

# Feasibility Study: Footbridge on the River Wandle

An Interactive Qualifying Project Report

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by

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1. footbridge
2. commuting
3. Merton

## **EXECUTIVE SUMMARY**

The Willow Lane Industrial Estate (WLIE) is the largest industrial estate within the London Borough of Merton. Nearly 150 industries and organisations do business within the estate. The River Wandle flows along the southwest border of the WLIE and separates it from a dense residential area. There are two vehicle bridges crossing the river; however, neither provides a direct or convenient way into the estate. Access to the estate is limited because there are only two entrance points and one exit. There is little public transportation from the residential zone to the WLIE. No trains run from one to the other and the bus routes require changeovers and waits.

Groundwork Merton (GWM) is a non-profit land regeneration charity that is a trust in the larger organisation Groundwork UK. In an attempt to help improve traffic and parking conditions in the WLIE, they have proposed the construction a footbridge across the River Wandle connecting to the WLIE to give cyclists and pedestrians a more direct route as well as a commute free from the dangers and inconveniences of motorised traffic. Prior to the construction of this footbridge, GWM wanted a feasibility study conducted.

Our group completed a feasibility study for GWM to determine whether a footbridge should be constructed across the river. We first determined what volume, if any, of traffic the footbridge might receive if implemented. Second, we evaluated two locations that were proposed by GWM to find out which location was better suited for the project. Lastly, we determined what kind of general support there was for the project in the WLIE and any concerns the working population of the estate might have.

We used both quantitative and qualitative data collection methods to achieve these goals. We interviewed contacts from ten companies in the WLIE who could speak on the company's behalf to find out their feelings on traffic and parking in the WLIE and how implementing a footbridge might affect this. We also interviewed an ecology officer from

the Borough of Merton regarding the proposed northern location, for a footbridge at this location would lead directly into a wildlife reserve. We needed to determine the suitability of this location as well as what impact a footbridge might have on it. We interviewed the owner of a narrow strip of land at the proposed southern location, to find out the level of cooperation GWM might receive and any concerns they had regarding the project.

In order to obtain the opinions of a wide range of people who would use the footbridge or might be impacted by its installation, two types of surveys were used. The first were employer surveys. The employers would be in a position to give employees incentives to use the footbridge as well as to provide facilities to accommodate those who chose to cycle or walk to work. We asked them about these issues as well as their thoughts on traffic and parking in the WLIE and whether they would benefit from a footbridge possibly reducing traffic. The second type was the employee survey. We asked employees to provide such information as: their commuting distance, their commuting routes, if they would use a footbridge for commuting or during breaks in the workday, if they had a preference for either of the two proposed locations.

Lastly, we completed traffic surveys in order to develop commuting patterns entering and exiting the WLIE. From analysing some of the preliminary results from the employee surveys, we realised that one vehicle bridge in particular seems to be accessed for commuting to the WLIE. In order to estimate what kind of effect, if any, the footbridge might have on local traffic we counted a days worth of vehicles in both lanes of the road at fifteen minute intervals, from 7 AM to 7 PM.

With the commuting routes provided from the employee surveys and the data we collected in the traffic survey, we made estimates about the effect a footbridge might have on local traffic conditions. Based on the employee surveys we made an estimate of the amount of traffic the bridge might receive on a daily basis. 6.25% of the 64 employees surveyed

indicated they would utilise such a footbridge for their daily commute. The Middleton Road bridge currently is used by roughly 510 employees daily. Of these, approximately 150 of them would use the footbridge if it was implemented. This would mean the number of employees using the Middleton Road bridge would be reduced to an estimated 360 employees daily, not a significant amount since this bridge is used by about 23,000 vehicles daily. 24% of the employees indicated they would use the bridge during the work day to access such facilities as Poulter Park and the Wandle Trail, both of which are on the opposite side of the River Wandle from the WLIE.

Another part of our analysis dealt with determining which of the two proposed sites would be best suited for this project. After analysing the employee surveys, we found that 47% of employees were indifferent to the location while the employees who had a preference were equally split 20% preferring the southern and 20% preferring northern location. As this evidence did not supply an obvious point of conclusion, other factors were examined in order to come up with a recommendation for bridge location.

From the meeting with the Ecology Officer for the Borough of Merton, the major problems with the northern location for the bridge were presented. The main objections were that increased traffic, noise and litter could potentially harm the birds that breed in the reserve and the species of plants that grow there. The trails would also have to be widened, decreasing the area of usable land for the birds and plants. A study on the environmental impacts of a bridge in this location would also have to be completed before any definite plans were made. The interviewee also suggested an alternative location for the footbridge near the Middleton Road Bridge.

From the interview with a representative from the Eagle Trading Estate, we gained an idea of their stance on the possibility of a footbridge leading onto their land. They had some strong concerns about crime such as vandalism if the footbridge allowed access to the estate

through their property. They also felt that there was not a problem of traffic on the estate, therefore there was not a need for a footbridge.

The last part of our results presented was on the common thoughts and concerns shared by those who would be affected by the implementation of a footbridge. Many of the employers felt strongly that the implementation of the footbridge could cause an increase in crime. Break-ins into vehicles on the estate as well as other types of vandalism were common concerns voiced. A footbridge into the area, as was said by one of the employers, would allow for an easy exit after committing such crimes. The lighting on the trail as well as around the area for the bridge would also have to be thought about. Women were concerned about travelling this route at night or alone, so lighting would help with these concerns. A hill in the residential area to the south of the estate was also brought up as a possible obstacle that might deter people from walking and cycling.

From all of the data collected, there is a small population of employees from the WLIE that would walk or bicycle to work if the bridge was implemented. Therefore, traffic conditions in the area would not be significantly impacted by the footbridge. However, there is a substantial amount of employees who would use the bridge to access the Wandle Trail or Poulter Park during their lunch break for recreational purposes.

The most difficult recommendation to make was that of the bridge location, as the two proposed sites had significant drawbacks as previously discussed. The northern location was possible, but there would have to be a great deal more work done due to the controversial issues with the wildlife reserve. The southern location would be feasible only if an agreement with the Eagle Trading Estate could be reached, but at this point they are not willing to allow their land to be used. The alternate location would have to be analysed in greater depth, as far as the accessibility on either side of the river and how great of an effect it would have on cutting down commuting distances.

## **ABSTRACT**

The London Borough of Merton is home to the Willow Lane Industrial Estate, where many residents of the area are employed. To improve traffic conditions in the area and encourage pedestrian/ cyclist commuting to work, Groundwork Merton proposed the construction of a footbridge over the River Wandle into the estate. We determined the prospective use and analysed its possible locations. We utilised the data collection techniques of surveys and interviews to make recommendations regarding the project's future.

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## **INTRODUCTION**

Automobiles are the preferred mode of transportation in many areas of England. Automobiles are expensive to operate, however, due to the high price of gasoline. In addition, traffic congestion has created a problem in London and new congestion charges have been implemented in an effort to reduce the traffic. As a result, alternate forms of transportation such as walking and public transportation are becoming more and more popular. In central London, over 46 percent of the people use some form of public transportation to travel to work. Although central London has extensive public transportation options, walking and public transportation are not practical in other areas of London. One such area is the Willow Lane Industrial Estate (WLIE) and the surrounding residential area in the London Borough of Merton.

The WLIE is an industrial zone where many residents who live in the surrounding boroughs of Merton, Wandsworth, and Sutton are employed. Employees of the WLIE primarily take private cars to work because of limited transportation options. Bus stops and tram stops are infrequent and impractical due to long layovers on routes that do not provide direct access to the Industrial Estate (Cleary et al., 2000). The option to walk or bicycle is limited because there are few access areas to the WLIE. There are two bridges leading into the area from the residential area, but they are spread far apart on the outskirts of the site and experience a high volume of automobile traffic so are not conducive to walking or cycling.

There are several other problems in the WLIE. Since many of the buildings in the WLIE were constructed prior to the use of automobiles, adequate space for roads was not provided, resulting in traffic and parking problems for the current lorry/auto dependent estate. There is not sufficient allocated parking space forcing employees to park on roads, adding to traffic congestion. The area is also considered to be unsafe and unpleasant to walk through, therefore many workers do not want to walk or bicycle into the area (Cleary et al., 2000).

A group aiming to improve transportation options in the Willow Lane area is Groundwork Merton. Groundwork Merton is an environmental regeneration charity whose purpose is to ensure "that it delivers high quality, cost-effective projects that meet real community needs" (Groundwork Merton, 2002B, par.1). Their projects work to create healthier, safer, and more environmentally friendly areas.

In response to the transportation problems the Borough is facing, Groundwork Merton wanted to research the possibility of installing a footbridge for walking and bicycling between the surrounding residential areas and the WLIE. The footbridge would be part of a program to regenerate the Wandle Trail, a recreational path along the River Wandle.

Two possible locations were discussed for the placement of the footbridge but both locations were controversial for different reasons. One of the proposed locations would have the footbridge leading into a nature reserve from the Wandle Trail, the reserve being adjacent to the WLIE. The other possible location would pass into the WLIE directly; however the land needed on the WLIE bank of the river is privately owned.

The proposed footbridge has the potential to change the landscape by opening up the area and allowing better access, in the hopes of creating a more visually appealing and safer feel to the site. The area which would be affected includes both the WLIE side of the River Wandle and the dense residential section on the south-western side. The goals of this project were to collect data regarding how employers and residents of the area felt about the proposed footbridge, to estimate the amount of use of the footbridge, and to estimate the possible impacts on traffic flow that the footbridge would have on the surrounding areas.

We used surveys and interviews to gather information from the employers and employees in the WLIE regarding their opinions of the proposed footbridge. We also conducted traffic surveys to determine the traffic volume leading in and out of the WLIE area. Lastly we met with an Ecology Officer of the Borough of Merton, a representative of

the owners of the private land, and a Transport Planner from the Borough of Merton to discuss the possible bridge locations. After analysing the data, we were able to make a recommendation to Groundwork Merton regarding the footbridge construction.

In the following pages, we present some background covering many topics of interest to this project from the history behind London transportation to automobile pollution and the programmes created to help keep the UK's air quality at reasonable levels. We also include a section on programmes and projects specifically targeted to the River Wandle and the surrounding communities. After introducing the background information we explain our methodology, which includes detailed information on each data collection method. Then we present the data we collected using the different techniques and their analysis. The final section of this report provides the conclusions that we drew from the analysis of our study and the recommendations we made based on them.

## **BACKGROUND**

Before deciding what data to collect, it was necessary for us to conduct background research in fields relevant to our project in order to gain an understanding of the information that was available to us. To understand where the current problem originated from, we researched the history of transportation in London as well as current day transportation problems in the UK. A previous project on the Willow Lane Industrial Estate (WLIE) and its transportation issues (Cleary et al., 2000) helped bring some more insight on the current conditions in the WLIE. This project focused on making changes to help cut down on traffic and parking problems, and make the estate a safer environment. Environmental issues, legislation, and strategies to reduce pollution were also looked into to give us insight into possible reductions in emissions from motorized vehicles.

## **TRANSPORTATION IN LONDON AND MERTON**

In this section, a brief history of the post war transportation systems in London and surrounding areas are discussed as well as the current day systems. This allows for a complete understanding of what transportation options are available today and how they were developed.

### **Post World War II Transportation**

The massive public transportation system in place before the start of World War II was nearly completely destroyed by the bombing of London by Nazi Germany. After the Allied victory had been secured by the unconditional surrender of Germany on May 7, 1945, the governing body of transportation in London, London Transport (LT), had to almost completely redesign the public transportation system.

Unfortunately, LT had a hard time rebuilding the massive system in place in pre-war London. Cars were cheaper to own than before World War II, and were becoming much more reliable throughout the end of the 1940's and 1950's. According to Taylor (2001), London Transport simply could not keep up with the growing automobile industry with their failing bus system and an unreliable train system.

By 1965, there were about 1,920,000 automobiles registered within the London city limits. This was a nearly 300% increase in the number of registered automobiles since 1950, when the number was only 480,000. This increase in vehicles on the roads increased traffic so much that bus service became very unreliable. The government now was subsidising the bus system as operating costs far surpassed revenue generated. Even with new one-person operated buses and bus lanes being introduced, the service and the passenger numbers declined. The trains were not doing much better either; rider volume had shrunk to record lows. Personal vehicles were making public transportation suffer from the over congestion on the roads. The concept of subsidising public transportation was completely unheard of in pre-war London where the public transportation system was a large source of government income (Taylor, 2001).

### **Greater London Council Gains Control of Public Transportation**

On January 1, 1970, financial and policy control of LT was turned over to the Greater London Council (GLC) which had taken the place of the London County Council (LCC) as a local governing body in 1965. Previously LT had been run by the central government (Dempsey & Saunders, 2000). This shift of responsibilities was the main factor in turning around the fading and failing public transportation system. The GLC was well aware that subsidising the public transportation system, as had been commonplace throughout the 1960's, could lead to the demise of the whole system. Even with the new leadership, LT still had many problems to face. Inflation was on the rise, fare subsidy grants had been reduced,



and staff positions were hard to fill. Problems arose which brought conflict among the GLC and central government on transport issues. Taking LT out of debt and resuming profit making became a priority of GLC (Taylor, 2001). The effects, however, were not fully felt until nearly ten years later.

### **The Effects of the New Ownership**

The 1980's were the first years to feel the effects of the changing policy of the GLC. The Tube was expanding rapidly to meet the increased demand because of its own increased efficiency and reliability. The 1970's saw the completion of several tube lines. The Victoria line, running from the northeast to the south of London was the first update to the system in this time period. The Heathrow Extension of the Piccadilly Line was finished in 1977, connecting the previous line that ran from the northeast down to the southwest of London to terminals 1, 2 and 3 at Heathrow Airport. The third major change to the Tube during this time period was the opening of the Jubilee line in 1979, running around London from the northwest down to the south of London, and back up to the northeast. All were now being widely used. The government used the marketing slogan "Fly the Tube to Paris" to encourage users to take advantage of the Heathrow Extension (Taylor, 2001).

Ken Livingstone became the leader of the GLC in 1980, and led them through a campaign called "Fares Fair." The idea was to create cheaper fares, to help increase the use of public transportation and to hopefully bring in more revenue from the transportation systems. Unfortunately this campaign only created a small increase of 9% in tube passenger traffic. This was not enough of an increase to cover the costs of the campaign and increasing operation costs of the tube system. This then increased the need for subsidy from 30% to a high of over 54% (Dempsey & Saunders, 2000).

The 1980's saw the complete turnaround of the bus system in London as well. As bus lanes were being designated, and the system was becoming more efficient as a whole, more

commuters decreased their reliance on personal automobiles. 1985 was the first year bids for bus system contracts were officially opened to the private sector. By 1994, the entire system was privatized which was a complete reversal of what had been established in the pre-war 1930's when it was a 100% government run system (Taylor, 2001).

### **Current Transportation Options in London**

While transportation in London can be paralleled to transportation in the Boroughs of Merton and surrounding areas, there are important differences. Since London is a large urban city, there is a much heavier reliance on public transportation. Areas such as Merton and the surrounding Boroughs rely more on individual transportation because public transportation is not readily available or efficient in these areas. This can be seen in Table 1 which shows that personal vehicles are used by only about 41 percent of Londoners and public transportation is used by about 46 percent. In the south-west of London, which is where Merton resides, 75 percent of people use personal vehicles, and only 5 percent use public transportation.

The rail system in London is very extensive and can get a person almost anywhere in the city to within walking distance. The three types of rail transport include the tubes, the trains, and the trams. Today, the city of London has over five hundred trains at over 250 stations serving more than three million people a day (London Underground Limited, 2002).

The bus system in London is very unique. The buses are known worldwide for their double-decker design. Buses are prevalent all over London and are often a faster means of travel than private vehicles because of bus-only lanes found over the entire city (Taylor, 2001). About four million journeys are made every weekday on 4,500 buses city wide (Transportation for London, 2002).

London's taxi system is well recognized for its availability and efficiency. A great number of black taxis can be found throughout London streets. The taxis date back to 1948 when the FX3 taxi made its first appearance. Today, the TXII taxi has taken the place of the

FX3 because of new technologies, however, the design still maintains the nostalgic look that

*Table 1: Mode of Transportation for Commuting to Work*

*(Source: National Statistics, 2001)*

|                             | Car, van,<br>minibus,<br>works van | Motorbike,<br>moped,<br>scooter <sup>2</sup> | Bicycle <sup>2</sup> | Bus,<br>coach,<br>private<br>bus | Rail <sup>2</sup> | Other<br>rail <sup>2,3</sup> | Foot | Other <sup>4</sup> |
|-----------------------------|------------------------------------|--|----------------------|----------------------------------|-------------------|------------------------------|------|--------------------|
| United Kingdom              | 70.4                               | 1.1  | 3.0                  | 7.6                              | 3.9               | 2.5                          | 10.8 | 0.6                |
| North East                  | 70.1                               | ..   | 2.1                  | 12.7                             | 0.7               | 1.9                          | 11.1 | 0.8                |
| North West                  | 73.5                               | 1.0  | 2.6                  | 8.4                              | 2.1               | 0.6                          | 11.1 | 0.6                |
| Yorkshire and<br>the Humber | 70.9                               | 0.9  | 3.5                  | 11.0                             | 1.2               | 0.3                          | 11.5 | 0.6                |
| East Midlands               | 76.7                               | 1.0  | 3.7                  | 6.5                              | 0.4               | ..                           | 11.2 | 0.4                |
| West Midlands               | 77.6                               | 1.0  | 2.8                  | 7.9                              | 1.4               | ..                           | 8.8  | 0.3                |
| East                        | 77.5                               | 1.5  | 4.2                  | 3.9                              | 1.5               | ..                           | 10.9 | 0.4                |
| London                      | 41.3                               | 1.6  | 2.1                  | 10.7                             | 18.8              | 16.5                         | 8.2  | 0.9                |
| South East                  | 77.5                               | 1.1  | 3.8                  | 3.8                              | 2.5               | ..                           | 10.7 | 0.5                |
| South West                  | 74.5                               | 1.6  | 4.3                  | 4.6                              | 0.8               | ..                           | 13.7 | 0.4                |
| England                     | 69.9                               | 1.2  | 3.2                  | 7.4                              | 4.3               | 2.9                          | 10.6 | 0.5                |
| Wales                       | 78.2                               | 0.9  | 1.8                  | 5.4                              | 1.1               | ..                           | 11.9 | 0.7                |
| Scotland                    | 68.7                               | 0.4  | 1.9                  | 11.8                             | 3.3               | 0.3                          | 12.1 | 1.4                |
| Northern Ireland            | 81.4                               | ..   | ..                   | 4.4                              | ..                | .                            | 11.1 | 1.1                |

*1 Analyses excludes those on government schemes, those who work from home or in the same grounds or building as their home, and those who work in different places using their home as a base. See Notes and Definitions*

*2 For some regions, sample sizes are too small to provide a reliable estimate.*

*3 Underground, light railway and tram.*

*4 Includes taxi as main method.*

the FX3 had grown famous for. The taxi is a very popular means of transport in London, but can be very costly (London Taxis International Limited, 2002).

The price of gas in London averages £0.84 per litre when the U.S. range in gas prices in New England is £0.23 to £0.30 per litre (Bosnor, 2002). Traffic congestion in London is a

problem and a new congestion charge was being implemented while our team was in London that charged £5 per day to deter motorists from using their vehicles in the city (The Automobile Association Limited, 2002).

Walking long distances in London is normal for its residents and is commonly their only choice due to the costs of other forms of transportation. Traffic-free zones have been created in London to accommodate pedestrian traffic and many more are continuing to emerge. In a congested city like London, pedestrian areas tend to offer aesthetically pleasing travel paths (Taylor, 2001).

## WILLOW LANE INDUSTRIAL ESTATE TRANSPORTATION ISSUES

The Willow Lane Industrial Estate is located in the eastern side of Morden which is a section of the London Borough of Merton. The WLIE is situated to the northeast of the River Wandle which runs for approximately 14 miles. The section of the river running near the WLIE is shallow but the water runs fast, and averages 20 feet in width. There are a series of parks located on the southern side of the river, beyond which is the residential area. There are quite a few residential developments in this area, approximately 1/2 mile away from the WLIE. Two bridges located at either end of the estate provide automobile access over the River Wandle. A map of the area is provided in Figure 1.

### **Public Transportation Issues**

Merton's public transportation system is not as extensive as central London's. Specifically, the residential area on the west bank of the River Wandle in Merton (opposite the WLIE) is lacking the convenience of a good system for travelling to work in the WLIE.

The train system does not have stations south of the River Wandle in the residential area of interest. There are not many bus routes that travel directly into the industrial area, causing the hassle of dealing with numerous changeovers. Changeover waiting times vary

depending on the punctuality of buses which is determined by the traffic on the route. This can cause unexpected delays that can potentially make employees late to their jobs. Also, bus stops are not placed in convenient areas and many do not have cross walks from the other



Figure 1: Map of the WIE and the surrounding residential areas

side of the road. While taxis are available, the cost of using a taxi on a daily basis to get to and from work is not reasonable. For these reasons, many people utilise their personal automobiles (Cleary et al., 2000).

## **Pedestrian Transportation Issues**

Access to the WLIE is only by two bridges over the Wandle River on the outskirts of the region. Because the bridges force pedestrian travellers to take an indirect path to the WLIE, the distance is considered too great for many workers to consider walking. Therefore, walking is not a practical option for commuters at this time.

Another pedestrian issue is the slope of the land leading up to the WLIE from the residential section south of the River Wandle. Because of the additional work that is needed to walk or cycle, many workers may feel that the journey would be too strenuous and that they would need showering facilities at work (Adams, 2003).

## **PREVIOUS WORK ON THE TRANSPORTATION ISSUES OF THE WLIE**

Groundwork Merton began work on the transportation issues of the WLIE in conjunction with students from Worcester Polytechnic Institute in 2000. The first stage, the Interactive Qualifying Project “Willow Lane Industrial Estate - Green Transport Plans” was completed in the summer of 2000. The goal of the project was to analyse the current transportation in use in the WLIE area and make recommendations to expand green transportation options. The project targeted the employers within the WLIE by trying to encourage green transport plans for commuting workers (Cleary et al., 2000).

## **Recommendations to Employers**

Cleary et al. (2000) made several short-term recommendations to improve the transportation problems through employer programs. One recommendation was to educate the employees of the area on alternative transportation routes. They noted that if employees used alternatives to automobiles, such as cycling, this would offer fast transportation with no environmental detriments. According to the Cleary et al. (2000), most of the WLIE

companies do not have bicycle racks for employees to secure their bicycles to. The recommendation was made to the employers to consider supplying them.

The IQP group next presented recommendations for the medium-term. One recommendation was to have employers subsidize employee travel passes, which would allow workers to utilise the bus system at a considerably discounted rate. This idea relied heavily on the acceptance by employers. As shown in Table 2, a large percentage of the workers surveyed relied on individual transportation and public transportation was not heavily utilised. Another recommendation for the employers was the encouragement of carpooling within companies. Many employees would be more willing to utilise such programs if they already existed, rather than starting a program themselves. Fifty three percent of employees polled stated that they would carpool if encouraged, which would provide some benefits.

Long term recommendations were also discussed by the IQP group, which required more funding and interest from the employers. The first recommended program was to extend car-pooling between companies. Another was for the companies to fund a private shuttle to and from the industrial estate, which would require a large investment from the employers, thus requiring a substantial usage to make up for its price.

*Table 2: Breakdown of the Modes of Transportation Used by Employees in the WLIE*

*(Source: Cleary et al., 2000)*

| Mode of Transportation | Percentage Utilised |
|------------------------|---------------------|
| Private Car            | 72%                 |
| Car Pool               | 13%                 |
| Train/Tube             | 0%                  |
| Bus                    | 2%                  |
| Walk                   | 4%                  |
| Cycle                  | 2%                  |
| Other                  | 7%                  |

## **Recommendations to Transport Planning**

As the financial burden of improving transportation should not be solely placed on the industrial estate that it improves, Cleary et al. (2000) concluded that the Borough of Merton needed to take an equal role in its improvement. If the Borough stressed the importance of environmental consciousness, its employers would be more likely to enact programs. The appearance of the WLIE was also a concern of the group. They suggested that the Borough support the maintenance of the area. If the estate is kept clean, employees would feel less discouraged from walking through it. Connecting the WLIE to existing cycle routes would likely increase bicycle commuting, and as the Borough was installing new routes at the time, a good option would be to extend it to the industrial estate. An additional issue presented was the problem of speeding through the WLIE, which the group proposed to resolve by posting speed limits, constructing speed bumps, and enforcing laws more strictly.

Employees of the WLIE felt that bus transportation needed the most improvement. At the time of the project there was only one bus that had a route into the WLIE and it was on an infrequent basis. It was suggested that the transportation authority increase the frequency and number of buses that go to the area, and that bus stops be better lit.

There were also long-term solutions suggested to the Borough, which would take a large amount of time, planning, and money to implement. The first of these was to provide better access roads leading in and out of the WLIE to improve traffic flow and increase pedestrian access. Sidewalks were rare on the streets in the area, which had to be improved in order to facilitate walking and cycling. Pedestrian traffic lights, as well as additional automobile traffic lights were viewed as another necessity to make the area function more efficiently and safely. Another major concern of employees was the existing Mitcham Tram stop, which was classified as unsafe by employees. Improving its safety, especially at night,



was a concern of the employees. Increasing police protection and better lighting in the area were outlined as improvements that could be made.

### **Cleary et al. Analysis of Findings**

In the employment of any of these recommendations, each side must feel compelled to enact such programs. It was found by the IQP group that both sides felt as though it was the other's responsibility to make such improvements, which creates a problem in effectively supporting green transportation plans. To solve this discrepancy, it was suggested that the employers of the WLIE build a partnership with the Transport Planning section of the London Borough of Merton. Such an affiliation would help spread the burden so that neither party would feel overburdened (Cleary et al., 2002).

## **AIR QUALITY, VEHICLE POLLUTION AND ENVIRONMENTAL PROGRAMMES**

Benefits of encouraging and aiding green methods of transportation do not stop at merely reducing traffic and making commuting more efficient. We collected information regarding current strategies and policies concerning pollution and emissions to develop an understanding about how much pollution may be reduced by a cutback on the number of motor vehicles in service.

### **Air Quality and its Measurements**

As early as the 13<sup>th</sup> century, complaints have been recorded due to pollution caused by coal which was beginning to be used in London at that time. The Industrial Revolution of the UK in the 18<sup>th</sup> and 19<sup>th</sup> centuries brought about many coal-powered industries. When the burning of coal for domestic use was added, levels of air pollution became very high. In the middle of the 19<sup>th</sup> century, coal smoke regularly polluted London's air, covering the city in

smog. In 1875, the Public Health Act was put into effect to try to reduce smoke pollution in urban development areas (Buchdahl & Hare, 2000).

In 1952, the Great London Smog took place. Deaths due to this event amounted to around 4000 people. The Clean Air Acts of 1956 and 1968 were introduced because of the aftermath of that tragic event. The first act was put into effect to control domestic sources of smoke pollution through the use of smokeless zones. The second act, which was introduced in 1968, provided that smoke chimneys must be a minimum height for the burning of fossil fuels. At this time, it was felt that smoke pollution could be controlled but that sulphur dioxide removal was impractical. Throughout the 1970's air quality improvements were made, but in the 1980's the number of vehicles was growing and so were the levels of pollution (Buchdahl & Hare, 2000).

During the previous decade, many conferences across the globe have convened to work on the matter of global environmental problems. The Convention on Long-Range Transboundary Air Pollution of 1999 included many United Nations countries and their current plans for cleaning up their country's air. The UK's Environment Act of 1995 required that a National Air Quality Strategy be published containing standards for air pollutants. This was published 2 years later in 1997 and contained health-based standards for eight pollutants to be achieved by 2005. These standards form a basis for what levels are acceptable and where there is minimal to no risk of harmful affects. International targets have been set for sulphur dioxide, nitrogen monoxide, and volatile organic compounds as well (United Nations, 1999).

### **Vehicle Pollution Policies of the United Kingdom**

In the 1960's the United Kingdom was not part of a common market society. Each country in Europe had their own regulations on pollution, mostly on that caused by vehicle emissions. The UK only placed emission limits that were mandated by the United Nations.

The focus on environmental protection was not as common of a goal as it has been in more recent years. The United Nations' regional body for Europe, the UN Economic Commission for Europe, and later the European Union (EU), helped negotiate emission limits. Carbon monoxide, hydrocarbons and nitrogen oxides were labelled as the three main gaseous pollutants that should be regulated, with benzene later being added to the list as being very volatile (Boehmer-Christiansen & Weidner, 1995).

Environmental policies on emissions began in the 1980's when acid rain and forest dieback were becoming very serious. This altered the style of European vehicle emissions regulations (United Nations, 1999). The European Community implemented new plans for the emissions control systems about ten years after similar controls were put into effect in the U.S. and Japan (Boehmer-Christiansen & Weidner, 1995). In the early 1980's, lead content in petrol became a leading issue. With pressure from outside countries, such as Germany, the UK decided to only slightly cut back the maximum lead content allowed in petrol gas from 0.45 to 0.40 grams per litre (Mcloughlin, 1982). Further pressure from Germany in the next few years caused the UK to make significant change in their lead policy. In December of 1984, the Council of Ministers opted to make unleaded petrol widely available (Boehmer-Christiansen & Weidner, 1995). This allowed for vehicles unable to run on the unleaded petrol to continue being used until 1993. Leaded petrol was planned to be phased out with exceptions for classic cars and vehicle testing beginning in 2000 (United Nations, 1999).

In 1989 a directive was adopted mandating that small cars (cars with engines smaller than 1400 cm<sup>2</sup>) would in the future have even tougher emission regulations than those already planned in 1985 for large cars. It was not until late 1990 that the Environment Ministers of the Council of EC Ministers agreed to mandate common standards for all new passenger cars to take effect in 1993 (Boehmer-Christiansen & Weidner, 1995). The Commission proposed a

few directives in the years following 1990, narrowing down on one in 1992 where emissions were set to be as tough as those currently used in the U.S. and other countries that year.

### **Environmental Programmes**

Many programmes have been set up in the UK to help address air quality needs as well as bringing awareness to the people of what needs to be done. The Energy Efficiency Best Practice Programme was set up in 1989 to stimulate investment in energy saving technology and technologies (United Nations, 1999). By stimulating energy savings, they hope to reduce greenhouse gas emissions by about 5 million tons of carbon that will hopefully save about £8 million.

A campaign, “Are You Doing Your Bit?” was introduced throughout the UK in 1998 to help in the fight for better air quality and the reduction of global warming. A Local Transport Planning system is being put into effect across the UK to work on “air quality, road safety, public transport and reducing road traffic” (United Nations, 1999). This will incorporate a green transport plan to be created which will decrease vehicle emissions and encourage the use of public transportation as well as walking or cycling as other alternatives to driving personal vehicles (United Nations, 1999).

### **PROGRAMMES AND PROJECTS OF THE WANDLE AREA**

Groundwork Merton (GWM) is a major non-profit organisation that works on bettering the surrounding communities’ awareness as well as protecting and improving the natural environment in the area (see Appendix A for further information about Groundwork UK and Groundwork Merton). They have sponsored many projects working on the regeneration of the Wandle Corridor. Working together in a partnership with Sustrans, the London Boroughs of Merton, Sutton, and Wandsworth and many other local organisations, Groundwork Merton is creating improvements to the areas surrounding the River Wandle by

increasing access and safety to residential and industrial areas, such as the WLIE. In creating these projects, they hope to raise awareness on a wide range of environmental, educational, and heritage issues.

Groundwork has recently completed and is also currently working on projects in the Wandle area. One very successful project was a graffiti project in the Colliers Wood area. GWM recognised a general problem with vandalism and derelict areas that had the potential to become aesthetically pleasing. In the case of this particular project, GWM had previously constructed a path that ran along a 180-metre brick wall. The wall was subsequently vandalised with graffiti. They gathered young people from the Colliers Wood community to address the problem, and came up with a project to rejuvenate the area. GWM contacted world renowned graffiti artists and together with the youth of the area, they designed and covered the brick wall with artistic graffiti. The group focused on the theme of respecting ethnic diversity while depicting certain historic eras to keep the community educated on its past (Groundwork Merton, 2003).

The Wandle Cleanup was organised by Groundwork Merton as well. They gathered over sixty volunteers to clean up the banks of the River Wandle. The volunteers were spread out in different locations along the river, with the sponsors leading the cleanup. These sponsors included The Squad, Sathya Sai, and the Wandle Industrial Museum, as well as the National Trust, Probation Service, the London Borough of Merton, and Friends of the Earth. Together, they made substantial progress in cleaning up the river banks and paths, providing people with more aesthetically pleasing areas along the river to enjoy for recreational purposes (Groundwork Merton, 2003).

Groundwork Merton's largest ongoing project is The Wandle Trail, previously called The Wandle Route. The trail runs along the river Wandle, stretching almost 14 miles beginning in the foothills of Surre and ending where it empties into the Thames in

Wandsworth. This trail will be accessible to pedestrians and cyclists, and will be part of the National Cycle Network. The Wandle Trail project aims to improve the current trails which have been grown over by vegetation. This will include widening and improving the walking paths and linking them to town centres, schools, and business sites. One main hope of this project is to give more access to people who choose travel without the use of motorized transportation (Groundwork Merton, 2003).

## **METHODOLOGY**

The goal of our project was to perform a feasibility study on a proposed footbridge to connect a residential area to the Willow Lane Industrial Estate. We compared the bridge's projected usage and advantages to its disadvantages in order to determine whether or not the project should be initiated. Through various research techniques, we completed a number of tasks that would help in making this decision.

Our first task was to estimate the number of people who would use the proposed bridge. We surveyed employees of the WLIE to determine if they would use the bridge for commuting and scaled the results of our survey to the total number of employees in the WLIE. This would not only be used for estimating possible usage of the footbridge, but would also show if motor traffic conditions in the area would be changed. We also asked them about their potential usage of the bridge for recreational purposes. We then examined existing statistics and gathered field data to illustrate traffic patterns in the area, and the time of day that traffic problems occurred.

Our second task was to gather information on people's attitudes about the bridge. The opinions of employees and employers within the WLIE, and abutting landowners were seen to be most important, as a new footbridge would most directly affect them. Using surveys and interviews, we were able to establish whether or not there was overall support for the bridge's implementation.

## **DATA COLLECTION**

We began by conducting interviews with employers in the WLIE to gain contacts and a general feeling about the problems in the area and their views on the proposed bridge. From there we set up survey drop-offs and collections for the employees and employers of the Willow Lane Industrial Estate. We also completed a survey of the traffic over the two

bridges on either side of the estate that allow northbound traffic to cross the River Wandle. Next we conducted interviews with an ecology officer who was concerned with the northern bridge site, as well as with a representative of Eagle Trading Estate who owned the strip of land interfering with the southern bridge site. Lastly, we interviewed the transport planner of the Borough of Merton.

## **Interviews**

In collecting data that is not merely of the statistical type, we gathered information from individual interviews. While our primary method of collecting data from prospective users of the proposed bridge project was through the two written surveys, we felt that surveys were limited to the type of data that could be collected. Surveys are very focused and do not offer in-depth data, therefore interviews were used to fill in this gap. By personally meeting and talking with certain people and groups, we were able to gather more in-depth data about the preferences and concerns of area residents and employers of the Estate as well as the concerns of environmental groups and other organisations.

### *Employer Interviews*

The Willow Lane Industrial Estate has an extensive composition of companies, offices, and plants. We targeted ten companies of varying size who employ varying worker types (i.e. white collar and blue collar) to receive a good spread of the types of people who would possibly be affected by the bridge. We met with company executives who could provide a good representation of the companies' views on the topic. Contacts and arrangements for these interviews were made upon our arrival in London.

We foresaw many advantages to be gained by conducting employer interviews as opposed to conducting written surveys. The interviewees were familiar with the surrounding area, and their perspective was helpful in evaluating the transportation situation in the WLIE.



They were able to point out locations of interest for survey distribution, and helped in facilitating the successful distribution of the surveys.

Interviews with employers were conducted from January 20 through January 24, 2003, and were helpful in opening relations and gaining contacts with companies, so further cooperation would be possible. An agreement of confidentiality was signed by the interviewee prior to each interview, which prohibits our release of information including the name of the interviewee and the company he or she represented.

The interviews were conducted by two IQP group members in order to be most efficient. One member asked questions and the second aided in taking notes on what was said during the interview and acted as a back up in case the tape recorder failed. This turned out to be a good decision because 3 of the 10 recordings were lost to mechanical malfunctions of the tape recorder. The recording of the interviews provided a means to thoroughly analyse the comments made by the employer as well as a means to critique the questioning techniques used by the interviewer.

The interview guide we created for the employer interviews went over a few different topics. The beginning questions focused on the estates' current traffic and parking issues, as well as any safety or crime issues. Questions regarding the employees' transportation types as well as if any lived close enough to walk or cycle to work were also included in the guide. The interview guide is provided in Appendix B.

### *Site-Specific Interviews*

The technique of using interviews was chosen over the original planned technique of focus groups for gathering information about the two proposed footbridge sites because of logistical problems organising focus groups. While focus groups may have given us more information regarding each site, we found we were not lacking in information from the two

representatives we chose to interview. Both provided all the data necessary to make our final conclusions.

Because the northern location for the footbridge would connect into a wildlife reserve, we met with an Ecology Officer from the Borough of Merton to talk about his concerns and possibly what compromises could be reached. Since the southern location would connect directly into the WLIE through a two meter stretch of land owned by the Eagle Trading Estate, we corresponded, via email, with a company representative to discuss the location and see what agreements could be reached so as to make the bridge location a possibility.

We had two group members present for the interview session with the Ecology Officer. One group member was the interviewer, while the other group member took notes. Recording this session on cassette tape was our primary recording means so we could analyse the results in-depth.

The types of questions for the different site-specific interviews were a little different, so two different interview guides were used depending on what location for the footbridge was being brought into question. For the Ecology Officer, the questions focused on who controlled the wildlife reserve, what their concerns/issues are with the northern proposed site, and what kind of compromises they would be willing to make to allow for the footbridge and path to run through the reserve. For the interview with the Eagle Trading Estate representative, questions concerned what issues they would have with a footbridge leading into their site and whether they would be willing to cooperate if the footbridge was planned to go into the area. We asked who owns the rights to that piece of land specifically, as well as any other problems they would foresee with the project. Copies of the site-specific interview guides are included in Appendix B.

### *Transport Planner Interview*

We also conducted an interview with a Transport Planner for the Borough of Merton whose position entailed being a Cycling Officer for Merton. We interviewed the Transport Planner in order to determine her views on the footbridge, as well as some general public transportation improvements that Merton is working on in the WLIE area.

### **Surveys**

Surveys are efficient at collecting a large amount of information and are appropriate for the type of data we needed collected. While they lack the ability to collect detailed and open ended information, the type of questions we needed to ask the working population of the WLIE were straightforward, mostly yes or no questions. We used a printed questionnaire format to conduct these surveys.

### *Employees of the WLIE Survey*

The employees were the most important source of data because they would be the primary users of the footbridge. In order to achieve a large enough sample size for the employee surveys, we decided to distribute them to approximately 10% of the entire employee population in the estate. With a total of approximately 2590 employees working in WLIE (Willow Lane Contact Database, see Appendix C), we had hoped to distribute approximately 250 surveys. We estimated how many surveys each company in the estate should receive by dividing the number of employees at each company by 10 then rounded up to the next whole number. Then we left a few more than that number assuming that some companies would turn us down, which did end up being true.

We left the blank surveys with either the contact at the company from the database provided by GWM or with the secretary or receptionist. We offered to return at a convenient time to pick them up which varied from two days to two weeks. We felt this was a good

strategy because the employees could complete the survey when it was convenient for them and the company. This strategy yielded 64 completed surveys.

Our focus of the employee survey was to gather the workers' interest in substituting walking or bicycling for driving. A map of the area was included in the surveys for the employees to map out their route to work. This information was then used to map out the areas where traffic volume was heavy. In addition, the survey was intended to gain an understanding of other ideas people have about improving access to the Willow Lane Industrial area. This allowed for the formulation of alternatives, depending on the outcome of the project. The survey was made to fit on one page for logistical purposes but also because, as stated by Moser and Kalton (1971), "[The] length of the questionnaire must be presumed to affect the morale of both the interviewer and respondent, and probably also refusal rates and the quality of the data" (pp. 439-440). For this reason, the survey was made to be only one page double sided, with a majority of the back being the map of the area. The employee survey is provided in Appendix B.

#### *Employers of the WLIE Survey*

We distributed an employer survey to all the companies we distributed employee surveys to. We targeted the contacts at these companies that were in the database of the WLIE companies provided by Groundwork Merton. This database is provided in Appendix C. The purpose of the survey was to give us a better representation of employer opinion than just ten interviews would. They were asked their opinions on issues such as traffic and parking. We also wanted to determine their level of cooperation in providing facilities to accommodate their employees whom walk or bicycle to work. We distributed employer surveys to 60 companies throughout the estate, and received 34 back. The employer survey is provided in Appendix B.

## *Traffic Surveys*

As discussed previously, traffic is a problem in the Boroughs of Sutton and Merton. Traffic patterns in the residential areas leading to the Willow Lane Industrial Estate can show the usage levels of the surrounding bridges and road systems, allowing an analysis on the location of problem areas. Relating the level of traffic now and estimated levels of traffic after the possible implementation of the footbridge linking the Wandle Trail pathways could help illustrate the difference the bridge will make in the area.

Data was collected by counting vehicles passing over the two vehicle bridges which allow access to the WLIE from the south-western side. Counting was in two shifts, one from 7:00 a.m. to 1:00 p.m. and from 1:00 p.m. to 7:00 p.m. Each of these time periods were broken up into 15 minute intervals during which cars were counted going in both directions.

One objective of gathering this information was that the current patterns of traffic could be compared to the estimated traffic patterns after the footbridge implementation. One possible result was that there would be a visible difference in the traffic flow through these areas, and that the footbridge would have a clear impact on this traffic. The traffic survey form can be found in Appendix B.

## DATA ANALYSIS

The raw data in the form of interview transcriptions and completed survey forms were analysed to find trends and similarities between them.

### **Interviews**

The analyses of the employer interviews, site specific interviews, and the Transport Planner were done in very similar manners. First, the interviews were transcribed. The next step in this process was the breakdown of the transcriptions. The interviews were reviewed, looking for key words or phrases about traffic, parking, the Wandle Trail, footbridge, and

anything else relevant to our research. Next, the phrases containing key words or important topics were put into categories. Once these categories were formed and responses grouped, a generalised list of responses was created.

From there, each topic of discussion was then separated into positive and negative views. The two groups were then compared to determine whether the positive views outweighed the negative ones. The complete details from the interviews can be found in Appendix D.

## **Surveys**

After the data were collected through the different types of surveys, it had to be organised and analysed. For the employee and employer surveys, the general process was the same. The first step in this process was to make a table containing rows of responses and to tally each survey's responses. After having a tally count from the collected surveys, the total values were organised in a spreadsheet where percentages could be calculated. The travel routes were analysed by overlaying each travel route onto a single map to determine where the traffic was the heaviest. Open ended questions in the surveys were looked at through a more qualitative analysis. For these questions, an approach much like that in the interviews was used. The responses were read through and then categories were laid out that the responses could be placed in. After they were grouped, one single phrase was made that would tie all the underlying comments together and be the representative idea.

The traffic surveys we completed were compared with our employee survey travel routes to provide further details on the severity of traffic passing along the two main access bridges. By determining the traffic severity according to time intervals throughout the day, we were able to establish when traffic was heaviest. These data were placed into spreadsheets and then graphed.

## **RESULTS AND ANALYSIS**

Upon completion of all data collection methods, we organised the collected data into logical categories in order to complete a detailed analysis. Interview results are shown in Appendix D and survey results in Appendix E. The first data analysed was the traffic patterns on the roads in and around the WLIE. We then compiled and analysed data from the surveys and interviews to generate an estimate of the amount of use that the bridge might experience. Then we determined people's preference regarding the location of the proposed footbridge. The chapter concludes with a discussion of some common concerns and related issues brought to our attention throughout the data collection process.

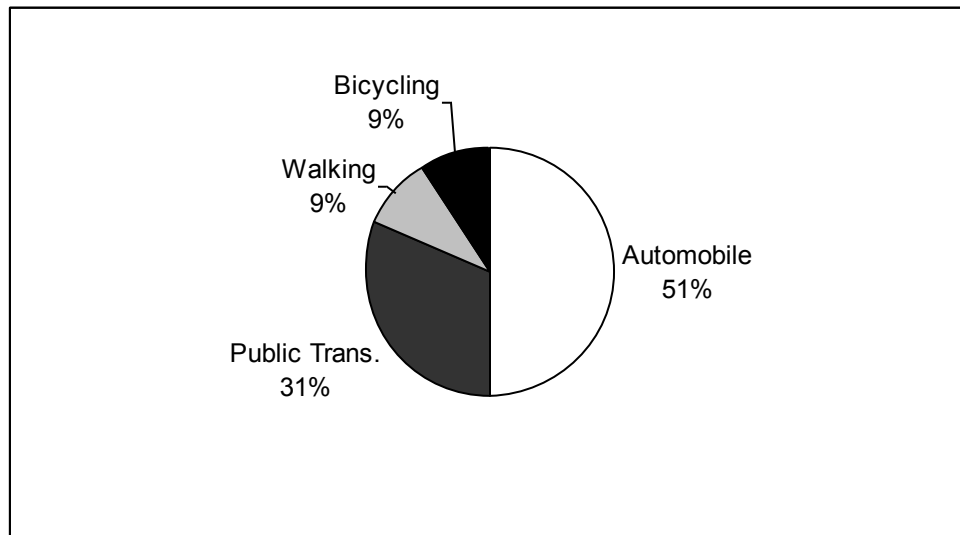
### **ANALYSIS OF LOCAL TRAFFIC**

To better understand how much of a problem the traffic and parking were, we studied different aspects of motorised traffic in and around the WLIE. We gathered information on commuting distances and routes as well as the volume of traffic crossing one of the vehicle bridges on the River Wandle that leads to the WLIE. We also gathered opinions on several different traffic-related topics from the employers and employees to better understand the current situation.

#### **Employee Commuting Trends**

To determine how much the commuters of the WLIE contribute to area traffic, we decided to find out the modes of transportation they use to get to work and in what percentages. Through research of the Interactive Qualifying Project "Willow Lane Industrial Estate – Green Transport Plans" (Cleary et al., 2000), we obtained a breakdown of the modes of transportation used by employees in WLIE, however these data were collected when that project was completed nearly three years prior to the completion of our project, making it fairly obsolete. We determined the current transportation breakdown by including such a

question in our employee survey. The question asked if they used a car, public transportation, walking, bicycling or a mode not specified to commute to work. The results of this question can be seen in Figure 2.

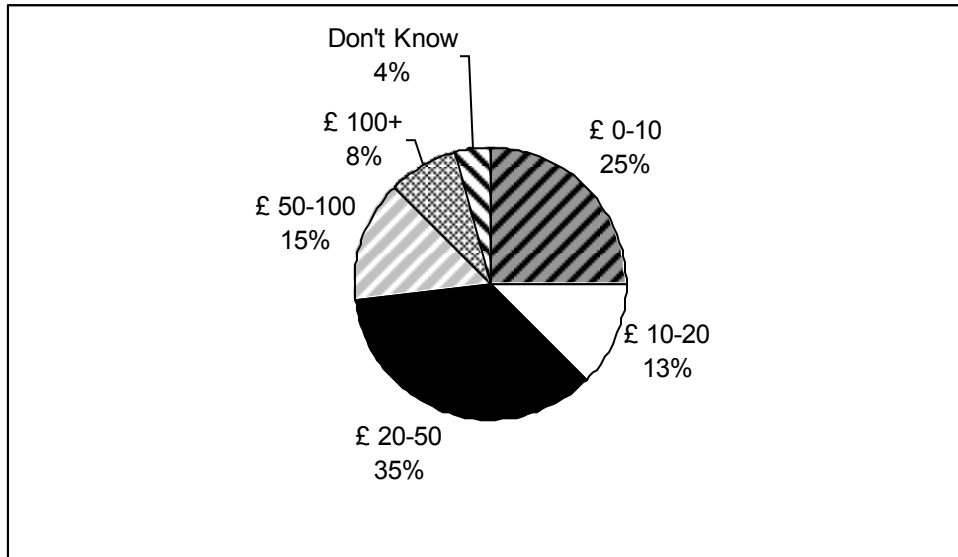


*Figure 2: Employee modes of transportation for commuting*

The employees have a heavy reliance on automobiles, making up more than half of the total transportation used, but this is much less than the previous project showed. As shown in Table 2 in the Background chapter, a total of 85% of the employees relied on automobiles to get to work in 2000. There has been a sharp increase in the past three years in use of public transportation and significant increases in the number of employees walking and bicycling.

In order to estimate the savings employees might receive by changing their transportation method to walking or bicycling we wanted to find out the average cost of transportation for the employees working in WLIE. We asked the employees to estimate the amount they spend on commuting to work on a monthly basis (Figure 3). The most common amount spent on transportation is in the range of £20 to £50 per month.





*Figure 3: Employee monthly commute transportation expenditures*

By examining employees' means of transportation and approximate travel expenses, many relationships can be drawn. There is a direct correlation between walking and low travel expenses and also between car use and high travel expenses. Commuting distance also affects both travel expenditures and mode of transportation utilised. Figure 4 shows the effect of transportation mode on monthly travel expenditures. A more detailed survey would have to be completed to fully understand the relationship between distance, cost, and transportation mode.

As Figure 4 shows, walking and bicycling were the least expensive form of transportation used by employees, costing £0-10 per month. The most common response from those who drive automobiles was £20-50 per month, while public transportation expenses varied throughout the range of costs, most likely dependent on the distance travelled. We feel the low cost of walking and bicycling could be helpful in encouraging employees to make use of the footbridge to further reduce their transportation costs, and would also help reduce traffic and the number of vehicles within the WLIE. If specific costs

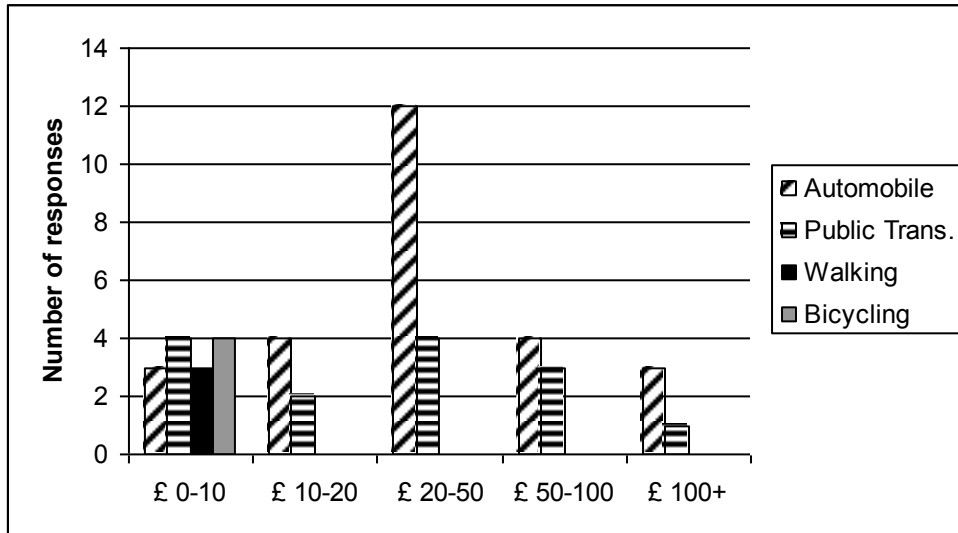


Figure 4: Effect of transportation choice on monthly travel expenditures

were obtained for each transportation mode, an average could be calculated for each mode in pounds per mile to better compare how each of these factors affects one another.

We also decided to find out how far employees are commuting as this would have heavy influence on whether or not they would decide to walk or bicycle to work. We asked them to estimate the distance they commuted every day and graphed the results which can be seen in Figure 5.

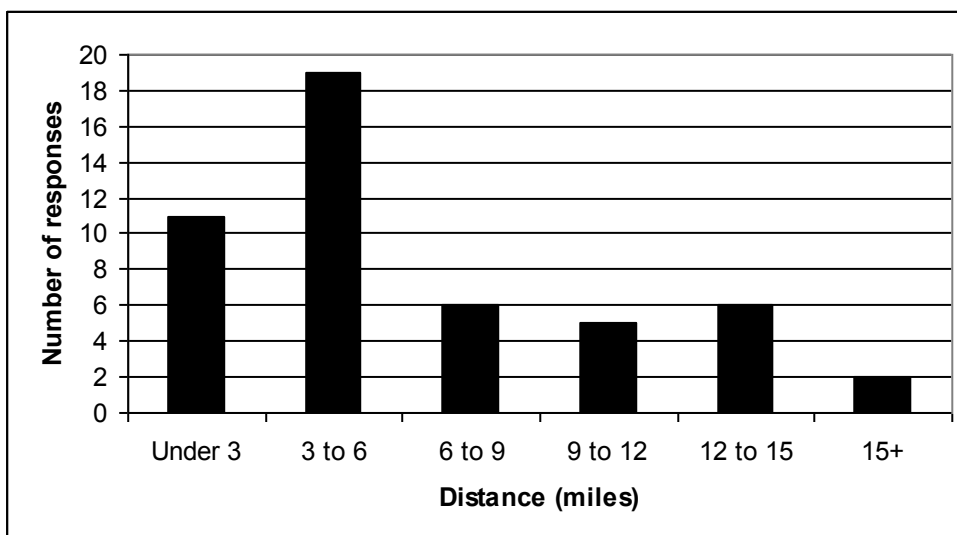


Figure 5: Employee commuting distances

The average commuting distance of the employees surveyed was 7.5 miles. This number, however, is slightly skewed by two distances with a large deviation. One of the employees surveyed indicated a 53 mile commute while another indicated a 50 mile commute. These numbers deviated 45.5 and 42.5 miles respectively from the average of 7.5 miles. In this case, the median distance of 5 miles better represents the commuting distances.

### **Area Traffic Flow**

The data collected from the traffic surveys was tabulated and graphed in fifteen-minute intervals as described in the Methodology chapter. Though the collection split the day into two shifts, we analysed the data as if it were the same day under the assumption that the weekday traffic volume is relatively the same on different days.

Figure 6 organises the traffic volume over the Middleton Road Bridge throughout the morning hours of 7.00 to 13.00 in both the eastbound and westbound directions. A pattern can be seen here of a larger quantity of traffic eastbound throughout the morning hours of 7.00 and 10.00. The westbound traffic volume remained a steadier rate throughout the morning.

Throughout the morning commuting hours of 7.00 to 10.00, the average number of cars going towards the WLIE, which is the eastbound direction, was 390 cars per fifteen minutes. The average number for these morning commuting hours going away from the WLIE, the westbound direction, was 180 cars per fifteen minutes. This suggests that the vehicles going to the WLIE heavily influence the traffic volume over the Middleton Road bridge.

Figure 7 shows the traffic flow over the Middleton Road bridge from 13.00 to 19.00 in the eastbound and westbound directions. This data displays different trends than the morning survey did. The volumes were roughly the same in both the eastbound and westbound direction suggesting that the volume of traffic in the afternoon is not heavily

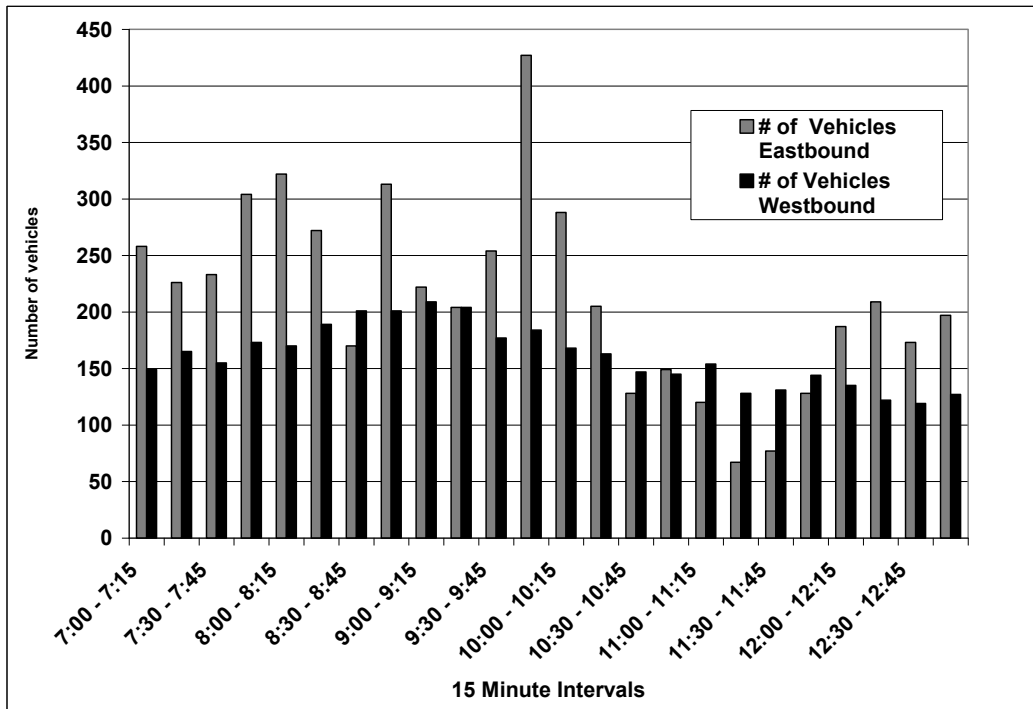


Figure 6: Traffic flow over the Middleton Road bridge (7.00 – 13.00)

influenced by traffic from WLIE. A rise in volume can be seen from 17.00 to 19.00 in both directions indicating that the road is used by commuters from different places which increases traffic in both lanes.

The average volume in the eastbound lane through the afternoon session was 201 cars per fifteen minutes while the westbound lane was 195 cars per fifteen minutes. These averages emphasise how close the two lanes were in terms of traffic flow. The dissimilarity between the morning and afternoon session may be attributed to the surveys being done on different days.

We also collected morning traffic information on the London Road Bridge. Before completing the afternoon sessions, employee surveys results showed that very few employees commuting to the WLIE use the London Road Bridge to access the estate. None of the 64 employees surveyed indicated they used this bridge to commute to the WLIE. We decided the information from the morning session was therefore irrelevant, and did not return to that site to complete the afternoon session.

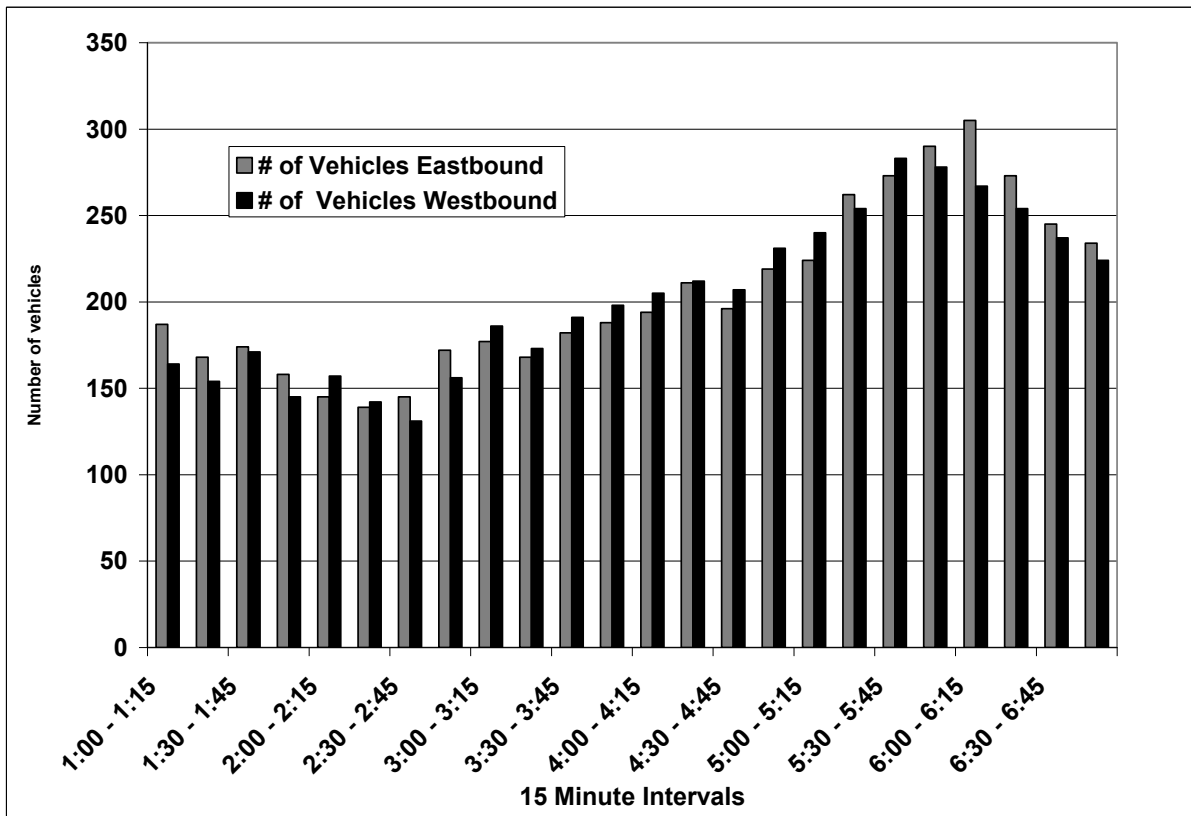


Figure 7: Traffic flow over the Middleton Road bridge (13.00 – 19.00)

From the information gathered about the commutes of employees in the employee survey, we were able to better analyse the flow of traffic to and from the WLIE. 19.6% of the employees surveyed use the Middleton Road bridge during their daily commute. This amounts to about 510 employees using this bridge to get to and from the WLIE daily.

We then can estimate that traffic going to the WLIE in the morning accounts for about 40 vehicles per fifteen minutes between the hours of 7.00 and 10.00 in the eastbound lane, or about 17% of the total traffic flow in the eastbound lane between these hours. For the afternoon, assuming the employees use the same mode of transportation and route to get home, the percentage of traffic they account for falls to 16.5%, this being for the westbound lane between the commuting hours of 16.00 and 19.00. These numbers, however, are not very accurate. To determine the amount of area traffic going to or coming from the WLIE, the traffic surveys should be completed the same day, and also repeated on several days to

obtain a better average of the area traffic. Employees could also be asked at which time they commute for a complete understanding of how much they contribute to the area traffic.

### **Employer Traffic Concerns**

From the interviews and surveys conducted with the employers we evaluated traffic concerns within the estate, which seem to depend on company location and the existence of a company parking lot. Due to the setup of the WLIE, some sections are heavily populated, with narrow roads and few car parks, while others are less dense, with plenty of room for parking and wide enough roads for cars and lorries to obtain access. When questioned if their company would benefit from less traffic and fewer parked cars, one employer responded, “[traffic] doesn’t cause us an excessive problem. Sometimes it’s a bit more difficult, depending on the time, to move [cars and lorries] around the estate. Generally it’s not a problem, but there can be cars and lorries all over the place” (Interview #6). This sentiment was consistent with most employers, that traffic problems within the estate were only a minor problem. Another employer added “...this morning, we just sailed in, but you might get a little hiccup and then you do get a problem” (Interview #2).

The question regarding traffic within the estate often led to employers expressing a common problem. Every interview resulted in the same concern: traffic congestion entering and exiting the estate. Since there are only two vehicle entrances and just one vehicle exit, traffic can become very backed up. As one interviewee stated,

“There is a problem actually with leaving the estate at night because there are two ways in, but only one way out, and if there is an accident there, and it does happen occasionally, you’re stuck. There are times when I have been on the estate and the traffic has just been piled along here, and I’ve sat here ‘till half past six, seven o’clock at night waiting for traffic to clear just to exit the estate myself” (Interview #4).

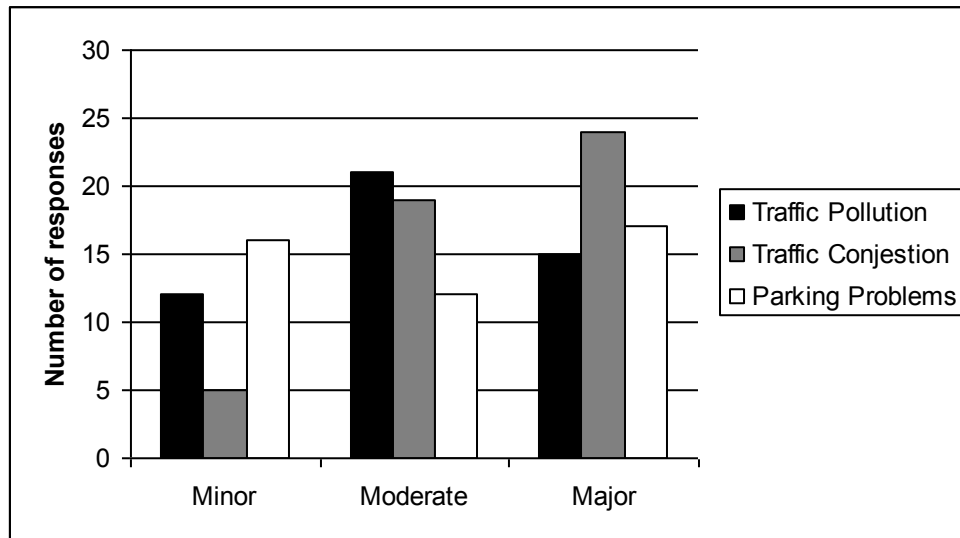
As another employer expressed, “five o’clock is impossible to drive out of here, chaos” (Interview #1). This type of feeling corresponds to our surveys conducted of the employers of the WLIE. When asked to rate how much problem traffic is in and around the WLIE on a scale of 1 to 10 (1 being no problem and 10 being a considerable problem) the average answer was 7.5 out of 10, with 4 out of 10 being the lowest rating given by any participant. 89% of those surveyed felt traffic was enough of a problem to give it a 5 or higher rating out of 10.

Many of the interviewed employers did not have a problem with parking at their businesses, though some felt that other businesses on the estate did have a problem. This along with the employer survey showed that employers were less concerned about parking conditions. The average survey response for the parking question was a rating of 5.6 out of 10 where 1 was no problem and 10 was a considerable problem with regard to parking. The average, however, does not display the whole picture. 33% of the employers gave a rating of 1 out of 10 to the problem while 28% gave a rating of 10 out of 10. This reason for such polarised ratings is most likely dependent on whether or not the company owns or has access to a parking lot for its employees.

### **Employee Traffic Concerns**

Part of the survey of the employees of the WLIE focused on gathering their opinions on problems in and around the WLIE with traffic and parking. We asked them to rate the severity of three items on a scale of minor, moderate, and major. The issues we asked them about were traffic pollution, traffic congestion, and parking problems. Figure 8 shows the three issues and how the employees felt about them. Traffic congestion is the issue the employees seemed to be concerned about the most. Again, this is consistent with the employer concerns. This is most likely attributed to the fact that there are only two ways into the WLIE and just one exit. According to the employees, the problem of traffic pollution and

parking seemed to be about the same. Neither issue concerned employees as much as traffic congestion.



*Figure 8: Traffic related concerns of employees of WLIE*

We could not be sure that the employers did not consider parking a problem because their own parking spaces were secure and they did not concern themselves about employee parking or if parking truly was not a problem. The survey results seem to weakly support the latter although the results are largely inconclusive: 32% of the employees surveyed felt parking was a minor problem, while 23% felt it was a moderate problem and 33% indicated it was a major problem.

The fact that 32% of the employees surveyed had minor concerns and 33% had major concerns related to this question of parking may be attributed to whether or not they have a secure place to park. It seems likely that if an employee has to park on the street, or is not guaranteed parking, they would consider it a major problem. On the other hand, if an employee had a guaranteed place to park daily, they then would consider parking to be a minor problem.



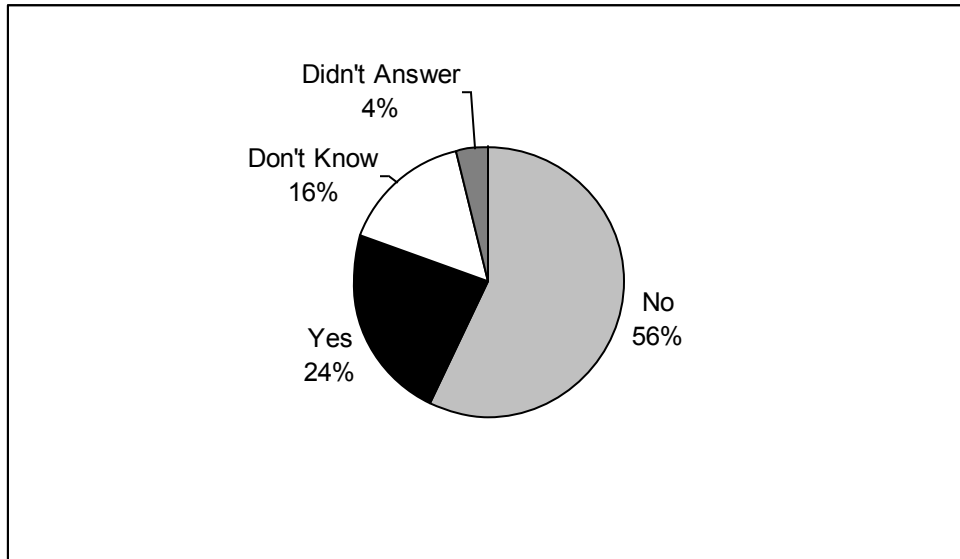
## PROSPECTIVE BRIDGE USE

To more accurately predict the amount of possible traffic over a footbridge, we analysed the data from the surveys of the employees of the WLIE. Since the employees were our primary targets for collecting information on bridge use, our estimate is based on the data collected from them regarding commuting and recreational use. We distributed 160 employee surveys and we received back 64, a 40% response rate. There are about 2600 employees working in the WLIE, so the survey covered approximately 2.5% of the population.

The data collected showed that 6.25% of the surveyed employees of the WLIE are willing to take advantage of a footbridge for commuting if constructed. Of those who expressed this willingness, 37% indicated they would bicycle and 63% indicated they would walk. If these percentages were applied over the whole of WLIE and the 2600 employees who work there, the projected use of the footbridge would be approximately 150 commuters. This number would be doubled to account for two commutes per day, in determining a daily traffic estimate.

Due to the location of Poulter Park directly across from the WLIE, a question was also asked of the employees if they would use a footbridge to access the park or the Wandle Trail during breaks in the workday. From the employees surveyed, 24% indicated they would use it for these purposes, as seen in Figure 9.

With the data from these surveys of possible footbridge users, we have estimated the use the footbridge might get if constructed. We determined that there may be as many as 150 commuters using the bridge daily as well as 625 users crossing to access recreational facilities opposite the WLIE during their breaks.



*Figure 9: Willingness of employees to use footbridge for recreation*

## POSSIBLE BRIDGE LOCATION

To determine the best location for the footbridge of the two proposed locations, we collected the opinions of the employees that would use the bridge if built, an Ecology Officer from the Borough of Merton, and an attorney representing the Eagle Trading Estate. With these opinions we formed our final recommendation regarding the bridge location.

### **Ecology Officer Meeting**

By meeting with an Ecology Officer of the Borough of Merton who could speak on behalf of the wildlife reserve, we were able to obtain information on the feasibility of the northern bridge location. This location would connect the Wandle Trail to the Bennett's Hole Local Nature Reserve (LNR), one of the largest nature reserves in Merton, that is well known for the wide variety of plants and birds it contains.

The main views expressed by the Ecology Officer were apprehensive, in terms of the environmental impact of the bridge and of its users. While the reserve currently has trails running through it, they are rarely used, and the construction of a bridge would increase traffic through the area. An increase in pedestrian traffic through the reserve raised fears of

increased disturbance to the vegetation and wildlife in the area, due to litter and noise. Maintenance of the area would have to be increased, including litter collection and vegetation pruning and trimming. The trail itself would also need work done in order to accommodate the increase in traffic. As it is now, the trail is too narrow and muddy to take on the amount of traffic we have predicted it might have.

Another concern that was expressed was the environmental impact of the bridge itself. The spot chosen for the bridge is a breeding ground for several types of birds that would be disturbed by the construction of a footbridge there. If this location was chosen, a full environmental impact study would need to be carried out that could determine the effect of the bridge on the river and land around it.

The Ecology Officer, although not dismissing the possibility of installing a bridge at this location, did not feel that it would be a beneficial option as it does not provide direct access to the estate and it would disrupt the local ecosystem. He did offer an alternative site, further south of the southern location. This option is discussed further in the Conclusions and Recommendations chapter.

Through meeting with the Ecology Officer, we were able to gain an understanding of the concerns that the Borough has with disturbing an existing nature reserve. While there are no laws prohibiting pedestrian access to the LNR, it is the belief of the representative that a bridge leading into it would increase traffic to a point that would harm the surroundings.

### **Analysis of Meeting with Eagle Trading Estate Representative**

The interview planned for a representative of the owner of the land in the Eagle Trading Estate (ETE) near the southern location instead was an email correspondence because of time and logistical issues. Because no meeting in person would have been feasible to schedule, the email served us better than a phone interview would have. We were

able to describe the problem and the site in detail and we provided a map to easily illustrate the area in question.

The correspondence was done with the lawyer speaking on behalf of Stuart Edwards Fullermoon, a real estate corporation that owns the ETE and also the land on the proposed bridge site. A copy of the email sent can be read in Appendix B. The response to the email by the lawyer can be read in Appendix D.

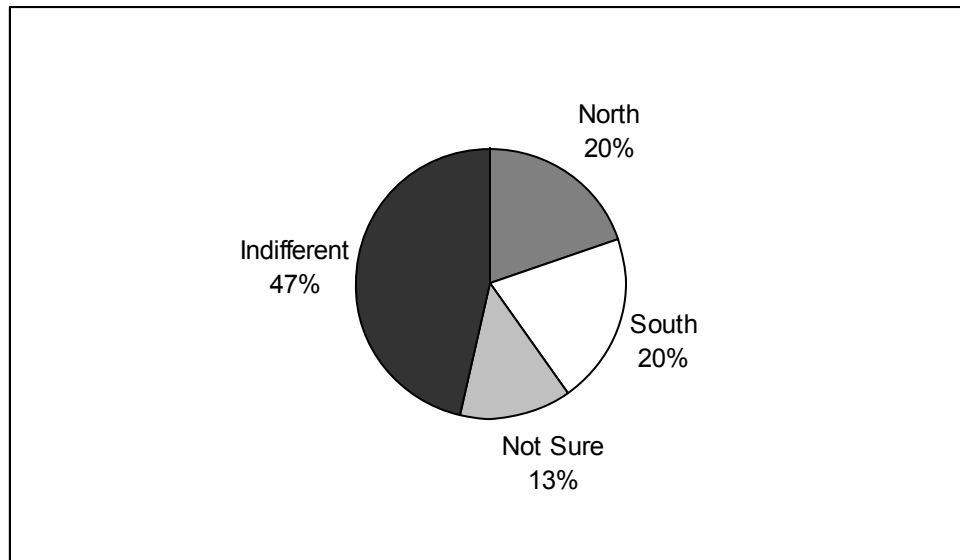
The main concern expressed was over the increase in crime he thought ETE would endure with the construction of a footbridge. All of the windows on the buildings facing the River Wandle are either “boarded or shuttered” because of the vandalism they already experience. He believes this vandalism has been facilitated by the Wandle Trail.

He also stated that he believes traffic would not be alleviated by the construction of the proposed footbridge. He acknowledges that the traffic within the WLIE is busy but not out of the ordinary. His words were that traffic is “...consistent with an active industrial estate.” He believes furthermore that employees would not use the bridge to walk or bicycle because the distance would just be too great. Because he did not foresee advantages to the project and was concerned with crime, the lawyer stated, “my clients would not... be willing to allow access over the estate.”

### **Employee Preference in Bridge Location**

From the surveys distributed to employees working in the WLIE we established the bridge location that would best suit their preferences. The map provided with the survey indicated the two proposed locations, and they were asked to indicate which they would prefer. We took into account only the answers of employees who expressed an interest in using the proposed footbridge for either commuting or recreational purposes. The opinions of those who did not express an interest in using it were felt to be irrelevant.

The results indicate that the employees are largely indifferent to the location of the footbridge. 20% preferred the southern location while another 20% preferred the northern location. 47% expressed they were indifferent while 13% were not sure which site they would prefer. Figure 10 shows the preference of employees on bridge location.



*Figure 10: Employee preference on bridge location*

Because there was no strong preference indicated for either the southern or the northern location, this did not have a strong impact on our final recommendation. The issues with the wildlife reserve and with the privately owned land were the key factors instead because of the relative indecisiveness of the surveyed employees.

#### RELATED CONCERNS TO THE PROJECT

Some of the data we collected did not apply to any of the three categories we used to analyse our data but were still pertinent to the project. This data includes concerns expressed in our employer interviews, how familiar the employees are currently of the Wandle Trail,

and how willing employers might be to accommodate their employees whom walk or cycle to work. We also include in this section a summary of the interview with the Transport Planner.

### **Common Concerns Relating to the Footbridge**

Interviews proved to be very helpful in determining the concerns related to the construction of a footbridge. When asked about their concerns, most employers immediately responded with crime being a large concern. Four of the interviewees brought up crime within the first question being asked. When talking to employers informally, whether before an interview started or when distributing surveys, many felt strongly that an increase in crime following the construction of a footbridge could be expected. Some said there was already a great deal of crime in the area, caused primarily by the nearby youths. Some comments from the interviewees were:

“Biggest fear seems to be vandalism, we suffer quite badly... individual crime, although there has been a certain amount of other crime, people taking things out of wallets, keys and things, that would be the biggest” (Interview #1).

“... because of the walking route near us, people come up and take things and run away down the path” (Interview #9).

“Mostly dumping of things, if you were to look out into the car park, there’s two cars been dumped and a pile of rubbish and that was just last weekend, but that will happen footbridge or not... what is a concern [with the footbridge], is people coming in and taking stuff, personal property and having easy access or exit from the estate” (Interview #1).

Other concerns with the footbridge related to the issue of safety on the route. Two major concerns were the lack of lighting on the trails and fear of security for women. One of the woman employers stated that most women she had talked to felt very vulnerable walking in and around the estate, and would not walk or cycle unless accompanied by another person.

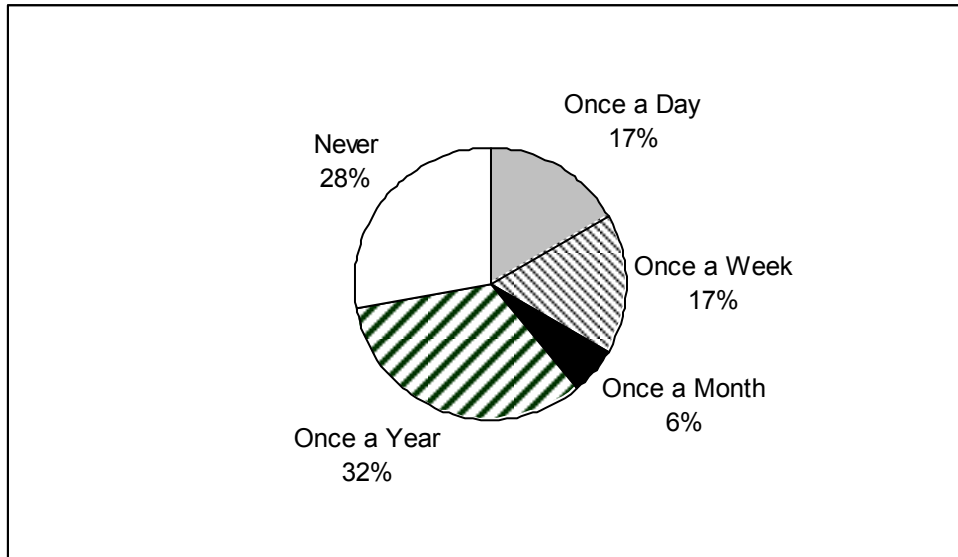
Another employer suggested that adequate lighting would be needed in order for people to feel at ease when accessing the bridge.

Another issue that was brought to our attention was that people who accessed the bridge would be faced with walking or cycling uphill from the south due to the slope of the land in the residential section. This could possibly be a deterrent to those who do not want a strenuous route on their way to work.

### **The Wandle Trail**

In order to develop a better understanding of how employees might receive the idea of using a bicycle or walking we decided to ask if they were familiar with the Wandle Trail in the first place. We thought that we might gain an understanding for bridge use by finding out how many employees that work in the WLIE have actually heard of the Wandle Trail, and of those, how many use it on a regular basis.

When asked if they were familiar with the Wandle Trail, 33% said they were familiar, 13% said they were not sure and 54% of those surveyed said they had not heard of the Wandle Trail. We asked those who did say they were familiar with the Wandle Trail to say how often they used it. The results of this question can be seen in Figure 11. Of these employees who indicated they were familiar with the Wandle Trail, 28% said they never use it and 32% said they use it just once a year. The employees who use the trail daily or those who use it once a week each comprised 17% while the employees who use it once a month accounted for 6%.



*Figure 11: Frequency of Wandle Trail use*

### **Transport Planner Comments**

Through meeting with the Transport Planner for the Borough of Merton, we were able to obtain current information on possible public transportation projects that are being considered to go into the area surrounding the WLIE. The Transport Planner stated that she is “involved in doing a green travel plan, which is what I am ... doing for the council and the rest of the borough. [We are] trying to get more bus routes in, dealing with the tram, east London line extensions, that kind of public transport, giving out information, just trying to encourage other modes to use than the car” (Appendix D). She also voiced an interest in this project when we showed her the two possible locations, and she told us that she would possibly be one of the coordinators for gaining funding for such a project.

### **Employer Cooperation**

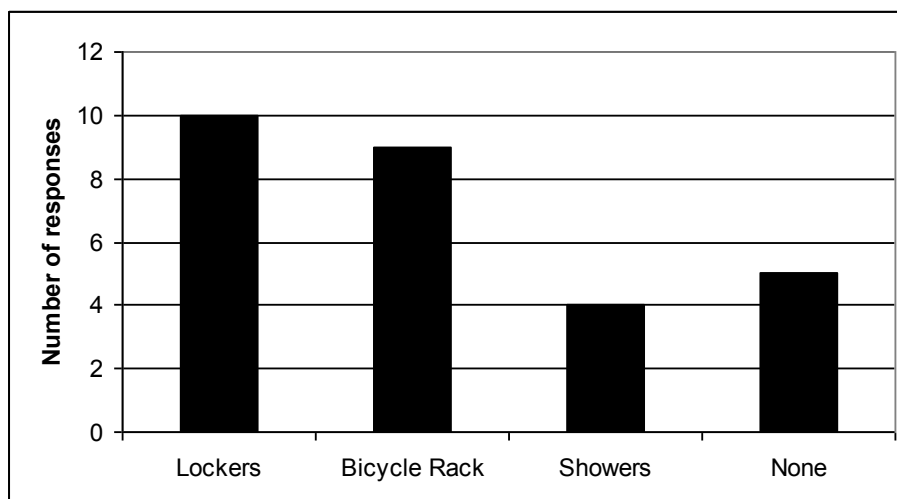
An important element to encourage employees to use non-motorised transportation to and from work is to have accommodations at their workplace for them to do so. Cyclists need safe places to keep their bicycles during the day. Pedestrians and cyclists may need lockers to keep their travelling attire in if they are unable for some reason to wear it at their



workplace. Showers may also be of benefit to those employees who have office jobs or those dealing with customers.

Since a decision to provide any of these facilities would be up to the employers, inquiring about their willingness to do so was part of our employer survey. The employers were given a list to choose from consisting of showering facilities, secure bicycle rack, lockers, none, or other. They were asked to circle any they would be willing to provide or to list the facility in the case they chose “other”.

As shown in Figure 12, the employers were equally willing to provide a secure bicycle rack as they were lockers, most likely because these are both relatively inexpensive, require little space, and would require small disturbance to business. There were more employers willing to provide showering facilities however, than one might expect given the expense that showers would require to install as well as the space they take and the disturbance of installation. From the collected surveys, 11% of the employers expressed a willingness to provide showers. The overall results from this survey indicate a strong willingness on the part of the employers to cooperate and aid their employees in walking or bicycling. 82% of all the employers interviewed expressed a willingness to provide at least one of the facilities listed.



*Figure 12: Willingness of employers to provide facilities*

## CONCLUSIONS AND RECOMMENDATIONS

After collecting and analysing data from various people associated with the Willow Lane Industrial Estate as well as the Wandle Trail, our group compiled several recommendations for Groundwork Merton. These recommendations have been prepared to assist Groundwork Merton in their forthcoming decisions involving the implementation of the proposed footbridge. The recommendations were based on the projected volume and nature of the bridge's use, as well as the best possible location for construction. Because of how the data collection methods were set up, we learned more about the footbridge than just whether or not it should be built. There are many factors to look into concerning the footbridge, and this chapter explains the recommendations we are making based on such considerations.

### CONCLUSIONS ON BRIDGE USE

As reported in the Results and Analysis section, the overall opinion on the footbridge varied between employees, employers, and the parties involved with the footbridge location. It was concluded that the overall sentiment on using the footbridge for commuting was fairly negative, as only 4 employees (6.25%) of those asked said that they would use the bridge for commuting. Out of the 2,600 total employees within the WLIE, this yields a projected 160 employees that would be willing to use the bridge for commuting. Due to the significant margin of error, this figure could be lower, or possibly higher. Combining the overall negative sentiment towards using the bridge for commuting and a median commuting distance of 5 miles, it is concluded that the bridge might not have the desired impact of decreasing traffic and automobile emissions in the WLIE area.

GWM had hoped that a footbridge in the area would encourage employees of the WLIE to walk or bicycle to work instead of driving a car for their daily commute. Only

6.25% had expressed an interest in switching to using a footbridge if built and none of the 64 employees surveyed indicated they lived in the target residential area opposite the WLIE. While there was low interest in using the footbridge for commuting, 24% of the employees surveyed indicated they would use the footbridge for recreation.

While the original intent of cutting down on traffic congestion in the WLIE does not look probable, the footbridge could serve another purpose. The majority of the bridge's predicted use would be to access recreational areas, for employees on breaks and for residents of surrounding areas. Such use would increase the quality of life of those who choose to use it, by providing access to recreational and nature areas. While this use will be significant and beneficial to the area, it does not fulfil the initial objectives of the bridge's proposal; therefore Groundwork Merton must decide whether or not to continue the project for these purposes. We feel that 24% of the total employee population is a very substantial figure, which could warrant the bridge's construction.

There are several benefits that the footbridge could provide if utilised for recreational purposes. If employees from the WLIE begin using the footbridge on a regular basis we feel there will be increased interest in Poulter Park and especially the Wandle Trail. With more interest in these open spaces, employees may become more receptive to the idea of commuting without the use of a car, accomplishing GWM's original goal.

#### CONCLUSION ON PRACTICAL BRIDGE LOCATION

Another important conclusion that was extracted from the employee surveys was the preference of bridge location. Responses for the question "Which bridge location do you prefer?" were split between the northern and southern locations equally from those who answered they would use the bridge, at 20% each. The other 60% of employees either did not respond or were indifferent, therefore either location would be equally as popular with the

users. In order to make a recommendation on the best bridge location, other data were examined that could help make a conclusive decision.

The Ecology Officer from the Borough of Merton made strong recommendations not to use the northern location for the footbridge, which would lead through Bennett's Hole nature reserve. He felt as though it would cause a disruption to the wildlife and vegetation in the reserve, and would not be a direct path into the estate. An environmental impact study would have to be performed on the area before the location could be finalised. Regarding the southern location, the attorney for Eagle Trading Estate felt that a bridge would be a detriment to his client. The existing presence of crime, and the increased accessibility that a footbridge would provide to the ETE, bring about further concerns. Due to the lack of cooperation from either party involved, it is recommended that alternatives be examined, as the two proposed sites are not popular with their respective owners.

## RECOMMENDATIONS

After drawing our conclusions from all the analysed data, we have several recommendations. We will make our final recommendation regarding the construction and best location for the footbridge as well as introduce an alternative location for the footbridge we discovered during our research.

### **Alternative Footbridge Location**

From the meeting with the Ecology Officer from the Borough of Merton about the Bennett's Hole Nature Reserve, we were shown another possible location for the footbridge. This site is south of the southern proposed site discussed earlier in the report. The alternate location can be seen in Figure 13.

A footbridge would cross as labelled in Figure 13 and a trail would have to be made as indicated. The main advantage to this site is that the land that would be required for

construction of the footbridge is already government owned land. The site is adjacent to a company called Dorling Print, on the building's south side. Very little would have to be disturbed in constructing a bridge at this site.

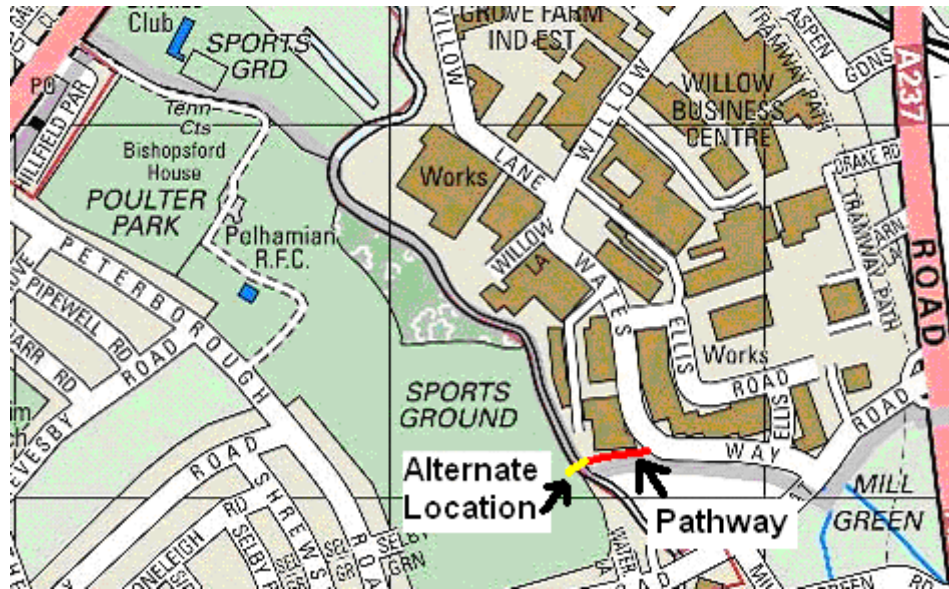


Figure 13: Alternative bridge location

Unfortunately, this site would not cut off as much time from some employees' journeys as either of the other sites would, because it is positioned very close to Middleton Road, which could be used for commuting. Of course, this statement largely depends on where the employee is coming from and to which company they are commuting. However, this bridge would be a nicer location to walk through compared to the busy Middleton Road bridge. A complete study and analysis of this alternate location would need to be completed to better understand all the pertinent information about this site, such as was presented about the other two sites in this report.

### Recommendations to Groundwork Merton

Though both responses we received regarding the two proposed locations from the representatives of each of these locations were decidedly negative, we are not recommending

GWM give up on either of these sites. Here we present ideas to GWM on how to proceed with each of these sites. The desired outcome is to change the opinions of the representatives who are currently opposed to the project.

The first course of action in persuading the parties to allow their land to be used is educating them on the project's advantages. If they can be fully convinced that the project is beneficial to the surrounding areas, they may be more willing to allow their land to be developed. While conducting interviews, we remained objective, as to collect their opinions on the footbridge. It is suggested to Groundwork Merton that they work in trying to convince the involved parties of the project's benefits. Through some persuasion, one of these two sites may allow construction, which would be preferable over finding alternative sites.

As we are recommending to Groundwork Merton that the two sites are worth further exploring, they should attempt to secure one of the two sites using necessary measures. These include compensation for developed land, recognition for co-operation, or other reparations that could secure either location's support. While neither site's representative agreed to go along with the project, the representative of Bennett's Hole was not vehemently against the project. Therefore, it is highly recommended that Groundwork Merton follow up in trying to use land within the Bennett's Hole nature reserve as the site for a pedestrian footbridge.

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## **APPENDIX A: GROUNDWORK MERTON**

Groundwork Merton is an environmental regeneration charity organisation. It is one of 45 trusts of the larger Groundwork UK organisation. Groundwork UK employs over 1500 people throughout the United Kingdom. They have a budget of approximately £76M a year. Their funding comes from many different areas including the UK Government and National Assemblies, the Private sector, local authorities, the European Union, the National Lottery, and other regeneration funding. This money goes towards physical environmental improvements, education and community involvement, as well as the management and development of the organisation and fund-raising.

Groundwork Merton was founded in 1996 in order to oversee the improvement of the quality of the local environment as well as helping the community. Their support comes from the public, private, and voluntary sectors of the area, and their funding comes from the local governments, businesses, and charitable foundations. They are staffed by 12 full time employees as well as having a large support group of volunteers throughout the surrounding communities.

## **APPENDIX B: DATA COLLECTION GUIDES**

Contained in this appendix are the surveys and interview guides that were utilised in collecting data for analysis. They include the:

- Employee Survey Form
- Employer Survey Form
- Traffic Survey Form
- Employer Interview Guide
- Ecology Officer Interview Guide
- Eagle Trading Estate E-mail Interview
- Transport Planner Interview Guide

## EMPLOYEE SURVEY FORM

### Conducted by Worcester Polytechnic Institute, Worcester, Massachusetts, USA

This survey is intended for purposes of transportation analysis and environmental studies. Answers to questions will be kept in strict confidentiality, and will not be reported to any commercial organisations. This survey should take less than 5 min. to complete.

Please circle answers where appropriate and print answers otherwise, no script please.

1. a) Approximately how many miles do you live from your place of employment?

\_\_\_\_\_miles      Don't Know

b) Road or Intersection nearest your home \_\_\_\_\_

2. What mode of transportation do you take to get to work?

Automobile      Public Transportation      Walking      Bicycling

Other \_\_\_\_\_

3. Approximately how much do you spend per month on commuting to work?

£ 0-10      £ 10-20      £ 20-50      £ 50-100      £ 100+      Don't Know

4. Indicate the severity of the following issues:

Traffic pollution:    \_\_\_ Minor      \_\_\_ Moderate    \_\_\_ Major      \_\_\_ Not Sure

Traffic congestion: \_\_\_ Minor      \_\_\_ Moderate    \_\_\_ Major      \_\_\_ Not Sure

Parking problems: \_\_\_ Minor      \_\_\_ Moderate    \_\_\_ Major      \_\_\_ Not Sure

5. a) Are you familiar with the Wandle Trail?

Yes      No      Not Sure

b) If yes, how often do you use the Wandle Trail?

Once a Day      Once a Week      Once a Month      Once a Year      Never

Don't know      Other \_\_\_\_\_

6. Please illustrate your transportation route on the back of this sheet-

7. a) The map shows the area of two proposed footbridges. If one of the footbridges illustrated was constructed, would you walk or bicycle to work?

Yes No Don't Know

b) If yes, which?

Walk Bicycle Both Other (please specify) \_\_\_\_\_

c) Approximately how many miles would you walk or bicycle to work?

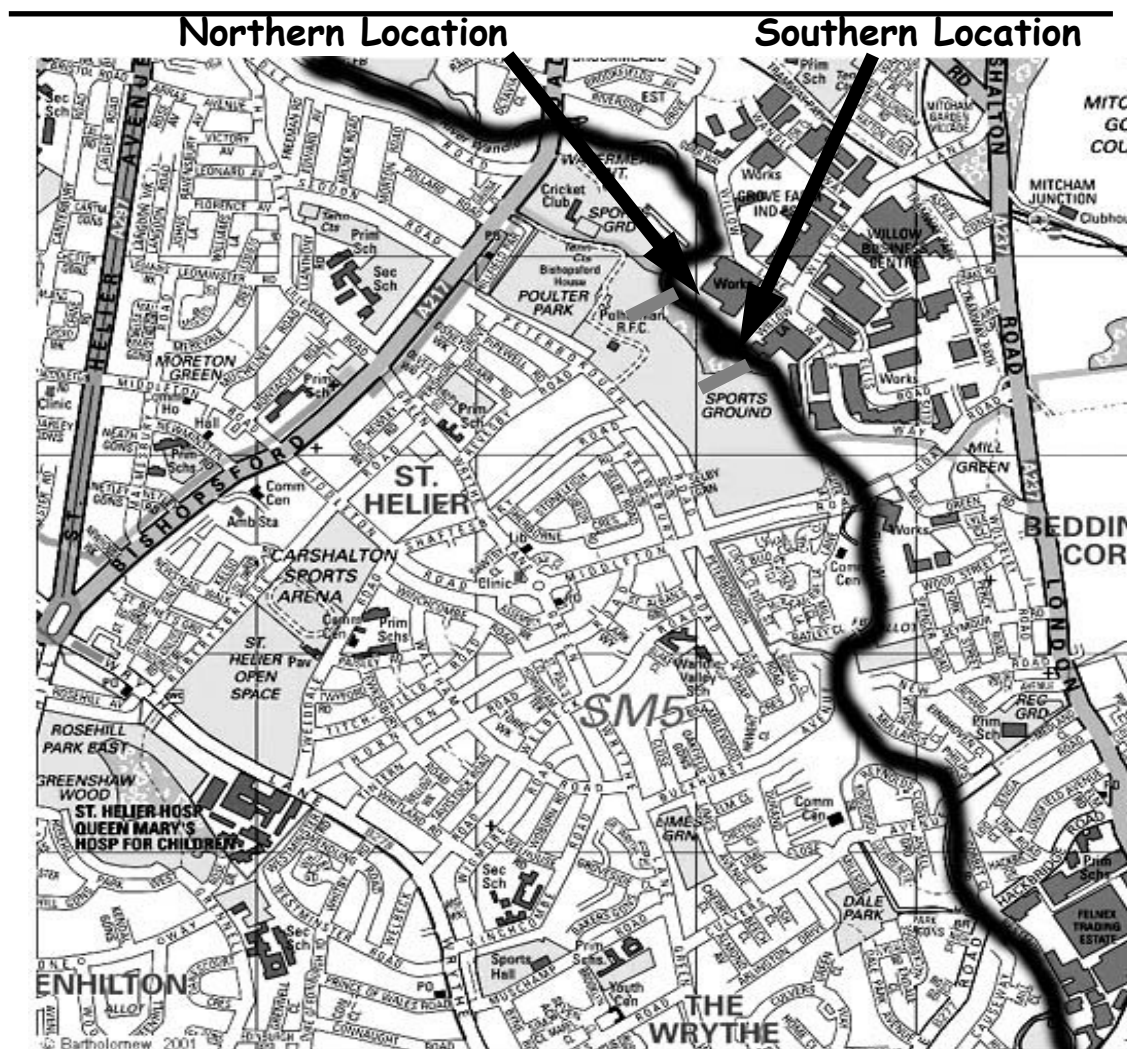
\_\_\_\_\_ miles Don't know

8. Given the two locations for the bridge, which do you prefer?

North Location South Location Not Sure Indifferent

9. Would you use the bridge to access recreation areas such as Poulter Park and the Wandle Trail during any breaks you have in the workday?

Yes No Don't Know



## EMPLOYER SURVEY FORM

### Conducted by Worcester Polytechnic Institute, Worcester, Massachusetts, USA

This survey is intended for purposes of transportation analysis and environmental studies. Answers to questions will be kept in strict confidentiality, and will not be reported to any commercial organisations. Your name or contact information will not be distributed in any way and will be kept in strict confidentiality. Your name will in no way be associated with the answers given below.

Please fill out completely, clearly circling answers or print answers if applicable. We request you not use script.

1. On a scale of 1 to 10, how much room for improvement do you feel could be made on employee parking conditions, one being the least and ten being the most room for improvement?

|                         |                           |                           |
|-------------------------|---------------------------|---------------------------|
| No room for improvement | Some room for improvement | Much room for improvement |
| 1      2      3         | 4      5      6           | 7      8      9      10   |
| Don't know              |                           |                           |

2. Would your company benefit from having fewer employee cars on the property and surrounding areas?

Yes    No    Don't Know

3. How would you rate traffic in the immediate area surrounding Willow Lane on a scale of 1 to 10, 1 being no problem and 10 being a considerable problem?

|                 |                 |                         |
|-----------------|-----------------|-------------------------|
| No problem      | Some problem    | Considerable problem    |
| 1      2      3 | 4      5      6 | 7      8      9      10 |
| Don't know      |                 |                         |

Would you be willing to provide any of the following facilities to employees who choose to bicycle or walk to work? Please circle all that apply-

Secure bicycle rack                      Lockers

Showering facilities                      None

Other (please specify) \_\_\_\_\_

TRAFFIC SURVEY FORM

| Site 2 - London Road         |                       |                          |                              |                       |                          |
|------------------------------|-----------------------|--------------------------|------------------------------|-----------------------|--------------------------|
| Shift One                    |                       |                          | Shift Two                    |                       |                          |
| Time Intervals               | # of Private Vehicles | # of Commercial Vehicles | Time Intervals               | # of Private Vehicles | # of Commercial Vehicles |
| 7:00 - 7:15                  |                       |                          | 1:00 - 1:15                  |                       |                          |
| 7:15 - 7:30                  |                       |                          | 1:15 - 1:30                  |                       |                          |
| 7:30 - 7:45                  |                       |                          | 1:30 - 1:45                  |                       |                          |
| 7:45 - 8:00                  |                       |                          | 1:45 - 2:00                  |                       |                          |
| 8:00 - 8:15                  |                       |                          | 2:00 - 2:15                  |                       |                          |
| 8:15 - 8:30                  |                       |                          | 2:15 - 2:30                  |                       |                          |
| 8:30 - 8:45                  |                       |                          | 2:30 - 2:45                  |                       |                          |
| 8:45 - 9:00                  |                       |                          | 2:45 - 3:00                  |                       |                          |
| 9:00 - 9:15                  |                       |                          | 3:00 - 3:15                  |                       |                          |
| 9:15 - 9:30                  |                       |                          | 3:15 - 3:30                  |                       |                          |
| 9:30 - 9:45                  |                       |                          | 3:30 - 3:45                  |                       |                          |
| 9:45 - 10:00                 |                       |                          | 3:45 - 4:00                  |                       |                          |
| 10:00 - 10:15                |                       |                          | 4:00 - 4:15                  |                       |                          |
| 10:15 - 10:30                |                       |                          | 4:15 - 4:30                  |                       |                          |
| 10:30 - 10:45                |                       |                          | 4:30 - 4:45                  |                       |                          |
| 10:45 - 11:00                |                       |                          | 4:45 - 5:00                  |                       |                          |
| 11:00 - 11:15                |                       |                          | 5:00 - 5:15                  |                       |                          |
| 11:15 - 11:30                |                       |                          | 5:15 - 5:30                  |                       |                          |
| 11:30 - 11:45                |                       |                          | 5:30 - 5:45                  |                       |                          |
| 11:45 - 12:00                |                       |                          | 5:45 - 6:00                  |                       |                          |
| 12:00 - 12:15                |                       |                          | 6:00 - 6:15                  |                       |                          |
| 12:15 - 12:30                |                       |                          | 6:15 - 6:30                  |                       |                          |
| 12:30 - 12:45                |                       |                          | 6:30 - 6:45                  |                       |                          |
| 12:45 - 1:00                 |                       |                          | 6:45 - 7:00                  |                       |                          |
| Site 1 - Middleton Road      |                       |                          |                              |                       |                          |
| Shift One - January 29, 2003 |                       |                          | Shift Two - January 31, 2003 |                       |                          |
| Time Intervals               | # of Private Vehicles | # of Commercial Vehicles | Time Intervals               | # of Private Vehicles | # of Commercial Vehicles |
| 7:00 - 7:15                  |                       |                          | 1:00 - 1:15                  |                       |                          |
| 7:15 - 7:30                  |                       |                          | 1:15 - 1:30                  |                       |                          |
| 7:30 - 7:45                  |                       |                          | 1:30 - 1:45                  |                       |                          |
| 7:45 - 8:00                  |                       |                          | 1:45 - 2:00                  |                       |                          |
| 8:00 - 8:15                  |                       |                          | 2:00 - 2:15                  |                       |                          |
| 8:15 - 8:30                  |                       |                          | 2:15 - 2:30                  |                       |                          |
| 8:30 - 8:45                  |                       |                          | 2:30 - 2:45                  |                       |                          |
| 8:45 - 9:00                  |                       |                          | 2:45 - 3:00                  |                       |                          |
| 9:00 - 9:15                  |                       |                          | 3:00 - 3:15                  |                       |                          |
| 9:15 - 9:30                  |                       |                          | 3:15 - 3:30                  |                       |                          |
| 9:30 - 9:45                  |                       |                          | 3:30 - 3:45                  |                       |                          |
| 9:45 - 10:00                 |                       |                          | 3:45 - 4:00                  |                       |                          |
| 10:00 - 10:15                |                       |                          | 4:00 - 4:15                  |                       |                          |
| 10:15 - 10:30                |                       |                          | 4:15 - 4:30                  |                       |                          |
| 10:30 - 10:45                |                       |                          | 4:30 - 4:45                  |                       |                          |
| 10:45 - 11:00                |                       |                          | 4:45 - 5:00                  |                       |                          |
| 11:00 - 11:15                |                       |                          | 5:00 - 5:15                  |                       |                          |
| 11:15 - 11:30                |                       |                          | 5:15 - 5:30                  |                       |                          |
| 11:30 - 11:45                |                       |                          | 5:30 - 5:45                  |                       |                          |
| 11:45 - 12:00                |                       |                          | 5:45 - 6:00                  |                       |                          |
| 12:00 - 12:15                |                       |                          | 6:00 - 6:15                  |                       |                          |
| 12:15 - 12:30                |                       |                          | 6:15 - 6:30                  |                       |                          |
| 12:30 - 12:45                |                       |                          | 6:30 - 6:45                  |                       |                          |
| 12:45 - 1:00                 |                       |                          | 6:45 - 7:00                  |                       |                          |

## EMPLOYER INTERVIEW GUIDE

**Introduction:** We are a team from Worcester Polytechnic Institute in the U.S. performing a Needs Analysis for Groundwork Merton. We request to tape record the interview. Please understand you are under no obligation to answer any of these questions and you may terminate the interview at any time for any reason. Should you request us to exit the premises for any reason, we shall comply. The information you provide will in no way be associated with your name or company and will only be used for educational and research purposes. By signing below you understand to answer questions truthfully and to the best of your knowledge and you give the interviewers full permission to tape record the interview. Do you have any questions regarding the terms of the Interview?

Please print your name here:

---

Please sign and date your name here:

---

What are your thoughts on the current parking situation in the Willow Lane Industrial Estate?  
Is there room for improvement?

Could business benefit in general from less traffic and parked cars around the area of the Willow Lane Industrial Estate?

Are there any changes currently being implemented to improve the parking situation?

What are your thoughts on the volume and flow of traffic, especially during rush hours, on the roads surrounding Willow Lane?

What rough percentage of your employees would be able to access the bridge for the daily commute (live on the opposite bank of the River Wandle)?

Would you benefit by implement a program encouraging employees to walk or bicycle to work, facilitated by the addition of the proposed bridge?

## ECOLOGY OFFICER INTERVIEW GUIDE

### **Distribute terms of interview to sign-**

#### **Preliminary Discussion**

1. Give a background on our group, including our goals and objectives.
2. Explain the footbridge project, the two proposed locations, and their pros and cons.
3. Explain our preliminary results

#### **Interview questions**

1. What is the exact nature of the group? Are you a government organisation?  
Private/non profit? How does the group function and what type of control does it have with the land?
2. Are there any laws protecting the wildlife reserve that would explicitly prohibit such a project?
3. What are your feelings on the installation of a footbridge in the proposed area?
4. Can you elaborate on any possible solutions to said problems?

What are your general feelings toward the project of the footbridge and the regeneration of the Wandle Trail?



## EAGLE TRADING ESTATE E-MAIL INTERVIEW

We spoke on the phone last week on Wednesday, February 12. We are a team of students from Worcester Polytechnic Institute, a college located in Massachusetts in the United States. We are working with Groundwork Merton (GWM), a local land regeneration charity that is part of a bigger organisation, Groundwork UK. GWM has proposed to construct a footbridge over the River Wandle in the hope of lessening motorised traffic and easing the number of cars in the Willow Lane Industrial Estate. We are conducting a feasibility study for GWM to determine factors such as the number of people that might use such a footbridge if constructed, where the best place is to construct it, and what kind of impact it might have on the traffic in and around WLIE.

To more accurately describe the area of concern, a map has been provided at the end of this email [the email was in colour even though this printing is not]. WLIE is marked as the "Willow Business Centre" and other points of concern have been drawn in on the map. The map is not very accurate but it should be enough to give a rough idea of the area in concern. We labelled the Eagle Trading Estate as "ETE" and can be found by following the intersection of Willow Lane and Wates Way. The two proposed locations for the footbridge are indicated as yellow lines across the River Wandle. A portion of the Wandle Trail on the opposite side of WLIE is indicated as well as a trail running through the Bennett's Hole nature reserve on the same side of WLIE. A paved drive extending off Willow Lane in ETE has been indicated in red which we observed when we visited the site. The drive is situated between buildings and ends in a car park immediately adjacent to the River Wandle. There is a roughly two meter wide strip of lawn separating the car park from the river.

After discussing the Bennett's Hole site with Mr. ----- who works for Leisure Services, we have determined there could be a number of difficulties with this site. The spot where the bridge would be built is a fertile bird breeding ground which is feared may be greatly disturbed with the addition of a footbridge. There would also be several maintenance problems associated with increased pedestrian and cycling traffic using the trails through Bennett's Hole to get to WLIE. Our recommendation to GWM has been deemed improbable at best for this site.

We request now that you provide us with some information regarding the southern proposed site directly affecting the Eagle Trading Estate which you represent. We appreciate any time you set aside to answering these questions as our final report will be given to GWM as well as passed on to the Merton Council. Your name will not be printed in the report nor will the report or any information therein be distributed to any commercial organisations:

- 1) Do you feel vehicle traffic within WLIE is too heavy and that there are benefits to having a footbridge into the area to increase access?
- 2) What would be your concerns, if any, with having footbridge traffic (cyclists and pedestrians) going through Eagle Trading Estate to access WLIE?
- 3) Would there be any way for GWM to use the land needed for the footbridge construction and use? This would most likely take up one or two parking spaces as well as a small portion of the lawn between the car park and the River Wandle.
- 4) Do you see any alternatives to this and the Bennett's Hole site?

We thank you for your time in answering these questions. Your information is vital to our final report and your answers will be used in detail. If you have any questions regarding the email or anything else, feel free to contact us at the Groundwork Merton offices

tel: 020 8540 5533

fax: 020 8540 4451

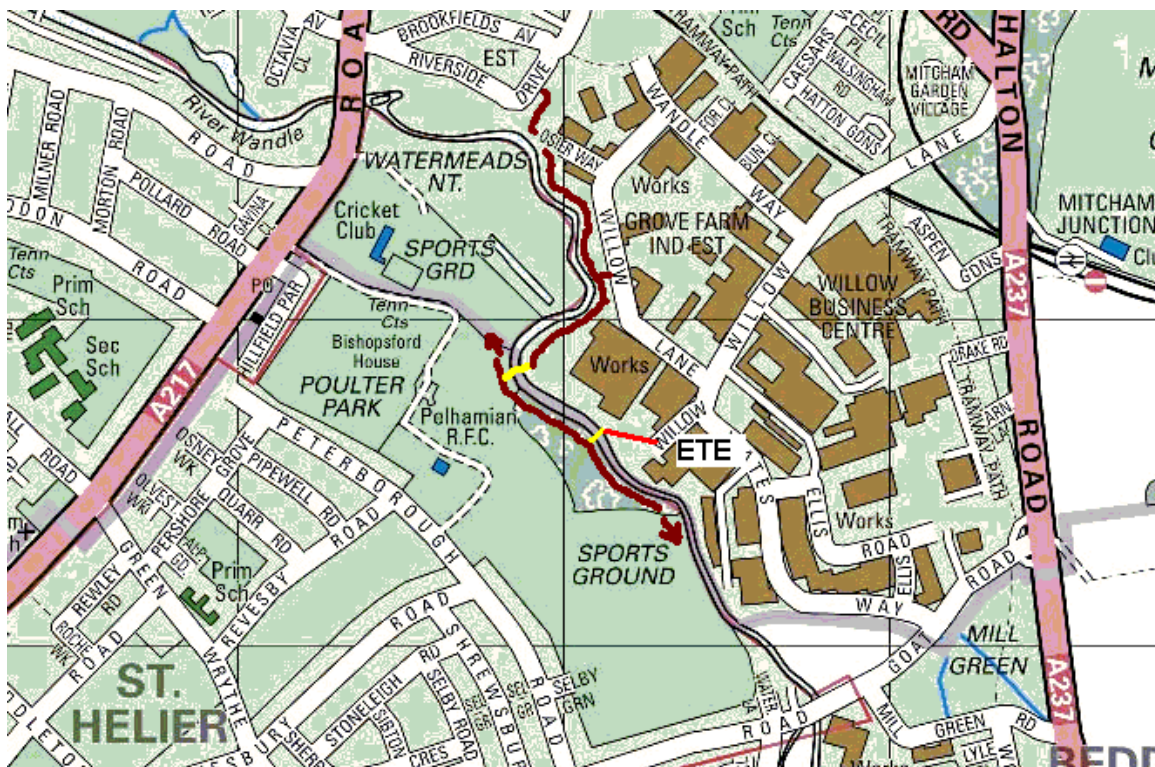
We will be in the offices Monday from 9.30 to 13.00 and Tuesday thru Friday from 9.30 to 16.30.

Sincerely,

Christina Byrne, Keith Liadis, Greg Mercier, Marc Moseley

Worcester Polytechnic Institute

Working in conjunction with Groundwork Merton



## TRANSPORT PLANNER INTERVIEW GUIDE

Distribute terms of interview to sign

### **Preliminary Discussion**

1. Give a background on our group, including our goals and objectives.
2. Explain the footbridge project, the two proposed locations, and their pros and cons.
3. Explain our preliminary results

### **Interview questions**

1. What is your job title? What is the exact nature of the group? What are the purpose and main goals of your organisation?
2. What are your feelings on the installation of a footbridge in the proposed area?
3. Do you think that through past projects you have seen that this footbridge may be a benefit to the area?
4. Can you elaborate on any possible solutions to said problems?
5. What are your general feelings toward the project of the footbridge and the regeneration of the Wandle Trail?

## **APPENDIX C: DATABASE OF COMPANIES IN WLIE**

This appendix includes the database that was supplied by Groundwork Merton of the companies within the Willow Lane Industrial Estate. It includes management contact names, who were the representatives of the companies for the employer interviews.

| Company Name                      | Address                       | Address (cont.)               | Telephone     | Title | First  | Last Name | Business Type                                |
|-----------------------------------|-------------------------------|-------------------------------|---------------|-------|--------|-----------|--|
| AAR INTERNATIONAL INCORPORATED    | 35 Willow Lane                |                               | 020 8640 2225 | Mr    | Tony   | Wall      | CAR, BIKE, VAN SALES/REPAIRS                 |
| ABBEY SURGICAL LTD                | 31 Wates Way                  |                               | 020 8640 2971 | Mr    | K      | Berry     | Non-automotive repair RETAIL                 |
| ABOX (MITCHAM) LTD                | Unit 4A, 39 Willow Lane       | Willow Lane Industrial Estate | 020 8687 0018 | Mr    | John   | Webber    | POSTAL/COURIER/DISTRIBUTION/PACKAGING        |
| ABS LITHO LTD                     | 42 Wates Way                  |                               | 020 8685 0440 | Mr    | Paul   | Richards  | PUBLISHING/PRINTING                          |
| ADDIFAB SERVICES                  | Unit 14, Eagle Trading Estate | 29 Willow Lane                | 020 8687 0547 | Mr    | Nigel  | Gammon    | Wood/Wood Products MANUFACTURER              |
| ALECTO LTD                        | Eagle Trading Estate          | 29 Willow Lane                | 020 8241 2545 |       |        |           |  |
| ALLEN CONCRETE LTD                | 38 Willow Lane                |                               | 020 8648 3847 | Mr    | Roy    | Topp      | General BUILDING SECTOR SERVICES             |
| ALLOWAY TIMBER (SOUTHERN) LIMITED | Forval Close                  | Wandle Way                    | 020 8640 5544 | Mr    | Colin  | Lawless   | General BUILDING SECTOR SERVICES             |
| AQUA DYNAMIC LTD                  | 46 Willow Lane                |                               | 020 8640 9702 | Mr    | Tony   | Cummins   | CONSTRUCTION/PROPERTY DEVELOPMENT            |
| AQUATREAT GROUP LTD               | Stanley House                 | 9 Bunting Close               | 020 8401 8391 | Mrs   | B      | Clearey   | Architects/Engineering/Surveyors CONSULTANCY |
| ARNOLD SELF                       | 10 Wandle Way                 |                               | 020 8401 8886 | Mr    | Andrew | Self      | TRANSPORT SERVICES                           |
| ASK PACKAGING LTD                 | 23 Wates Way                  |                               | 020 8685 1818 | Mr    | Allan  | Parish    | POSTAL/COURIER/DISTRIBUTION/PACKAGING        |
| ASSOCIATED MOTOR SERVICES         | Unit 4A, Wandle Way           | Willow Lane Estate            | 020 8640 5050 | Mr    | N      | Gower     | CAR, BIKE, VAN SALES/REPAIRS                 |
| ATB GAS                           | Unit 38                       | Eagle Trading Estate          | 020 8646 1471 | Mr    | Brian  | Merrett   | UTILITIES                                    |
| AUTOBODY DIMENSIONS LIMITED       | Unit 1, 10 Wandle Way         |                               | 020 8646 8743 | Mr    |        | Tredea    | TRANSPORT SERVICES                           |
| B & D CLAYS & CHEMICALS           | 10 Wandle Way                 | Willow Lane Industrial Estate | 020 8640 9221 | Mr    | Jim    | Trotter   | Chemicals MANUFACTURER                       |
| B NEBBETT & SON                   | Ellis Road                    | Willow Lane Industrial Estate | 020 8648 7379 | Mr    | S      | Nebbett   | Environmental CONSULTANCY/SERVICES           |
| BEST BUY WINDOWS                  | 38 Wates Way                  | Willow Lane Industrial Estate | 020 8646 0380 | Mr    | Andrew | Boyce     | Other MANUFACTURER                           |
| BETTER PRESENTATION GROUP         | 34 Wates Way                  |                               | 020 8669 2333 | Mrs   | F M R  | Kennard   | Pulp/Paper/Paper Products MANUFACTURER       |
| BOXALL ENGINEERING LTD            | Unit 50                       | Grace Business Centre         | 020 8648 8468 | Mrs   | Janet  | Hamilton  | Chemicals MANUFACTURER                       |
| BRITISH BAKERIES SEBON LTD        | 15 Ellis Rd                   |                               | 020 8646 5220 | Mr    | Philip | Green     | CATERING SERVICES                            |

| Company Name                       | Address                       | Address (cont.)               | Telephone     | Title | First    | Last Name | Business Type                                      |
|------------------------------------|-------------------------------|-------------------------------|---------------|-------|----------|-----------|--|
| BROOKSIDE LTD                      | Unit 3, Wandle Way            |                               | 020 8640 3378 | Mr    | John     | Baker     | CLEANING<br>Industrial/Office/Dry/Household        |
| BROVEY PARK                        | 9 Stanley House               | Bunting Close                 | 020 8401 8390 |       |          |           |  |
| BROWNLEY ENGINEERING               | 4 Osier Way                   | Willow Lane Trading Estate    | 020 8640 1617 | Mr    |          | Fraser    | Machinery/Equipment/Metal Products<br>MANUFACTURER |
| BVL SCAFFOLDING COMPANY            | Abbey Industrial Estate       | 24 Willow Lane                | 020 8640 5500 | Mr    | Roy      | Hunt      | CONSTRUCTION/PROPERTY<br>DEVELOPMENT               |
| C & C PRODUCTS                     | 55 Willow Lane                |                               | 020 8685 9895 | Mr    | C        | Crowhurst | Plumbing Services BUILDING<br>SECTOR SERVICES      |
| CHELSEA CARPET CO LTD              | Unit 2                        | Capital Industrial Park       | 020 8687 2889 | Mr    | Larry    | Byrne     | WHOLESALE TRADE                                    |
| CIPA LIMITED                       | 10 Wandle Way                 |                               | 020 8687 1551 | Mr    | John     | Engall    | CONSTRUCTION/PROPERTY<br>DEVELOPMENT               |
| CONCRETE REPAIRS LTD               | Cathite House                 | 23A Willow Lane               | 020 8288 4848 | Mr    | Tony     | Rimoldi   | General BUILDING SECTOR<br>SERVICES                |
| CREATOR CONSTRUCTIONS LIMITED      | Unit 1, Willow Centre         | 15-19 Willow Lane             | 020 8687 3800 | Mr    | Giles    | Elliott   | CONSTRUCTION/PROPERTY<br>DEVELOPMENT               |
| CROYDON SCAFFOLDING & CRADLES LTD  | 1 Willow Lane                 |                               | 020 8640 4959 | Mr    | G        | Sidwell   | MACHINE/EQUIPMENT HIRE                             |
| CS COLOUR PROOFING                 | Unit 1A                       | The Connaught Business Centre | 020 8640 9921 | Mr    | Stephen  | Butler    | PUBLISHING/PRINTING                                |
| CTP PLASRO LIMITED                 | 47 Wates Way                  |                               | 020 8685 0500 | Mr    | Patrick  | Ward      | Machinery/Equipment/Metal Products<br>MANUFACTURER |
| DAKOTA DRAWING OFFICE SERVICES LTD | Units 3-4                     | Willow Lane Industrial Estate | 020 8640 9527 | Mr    | Jim      | Morson    | MEDIA SERVICES/GRAPHIC<br>DESIGN                   |
| DAPPA M R P FLOORING               | Unit 3                        | Eagle Trading Estate          | 020 8646 4232 | Mr    | Martin   | Patey     | General BUILDING SECTOR<br>SERVICES                |
| DARREN'S DIES                      | 34 Willow Lane                |                               | 020 8640 4449 | Mr    | Darren   | Bryan     | Other MANUFACTURER                                 |
| DAVIES TURNER WORLDWIDE MOVERS LTD | 49 Wates Way                  |                               | 020 7622 4393 | Mr    | Nicholas | Kerr      | TRANSPORT SERVICES                                 |
| DEADMAN WASTE PAPER                | Wandle Way                    | Willow Lane                   | 020 8644 4845 | Mr    | A L      | Deadman   | MISCELLANEOUS                                      |
| DELAHAYE MOVING LIMITED            | 27 Wates Way                  |                               | 020 8687 0400 | Mrs   |          | Delahaye  | TRANSPORT SERVICES                                 |
| DENNIS EAGLE LIMITED               | 50 Willow Lane                |                               | 020 8240 3400 | Mr    | Trevor   | Gardiner  | TRANSPORT SERVICES                                 |
| DIRECT CHEMICALS & DETERGENTS      | Unit 17, Eagle Trading Estate | 29 Willow Lane                | 020 8640 8099 | Mr    | David    | Wright    | Chemicals MANUFACTURER                             |
| DISPLAY DEVELOPMENTS LTD           | Eagle Trading Estate          | 29 Willow Lane                | 020 8640 9415 | Mr    | David    | Ralph     | Other MANUFACTURER                                 |

| Company Name                         | Address                          | Address (cont.)               | Telephone     | Title | First   | Last Name | Business Type                                   |
|--------------------------------------|----------------------------------|-------------------------------|---------------|-------|---------|-----------|---|
| DIVERSITY FOODS LIMITED              | 10 Wandle Way                    |                               | 020 8646 0805 | Mr    | Trevor  | Warner    | CATERING SERVICES                               |
| DJG EXHIBITION FREIGHT SERVICES LTD  | Unit 34, Grace Business Centre   | 23 Willow Lane                | 020 8646 4200 | Mr    | Dave    | Gardner   | REMOVALS/STORAGE                                |
| DNS AUTOS                            | Eagle Trading Estate             | 29 Willow Lane                | 020 8640 3133 |       |         |           |   |
| DORLING PRINT LTD                    | 44 Wates Way                     |                               | 020 8685 9399 | Mr    | Eric    | Johnston  | PUBLISHING/PRINTING                             |
| DRD COMMUNICATIONS PLC               | 21A Willow Lane                  |                               | 020 8288 1234 | Mr    | Dave    | Dadds     | NEWS/COMMUNICATIONS                             |
| E S HARVERSON & SON TRANSPORT LTD    | Unit 3                           | Abbey Industrial Estate       | 020 8648 5553 | Mr    | Bryan   | Harverson | Industrial Goods RETAIL                         |
| ECONOMOS UK LIMITED                  | 22 Willow Lane                   |                               | 020 8648 0252 | Mr    | Rowan   | Carpenter | Machinery/Equipment/Metal Products MANUFACTURER |
| EF & CM OUTDOOR                      | Unit 3, 39 Willow Lane           |                               | 020 8646 8196 | Mr    | Ted     | Fountain  | MEDIA SERVICES/GRAPHIC DESIGN                   |
| ELMORE PLANT SERVICES LTD            | Ellis Rd                         |                               | 020 8648 7070 |       |         |           |   |
| ESTEBAN ENGINEERING                  | 33 Wates Way                     | Willow Lane Industrial Estate | 020 8640 9000 | Mr    | John    | Penalver  | Machinery/Equipment/Metal Products MANUFACTURER |
| FARMILOE & FARMILOE (WBS) LTD        | 28 Willow Lane                   |                               | 020 8685 9444 | Mr    | B R     | Deacon    | WHOLESALE TRADE                                 |
| FAST TRACK REPAIRS LTD               | 8 Wandle Way                     |                               | 020 8241 7700 | Mr    | M       | Fowler    | CAR, BIKE, VAN SALES/REPAIRS                    |
| FIDA ENGINEERING LTD                 | 2B Willow Lane                   |                               | 020 8640 7173 | Mr    | B       | Fish      | Machinery/Equipment/Metal Products MANUFACTURER |
| FOCAL SIGNS LTD                      | 12 Wandle Way                    |                               | 020 8687 5300 | Mr    | Mark    | Padberg   | Wood/Wood Products MANUFACTURER                 |
| FORCE ADMIT SERVICES LTD             | 44 Wates Way                     |                               | 020 8685 9191 | Mr    | Michael | Joyce     | PUBLISHING/PRINTING                             |
| FORESTDALE BUSINESS SERVICES LTD     | Unit 3                           | Wandle Way                    | 020 8640 3340 | Ms    | John    | Baker     | WHOLESALE TRADE                                 |
| FOUNDATION & BUILDING SUPPLY COMPANY | Unit 2-4 Abbey Industrial Estate | 24 Willow Lane                | 020 8687 1896 | Mr    | John    | Wallace   | CONSTRUCTION/PROPERTY DEVELOPMENT               |
| GLOBAL PRECISION ENGINEERING CO      | 7-8 Osier Way                    |                               | 020 8640 1777 | Mr    | A       | Baldrick  | Precision Engineers MANUFACTURING               |
| GRANDSTAND CAFÉ                      | 32 Willow Lane                   |                               | 020 8640 6602 | Mr    | R       | Collier   | RESTAURANTS                                     |
| GRAYS (BOOKBINDERS) LTD              | Unit 5                           | Capital Industrial Park       | 020 8640 1449 | Mr    | Barry   | Upton     | Pulp/Paper/Paper Products MANUFACTURER          |
| GW STONE (CARTONS)                   | 23 Wates Way                     |                               | 020 8646 1212 | Mrs   | Sandra  | Smith     | Pulp/Paper/Paper Products MANUFACTURER          |
| HANDS ON INTERACTIVE LTD             | Unit 3, 1-11 Willow LN           |                               | 020 8715 1111 | Mr    | Nick    | Ford      | Other MANUFACTURER                              |

| Company Name                               | Address                        | Address (cont.)               | Telephone     | Title | First   | Last Name | Business Type                               |
|--|--------------------------------|-------------------------------|---------------|-------|---------|-----------|---|
| HEWDEN PLANT HIRE                          | Ellis Road                     |                               | 020 8648 7070 | Mr    | Peter   | Austin    | TRANSPORT RENTAL                            |
| HSS HIRE SERVICE GROUP PLC                 | 25 Willow Lane                 |                               | 020 8685 9900 | Mr    | Peter   | Jones     | TRANSPORT RENTAL                            |
| HUMPHRIES VIDEO SERVICES LTD               | Unit 2                         | Willow Business Centre        | 020 8648 6111 | Mr    | David   | Brown     | MEDIA SERVICES/GRAPHIC DESIGN               |
| IAN WILLIAMS LTD                           | Grace Business Centre          | 23 Willow Lane                | 020 8640 5656 |       |         |           |   |
| J & A PLATING LTD                          | 5 Wandle Way                   |                               | 020 8640 1272 | Mr    | G       | Mackey    | Other RETAIL                                |
| J & R ENGINEERING                          | Unit 40                        | 29 Willow Lane                | 020 8640 9028 | Mr    | Richard | Hart      | Precision Engineers<br>MANUFACTURING        |
| JAN MALINOWSKI CENTRE FOR SOCIAL EDUCATION | Wandle Way                     | Willow Lane                   | 020 8646 8300 | Mr    | Joe     | McDonald  | CHARITIES/SOCIAL/VOLUNTARY/WELFARE          |
| JEWELL PRINTERS LTD                        | 18 Wates Way                   |                               | 020 8687 9120 | Mr    | Terry   | Jewell    | PUBLISHING/PRINTING                         |
| K & K CORPORATION                          | Unit F                         | Eagle Trading Estate          | 020 8687 1111 | Mr    | Tom     | Kenny     | Food and Drink RETAIL                       |
| KNIGHTSBRIDGE PROPERTY SERVICES            | Knightsbrige House             | 42 Willow Lane                | 020 8287 3838 | Mr    | Gary    | Allan     | CLEANING<br>Industrial/Office/Dry/Household |
| LAMB RANKEN LTD                            |                                |                               | 020 8946 7318 | Mr    |         | Ranken    | Other RETAIL                                |
| LASER GRAPHICS                             | 40 Wates Way                   |                               | 020 8646 8877 | Mr    | Roy     | Lucas     | MEDIA SERVICES/GRAPHIC DESIGN               |
| LASERSCRIPT LIMITED                        | Connect House                  | 21A Willow Lane               | 020 8288 4350 | Mr    | David   | McCarthy  | MEDIA SERVICES/GRAPHIC DESIGN               |
| LE MAITRE LTD'                             | 6 Forval Close                 | Off Wandle Way                | 020 8646 2222 | Mr    | Colin   | Lane      |   |
| LES DELICES DE SIMPLY DESSERTS LTD         | Unit E                         | Eagle Trading Estate          | 020 8640 4844 | Mr    | Peter   | Smith     | IMPORTS/EXPORTS                             |
| LONGFORD SHEET METAL COMPANY               |                                | Willow Lane                   | 020 8648 6261 |       |         |           |   |
| LUXOVEGA LIGHTING LTD                      | Unit 1 Abbey Industrial Estate | 24 Willow Lane                | 020 8410 2600 | Mr    | Robert  | Murray    | Electrical Household Goods RETAIL           |
| M CARRIERS                                 | Unit 38                        | Eagle Trading Estate          | 020 8646 1471 | Mr    | Brian   | Merrett   | TRANSPORT SERVICES                          |
| MACASKILL ENGINEERING LTD                  | 2 Forval Close                 |                               | 020 8640 7211 | Mr    | R       | MacAskill | Plumbing Services BUILDING SECTOR SERVICES  |
| MARTEK CONTRACTS LTD                       | 37 Willow Lane                 | Willow Lane Industrial Estate | 020 8687 8687 | Mr    | Derek   | Galloway  | General BUILDING SECTOR SERVICES            |
| MASTERLITH LTD                             | 13 Osier Way                   |                               | 020 8646 1585 | Mr    | Pat     | McDonnagh | PUBLISHING/PRINTING                         |
| MASTERS OF SOUTH LONDON                    | Unit 5                         | 2/4 Willow Lane               | 020 8685 9990 | Mr    | Peter   | Morss     | CAR, BIKE, VAN SALES/REPAIRS                |
| MATRIX ACCESS LIMITED                      | Unit 4, Abbey Industrial       | 24 Willow Lane                | 020 8646 6700 | Mr    | Jim     | Finch     | CONSTRUCTION/PROPERTY                       |



| Company Name                   | Address                        | Address (cont.)               | Telephone     | Title | First  | Last Name   | Business Type                                       |
|--------------------------------|--------------------------------|-------------------------------|---------------|-------|--------|-------------|---|
| MERTON TIMBER LTD              | 28-30 Goat Road                |                               | 020 8687 0055 | Mr    | Mike   | Evans       | Wood/Wood Products<br>MANUFACTURER                  |
| MITCHAM POWDER COATING         | 35 Wates Way                   |                               | 020 8640 0444 | Mr    | Leon   | Best        | Non-automotive repair RETAIL                        |
| MULLARCH LTD                   | 10 Wandle Way                  |                               | 020 8646 1110 | Mr    | Andrew | Green       | IMPORTS/EXPORTS                                     |
| MULTIFORM MACHINERY LTD        | 24 Willow Lane                 |                               | 020 8646 2300 |       |        |             |   |
| NETWORK PRESS LTD              | 53 Willow Lane                 | Willow Lane Industrial Estate | 020 8646 6545 | Mr    | Frank  | Milton      | PUBLISHING/PRINTING                                 |
| NOSTALGIABUS LTD               | 4 Forval Close                 |                               | 020 8640 6668 | Mr    | Roy    | Gould       | TRANSPORT RENTAL                                    |
| OFFICE FURNITURE GALLERY       | Unit 15                        | Eagle Trading Estate          | 020 8640 6888 | Mr    | A D    | Labrum      | Furniture/Lighting RETAIL                           |
| OLC LTD                        | Unit 10                        | Willow Business Centre        | 020 8640 6631 | Mr    | Kevin  | Hobbs       | WHOLESALE TRADE                                     |
| OPTIONS FITTED FURNITURE       | Unit 37                        | Grace Business Centre         | 020 8685 1525 | Mr    | Robert | Barnes      | Furniture/Lighting RETAIL                           |
| OPTIONS MARBLE LTD             | Unit 37a                       | Grace Business Centre         | 020 8640 3560 | Ms    | Julie  | Parnell     | Other non-metallic mineral products<br>MANUFACTURER |
| OUR PRICE WINDOWS LTD          | Unit 1                         | Capital Industrial Estate     | 020 8687 0758 | Mr    | Chris  | Bassant     | General BUILDING SECTOR<br>SERVICES                 |
| PARCEL FORCE MITCHAM LTD       | Unit 5-9, The Willow Centre    | Willow Lane                   | 0800 224466   |       |        | The Manager | POSTAL/COURIER/DISTRIBUTION/<br>PACKAGING           |
| PEGASUS COLOURPRINT LTD        | 10 Osier Way                   | Willow Lane                   | 020 8640 1201 | Mr    | Bob    | Harvey      | PUBLISHING/PRINTING                                 |
| PICKFORDS REMOVALS LTD         | Units 3-9                      | Willow Lane Industrial Estate | 020 8646 9000 | Mr    | Alan   | Newnham     | REMOVALS/STORAGE                                    |
| PIRTEK                         | Unit B1                        | Connaught Business Centre     | 020 8640 6565 | Mr    | David  | Cowpe       | Machinery/Equipment/Metal Products<br>MANUFACTURER  |
| PLUMB CENTRE                   | Unit 9, Willow Business Centre | Willow Lane                   | 020 8646 3424 | Mr    | Kevin  | Ingle       | Plumbing Services BUILDING<br>SECTOR SERVICES       |
| PROSPECT & PEACHGATE GROUP LTD | 37-39 Wates Way                |                               | 020 8648 6699 | Mr    | Mike   | Leney       | General BUILDING SECTOR<br>SERVICES                 |
| PROTUNE MOTOR SERVICES         | Abbey Industrial Estate        | 24 Willow Lane                | 020 8657 7720 |       |        |             |   |
| PSH LTD                        | Connaught Business Centre      | 22 Willow Lane                | 020 8640 8022 | Mr    | P R    | Slade       | Management/Marketing/Research<br>CONSULTANCY        |
| PW MERKLE LTD                  | Unit 14                        | Eagle Trading Estate          | 020 8640 8631 | Mr    |        | French      | Machinery/Equipment/Metal Products<br>MANUFACTURER  |
| RATHBONE CONSTRUCTION CENTRE   | Units 1/2 Cartwright House     | Wandle Way                    | 020 8687 2489 |       |        |             |   |

| Company Name                     | Address                          | Address (cont.)                | Telephone     | Title | First  | Last Name | Business Type                                    |
|----------------------------------|----------------------------------|--------------------------------|---------------|-------|--------|-----------|--|
| RBC SCAFFOLDING                  | Unit 3, Abbey Industrial Estate  | 24 Willow Lane                 | 020 8648 9212 | Mr    |        | Laing     | MACHINE/EQUIPMENT HIRE                           |
| REC GLAZING LIMITED              | 50A Willow Lane                  |                                | 020 8648 1122 | Mr    | Rick   | Caen      |  |
| REICHHOLD (UK) LTD               | 54 Willow Lane                   |                                | 020 8648 4684 | Mr    | Trevor | Stevens   | Chemicals MANUFACTURER                           |
| RETREADERS REQUIREMENTS LTD      | Unit 8-10                        | Capital Industrial Centre      | 020 8640 1839 | Mr    | Paul   | Hanlon    | CAR, BIKE, VAN SALES/REPAIRS                     |
| RINGWAY LTD                      | 52 Willow Lane                   |                                | 020 8640 6222 | Mr    | R V    | Rawson    | CONSTRUCTION/PROPERTY DEVELOPMENT                |
| ROCHFORD EXPORTERS               | Unit 7, Abbey Industrial Estate  | 24 Willow Lane                 | 020 8646 6776 | Mr    | Alan   | Rochford  | IMPORTS/EXPORTS                                  |
| RV LTD t/a RADIO VISOR           | Wandle Way                       | Willow Lane                    | 020 8640 3266 | Mr    | Barry  | Brunton   | Electrical/Cable/Wiring BUILDING SECTOR SERVICES |
| S M MECHANICAL SERVICES          | Unit 2, Abbey Industrial Estate  | 24 Willow Lane                 | 020 8640 2825 | Mr    | Simon  | Baines    | CAR, BIKE, VAN SALES/REPAIRS                     |
| SANTIKI LTD                      | Unit A4                          | The Connaught Business Centre  | 020 8685 0550 | Mr    | Nick   | Adams     | Computers/Office Equipment RETAIL                |
| SAVAGE PRINT FINISHERS LTD       | 34 Willow Lane                   |                                | 020 8640 9142 | Mr    | Kevin  | Savage    | PUBLISHING/PRINTING                              |
| SAVOIR BEDS                      | Willow Business Centre           | 17 Willow Lane                 | 020 8640 4046 |       |        |           |  |
| SCHNEIDER FREEWAY LTD            | Riverside House                  | Willow Lane                    | 020 8687 8000 | Mr    | Peter  | Mallory   | Pulp/Paper/Paper Products MANUFACTURER           |
| SERIOUS SECURITY                 | Connect House                    | 21A Willow Lane                | 020 8241 2722 |       |        |           |  |
| SHELLEY ENGINEERING LTD          | Unit 31-33 Grace Business Centre | 23 Willow Lane                 | 020 8685 0302 | Mr    | Peter  | Shelley   | Machinery/Equipment/Metal Products MANUFACTURER  |
| SHUTTLESOUND LTD                 | 4 The Willows Centre             | 15-19 Willow Lane              | 020 8640 9600 | Mr    | Paul   | Barretta  | Electrical Household Goods RETAIL                |
| SILKSCREEN ADVERTISING           | 32 Wates Way                     |                                | 020 8646 5709 | Mr    | D      | Sullivan  | MEDIA SERVICES/GRAPHIC DESIGN                    |
| SJB RECOVERY                     | Units H & I                      | Eagle Trading Estate           | 020 8640 4777 | Mr    | Steven | Byfield   | CAR, BIKE, VAN SALES/REPAIRS                     |
| SOUTHERN MARBLE UNIT AND GRANITE | Unit J                           | 29 Willow Eagle Trading Estate | 020 8646 3060 | Mr    | Chris  | Melvin    | Other non-metallic mineral products MANUFACTURER |
| SPECIALISED EXHAUST SYSTEMS      | Unit 2A                          | 22 Willow Lane                 | 020 8648 4786 | Mr    |        | Boxall    | CAR, BIKE, VAN SALES/REPAIRS                     |
| SQUIRRELS SECURE STORAGE         | 1-11 Willow Lane                 |                                | 020 8288 1055 | Mr    | Keith  | Murrell   | SECURITY SERVICES/PRODUCTS                       |
| ST JAMES LITHO LTD               | 21 Wates Way                     |                                | 020 8640 9438 | Mr    | G      | Hodges    | PUBLISHING/PRINTING                              |
| STEWART ENERGY                   | Unit 6, Abbey Industrial         | 24 Willow Lane                 | 020 8648 6601 | Mr    |        | Stewart   | CONSTRUCTION/PROPERTY                            |

| Company Name                               | Address                             | Address (cont.)               | Telephone     | Title | First   | Last Name | Business Type                                   |
|--|-------------------------------------|-------------------------------|---------------|-------|---------|-----------|---|
| STP AUTOS                                  | Willow Lane                         |                               | 020 8648 6007 |       |         |           |   |
| STS  | 29 Wates Way                        |                               | 020 8687 0100 |       |         |           |   |
| SURREY LAMINATORS LTD                      | Unit 11, The Willow Business Centre | 17 Willow Lane                | 020 8646 7710 | Mr    |         | Lowe      | PUBLISHING/PRINTING                             |
| SURREY PROOFERS                            | Willow Lane Industrial Estate       | 11 Osier Way                  | 020 8640 9820 | Mr    | Tony    | Wallace   | MEDIA SERVICES/GRAPHIC DESIGN                   |
| SURREY SCANNING LTD                        | Unit 3                              | Willow Business Centre        | 020 8640 3064 | Mr    |         | Adams     | PUBLISHING/PRINTING                             |
| TECHNOJET LTD                              | Connaught Business Centre           | 22 Willow Lane                | 020 8640 7676 | Mr    | Andrew  | Reed      | Furniture/Lighting RETAIL                       |
| THE ADPAX COMPANY (BATTERSEA) LTD          | 1 Osier Way                         |                               | 020 8685 0808 | Mr    |         | Haibatan  | POSTAL/COURIER/DISTRIBUTION/PACKAGING           |
| THE CLARENDEN HOUSE GROUP                  | Drake Road                          |                               | 020 8646 0733 | Mr    | Kim     | Drewitt   | PUBLISHING/PRINTING                             |
| THE PARKSIDE GROUP LTD                     | Unit 5, The Willow Centre           | 17 Willow Lane                | 020 8685 9685 | Mr    | D W     | Cook      | Machinery/Equipment/Metal Products MANUFACTURER |
| TINGEY & CO (ENGINEERS) LTD                | 36 Wates Way                        |                               | 020 8640 0553 | Mr    | L       | Withers   | Architects/Engineering/Surveyors CONSULTANCY    |
| TOWN & COUNTRY FLOORING LTD                | Unit 6                              | 24 Willow Lane                | 020 8685 0554 | Mr    | D       | Wingrove  | Furniture/Lighting RETAIL                       |
| TROJAN CONTRACTORS                         | 2b Eagle Trading Estate             | 29 Willow Lane                | 020 8646 4030 | Mr    | Tom     | Legge     | General BUILDING SECTOR SERVICES                |
| TYRES DIRECT                               | Unit 8,9 & 10                       | 24 Willow Lane                | 020 8640 1839 | Mr    | Paul    | Hanlon    | CAR, BIKE, VAN SALES/REPAIRS                    |
| WHITE ARROW EXPRESS                        | Ellis Road                          | Willow Lane Industrial Estate | 020 8685 1032 | Mr    | Richard | Day       | POSTAL/COURIER/DISTRIBUTION/PACKAGING           |
| WILLOW MOTOR WORKS                         | Wandle Way                          | off Willow Lane               | 020 8685 9515 | Mrs   | Maureen | Dyer      | CAR, BIKE, VAN SALES/REPAIRS                    |
| WILLOW STOVE ENAMELLERS AND POWDER COATERS | Unit 11, Eagle Trading Estate       | 29 Willow Lane                | 020 8646 7169 | Mr    | Bill    | Pink      | Non-automotive repair RETAIL                    |
| WILLOWOOD                                  | 1 - 11 Willow Lane                  |                               | 020 8241 2396 | Mr    | Dave    | Jenkins   | General BUILDING SECTOR SERVICES                |
| ZEPLA                                      | 7 Bunting Close                     |                               | 020 8648 1333 | Mr    | D       | Gilders   | WHOLESALE TRADE                                 |

## **APPENDIX D: TRANSCRIPTION OF INTERVIEWS**

This appendix includes transcriptions of the ten employer interviews, as well as the interviews with the representative from the Eagle Trading Estate, the Ecology Officer, and the Transport Planner. The transcriptions were extracted from the original interview tapes. Two group members conducted each interview, one of whom asked the questions, while the other took notes. As confidentiality forms were signed prior to certain interviews, the identities of these interviewees are not revealed. For the e-mail interview with Mr. Richard Wood, attorney of the Eagle Trading Estate, no confidentiality form was used, as his statements were formally representing his client.

In the event of a corrupted tape, which happened a few times due to tape quality-

Transcriptions contain the main points of the interview, as taken from the notes.

Such cases are indicated before the transcription.

For interviews transcribed directly from the tapes-

**Bold Text** - Denotes dialogue of the interviewing group member

Normal Text – Denotes dialogue of interviewee

## INTERVIEW #1

(Tape did not record, transcription is from interviewer's notes)

- Parking is not a problem outback because there are parking spaces for the company.
- Lorries make parking on the roads and driving bad because of the depressions in the roads and the space they take up.
- Public transportation in the area is not reliable- people are late because of trains not running on time.
- Most people drive their own personal vehicles to work.
- The biggest problem is people smashing into vehicles in our car park- because of the walking route near us, people come up and take things and run away down the path.
- Also rubbish dumping is a problem, as they have to move it and pay to get rid of it from the car park.
- They would like to see tighter security via the police such as CCTV of the Estates, particularly areas where dumping and vandalism have occurred in the past.

## INTERVIEW #2

### **What is the biggest problem that you see in the Industrial Estate?**

The biggest fear seems to be vandalism, we suffer quite badly... because of rubbish being dumped... individual crime, although there has been a certain amount of other crime, people taking things out of wallets, keys and things, that would be the biggest thing.

### **What kinds of crime are most common?**

Mostly dumping of things, if you were to look out into the car park, there's 2 cars that have been dumped and a pile of rubbish and that was just last weekend, but that will happen, footbridge or not, because people wont carry stuff. What is a concern is people coming in and taking stuff, personal property and having easy access or exit from the estate.

### **What are your thoughts on the current parking situation?**

5 o'clock is impossible to drive out of here, chaos.

### **Do your employees have problems finding places to park?**

No, we actually have a car park on the side here, so we have places allocated for our employees.

### **Is there general room for improvement over the rest of the estate as far as parking in the estate?**

Yes, because cars are parked out in this road, if you come early in the morning and see the debris that's come off vehicles heading around the corner, cars can easily get damaged down the road. There's large lorries, there's a tip up here where they ground up concrete, those lorries are in and out of here all of the time. It can cause problems, there's a great big depression in the road from parked Lorries.

### **Do you feel your business would benefit without having so many parked cars, do you have any problems with trucks coming in and out?**

No, to be honest, it's fairly free the access here, around the back, most of our people come through the back, so we don't have a lot of trouble in front. Nobody to my knowledge is complaining about somewhere to park.

### **The commute at 5 pm is a problem though?**

That's a problem getting out here because there is only one way out, which I think again is for security purposes, but its too rigid and narrow. It used to be controlled by traffic lights so there was a counter flow system, but they did away with that years ago. And you just come in that end and you can come in, and then go out this way, I think its also a cut throat, I think people who are coming from Mitcham through this estate would want to go out around the circle area.

**Do most of your employees drive to work?**

Almost all of them I think.

**Do you see any benefits of them walking or bicycling?**

Not me personally, but it certainly would help the environment.

## INTERVIEW #3

### **What is the parking situation in the area?**

It's fine, no problems at all. We have all our parking, well we don't have a lot of vehicles you know, in our particular area here we don't have a problem.

### **Do most employees drive themselves?**

Yes most of them do, and as I told you we share, we are doing our bit!

### **Do you think your company could benefit from less cars and traffic?**

I don't think there is a big problem on this estate. There is quite adequate parking here, in fact we let another company use some of our parking and we don't charge them, we let them use it, but we don't have a problem here at all. If we had a far better public transport, there's nothing here on the estate, none at all, no bus coming through, no tram link stop, from a woman's point of view, that's why they get in there cars.

### **What is the traffic like in the area?**

Funny enough, this morning we just sailed in, but you might get a little hiccup and then you do get a problem. I have to say some of the procedures that our local councils decide to do cause more problems. I mean, we go up to Wallington, you don't cover that area? No, well our council in its wisdom decided 2 years ago to turn a one way road around the other way, so that when your going south, you could always turn into it to cut off going to the main lights and cut through, and so now the traffic comes down and its got to turn right down a busy road then right again, what do you think of this! They don't live here, we live here and we protested, but they don't listen to us, because they always know best, we just have to abide by what they say.

### **Do you think any encouragement would help people walk or cycle to work?**

One of our lads is walking at the moment, but the walk he does he is quite happy with being male, but I would never do it on my own, being a woman and all. If there are 2 or 3 of you, but when you don't have any one else to walk with it's a dangerous place.



## INTERVIEW #4

### **Are you familiar with the Wandle Trail?**

I know the river Wandle...It's basically out on the green?

### **Could we get your thoughts on the parking situation in the WLIE?**

There is plenty of parking around here, sometimes its difficult getting out of here. Ther are things in the road that make it difficult.

### **What are your thoughts on the Traffic here during rush hour?**

There's 2 ways in and only one way out so that can be a problem.

### **How many employees work here?**

12 employees.

### **Do most of them drive or do they take any other form of transportation?**

They come in in groups, several cars.

### **Do you think there would be any benefit to walk or cycle to work?**

No, they usually get here around ¼ past 6 in the morning.

## INTERVIEW #5

### **What is the parking situation here?**

Well, we are quite lucky, we have 12 parking spaces in the front, 3 at the back, so we've got a lot of 15 cars and we've got 10 employees working here. There is a small parking problem, you see cars parked in the corners all along the main road, blocking exits at times as well, so there are obviously companies on the estate that do have problems.

### **Do you think that the proposed footbridge would benefit businesses here?**

Well, if its people that live local, over that way towards Morden, they can come across the footbridge. They could gain easier access to the estate, and actually save walking all the way around it, which takes quite a long time to come down and then back in if your working over in that area.

### **Do you see any problems with traffic in the WLIE?**

There is a problem actually with leaving the estate at night because there are 2 ways in but only one way out, and if there is an accident there, and it does happen occasionally, your stuck. There are times when I have been on the estate and the traffic has just been piled along here, and I've sat here till half past 6, 7 o'clock at night waiting for the traffic to clear just to exit the estate myself. There is a problem with access.

### **Do you think in general your employees would like to walk or cycle to work if they had an access point?**

I don't think there is anyone here that lives close enough to do that. Most people come from around Paddington, so it's a fairly long commute.

### **Do you know of the Wandle Trail?**

Well a lot of people do actually walk out over this way to the bridges and down the footpaths there, so there are people in this area that actually walk that way round. It could prove that they could actually take a short cut straight across that area, you do see most people going down the alley way.

## INTERVIEW #6

### **What are your thoughts on the parking problem in the WLIE?**

Because we work in this small area, it's generally not a problem. I cycle in, but we only have 2 parking spaces allocated, and they can quite quickly get filled up.

### **How many people work here?**

In this branch there are only 2 of us, one has a car and is mostly on the road, but is in the branch about 2 or 3 times a week.

### **Do you feel that the proposed footbridge would be beneficial?**

It would benefit me in the fact that I don't then have to cycle through the estate, which can be pretty bad. People drive through the estate very fast, especially with all the cars along the main road, and it's also a pretty dirty road. So if I could cycle through where you're saying, from Middleton road, it would cut down my distance, and it would also be a nicer sight.

### **Do you think there are a lot of employees that would benefit?**

I see a few people walking along, usually its single women, and I don't know if this footpath would be lit, because that would obviously be a safety concern for them, and whether it would be a cycle route. I definitely think there are a lot of people who would drive just because there is a hill involved. But I can't answer how many people live and work around there; it's quite a large estate.

### **Is crime something you are concerned about at night along the trail?**

I cycle through the estate I don't feel threatened while cycling. I think I've cycled a bit of it when I used to go swimming, you know there's a leisure centre over there. I'm aware of it (the trail) but its not particularly useful if you're on a bike, you're off and on your bike all the time, I mean the cycle route is ok, but suddenly it just stops in the middle of nowhere.

### **Would you be interested in using any of the paths after they update them?**

Yes I would, I mean, it's a cycle route that doesn't really serve a purpose in the fact that you might as well go along the road. I remember one time I was taking it and they had just built a housing estate and it just stopped, I didn't know where I was then, so maybe even just signs would help tell where you are when you get off the cycle route.

## INTERVIEW #7

### **What are your thoughts on the parking situation in WLIE?**

There are not enough places to park, it got worse over the last year, there's an increase in the number of people that work around here, mostly trucks and such as well people who park trucks in the road. Due to our extended work, we are very busy at the moment, there are a lot of people. There's a lot more private cars down here than there used to be, that's happened over the last year.

### **Do you think if people had better access to the area, they would be more willing to cycle or walk to work?**

If they live in a reasonable vicinity of the area, then yes. Sometimes in the morning, from about half past seven upwards they can spend over twenty minutes getting to work.

### **Could your company benefit from less traffic and less parked cars?**

It doesn't cause us an excessive problem, sometimes it's a bit more difficult, depending on the time, to move them around the estate, but generally it's not a problem. There can be cars and lorries all over the place.( Tape got recorded over from this point on)

## INTERVIEW #8

### **What are your thoughts on the parking situation in the WLIE?**

It's not too bad here, but in general it's not good, people on those roads are pretty jammed up.

(From this point on the tape was corrupted, so the following is taken from notes)

- People who currently drive and live near may be able to use the bridge for commuting instead of driving, but it wouldn't be the case for all of our employees.
- Public transport is inefficient in the area, as the busses are too bad
- The bridge could potentially help prove useful for an alternative commuting route.

## INTERVIEW #9

(The tape was corrupted, so the following is taken from notes)

- The area is heavily Industrial and there is a lack of space for cars. It will only get worse as time goes on.
- Very Few people walk, some people take the Tram link and National Rail service but most drive personal vehicles.
- A new bus route would be beneficial.
- They have good communication with the police. They receive a newsletter on what problems have occurred in the Estate, and it is usually not much other than an occasional car crime and lots of dumping issues.
- 2 members of their staff would benefit from the bridge.

## INTERVIEW #10

(This interviewee did not want to be tape recorded, so this is a transcription from interviewer notes)

- Such a footbridge would have no benefit to the company, they have few employees who all live far away.
- They have to travel during the day to clients with their trade materials so they need cars and trucks on site.
- They do not feel parking is an issue of major concern in WLIE.
- Traffic is an issue during the evening when everyone is trying to leave through one exit.
- A bridge may give an easy escape route to vandals and may facilitate unwanted traffic going through WLIE.
- Comment by employee in office- He would use the bridge to walk his dog in Poulter Park on his lunch break.

## ECOLOGY OFFICER INTERVIEW TRANSCRIPT

**We're here from the States working with Groundwork Merton and we're basically just trying to determine the feasibility of this project and the best location of these two and what kind of use [the footbridge] might see.**

Right, um, well I am a government officer working for the London Borough of Merton. At this stage, I'd like to say, the views I'm going to express this morning are mine and I don't want a paper to come out saying [his name was said here but is anonymous according to the terms of the interview] of the London Borough of Merton said this and that.

**Yeah, that's what this is for [referring to the terms of interview agreement].**

Right... well okay, so we've identified the first possible location, now where's the second? The second one is further...

Yeah that's [next part of interview was lost due to mechanical malfunction]

**This [southern] site is a private owner...**

Yeah... yeah... um, from the point of view of wildlife interest this particular region of the River Wandle by Bennett's Hole is undoubtedly one of the richest in the whole Borough and it's mainly because you've got the river there but also because you've got a good margin of vegetation on either side and the area of land immediately next to the proposed site for the bridge is especially good for breeding birds which is published actually. The main reason for that is probably lack of disturbance because if you walk along there, I know you can walk right along the edge of the river, but I doubt you saw anyone else when you were walking there. It's virtually undisturbed. Quite often you'll see birds sort of popping around in the water. So that would be, certainly should be one of the considerations if you're proposing to put a bridge there and you'd have to take that into account the effect of having a bridge, not just having the bridge structure but the users would have on the area.

I suppose the other wildlife consideration for having a bridge at this point- that's actually, if you had a bridge here, going into the Industrial Estate, where would the path go then, into the Industrial Estate?

**Yes.**

Obviously if you have a bridge at, what we'll call the Bennett's Hole site the route would then follow the existing path... that would be another consideration because obviously at the moment is very quiet not just at the bank of the river but [near the Estate] is quiet. The paths are fine for occasional use but I would suggest that it's going to be more frequently used, they'd probably have to widen the trails because there just isn't enough space with the vegetation there. That would obviously have implications if you were talking about a cycle route.

The other thing is there would be maintenance implications for Leisure Services if you had a bridge cross there. You'd have littering problems and they'd have to take over maintenance



of the paths. They'd have to be frequently cut and they're probably muddy in some places, and these things would have to be factored in to any decision you came to.

With this particular crossing point into the Industrial Estate you really wouldn't have these issues because basically you're coming straight of the river and straight into the estate.

**I just have a question on the wildlife area, so it's not to be undisturbed? People can walk through there right now?**

Well what I'm saying is that, um, really the whole point of coming up with the proposal to put the bridge here would be you've already identified the need for it, in terms of pedestrian traffic. Obviously if I assume this than you must assume that more people are going to go through that site. I think that, from the point of view of disturbance, that would obviously cause some disturbance with this path near the river here because the bridge would be right next to it... because people stand on bridges, you know, and birds are distracted by it. Plus also once they've come down from the bridge, they have to walk through the reserve to get to the estate. There I'm not thinking so much about the birds but more, just, trampling impact on edge vegetation and littering I think, unfortunately, children chucking things and that would have maintenance implications for the Borough. In short, I suspect that [southern] site is more frequently used now. I think in the reserve a considerable section of the footpath would have to be resurfaced and the trees and vegetation there would need to be cut back. These issues would be as important with the other side of the river because there's already a pretty straightforward path there now.

**What's the policy on bicycles within the wildlife reserve? Would they not be allowed?**

Not necessarily, I think that, um, there might be issues because that site is not just a wildlife site, but I'm not saying that you couldn't, um, if we move on to the subject of cycling this would be a concern not with push bikes, but motor bikes and the fact that this area here is frequently used for motorbikes. I was at a meeting last week to discuss that half of [WLIE] is advertised on websites as a place where you can go and race cars, not legally, but the point is there's a big issue with motorbikes and if you had a bridge in at any point, actually, there's a concern that [motor]bikes would use it. I have no doubt that if you do come up with a proposal to put a bridge in, that would be a major concern, less so than wildlife concerns because you would be going into an Industrial Estate.

**Now there's a trail up here on the north end that runs from a housing development into the Estate and it also goes into the wildlife reserve...**

Yes...

**...There are guards in place there to keep out things like that...**

Right...

**Now if there were precautions taken like that do you think it would help the situation?**

I don't know, to be honest with you. I think you'd have to give that point serious consideration. I'm not sure that just having barriers would work, most of them wouldn't stop [the motorcyclists] from getting through, and they'd just come through on an angle. Perhaps

a better design, but even this I'm not sure how it would work, would be one that Groundwork put in at a site called Merning Close, which you might not be familiar with but there is [unintelligible] but it does work quite well. Having said that I don't think there's such a pressure at that particular site.

My genuine concern with this is that by putting a bridge in you're effectively linking this housing estate with the industrial estate and there are problems with that estate, motorbike problems, Poulter Park [unintelligible]

Going back to this other possible site, if you did put a bridge there, you can't really link up with the Wandle trail, until your, I mean its, it becomes a rather torturous route to get back onto the Wandle trail, is that an issue your concerned about?

**We were looking at the site, we were under the impression that the way the Wandle trail goes stays on this side of the river the entire way, and it comes down here**

Yes that's true yes

**So really would just be only for access into the estate.**

Perhaps I should have asked this first of all then, What would the overall aim, of this project, what's the objective behind putting a bridge over the river Wandle

**Really would be to reduce the traffic in the estate and encourage more people to use green transportation for their commute**

So its not linking up the Wandle trail as such, its more getting people to....

I think I was going about this by what I was saying, I suspect, I would like to look at this on site, but I suspect that putting a bridge at that point, point of view of impact on wildlife is my main concern. When as the project develops, is it likely that this is going to go to consultation of the bridge positions or...

**As far as we know we are just going to make a recommendation based on what we do, and they will take it further.**

That presumes there will be consultations

**Yeah I'm sure there will be more research in addition to this.**

**I mean, what's your view on it, given what I just said? I mean when you looked at the Bennetts Hole site, and I know its more aesthetically it's more pleasing, but do you have any views on the potential impact on wildlife?**

I think, yeah the southern location would obviously have less of an impact on the wildlife, and its obviously more direct into the estate, but since it is privately owned, we don't know how the owner would receive it and if they'd allow it or allow the piece to be purchased. And also there are locked gates at the end, the Eagle Trading Estate is sort of a subsidiary of the WLIE, and there are gates that lock at night, so you'd be able to walk into the ETE, but not go into the Willow Lane Estate.

Is there not, see I recall that Merton owns land along here somewhere, did you see another set of double gates right next to the river?

**I don't think so, I don't think we went down that far, I don't think we went down past the southern location.**

I think it would worth your while having another look at this bit. One of the ideas that has been being kicked around was having a trail along this side of the river, and one of the stumbling points was said that Merton don't own all of the land. However they do own a piece of land further down, there's a set of double gates right next to a car park, and the car park and if you look at the river there's a set of double gates, those were put in by Merton, not quite sure why because the don't go anywhere but I mean it might be possible to bring that up, but that might be something worth investigating, so rather than having to go into the industrial estate through here, you might be able to go through there and then come out again, I can't quite picture exactly where it is, that's the point, what you need to look for is the river at this point is quite natural but when you go further back there is no green where the channel is.

[ The discussion at this point is conversing over a map of the area, trying to figure out the placement of the car park in relation to the southern footbridge location.]

I do have to say that I have got concerns about disturbance if you put a bridge in [the northern location].

See your also surveying the industrial estate, your doing a survey here to see if people would be willing to use it, you haven't gotten any data back from that yet have you?

**Yeah, we have. We've just gotten average distances that we found for commutes, the modes of transportation people currently take [loud bang] Everyone relies on their cars**

Yeah there is very poor transport links to the industrial estate, the project I'm involved in is to get some footpaths that lead up to the tram link station from there as well because people loath to use the [unintelligible]

**We were actually surprised by that 18 percent were walking and biking**

Where are they walking from?

**Most of them were close, form a half-mile to 3 miles**

So putting that bridge in would shorten their journey time

**We saw some direct correlation's between using a car and distance.**

**We asked a question of the employees if they would use the footbridge to access the trail or Poulter Park during their breaks, just lunch break or something, actually got a fairly positive response to that.**

Yeah I mean I have no doubt that if you put a bridge in Bennetts Hole, I don't know about people using to get to work or not because I don't know where people are coming from, but

I'm certain it would be used, which of course is another, it sounds odd really, I mean obviously we are managing this wildlife so its purely for wildlife, and we don't want people there, but that isn't the case, but obviously it is an issue to consider, you know one of the things about the river Wandle is that its obviously its important for people to get to but its also deeply important that there are areas where people can't get to.

**The southern location would be more convenient anyway because you have all the way up to Osier's Way to get to the trail end.**

I think it would certainly have less impact on the wildlife, I would probably be asked by Merton to deal with the issue of management of Bennetts Hole because its done largely by volunteers, last year vegetation was growing so quickly that there was an accident down there because they couldn't see the path. So we can get away with that occasionally but if we have people through there all the time that would be a serious management consideration.

## EAGLE TRADING ESTATE REPRESENTATIVE REPLY

Stuart Edwards Fullermoon acts as managing agent for the freehold owners of Eagle Trading Estate. This estate is multi let to a variety of mainly manufacturing based businesses and we would prefer less congestion on our estate rather than add more. My clients would not therefore be willing to allow any access over the estate.

My clients would also not be in favour of a footbridge giving access from the other side of the river as we have already had problems in the past with kids trying to smash windows, etc from the other side. A footbridge would give the opportunity for far more mischief.

Willow Business Centre, as you describe it, is a busy industrial estate. It is only busy, in my opinion, because of the business trading there - it is not used by others as a shortcut as it is quicker using the main roads. A footbridge is not therefore going to achieve a lessening of the number of cars on the whole estate. It is not as if all the workers on the estate are going to park on the other side of the river and walk over the bridge to work as it's quite a trek over the playing fields. It is, in my opinion, merely going to allow access to those on foot who we have been trying to keep out.

In conclusion and in answer to your questions:

1. Traffic within WLIE is busy but consistent with an active industrial estate. A footbridge over the river will not do anything to alleviate traffic.
2. A footbridge will not help traffic congestion on the estate generally but will give access to kids from St Helier who want to cause mischief. You will note from your site inspection that all the windows of Eagle Trading Estate facing the river are boarded or shuttered to protect from vandalism. Access through an industrial estate where all kinds of processes take place with all kinds of products - (perhaps some dangerous, some toxic) is not to be encouraged with additional points of access.
3. I believe the banks of the river are owned by others - perhaps the Council or the river authority. We already have overcrowding of vehicles on the Eagle Trading Estate and giving up any land or parking spaces is not an option. Access through Eagle Trading Estate will not be permitted.
4. I do not know the river boundaries and layout in any detail and so could not comment on other possibilities. I would only reiterate that I cannot see any advantages to the footbridge apart from the occasional jogger or bird watcher and it certainly is not the answer to traffic congestion on the Willow Lane Industrial Estate.

I hope the above points prove useful to your research.

## TRANSPORT PLANNER INTERVIEW TRANSCRIPTION

### **What do you do as a transport planner?**

My title is principle transport planner, and that means as I was just saying I am involved in cycling, but really on the feasibility side, and in trying to get funding, not really the design or the implementation side of it. But also I get involved in doing a green travel plan, which is what I am supposed to be doing for the council and the rest of the borough. To hand it out to businesses and organisations, trying to get more bus routes in, dealing with the tram, east London line extensions, that kind of public transport, giving out information, just trying to encourage other modes to use than the car.

### **Do you know if there are any plans for more public transport around the WLIE?**

We are looking get a tram that will go through the Willow Lane estates on its way to Tooting from Sutton. There are four different routes that are being considered by the mayor at the moment, and we don't know whether Sutton to Tooting will be one of the routes that will go through. We are supposed to hear within the next couple of months. We are probably looking to get more bus routes but I couldn't say now where they would run to.

### **What do you do with cycling in your job?**

We get an allocation from the mayor for London which is split up between all the different boroughs, and we set out routes that we are going to try to implement in the next year. Again I am not entirely sure which routes are planned to go in next year, or where they go, YET, but each year we bid for more and more routes, and usually get about half the funding that we actually bid for. We also bid for money for cycle routes which are not on the London Cycle Network, LCN + because they are looking at priority routes and we also bid for money which is not on the LCN or the LCN+, to do specific improvements on cycling. But we also bid through Swell Track or any other source of funding we can find- department of Transport, anybody really just to get extra bids in for cycling facilities.

### **Would you be involved in finding funding for this project?**

Yeah.

### **Have you seen other projects similar to this one that have tried to link areas where transportation is lacking?**

Yeah, we are just about to look at a project for the industrial estates through the swell track area, which is looking at improving pedestrian access, cycling access, information about where the nearest public transports, getting transport links near those areas. Not just the industrial estates, but we've got various schemes on the go where we look at these kinds of issues.

### **Do you think that this project would encourage people to walk or cycle?**

Yeah I mean, the Wandle trail from what I can see so far, it looks like a really good scheme, there is another scheme in the south-eastern part of London call Waterlink way, which is very well used, so I can't see why this one wouldn't attract the same amount of enthusiasm.

**Any other comments on the bridge or the project?**

I think it's a bit early to really have an opinion, there is so much work that needs to be done, I certainly don't have any objections to trying to get more cycle and walking routes through these areas. It's just that we need to consult with the people that would be affected, we have to sort out any ecological difficulties, and the engineering side, the funding side. It depends on how much its gonna cost and whether its feasible, I think its early days, but its something I would like to support, yeah.

## APPENDIX E: SURVEY RESULTS

This appendix contains the tabulated results of the employee and employer survey. If any confusion is encountered with the questions or options given, please refer to the survey forms in Appendix B.

### EMPLOYEE SURVEY RESULTS

| Question 1a: Approximately how many miles do you live from your place of employment? |        |        |         |          |     |            | Didn't Answer |
|--|--------|--------|---------|----------|-----|------------|---------------|
| Under 3  | 3 to 6 | 6 to 9 | 9 to 12 | 12 to 15 | 15+ | Don't Know | Didn't Answer |
| 11   | 19     | 6      | 5       | 6        | 2   | 6          | 9             |

| Question 1b: Road or intersection nearest your home: |
|--|
| [not tabulated]                                      |

| Question 2: What mode of transportation do you take to get to work? |                       |           |         |               |
|---|-----------------------|-----------|---------|---------------|
| Automobile  | Public Transportation | Bicycling | Walking | Didn't Answer |
| 31  | 18                    | 6         | 6       | 3             |

| Question 3: Approximately how much do you spend per month on commuting to work? |         |         |          |        |            |               |
|---|---------|---------|----------|--------|------------|---------------|
| £ 0-10  | £ 10-20 | £ 20-50 | £ 50-100 | £ 100+ | Don't Know | Didn't Answer |
| 16  | 8       | 21      | 8        | 5      | 1          | 5             |

| Question 4: Indicate the Severity on the following issues: |       |          |       |          |               |
|--|-------|----------|-------|----------|---------------|
|  | Minor | Moderate | Major | Not Sure | Didn't Answer |
| Traffic Pollution:   | 12    | 21       | 15    | 0        | 16            |
| Traffic Congestion:  | 5     | 19       | 24    | 0        | 16            |
| Parking Problems:  | 16    | 12       | 17    | 0        | 19            |

| Question 5a: Are you familiar with the Wandle Trail? |    |          |               |
|--|----|----------|---------------|
| Yes  | No | Not Sure | Didn't Answer |
| 23   | 34 | 7        | 0             |

| Question 5b: If yes [to 5a], how often do you use the Wandle Trail? |             |              |             |       |            |       |
|---|-------------|--------------|-------------|-------|------------|-------|
| Once a Day  | Once a Week | Once a Month | Once a Year | Never | Don't Know | Other |
| 4   | 4           | 1            | 7           | 6     | 1          | 0     |

| Question 6: Please illustrate your route on the back of this sheet- |
|---|
| [Not tabulated]   |

| Question 7a: If one of the two footbridges were constructed, would you walk or bicycle to work? |    |            |               |
|---|----|------------|---------------|
| Yes   | No | Don't Know | Didn't Answer |
| 4   | 35 | 12         | 13            |

| Question 7b: If yes [to 7a] which? |         |      |       |
|------------------------------------|---------|------|-------|
| Walk                               | Bicycle | Both | Other |
| 2                                  | 2       | 0    | 0     |



| Question 7c: Approximately how many miles would you walk or bicycle to work? (miles) |        |        |        |        |        |    | Didn't Answer |
|--|--------|--------|--------|--------|--------|----|---------------|
| under 1  | 1 to 2 | 2 to 3 | 3 to 4 | 4 to 5 | 5 to 6 | 6+ | Didn't Answer |
| 5  | 5      | 9      | 8      | 5      | 4      | 3  | 25            |

| Question 8: Given the locations for the bridge, which do you prefer? |                |          |             |               |
|--|----------------|----------|-------------|---------------|
| North Location   | South Location | Not Sure | Indifferent | Didn't Answer |
| 7  | 8              | 8        | 31          | 10            |

| Question 9: Would you use the bridge... during any breaks you have in the workday? |    |            |               |
|--|----|------------|---------------|
| Yes  | No | Don't Know | Didn't Answer |
| 12   | 29 | 9          | 13            |

## EMPLOYER SURVEY RESULTS

| Question 1: On a scale of 1 to 10, how much room do you feel could be made on employee parking conditions, one being the least and ten being the most room for improvement? |   |   |   |   |   |   |   |   |    |            | Don't Know    | Didn't Answer |
|---|---|---|---|---|---|---|---|---|----|------------|---------------|---------------|
| 1   | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Don't Know | Didn't Answer |               |
| 11  | 0 | 1 | 3 | 3 | 0 | 0 | 2 | 0 | 9  | 0          | 0             |               |

| Question 2: Would your company benefit from having fewer employee cars on the property and surrounding areas? |    |            |               |
|---|----|------------|---------------|
| Yes   | No | Don't Know | Didn't Answer |
| 11  | 14 | 4          | 0             |

| Question 3: How would you rate traffic in the immediate area surrounding Willow Lane on a scale of 1 to 10, one being no problem and 10 being a considerable problem? |   |   |   |   |   |   |   |   |    |            | Don't Know    | Didn't Answer |
|---|---|---|---|---|---|---|---|---|----|------------|---------------|---------------|
| 1   | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Don't Know | Didn't Answer |               |
| 0   | 0 | 0 | 5 | 1 | 4 | 0 | 7 | 6 | 6  | 0          | 0             |               |

| Question 4: Would you be willing to provide any of the following facilities to employees who choose to bicycle or walk to work? |         |                      |      |       |               |
|---|---------|----------------------|------|-------|---------------|
| Secure bicycle rack   | Lockers | Showering facilities | None | Other | Didn't Answer |
| 9   | 10      | 4                    | 5    | 0     | 0             |