WEMBLEY REGENERATION INDEX

The Application of a Point System to Measure the Continuous Regeneration in London, Borough of Brent

An Interactive Qualifying Project proposal to be submitted to the faculty of Worcester Polytechnic Institute in partial fulfillment of the requirements for the Degree of Bachelor of Science

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ABSTRACT

This project aimed to help Brent Council monitor the effects of regeneration in Wembley. To accomplish this goal a comprehensive system was created that measures and monitors different data points. With the collection of this data a weighted index was created to produce a final regeneration value. This final value is used as a guide to show Brent Council their status in fulfilling sustainable regeneration. Photo documentation was incorporated to show the aesthetic changes to the area.

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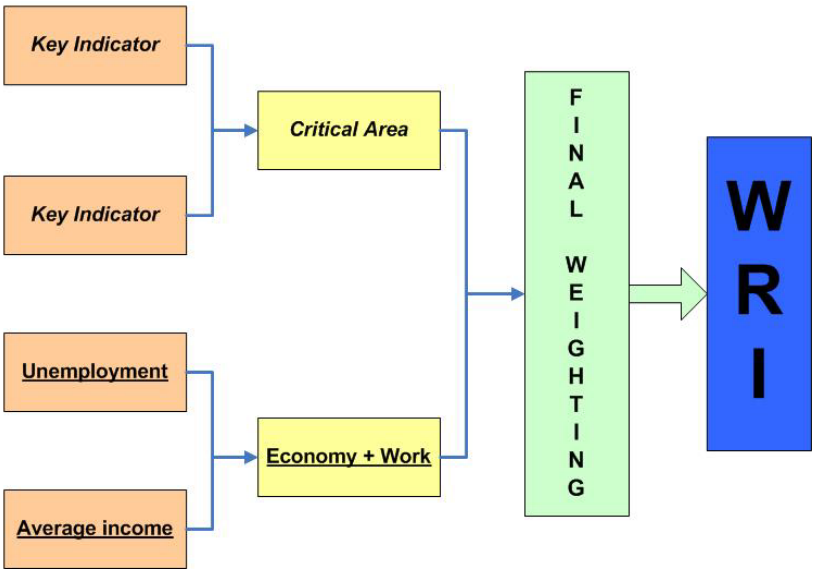
EXECUTIVE SUMMARY

When a city invests in a multi-hundred million dollar project, they understandably expect a large return on investment, both economically and socially. London is currently involved in such a project with the construction of the New Wembley Stadium in the London Borough of Brent. Brent seized the opportunity to be hosts to the new stadium with a desire to use it as a catalyst for urban regeneration in the local area. With construction of the stadium well under way, the main problem that Brent Council now faced was how to track and measure this urban regeneration to see if their efforts were successful. A system was needed to monitor specific changes in areas of public interest, such as transportation or economy, and produce a simple, easy to understand assessment showing the success or failures of their regeneration efforts. Our group produced a comprehensive monitoring system to track and measure the impact of the regeneration efforts around Wembley Stadium and Wembley Centre. The goal of this system was to help Brent Council determine whether they are making effective steps towards the goal of sustainable regeneration, and if those steps are being hindered, identify those areas so that they can be addressed.

There were many steps that went into the process of creating this system. The first was to identify the *critical areas* that were most important to Brent and its regeneration efforts. *Critical Areas* are the main categories that focus on different areas of regeneration. The three that were chosen after extensive research of regeneration projects conducted in other cities, and ones that covered Brent's regeneration goals were 'Economy and Work,' 'Transportation and Mobility,' and 'Housing.' The main reason these were chosen was because they were the areas which Brent's regeneration efforts focus the most. The next step was to identify the *key indicators* for each *critical area*. The *key indicators* are extremely important because they must identify the key aspects of each *critical area*. An example of some *key indicators* would be 'Unemployment' and 'Average Income,' both falling under the *critical area* of 'Economy and Work.' These *indicators* were determined in much the same way as the *critical areas* in which research of Brent's currents goals were reviewed and discussions with experts in Brent were conducted. The information and data gathered for each *indicator* was reviewed to ensure relevance and accuracy so the finalized set of *indicators* would best track the borough's progress. After analyzing the information available a list of 30 indicators was derived. Any detailed information on each of the 30 indicators can be viewed in the final system created.



Lastly, the *Wembley Regeneration Index* (WRI) was created. The *key indicators* within each *critical area* were amassed to create one value for that corresponding area. Then the three *critical area* values were pulled together to create the final *Wembley Regeneration Index* value; the encompassing value that shows the regeneration as a whole. An important component in the index that must be considered is that each *key indicator* and *critical area* is weighted differently depending on the level of importance to Brent's regeneration.

The tool used to create such a system was Microsoft Excel. This program was chosen above all others because of its ease of use, its extensive capabilities, and simply more Brent Council employees are familiar with the program. The Excel program contains a database with all the current statistical data available and the necessary coding to produce three reports (*Key Indicator Report, Critical Area Report, and Wembley Regeneration Index*), which shows detailed descriptions of data collection methods, graphs of past and current trends, the applied point scheme, and more. The data for all of the *key indicators* used was gathered in the form of surveys, censuses, and specific Brent documents. As stated before, the coding in the system is already in place and the only changes the system will need is for future data entry, conducted by a Brent Council employee, and it will instantaneously produce the necessary reports. Since construction in and around the stadium will continue over the next decade, the system is able to input and analyze additional data at any point in time and still produce a final value which tracks

progress and acts as a guide for future developments. A figure of what one of the reports looks like can be seen below.

Key Indicator Report

Indicator ID	Name	Critical Area	Date Updated
e1	E1: Unemployment	Economy and Work	April/7/2006

General Description
Percentage of Unemployed Population Eligible to Work

Location
Wembley Central

Point Scheme

2	*4*	*6*	*8*	*10*
≥8%	(<8%)-6%	(<6%)-4%	(<4%)-2%	<2%

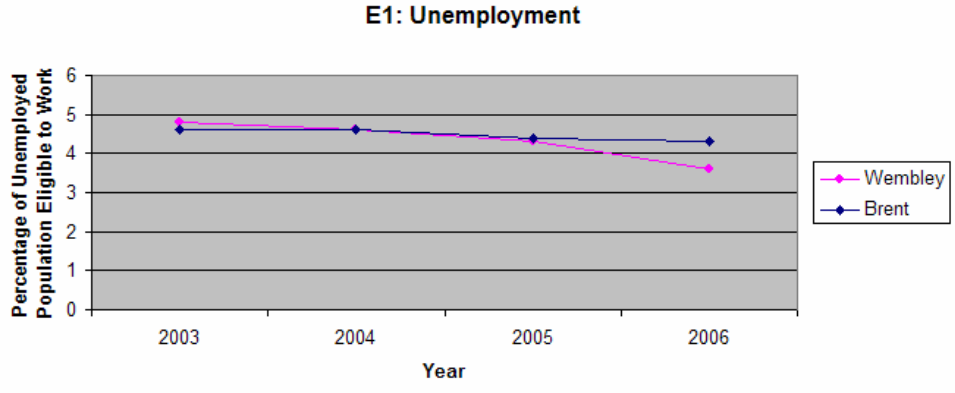
Year	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*
Value	4.8	4.6	4.3	3.6	0	0	0	0
Points Received	6	6	6	8	10	10	10	10

Contact/Resources

Nomis National Statistics- www.nomisweb.co.uk

Description/Purpose

- This indicator is meant to show the percentage of unemployment for Wembley Central residents and also compares the percentage to Brent overall unemployment percentage.
- The specific filters used in 'Nomis' were as followed (Same used by Brent in2 Work):
  - o Data Set: Claimant count with rates and proportions
  - o Rates and Proportions: Proportion of resident working age population
  - o Sex: Proportion of resident working age population
  - o Geography (Wembley): 2003 CAS Wards – Wembley Central
  - o Geography (Brent): Local Authorities – County – Brent
  - o Date: January of selected year
- The importance of this indicator is that it has ties to other critical areas of regeneration other than "Economy and Work". It can affect what form of transportation one might use or the type of home they live in or may purchase.
- Brent would like to see the percentage of unemployment decrease.



Green=Past Data Available; Red=Only 2006; To add or remove data, click +/- button on **"Graph Data"** sheet to take out/put in past data	
Green=Brent Data Available; Red= None available; To add or Remove data click +/- button on **"Graph Data"** sheet to take out/put in past data	

As discussed before there is also the issue of weighting each *key indicator* and *critical area*. As priorities of regeneration change in the future, the 'weighted values' can be changed and are as easily updateable as any other portion of the database. If the weightings are updated, previous year's statistics will automatically adjust to the new weighting scheme to show accurate trends with any past and current data.

With the incoming improvements to the area, Brent Council sought a way to track the changes specific to their town centre, not only economically but aesthetically. To provide a way for this to be monitored, a photo documentation database was created. In this database is a photo of each store, the address, the type of store, and the number of full and part time employees. The information and format provided in the photo documentation database will allow Brent Council to see if store owners aesthetically improved their store front and provide the ability to update that database with a future trend of photos. When we asked the survey question of how many full and part-time employees each business had, we were creating an indicator for our *Wembley Regeneration Index*.

The final product is a comprehensive system that will be used to monitor and measure the impact of the regeneration efforts in Wembley for years to come. It allows Brent Council to bring in a wide variety of data, compare all of it through a simple point scheme, and produce a final value for which they can analyze and help them adjust their regeneration efforts. The extent of the system is not just limited to annual assessment but also serves as a way to look at trends and make predictions for the future all of which will supply the London Borough of Brent with an extremely helpful tool they can use to reach urban sustainability.

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Chapter 1: Introduction

Opened in 1923, the Old Wembley Stadium, originally known as Empire Stadium, is one of the world's most famous football grounds. It is regarded by many to be the 'home of football.' It served as England's national stadium and was the focal point of UK football for almost eighty years, closing in the year 2000. After this impressive run, the Old Wembley Stadium was ready to be replaced by the 90,000 seat New Wembley Stadium, currently under construction. In the year 2003, the developers broke ground and the stadium is scheduled for an opening in early 2007.

The New Wembley Stadium is expected to be a catalyst and focal point of a local regeneration effort. The new stadium will not only bring with it immense event day crowds, but improved tube stations, improved public leisure areas, and an improved shopping plaza. These new improvements are part of the regeneration effort coordinated by the planning department in Brent Council.

One problem that the Council faces with the regeneration of Wembley, and also faces in future planning applications, is that there is now a government mandate requiring planning services to track their policies regarding planning developments. Such a tracking system needs to clearly determine what progress or lack there of had been made in improving the quality of life to the local residents and business owners. Brent Council is in need of this type of tracking system to monitor and measure their efforts in order to understand and report on the effects of the planning and regeneration on the Wembley region.

There have been general studies of how to measure and track regeneration, e.g. the Point System (Barry, 2004). A key component of the approach in the Point System (Barry, 2004) is that data must be collected for many regeneration *indicators*, e.g. transportation, transport, and community benefits. Brent Council collects data for some of these *indicators* already through the census, housing data, and local surveys. This information, however, is scattered across several agencies within Brent Council and may not have equal value towards providing insight of the success of the regeneration efforts on the residents and business owners in the Wembley area. A complete "system" for measurement and tracking regeneration in Brent, providing an overall picture of the effects of the regeneration efforts, is needed.

This project resulted in a complete regeneration monitoring system for the Wembley area of the Borough of Brent. We identified the *areas* of regeneration that were *critical* to the residents and business owners in the Wembley area, and created a concrete set of *indicators* for each area that accurately measure regeneration. Data was collected in one of four ways. These included the creation of a photo documentation database, the referencing of Brent Council documents, the consultation of departments within Council, and the consultation of two government sources outside the council. These four components were brought together to create the *Wembley Regeneration Index.* The *Wembley Regeneration Index* provides a single regeneration *indicator*, synthesized from a weighting of 30 specific measurements in 3 critical areas.

The *Wembley Regeneration Index* monitoring system provides a simple method by which the regeneration of Wembley can be tracked in the future. The index can be used as a basis of determining successful regeneration in Wembley and is expected to serve as a foundation to track Brent's future regeneration and planning policies.

Chapter 2: Background

Wembley Stadium is the pinnacle of the new regeneration development in the Borough of Brent. The officials of the community are using the stadium as the primary catalyst to rejuvenate the economy and social atmosphere of the surrounding area known as Wembley. With a population of 263,464, Brent is one of the more ethnically diverse boroughs in London. Various minorities represent about 40% of the population. The Borough of Brent has a 5% unemployment rate and issues regarding crime, education, traffic, housing, and cultural richness are prevalent.

Many communities like Brent face the need for change in today's society, in the form of regeneration. They want to restore the vigor and prestige of their great Cities, Boroughs, or Wards. The core issue here is determining whether these efforts are successful or not. Is the regeneration project working, the area improving, or the impact sustainable? This chapter discusses previous research done on urban regeneration and how we used this information to answer these questions.

The first two sections will briefly discuss the general idea of sports stadiums as a catalyst for urban regeneration and the second will discuss specifically what is being done in the area of Wembley to facilitate its own regeneration. After, the philosophy behind urban regeneration and sustainability will be highlighted and will show past studies and give an overview of how regeneration is defined.

Once a general background of Wembley and regeneration has been established we will move into the specific documents and sources we used for determining our *indicators* of Wembley's regeneration. Not only will we discuss the documents that created the *indicators*, we will discuss the sources of data used to evaluate those *indicators*. Finally, this section will conclude with an example of a weighting matrix similar to the *Wembley Regeneration Index* created as our final product.

2.1 Sports Stadiums as a Catalyst

Figure 1: Wembley Stadium March 2006

One of the main goals of Brent Council is to use Wembley Stadium as a catalyst for urban regeneration in the surrounding area. This is not an uncommon outlook as James Bulley, a stadium consultant who did a study on stadium development as a catalyst for regeneration, points out by saying, "a set of circumstances have come together in the UK that have led to the redevelopment and, in many cases, the relocation of football stadia, and these circumstances have led to stadia development playing a significant part in the regeneration of urban communities" (Bulley, 2002).

When France was informed that it was a candidate to be host to the 1998 World Cup, they immediately began to take steps to identify a location to create an international sized stadium. The location that they were looking for was one which would benefit the most from an economic and social boom.

France's final decision was to construct the stadium in Saint Denis, a highly industrialized district 1.5 km to the north of Paris. Immediately following the World Cup there was a noticeable economic impact. About 4000 new jobs in the stadium were created, tourism increased, and benefits were reported by shop owners, hotels and restaurants. However, only 19% of these businesses attributed their benefits to the World Cup. The major impact came afterwards, as the stadium improved the infrastructure and community of Saint Denis. The

stadium changed the economic assessment of the local area's development potential and received a large amount of government attention.

Saint Denis had been working with neighboring communities to improve the environmental conditions of the area, many years before the proposed plan to build the international stadium. The construction of the stadium was the spark that set off many of the improvements. Street lighting and furniture were placed on all access roads creating the sense of a safe, culturally rich environment as well as the creation of new green space which improved the environmental quality (Newman, 2002).

Although the economic and environmental aspects of Saint Denis improved, the social component was not as successful. The main issue was that Saint Denis was unevenly distributing its economic benefits between locals and people outside the region. Of the people employed in Saint Denis, 70% lived outside the area leaving only 30% of the residents with jobs inside the area. This is obviously a problem because one of the goals of the stadium was to create urban integration, and it was integrating with the outside community, not the residents of Saint Denis. Additionally, there were also problems with the lack of quality housing (Newman, 2002).

As the example of the Stade de France shows, sports stadiums can be used as catalysts and in many ways succeed. However, like any major plan of urban regeneration, problems do arise and must be identified. Systems must be created to find these problems so that they can be addressed and corrected. The city of Saint Denis obviously had a system to know that the social component was not successful; if this was not the case then there might not have ever been an effort to fix it. The identification and correction of these problems is the first step towards creating urban sustainability in any community.

2.2 Wembley Regeneration Projects

The new stadium is not the only regeneration project currently underway in Wembley. In addition to this focal point of regeneration, many publicly funded projects are being developed with the intention of enhancing the economy, local transportation, and general community resources of Wembley. Such projects include the renovation of rail stations, the redevelopment of Central Square, the building of bridges, the creation of more public space, and the creation of more entertainment facilities, such as a new super casino. Many of these developments and more can be seen in Figure 2.

Figure 2: Current Wembley Developments and Infrastructure Works

2.2.1 New Wembley Stadium

The New Wembley Stadium will be a landmark for London and one that will have a dramatic effect on the London skyline with the Stadium's iconic Arch being visible across the City. When lit on a clear evening, the Arch will be seen from Canary Wharf – 13 miles away. Upon its completion it should be one of the most impressive stadiums in the world seating 90,000 spectators for events. There are 71,200 general admittance seats, which is approximately the same as the entire capacity of the Millennium Stadium in Cardiff. Access at the new stadium will be excellent, with 30 lifts and 26 escalators to enable fans to reach every seating area. In addition to the excellent accessibility comes excellent hospitality though 60 bars, 41 food outlets, 19 parenting rooms, and 20 first aid rooms. There is no doubt that this new facility is state of the art and will provide a memorable experience to all that attend its events.

2.2.2 Wembley Public Transit Stations

First impressions play a big part of what an incoming person will think of a community. To set a good first impression the borough is currently working on regenerating Wembley Central Station, Wembley Park Station, and Wembley Stadium Station, which are all anticipated to be completed for May of 2006. Currently, an incoming visitor may not see Wembley as a respectable area because all three stations are presently under construction. When Wembley Stadium is completed, the tube stations and the rail station must display an inviting atmosphere that will entice them to return for future events.

The crowds destined for the stadium are more likely to use Wembley Park Station (transport 40,000 People Per Hour) rather than Wembley Central Station (20,000 PPH), or Stadium Station (10,000 PPH) since the Park Station is closer. This will help split the crowd in each tube station, and make exiting the stadium through the tube a little easier. The reconstruction of the stations will present a warmer feeling for incoming visitors and will allow for smoother traffic flow.

2.2.3 High Road

The main route which visitors will take from Wembley Central Station to Wembley Stadium is High Road. Since the closing of the Old Wembley Stadium, there appears to have been a steady decline in businesses along the road. Walking left or right out of Wembley Central

Station for about five minutes, you can see fast food stops, convenience stores, and small businesses, but nothing that promotes an urge to shop along the street. To attract "shopping stores", the businesses need to feel that they will turn a profit. One reason many "shopping stores" are not present on the road is that a large percentage of the local residents may not be able to afford the products sold in these stores. As presented in the "Shopper's Survey," about 27% of the people shopping in the town centre along High Road are visitors from other areas. Since there is low percentage of incoming visitors to add to the "shopping store's" revenue, this location is not yet attractive for occupation. The completion of Wembley Stadium will hopefully correct this problem High Road is facing.

When exiting the station towards the stadium one will see that roughly the first 100 yards of High Road have unoccupied store fronts, this area is known as Central Square. The buildings are being torn down in an effort to rebuild the square (anticipated completion Spring of 2008) and rejuvenate the once vibrant shopping complex. If the passerby likes what they see they might be enticed to shop in the square or proceed down the road to have a look at other shops. The intention of this new construction is to give a lasting first impression of "Destination Wembley".

To handle the additional traffic flow on event days the borough is requesting funding for the expansion of the road. The expansion will allow better flow of buses and cars, allowing cars to easily pass the buses at their stops. With the expansion of the roads, the sidewalk space is decreased. This presents a problem for pedestrians, but it is important that the flow of traffic is maintained.

2.2.4 White Horse Bridge

White Horse Bridge (anticipated completion April 2006) will eventually direct the flow of pedestrians from High Road to the stadium. The bridge will run over the new Wembley Stadium train station, and will allow access to the station below it. This bridge is the key in linking the stadium to the Town Centre. This visually appealing structure will invite those in stadium attendance to see the new changes in the Town Centre.

Figure 3: White Horse Bridge & Wembley Stadium Station

2.2.5 Olympic Way

Olympic Way leads to the main entrance of Wembley Stadium. The way leads towards two large ramps, which plan to be remodeled before the opening of the stadium. The new ramp plans to be as impressive as the stadium itself, and as the main entrance to the stadium, it will be the largest entrance to the stadium (Figure 1). This entrance is on the opposite side of the White Horse Bridge entrance, but is the grander of the two.

Along one of the sides of the Olympic Way, Junction Retail Park is being regenerated. This new retail park will provide a more inviting sight to the majority of those entering the stadium instead of the present view of vacant lots and rundown buildings.

2.2.6 Destination to Shop

The Borough of Brent is in a position where there are not many opportunities for multi-stop shopping. An example of one-stop shopping is a local superstore ASDA. Presently, there are not many other stores around the super store that would promote multi-stop shopping. The idea of creating a shopping district that emphasizes multi-stop shopping is the Ward's goal. The problem is that they do not know how to achieve it because they are unsure of what the people of the borough's needs are. Brent intends on collecting data in future surveys to help them create a plan for regeneration in the ASDA area.

2.2.7 New Housing Developments

New housing developments are currently being constructed to meet the needs of the ever growing population in the Brent. Wembley is one of many wards undergoing this type of

development. Plans are in place to develop more affordable and highly dense housing. Highly dense refers to how many people live per square meter and will be achieved by large multi-story housing complexes.

2.2.8 Other Regeneration Projects

With the regeneration of the surrounding area of Wembley Stadium, a more attractive and lucrative "Destination Wembley" will emerge. Brent Council has other ways of creating greater community interest. The owners of Caesar's Palace in Las Vegas are looking to build a casino on the south-west side of the stadium. This could attract a large crowd and be a good source of income to the area, but it has the potential to bring a "bad crowd" of gamblers as well. However, this type of development would not become a reality until at least 2010.

Another possible source of appeal would be the creation of a movie theatre. With movie theatres surrounding almost all sides of Brent drawing people out of Brent, the borough has an opportunity to bring this source of revenue back into the community. The possibility to have one such theatre developed within the stadium has even been discussed.

This section has just shown us the wide array of projects that are being done in Wembley to regenerate the area. But the question still remains "How will we know if it is all working?"

2.3 Urban Sustainability

The goals of urban regeneration *used to be* to improve economic, social, and environmental conditions in the given area. However, recently there has been a change in philosophy where the ultimate goal is not only to improve those conditions but to also create *urban sustainability*. Voula Mega, a research manager for the European Foundation for the Improvement of Living and Working Conditions, says the pillars of urban sustainability can be defined as "a healthy environment, social cohesion, economic efficiency, and a universal concern [for sustainability]." Ultimately, sustainability is more than creating immediate impacts; it is an ongoing process to establish those four pillars.

2.3.1 Philosophy of Urban Sustainability

The term 'urban sustainability' became popular after the Brundtland Report came out in 1987 (Lumley, 2003). The main points of the report said that current needs should not compromise the ability for future generations to meet their needs and the economic conditions of

the poor must improve. However, the most important point that it stressed was on the conditions of the environment saying that it must be connected to the economy and cannot be sacrificed for current goals. The Australian Commonwealth Government said that sustainability is, "development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends" (Commonwealth of Australia, 1994). Sustainability in terms of the environment basically means minimal use of nonrenewable resources and protection of the natural environment such as water, trees, and land. This goes hand in hand with economic success and the satisfaction of the community's needs.

2.3.2 Identifying Key Indicators

An important aspect when trying to achieve urban sustainability is the reporting of the steps that are being taken to show if they are successful. Local officials can use the report to focus attention on important issues and can also use it to reveal problems. However, the report is not only for the respective government or organization but also for the community, who would like to know how it is affecting them. If the programs that are in place are not working or are conflicting with the community interest then the report is there to back the resident's claims. Experts can also use the report for future reference when planning in other urban regeneration sites. In order to produce this sort of thorough report there has to be a well defined step by step process for identifying the most important urban sustainability indictors.

Urban sustainability indicators are "bellwether tests of sustainability and reflect something basic and fundamental to the long term economic, social or environmental health of a community over generations" (Sustainable Seattle 1993). According to Maclaren, these indicators must cover a wide array of economic, social, and environmental aspects, and must possess at least one of these four characteristics:

- Integrating
- Forward-looking
- Distributional
- Input from multiple stakeholders in the community

An **integrating indicator** is one that provides a link between an economic, social, and environmental problem. An example of this is unemployment, which not only measures an economic problem, but also a social problem, because it can indicate that there is social stress

due to the fact that people do not have jobs. This means the indicators can be developed for the measurement of more than one area.

Forward-looking indicators look at past trends and try to set a benchmark number for the future. An example of this would be to reduce solid waste 50% by 2010 or keep unemployment below 3%. Brent Council has put forth such numbers stated in the Annual Monitoring Report (Brent Council, 2005) which can be used for these types of indicators.

Distributional indicators try to measure a problem by breaking it down into certain groups or areas. If a highly populated neighborhood in a community has the rate of unemployment go down and the smaller surrounding neighborhoods all have their rate of unemployment go up. Then there is a possibility that the overall rate of unemployment in the community could still show that it went down. This gives a false sense of success in the community because although the larger neighborhood is improving the smaller communities are still hurting. Distributional indicators can be used to solve this problem with an appropriate weighting system as shown in our final system.

Multiple stakeholder indicators are determined by surveying local people in the community as well as experts on the specific field. "The history of the social indicator movement suggests that the most influential, valid, and reliable indicators have been those that were developed with input from a broad range of participants in the policy process" (Maclaren, 1996). These indicators can be determined through simple surveys (2.2.1 and 2.2.2), focus groups, and interviews.

These four types of indicators were important because they gave us a general background for creating *key indicators* specific to Wembley that may mot have been identified in the Barry System (Barry, 2004).

Once a set of indicators are created they must be evaluated to determine if they cover all aspects of the proposed goals. If they do, then they can be applied to a weighted system to measure the success of regeneration such as the point system discussed in Sections 2.4.3 and 2.8.

2.3.3 Documents Used to Determine Critical Areas and Key Indicators

Specific Documents were used for Determining our *Critical Areas* and *Key Indicators.*

- Unitary Development Plan (UDP, 2004)
- Wembley Masterplan (WMP, 2005)

- Barry System (Barry, 2004)

The first two documents were provided to us by Brent Council while the third was a study done outside of the Council. The UDP and WMP helped us to figure out *critical areas* specific to Wembley, while the Barry System (Barry, 2004) helped us to develop *key indicators* for those *critical areas*.

Wembley Masterplan

The Wembley Masterplan (Brent Council, 2005) is a document produced by Brent Council. It has a specific section stating objectives for the regeneration. These objectives are important because they state what Brent Council or the community is actually looking to get out of the regeneration. This knowledge allowed us to decide what the *critical areas* of Wembley were and from this we created specific Wembley *key indicators* based upon WMP's (WMP, 2005) objectives. The document also has a specific section on transportation which outlined additional objectives for that *critical area*. The three *critical areas* of Transportation, Economy and Work, and Housing were all created due to this document. However, this document was not specific enough to create *indicators* for all of those areas. Overall objectives along with *key indicators* created from the WMP (WMP, 2005) can be seen in Appendix A.

Unitary Development Plan

The UDP (UDP, 2004) is a document that provides planning guidance for the development and use of land in Brent so that future developments have clear direction. In this document there is not only planning help but the goals that the borough wishes to come out of future planning, similar to those of the WMP (WMP, 2005). These objectives can be seen in Appendix B and were used to determine *critical areas* and get a general idea of *key indicators* in the same way the WMP (WMP, 2005) was as discussed above. Also seen in Appendix B are the specific indicators created because of this documents influence.

The UDP (UDP, 2004) and WMP (WMP, 2005) were used in conjunction with guidance from our liaison Mr. Hullock to create one list of possible indicators that would be appropriate to measure the Wembley regeneration. This document is not broken down specifically into ideas from the UDP (UDP, 2004), WMP (WMP, 2005), and Mr. Hullock's input because this list was

derived from a team meeting of WPI students and Mr. Hullock, where all of these components were discussed at one time. This encompassing list can be seen in Appendix C.

Point System

"Assessing the effectiveness of regeneration policy has been the subject of numerous evaluations" (Barry, 2004). From these various studies key performance indicators have been identified as acceptable measures to assess the achievement of regeneration in a quantitative fashion (Barry, 2004). These numbers are derived from many sources so that they may weight the performance to determine if there was a sustainable regeneration. This system is known as the point system (Barry, 2004). The study developed by Barry received input from 47 experts in determining *critical areas* of regeneration along with *key indicators*.

In the point system there are certain *critical areas* of regeneration (Figure 4). These *critical areas* are broad components that surveyed experts believe have the greatest impact on the community. To help to evaluate whether these area's regeneration goals are being reached, indicators are put in place. An example would be trying to move more from private to public transportation in an urban area. Your critical area would be *transportation and mobility* and your indicators might be how many people own a car, how many people use the bus or rail, and how many people walk. By comparing this to an initial baseline of information it is possible to see if your target goal was achieved. This would be an example of a forward reaching indicator discussed in 2.3.2.

Components	Weighting (percentage)	Ranking
Economy and work	21.5	(2)
Resource use	17.5	(5)
Buildings and land use	18.9	(4)
Transport and mobility	22.1	(1)
Community benefits	20.0	(3)

Figure 4: Critical Areas and the Weightings Applied to Each (Barry, 2004)

Figure 4 also illustrates the importance of each critical area giving it a weighting and more importance in the overall scale as discussed in 2.8.

Within this system, a case study was done in Belfast, Dublin, and Barcelona. The following *key indicators* were used to measure transportation (Figure 5). Along with the

indicators are the points that were allocated by the experts. This is one of five sets used and later applied to a weight system which will be discussed in further detail in Section 2.8.

Indicator description	Points scoring framework
1. Land devoted to roads—percentage of site area occupied by roads	>25 = 2 points 20–25 = 4 points 15–20 = 6 points 10–15 = 8 points <10 = 10 points
2. Land dedicated to pedestrians—percentage of road network	<30 = 2 points 30–44 = 4 points 45–59 = 6 points 60–75 = 8 points >75 = 10 points
3. Reorientation of road network—safety, accessibility, congestion	Points allocated on a scale of 1–10 by residents/end–users
4. Work travelling habits—mode of transport	Private transport = 2 points Share a car = 4 points Public transport = 6 points Walk/cycle = 8 points Live/work on site = 10 points
5. Leisure travelling habits—mode of transport	Private transport = 2 points Public transport = 6 points Cycle = 8 points By foot = 10 points
6. Public transport links—walking distance to nearest facilities (in metres)	>1000 = 2 points 750–1000 = 4 points 500–750 = 6 points 250–500 = 8 points <250 = 10 points

Figure 5: Transportation Indicator Set and Point Framework (Barry, 2004)

We compiled a complete list of all *indictors* expressed in the point system (for all 5 *critical areas*) in Appendix D. These *indicators* provide an array of *critical areas* for assessment. They should be considered legitimate measures of regeneration because of their application in the three aforementioned European case studies, which measured urban regeneration. This system had a heavy influence on our overall index and will be referenced often in the Methodology and Results section.

Using the point system might be ideal if not for the fact that there is no concrete definition of regeneration. Essentially urban regeneration comes from growth to an area. However, with urban regeneration there are many different kinds of growth an area could be looking for. In short, these would be the *critical areas*. From the point system there were five *critical areas* defined: Transportation, Economy, Resource Use, Building Use, and community benefits. These areas are only relevant to the regeneration effort in Wembley if they are also the *critical areas* that the residents of Wembley and Brent Council consider important to their specific regeneration effort.

For example, if the focus of the regeneration effort is to promote crime reduction and not the overall economic status then the *indicators* would be quite different than the Point system

which has no provision for such an *indicator*. While it is true that many of the *indicators* in the Barry system reflect the overall regeneration of Wembley, it is clear that certain *indictors* are missing that are crucial to measuring the final objectives and goals which will eventually create 'Destination Wembley'.

In the end *indicators* in Appendices C and D, needed to be narrowed down to produce a complete regeneration index, focusing on quality, rather than an incomplete system focusing on quantity of *indicators*. By using the 3 aforementioned documents we produced a final *indicator* list by using the methods in Section 3.1.

2.4 Data Collection Sources

Once *key indicators* were determined we needed data sources to measure these *indicators*. This section will describe all of our data collection sources:

- Shoppers Survey
- Business Survey
- Census
- Annual Monitoring Report
- Nomis – National Statistics
- Previous Photo-documentation Work
- Global Information Systems Department
- *Brent in2 Work*
- Transport for London

This section starts with all surveys used; all public and private documents used, departments within Brent Council consulted, and conclude with all agencies outside Brent Council consulted. These data sources not only evaluated previously established *indicators* but it helped to form more of them as well. It brought into light previously overlooked information that we made into *indicators* due to these data sources.

2.4.1 Shopper's Survey

A shopper's survey was conducted in July of 2005 by Adsearch Limited for Brent Council. The purpose of this survey was to provide information on shopping habits, shopper and

visitor demographics and opinions of the Town Centre's of Wembley, Harlesden, and Willesden Green.

This survey was conducted in July 2005. We are under the impression that this survey will be done annually to track the shopper's view of the area. This data helped us gain specific insight into what shopper's thought of the Wembley Town Centre. This report was critical in creating any of the economy *indicators* for the Town Centre (E13, E14, and T2).

Questions asked in the survey along with more detail about the survey can be seen in Appendix E. A copy of the survey can be found in the Brent Council Planning Office (West Team).

2.4.2 Business Survey

The Business Survey was conducted in 2005 and its goal was to obtain a general idea of what local businesses anticipate will be the impact of the opening of the new stadium. 147 businesses participated in the survey.

The business survey was last conducted in 2004 and 2005. It is thought that records prior to this exist but they were not unveiled during our time working with the Council. The business survey is helpful in creating some *indicators* for the *critical area* of economy and work because it shows what the businesses are hoping for in regeneration and therefore *indicators* were made to monitor those aspirations. The survey question that was most applicable in helping us create more *indicators* was "Which factors are critical to the growth of your business?" The only *indicator* that was evaluated by this source was E6: Store Tenure.

A copy of the survey can be found in the Brent Council Planning Office (West Team).

2.4.3 Census

Every 10 years a government census is done in the UK. The Census contains valuable information concerning transportation, housing, crime, employment, and economic conditions in the area. The most current census done for Brent was conducted in 2001.

Much if this information was only broken down into the boroughs of London and therefore we only used it when we could not find certain *indicator* data specific to Wembley. Therefore only one *indicator* was evaluated through the census, T2: Transportation Residents' Use for Work.

If additional census information is to be sought, it can be found on the website www.brent.uk.gov.

2.4.4 Annual Monitoring Report

The AMR (Brent Council, 2005) is a report that will be produced annually and was started for the 04/05 fiscal year. This report is produced for the Secretary of State according to the Planning and Compulsory Purchase Act 2004. This report has two purposes. The first is to present a concise review of development activity for that fiscal year and the second is to outline the progress toward the local development framework (i.e. UDP (Brent Council, 2004), WMP (Brent Council, 2005), etc.). At the current time the AMR (Brent Council, 2005) for 05/06 is being compiled and upon its completion can be used to update the *Wembley Regeneration Index.*

The AMR has sections responding to the following areas:

- Built Environment
- Environmental Protection
- *Housing*
- *Transport*
- *Employment*
- *Town Centres and Shopping*
- Tourism, Entertainment, and the Arts
- Open Space, Sport and Recreation
- Community Facilities
- Waste
- Park Royal Regeneration Area
- Wembley Regeneration Area
- Planning Obligation Agreements
- Monitoring Local Development Scheme Process

The most important sections that were utilized in our Methodology and Results are those in *italics*. These sections of the AMR were used to evaluate *indicators* T1: Traffic Flow, T6: Bus Usage, and EVERY housing indicator H1-H9.

A copy of the report can be found in the Brent Council Planning Office (West Team).

2.4.5 Nomis – National Statistics

Created in 1981, Nomis is a web based database consisting of labor market statistics in the UK. This includes employment, unemployment, earnings, labor force surveys, and Jobcentre Plus vacancies. Using this system, one may refine searches all the way down to ward specific information. Nomis has proven to be very helpful for local authorities to determine specific statistics regarding their town or city (and is used by *Brent in2 Work* and Brent Council). However, this data is not open directly to the public. Due to confidentiality laws in the UK, it is

illegal to release information to a certain level of accuracy to a third party organization. One such example is that it can provide the employment data for the agriculture industry in Wembley Central.

All of the Nomis data collected has been recorded from 2003-2006. Nomis was helpful in evaluating the *key indicators* E1: Unemployment and E2: Gross Income.

Access to the Nomis database can only be given to employees of the council. If access is needed one should consult the Brent Council Planning Office (Policy and Research Team).

2.4.6 GIS Intranet Mapping

An important tool that Brent Council uses in planning is Geographic Information Systems also known as the GIS intranet mapping system. The purpose of this system is to give all Council employees access to currently, 18 maps of Brent, relaying information such as transportation, housing, parks and open space, and aerial photography. It can take all forms of data and present it in a geographical format. Other more specific uses of the mapping system include 3-D modeling, mapping the shortest route, distance measurements, baseline studies, and noise mapping assistance.

The GIS system is continually updated but our documentation of the area through GIS has been the first recorded effort. The program was useful to us in Evaluating *key indicators* T4: Land Devoted to Pedestrians and T5: Land Devoted to Roads.

The program can be accessed from any PC outside of the Council but changes cannot be made to the program. Inside the Council changes can be made to a certain extent be to have the knowledge necessary to take the measurements to update the index we recommend consulting the GIS department.

2.4.7 Brent In2 Work

Brent in2 Work is an organization that works in partnership with other employment agencies in London to employ ONLY people who live in the Borough of Brent. *Brent in2 Work* has developed partnerships with Wembley Stadium, Delaware North, Clean Event, H&M Security, Sword Security, and Integrated Security Consultant (ISC). All of these companies will require new employees at the opening of the stadium and it is *Brent in2 Work's* intention to give as many positions to Brent residents as possible. More information about *Brent in2 Work* can be found in Appendix F.

Brent in2 Work was useful for evaluating employment and training *indicators*. This information dates back to 2003 but some data dates back even further to 2000 which is the date of their opening. They provided us with information regarding their training programs, unemployment data specific to Wards, and statistics involving present and future jobs provided by the development specifically from the Arena and the Stadium. Specific *indicators* evaluated by this source were E10: Stadium and Arena Jobs Occupied by Brent Residents, E11: Sustainable Vacancies (or jobs that are more than 16 hours a week) in Wembley, and E12: People Trained.

To contact this office one may either find the contact information on the Brent Council website by searching for 'Brent in2 Work' or try the 2006 contact Chantelle.Daniel@Brent.gov.uk.

2.4.8 Transport for London

TFL is responsible for running most of the public transport system in London. The data supplied from them dates back to 2004 however, there is no data post-2004 and we are waiting for it to be updated. The information obtained was used to evaluate one indicator, T7: Train Usage. This was done by looking at the average turnstile numbers for Wembley Central and Wembley Park tube stations.

Additional information can be obtained on their website at www.TFL.com.

2.5 Wembley Regeneration Index

After *indicators* were created and data had been collected, the *Wembley Regeneration Index* was made. Again the point system (Barry, 2004) was used as a general guideline. This section refers to the weighting methods discussed in the point system for determining sustainable regeneration. The point method was the primary inspiration for the methods used to compute the WRI, as discussed in section. The point system is probably the single most important document used in our project because it was the only document that offered specific help for the weighting in our final index.

As seen in Figure 6, there are 5 headings that were used to determine the weighting of the point system. 'Indicator grouping' refers to the *critical areas* and 'Number of indicators' is the amount of *indicators* used for each critical area. 'Percentage weighting' was determined through

the surveys received from the experts. 'Maximum points' is simply determined by multiplying the indicator number by 10 and the final heading is explained in the figure.

Indicator grouping	Percentage weighting	Number of indicators	Maximum points	Maximum points X weighting
Economy and work	21.5	10	100	2 150
Resource use	17.5	9	90	1 575
Buildings and land use	18.9	12	120	2 268
Transport and mobility	22.1	9	90	1 989
Community benefits	20.0	12	130	2 600
Total	100	52	530	10 582

Figure 6: Maximum Possible Regeneration Points (Barry, 2004)

Finally, in Figure 7 the maximum point total is put into a sliding scale which will assess the overall sustainability of the regeneration.

Scale	Percentage range	Points total
Poor	<40	<4152
Average	40–49	4152.8–5078.2
Average–Good	50–59	5191.0–6125.4
Good	60–69	6229.2–7163.6
Good–Excellent	70–79	7267.4–8201.8
Excellent	>80	>8305.6

Figure 7: Regeneration Sliding Scale (Barry, 2004)

The point system has many benefits. It draws information from multiple *indicators*, to take into account the various factors that effect regeneration, and it are places those indicated values into a weighted matrix to allow the more important *critical areas* of regeneration to take precedence in the evaluation.

By incorporating parts of the point system (Barry, 2004) we were able to take the Documents used for determining *key indicators*, and the data sources for those *indicators* and put that information into the *Wembley Regeneration Index* with a strong reference for final weightings.

2.6 Summary

This background research has provided us with a foundation for our methodology to rest on. The foundation comes specifically from Sections 2.5-2.8. These sections directly correspond with Sections 3.1-3.3 of the Methodology and will be heavily referenced.

Our most important finding within our background came within Section 2.5 Data Collection, where 8 sources were identified to monitor the *indicators* specified later in Section 3.1 of the Methodology. This section helped us to realize that there was enough indicator information available, concluding that it was not necessary for us to conduct our own public opinion survey.

With the establishment of these data sources along with sources for determining *key indicators* and a strong reference for weighting those indictors. We were prepared to move into the methodology in which we develop the *Wembley Regeneration Index* as a complete system for measuring and tracking the regeneration of the Wembley area in the Borough of Brent.

Chapter 3: Methodology and Results

The essential goal of this project was to create a means by which Brent Council will be able to track the regeneration of Wembley due to the impact of the new Wembley Stadium. Our team suggested and developed a plan for an appropriate tracking system to be implemented. An overview of our Methodology is given in Figure 8.

Our team:

1. Determined the *critical areas* of regeneration and the *key indicators* for each area. (2.3.3)
2. Collected a baseline of indicator data which included numerical and visual information which can be used to track future regeneration. (2.4)
3. Produced an updateable system known as the *Wembley Regeneration Index* which was built specifically for the monitoring of regeneration. (2.5)

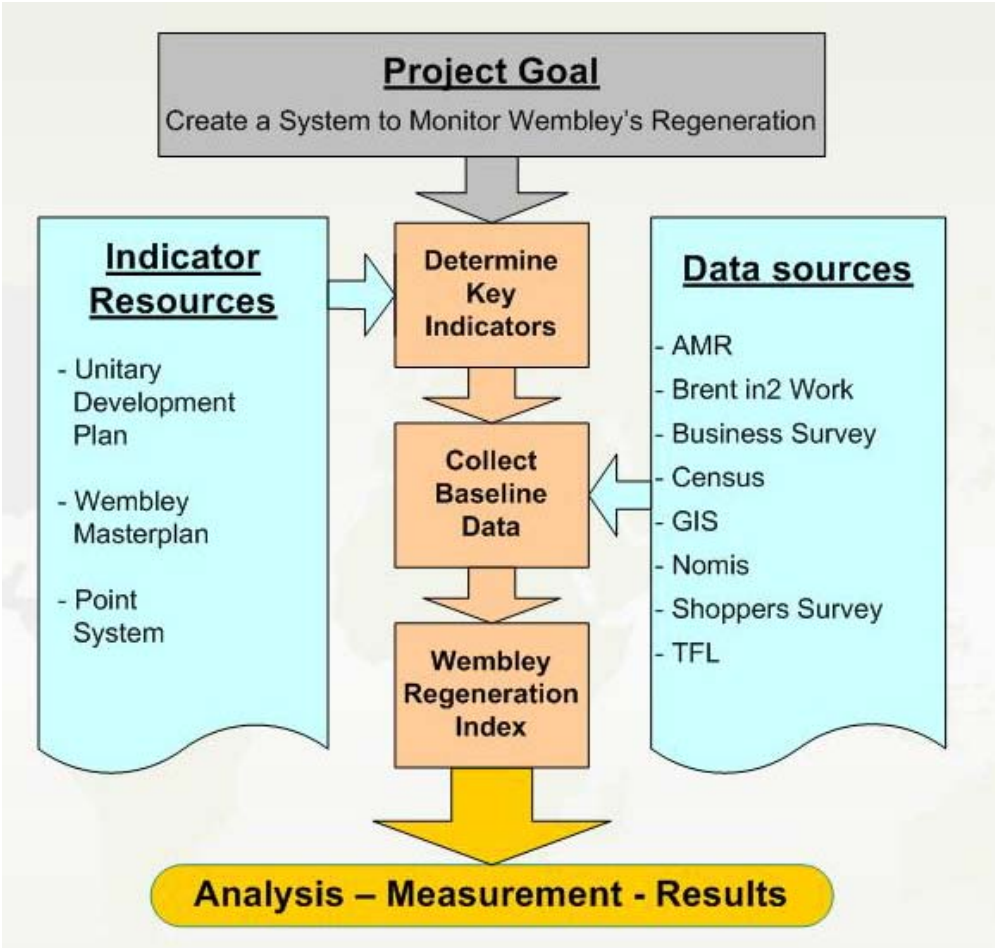


Figure 8: Methodology Flow Chart

3.1 Determining Critical Areas and Key Indicators

To determine *critical areas* and *key indicators*, we used Section 2.3.3 in conjunction with several meetings with different departments. An additional example of how *critical areas* and *key indicators* fit into our final system can be seen in Figure 9.

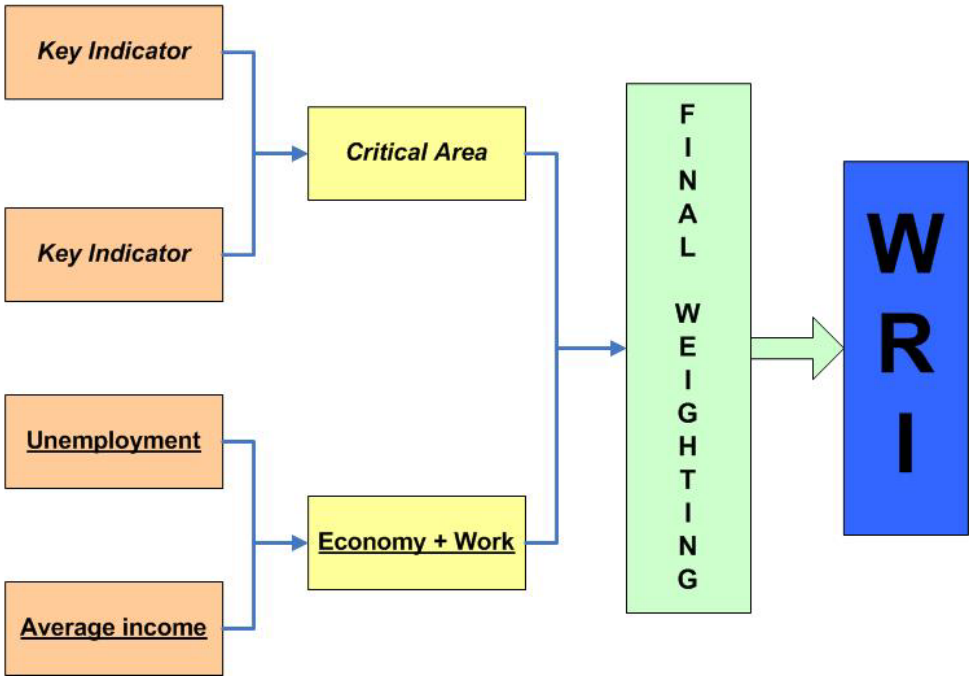


Figure 9: *Wembley Regeneration Index* Format

3.1.1 Critical Areas

Critical areas of regeneration are broad components, from the economy to the environment, which are perceived to be areas needing improvement. They are also specific areas that are important to monitor because their positive or negative impacts will help to gauge the overall regeneration. In order for a regeneration index to successfully measure the impact of Wembley Stadium on Brent, the *critical areas* of regeneration had to be determined.

To determine possible *critical areas* and *key indicators* we looked at several sources of information. (Section 2.3.3)

- Point System (Barry, 2004)
- Unitary Development Plan (Brent Council, 2004)
- Wembley Masterplan (Brent Council, 2005)

These three documents helped us to determine a wide variety of what some of the possible *critical areas* were in Wembley based upon expert opinions in the Point System and Brent Council goals in the UDP and Masterplan. The final decision was made during a meeting on 22-03-06 with our liaison in which the following *critical areas* were chosen:

- Economy and Work
- Transportation and Mobility
- Housing

3.1.2 Key Indicators

After developing the *critical areas*, *key indicators* were identified. Some *indicators* came from the idea to monitor the progress of Wembley High Road which is the area spectators would transit though to get from Wembley Central Station to Wembley Stadium. This area is deemed as a *critical geographic area* of regeneration even though it might not be specified in certain documents, according to Mr. Hullock and this was a deciding factor in creating a Photo documentation database (Section 3.2.1). The photo-documentation database also evaluated *indicators* E7-E9 which are all employment *indicators* for Wembley Town Centre.

Using the Section 2.3, we created a final list of *indicators* used to monitor the regeneration. This final list came from the compilation of two lists (Appendices A and B). A form (or draft) of each of these 2 appendices were brought up and discussed in several meetings with different departments and individuals in and outside of the Council. The lists of possible *indicators* were presented to Mr. Hullock (Brent Council Planning on 22-03-06), Chantelle Daniel (Brent in 2 Work on 22-03-06), and Phil Rankmore (Department of Transportation on 27-03-06). This was done so that the two original lists may be narrowed down into the *indicators* deemed most important to measure the regeneration of Wembley. These specific departments were chosen based on what were deemed our c*ritical areas* of Economy and Work (Brent in2 Work), Transportation and Mobility (Transportation/Mr. Rankmore), and Housing (Planning/Mr. Hullock). Sections 2.4.7 and 3.2.3 highlight what sections *Brent in2 Work* influenced while the Departments of Transportation and Planning influenced transport and housing *indicators* respectively.

Another key factor that decided our *indicators* was the information available. During our project we sought out as much factual information about the Wembley area as we could find and

then we broke it down seeing if we could use it to evaluate any of the *critical areas*. Figure 10 shows the complete list of *key indicators* however, a full index including each *indicator's* description, past and present data, and the methods in which data was obtained will be provided in Section 3.3.

Economy and Work:

E1: Unemployment
E2: Gross Income
E3: Number of Shops
E4: Vacant/Demolished Shops
E5: Vacant Store Frontage
E6: Store Tenure
E7: Jobs in Wembley Town Centre
E8: Jobs in Wembley Town Centre (Big Business)
E9: Jobs in Wembley Town Centre (Small Business)
E10: Stadium and Arena Jobs Occupied by Brent Residents
E11: Sustainable Vacancies
E12: People Trained
E13: Wembley Town Centre Use
E14: Length of Stay in Wembley Town Centre

Transportation and Mobility:

T1: Traffic Flow
T2: Transportation Residents' Use for Work
T3: Transportation to Wembley Town Centre
T4: Land Devoted to Roads
T5: Land Devoted to Pedestrians
T6: Bus Usage
T7: Train Usage

Housing

H1: New Homes
H2: Affordable Homes
H3: Unsuitable/Unaffordable homes
H4: Overcrowded Households
H5: Type of Affordable Housing
H6: Cost of Average Home
H7: Rent
H8: New Housing on Previously Developed Land
H9: New Housing Density

Figure 10: Final Indicator List

3.2 Collecting Baseline Data

Once the final list of *key indicators* was determined, we set out to collect data for each *indicator*. To do this we consulted resources in Section 2.4. This not only includes current data but also previous year's data where we could find it in order to show the current trend of a specific indicator. The purpose of collecting the baseline of data is so Brent will be able to compare that data to future information and gauge the impact of regeneration. This section discusses the methods by which we obtained baseline data for each of the *indicators* described in Figure 10.

3.2.1 Photo documentation

Photo documentation was done to document the current aesthetic state of the Town Centre. This work corresponds to the objective of improving the local businesses and economy of the Town Centre stated in the UDP (UDP, 2004) and WMP (WMP, 2005) Appendices A and B. By comparing pictures of the properties in 2006 with the pictures of the properties from 2007-2010, we can derive if there has been any desire for shops to improve, change location, or even expand, taking the places of the smaller lots next door and making a larger business.

We collected visual baseline data by taking pictures of each storefront along High Road and the main roads branching off of it (Figure 11). The stores photographed are shown in blue and to give a contrast Brent House is shown in yellow.

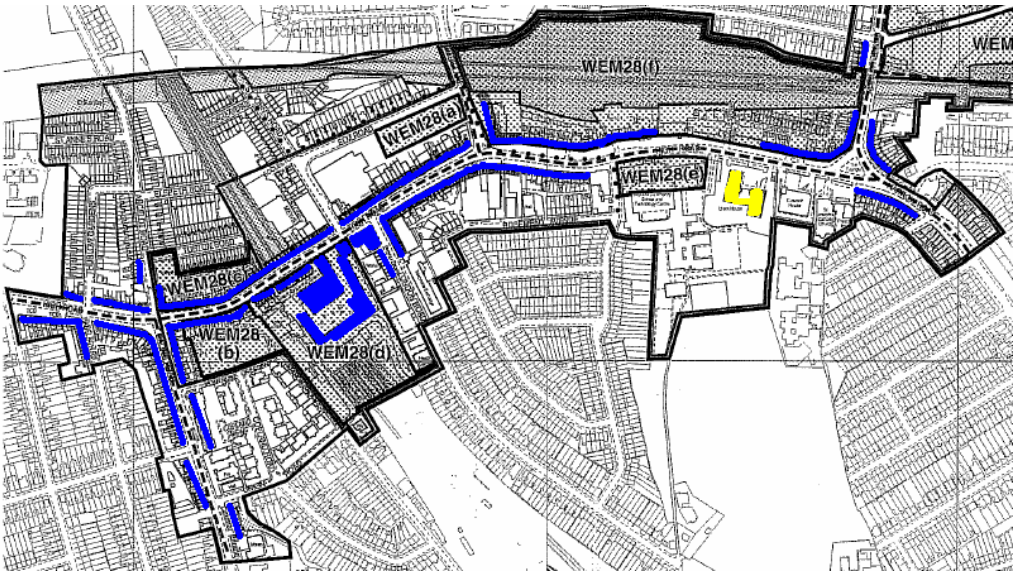


Figure 11: Area recorded during Photo-documentation

As described in Section 2.2.2, the High Road is the main centre for businesses and retail and this is the reason the following area was chosen for documentation.

Using a personal camera along with one borrowed from Brent Council, we photographed the area in much the same way as was done in previous years but with a few modifications. While conducting the photo documentation we did four things. We took a photograph of the entire store front (Figure 10), noted the business' address and matched it up with the list we obtained from the Brent Council, determined what type of store it was, and then asked the owner/manager of the store one question "How many full and part-time positions does this business (or store) employ including yourself?" regarding their employment. When creating the photographic database, we attached the picture of each individual store to its file, and provided a map of surrounding addresses (Figure 11), to make it easier to locate the individual business.

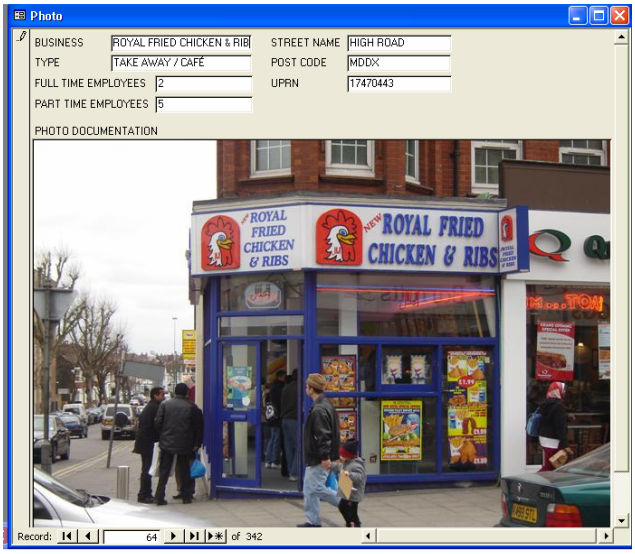


Figure 12: High Road – Royal Fried Chicken and Ribs Store Front

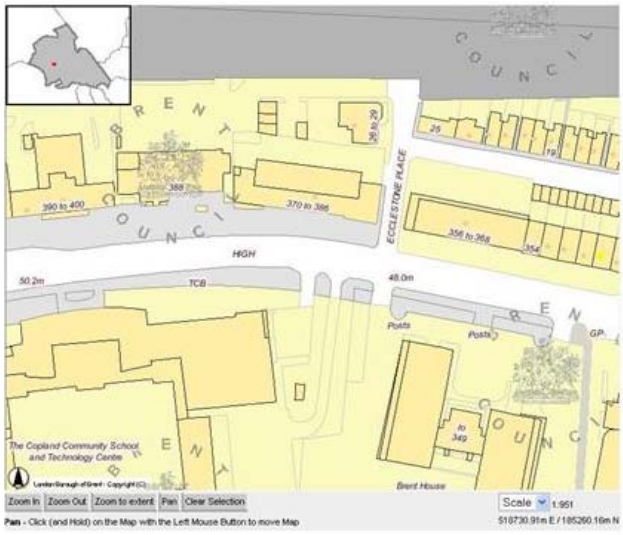


Figure 13: Brent High Road - Overhead Map

The employment question was created to determine how many full and part time employees each business had and will serve as an economy indicator (E7).

Once we acquired our information, we spoke with Brent's GIS Department to determine if it was possible to connect our photographs to the online GIS Mapping. We were informed that the only way to do this was to create a separate website for the photo documentation database. Instead we created a Microsoft Access database for the internal use of Brent Council only. This database contains a list of

each store name, the address, the type of store, a link to the store's picture, a link to a map showing their location along the High Road (Figure 13), and the number of their full and part time employees. This database is shown in Figure 14 and can be accessed on the attached CD with our report or on the V:\Policy\WPI D06 on the Brent council network as of April 2006.

Microsoft Access - [Photo : Table]

File Edit View Insert Format Records Tools Window Help

ID	PROPERTY NAME	DESCRIPTION	PICTURE	MAP	POST	STREET NAME	NUMBER OF	NUMBER OF
103	BOOTS 500	VARIETY STORE	3.0 Photo	3.0 Photo	MDDX	HIGH ROAD	10	10
104	NEWSMART	NEWSAGENTS	3.0 Photo	3.0 Photo	MDDX	HIGH ROAD	1	3
105	CHAMPION FOODS	SUPERMARKET	3.0 Photo	3.0 Photo	MDDX	HIGH ROAD	2	2
106	CHEQUE & PAWN	PAWNBROKER	3.0 Photo	3.0 Photo	MDDX	HIGH ROAD	4	
107	VACANT	VACANT		3.0 Photo	MDDX	HIGH ROAD		
108	DEMOLISHED	DEMOLISHED		3.0 Photo	MDDX	HIGH ROAD		
109	BARRATTS	SHOE SHOP	3.0 Photo	3.0 Photo	MDDX	HIGH ROAD	1	10
110	GREGGS	BAKERY	3.0 Photo	3.0 Photo	MDDX	HIGH ROAD		6
111	BARCLAYS BANK	BANK	3.0 Photo	3.0 Photo	MDDX	HIGH ROAD	16	24
112	PRIMARK	CLOTHES SHOP	3.0 Photo	3.0 Photo	MDDX	HIGH ROAD	4	120
113	BLANDS 510-512	CLOTHES SHOP	3.0 Photo	3.0 Photo	MDDX	HIGH ROAD	7	8
114	ABBEY NATIONAL BLDG SOC 514-6	BUILDING SOCIETY	3.0 Photo	3.0 Photo	MDDX	HIGH ROAD	11	4
115	NATIONAL WESTMINSTER BANK 18-20	BANK	3.0 Photo	3.0 Photo	MDDX	HIGH ROAD	17	3
116	JEAN CENTRE	CLOTHES SHOP	3.0 Photo	3.0 Photo	MDDX	HIGH ROAD	2	
117	CARTERS PHARMACY 524-526	CHEMIST	3.0 Photo	3.0 Photo	MDDX	HIGH ROAD	6	
118	INNER SPACE MEDITATION SHOP	RELIGIOUS INSTITUTION	3.0 Photo	3.0 Photo	MDDX	HIGH ROAD		
119	HUNT BUTCHERS	BUTCHERS	3.0 Photo	3.0 Photo	MDDX	HIGH ROAD	3	
120	LEXUS TELECOM	MOBILE PHONE SHOP	3.0 Photo	3.0 Photo	MDDX	HIGH ROAD	3	
121	MOPHEADS	HAIRDRESSERS	3.0 Photo	3.0 Photo	MDDX	HIGH ROAD	2	1
122	HEALTH FIRST	HEALTH FOOD SHOP	3.0 Photo	3.0 Photo	MDDX	HIGH ROAD	2	2
123	TENNISEE FRIED CHICKEN	TAKE AWAY	3.0 Photo	3.0 Photo	MDDX	HIGH ROAD		4
124	JACK MICHEAL	CLOTHES SHOP	3.0 Photo	3.0 Photo	MDDX	HIGH ROAD	3	0
125	POUND CITY	BARGAIN SHOP	3.0 Photo	3.0 Photo	MDDX	HIGH ROAD	3	0
126	B & J FISHERIES	FISHMONGERS	3.0 Photo	3.0 Photo	MDDX	HIGH ROAD	1	3
127	WEMBLEY FOOD & WINE	OFF LICENCE/GENERAL STC	3.0 Photo	3.0 Photo	MDDX	HIGH ROAD	2	1
128	WONDERLAND	CLOTHES SHOP	3.0 Photo	3.0 Photo	MDDX	HIGH ROAD		1
129	QUALITY TIME	HAIRDRESSERS	3.0 Photo	3.0 Photo	HA9	PARK LANE		
130	CARPHONE WAREHOUSE	MOBILE PHONE SHOP	3.0 Photo	3.0 Photo	HA9	PARK LANE	4	2
131	YOUNG BRIDE & GROOM	CLOTHES SHOP	3.0 Photo	3.0 Photo	HA9	PARK LANE	2	2
132	PARK LANE DRY CLEANING	DRY CLEANERS	3.0 Photo	3.0 Photo	HA9	PARK LANE	1	
133	POUNDSTRECHER 1-9	VARIETY STORE	3.0 Photo		HA9	ST JOHNS ROAD	3	12
134	M BHIMJI ZAVERI JEWELLER	JEWELLERS		3.0 Photo	HA0	EALING ROAD	3	4
135	LAKHA 16-20	JEWELLERS/CLOTHES STOR	3.0 Photo	3.0 Photo	HA0	EALING ROAD	11	0

Record:

Figure 14: Photo documentation database

Previous work was done concerning a photo-documentation database within the Council and a description of it can be found in Appendix G. This is described in our methods because it gave us a template to work off of so that there was continuity within the Brent Council database.

3.2.2 GIS Mapping

The indicator T5: Land Devoted to Pedestrians is concerned with the tracking the percentage of land devoted to roads in the regeneration area. The area that we focused on analyzing was the "Wembley Regeneration Area 2004", whose map can be found in the Brent Council Planning Department. The area the regeneration covers is the area around Wembley Stadium and the area along High Road. Tracking this indicator will allow Brent Council to

monitor the change in the amount of roads in units of a percentage. Using the "ArcMap" program in GIS, we were able to identify the percentage of land devoted to roads. Obtaining a complete list of roads, rails, and buildings and their areas, a calculated area of the regeneration as a whole was produced. The next step was to calculate the area specific to land devoted to roads alone. We calculated the area marked "roadside". We took the calculated area of roads and divided it into the total calculated area to give us the percentage of roads within the regeneration area. This value can be seen in the final *Wembley Regeneration Index*.

Similar to the method used to calculate T4: Land Devoted to Roads, we calculated T5: Land Devoted to Pedestrians. We worked with GIS and the "ArcMap" program again in order to identify a percentage of pedestrian space out of the whole area. The whole area being the "Wembley Regeneration Area 2004" as marked on the maps located in Brent Council's Planning Service Department. The building and land areas were irrelevant and we focused calculating the area marked "path". Dividing the value of "path" into the total calculated, we determined the amount of land devoted to pedestrian space. This value can be seen in the final *Wembley Regeneration Index*.

3.2.3 Brent in2 Work

Brent in2 Work provided us with *indicators* E1, E2, E10, E11, and E12. Each of these work *indicators* is specific to jobs in the area, jobs in the stadium, unemployment, or training programs.

To get this information a meeting was set up through a general e-mailing of the *Brent in2 Work* department. The meeting was conducted with our team, Mr. Hullock, and *Brent in2 Work* manager Miss Daniel. During this meeting two indicator lists similar to those of Appendices A and B were presented. After a brief discussion about what information was available we were given contact information to obtain this data at a future date. The next day an e-mail was sent to the e-mail contact (Chantelle.Daniel@Brent.gov.uk) and we were provided with the appropriate data to evaluate the *indicators* previously discussed in this section. A follow up e-mail was also sent to obtain not only data from current conditions but past conditions as well, as to establish trend lines for monitoring. We requested data dating back to the year 2000 which was one year after the closing of the Old Wembley Stadium and marked the end of event day jobs and event day revenue.

3.2.4 Department of Transportation

A meeting was held with Mr. Hullock, Mr. Rankmore (Head of Transportation at Brent Council) and our team. During this meeting possible transportation *indicators* were discussed and what possible information was available. The relevancy of *indicators* T1-T3 and T6-T7 were verified by Mr. Rankmore. Additionally supplemental information was found for T-6: Train Usage. A document was produced by Mr. Rankmore listing information pertaining to the mode of travel of those in stadium attendance of event days (Appendix H). It was indicated by Mr. Rankmore that this information will be collected in the future along with data from the turnstiles of the tube stations. This individual data is extremely useful in determining if there is an overall increase in public transport in Wembley.

If this information regarding event days was not available and one was to monitor T6: Train Usage in terms of annual traffic flow as an *indicator* of increased public transport, then the numbers would be skewed significantly.

In the future, *Event Day* turnstile counts from the tube stations will be subtracted from the *Annual Turnstile Counts*. Then the *Average Non-Event Day Total* will be multiplied by the *Number of Event Days* and then added back into the *original number*. This formula can be seen below.

Total Flow – Event Day Flow = Non-Event Day Flow

$$\text{NEDF} + \frac{(\#\text{ of Event Days})(\text{NEDF})}{(365 \text{ days} - \#\text{ of Event Days})} = \text{Assumed Yearly NEDF}$$

This *Assumed Yearly NEDF* is an appropriate number to be compared to the Annual Flows from 2000-2005, when there was no event day traffic. This comparison will show if public transport use has increased because of a regeneration and not just stadium day crowds.

3.2.5 Direct Information

Some of the information obtained from documents was not analyzed, it simply needed to be compiled from previous years and put into a presentable format for future updates. These

direct information sources were the AMR (Brent Council, 2005) (T1, T6, and H1-H9) and the Census (T2).

Indicators T1, T6, and H1-H9 are evaluated in the AMR and will be given a new value every year. The AMR was only started for the 2004-2005 fiscal year however, some of the *indicators* in the document show past trends through use of past data such as H1: New Homes.

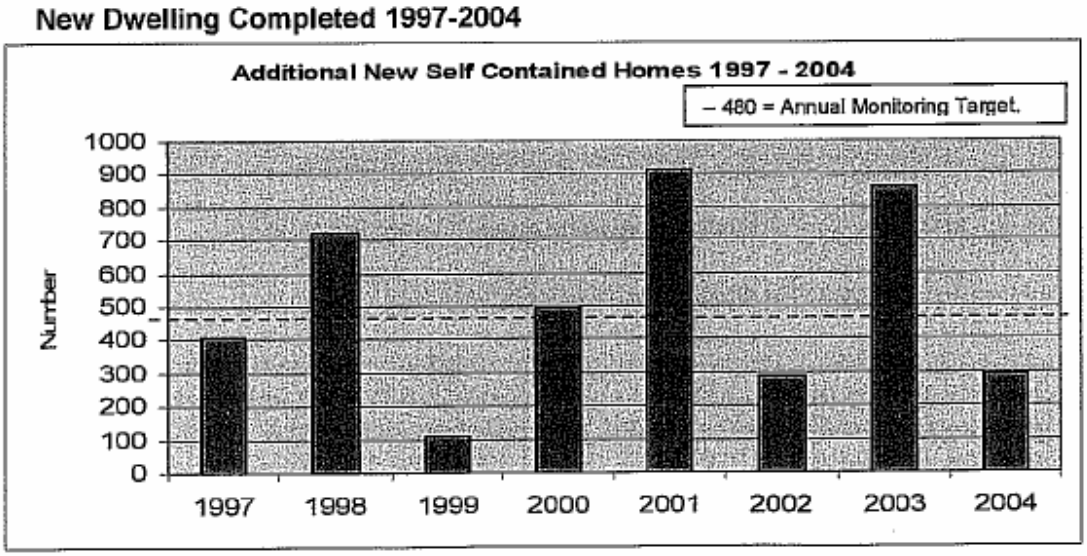


Figure 15: H1 previous data from AMR (Brent Council, 2005)

The AMR was also a strong influence in which housing *indicators* we chose because it was the only available resource containing this type of information. Figure 15 shows one of the figures used in the AMR.

3.3 Key Indicator Details for Wembley Regeneration Index

E1: Unemployment

Key Information

Critical Area:	**Economy and Work**	Units:	%
Value:	**2006: Wembley: 3.6% / Brent: 4.3%**	Date Recorded:	**April/7/2006**
Past years information:	Wembley 2003: 4.8%; Wembley 2004: 4.6% ; Wembley 2005: 4.3% Brent: 2003: 4.6%; Brent 2004: 4.6%; Brent 2005: 4.4%		

Resources/ Contacts

Nomis National Statistics- www.nomisweb.co.uk

Description/ Purpose

- This indicator is meant to show the percentage of unemployment for Wembley Central residents and also compares the percentage to Brent overall unemployment percentage.
- The specific filters used in 'Nomis' were as followed (Same used by *Brent in2 Work*):
    - o Data Set: Claimant count with rates and proportions
    - o Rates and Proportions: Proportion of resident working age population
    - o Sex: Proportion of resident working age population
    - o Geography (Wembley): 2003 CAS Wards – Wembley Central
    - o Geography (Brent): Local Authorities – County – Brent
    - o Date: January of selected year
- The importance of this indicator is that it has ties to other *critical areas* of regeneration other than "Economy and Work". It can affect what form of transportation one might use or the type of home they live in or may purchase.
- Brent would like to see the percentage of unemployment decrease.

E2: Gross Income

Key Information

Critical Area:	**Economy and Work**	Units:	**GBP (Average; Annually)**
Value:	**2005: Brent: £31,439**	Date Recorded:	**April/7/2006**
Past years information:	Brent 2003: £30,491 Brent 2004: £29,532		

Resources/ Contacts

Nomis National Statistics- www.nomisweb.co.uk

Description/ Purpose

- This indicator is meant to show the average yearly gross income for Brent residents.
- The specific filters used in 'Nomis' were as followed (Same used by Brent in2 Work):
    - o Data Set: Annual Survey of hours and earnings – resident analysis
    - o Date: Select year needed
    - o Geography: Local Authorities – County – Brent
    - o Pay: Annual pay – gross
    - o Sex & Full/Part-Time: Full-time workers
    - o Variable: Mean
- The importance of this indicator is that it has ties to other critical areas of regeneration other than "Economy and Work." It can affect what form of transportation one might use or the type of home they live in or may purchase.
- Brent would like to see the average yearly gross income increase.

E3: Number of Shops

Key Information

Critical Area:	**Economy and Work**	Units:	**#**
Value:	**2006: Wembley Town Centre: 282**	Date Recorded:	**Mar 27 – Apr 10 2006**
Past years information:	2003: Wembley Town Centre: 306 2004: Wembley Town Centre: 303 2005: Wembley Town Centre: 300		

Resources/ Contacts

- Brent Council Network - V Drive
- Photo Documentation Database – V Drive – WPI 2006 Folder

Description/ Purpose

- This indicator is meant to show the number of active shops in the Wembley Town Centre.
- Wembley Town Centre: High Road, Central Square, St. John's Road, Park Lane, Ealing Road, Harrow Road, Wembley Hill Road, London Road and Lancelot Road
- This was determined in three ways:
  - o 2003: Database provided by Brent Council listing all businesses in the Town Centre.
  - o 2004 & 2005: Interpellation
  - o 2006: WPI students walked along the Wembley Town Centre and recorded the business name and whether it was active or vacant (Note: Low 2006 value due to Central Square redevelopment)
- The importance of this indicator is that it will inform Brent if they are partially successful or unsuccessful in creating a visually appealing and economically robust Town Centre.
- Brent would like to see the number of active shop increase.

E4: Vacant/Demolished Shops

Key Information

Critical Area:	**Economy and Work**	Units:	**#**
Value:	**2006: Wembley Town Centre: 56**	Date Recorded:	**Mar 27 – Apr 10 2006**
Past years information:	2003: Wembley Town Centre: 41 2004: Wembley Town Centre: 44 2005: Wembley Town Centre: 47		

Resources/ Contacts

- Brent Council Network - V Drive
- Photo Documentation Database – V Drive – WPI 2006 Folder

Description/ Purpose

- This indicator is meant to show the number of vacant/demolished shops in the Wembley Town Centre. This indicator is not factored into the "Wembley Regeneration Index" because it is inversely proportional to indicator 'E3: Number of Shops' and is merely shown for monitoring purposes.
- Wembley Town Centre: High Road, Central Square, St. John's Road, Park Lane, Ealing Road, Harrow Road, Wembley Hill Road, London Road and Lancelot Road
- This was determined in two ways:
  - o 2003: Database provided by Brent Council listing all businesses in the Town Centre.
  - o 2004 & 2005: Interpellation
  - o 2006: WPI students walked along the Wembley Town Centre and recorded the business name and whether it was active or vacant (Note: High 2006 value due to Central Square redevelopment)
- The importance of this indicator is that it will inform Brent if they are partially successful or unsuccessful in creating a visually appealing and economically robust Town Centre.
- Brent would like to see the number of vacant/demolished shops decrease.

E5: Vacant Store Frontage

Key Information

Critical Area:	**Economy and Work**	Units:	**%**
Value:	**2006: Wembley Town Center: 17%**	Date Recorded:	**Mar 27 – Apr 10 2006**
Past years information:	2003: Wembley Town Centre: 10.9% 2004: Wembley Town Centre: 11.7% 2005: Wembley Town Centre: 12.4%		

Resources/ Contacts

- Brent Council Network - V Drive
- Photo Documentation Database – V Drive – WPI 2006 Folder

Description/ Purpose

- This indicator is meant to show the percentage of store frontage in Wembley Town Centre that is vacant.
- Wembley Town Centre: High Road, Central Square, St. John's Road, Park Lane, Ealing Road, Harrow Road, Wembley Hill Road, London Road and Lancelot Road
- This was determined in two ways:
  - o 2003: Database provided by Brent Council listing all businesses in the Town Centre and the amount of store frontage for each.
  - o 2004 & 2005: Interpellation
  - o 2006: WPI students walked along the Wembley Town Centre and recorded the business name and whether it was active or vacant (Note: High 2006 value due to Central Square redevelopment)
- The importance of this indicator is that not only does it take into account the amount of building in the Town Centre but it also looks at how much space they occupy. The value comes from dividing total vacant building store frontage by total store frontage. It will inform Brent if they are partially successful or unsuccessful in creating a visually appealing and economically robust Town Centre.
- Brent would like to see the percentage of vacant store frontage decrease.

E6: Store Tenure

Key Information

Critical Area:	**Economy and Work**	Units:	**%**
Value:	**2005: Wembley Town Centre: 63%**	Date Recorded:	**August 2005**
Past years information:	None Available		

Resources/ Contacts

- Wembley Town Centre Business Survey, 2005
- Only 2005 data available through survey and it is recommended this indicator data be collected annually.

Description/ Purpose

- This indicator is meant to show the number of stores that have been operating for 5 years or more in the Wembley Town Center.
- Wembley Town Centre: High Road, Central Square, St. John's Road, Park Lane, Ealing Road, Harrow Road, Wembley Hill Road, London Road and Lancelot Road
- The 2005 Business Survey had 147 businesses reply to its survey which accounts for just over half the businesses.
- The importance of this indicator is that if a high percentage of businesses have been operating for 5 years or greater in the Wembley Town Centre then Brent is being partially successful in terms of sustainable regeneration.
- Brent would like to see the percentage of stores operating in the Wembley Town Center increase.

E7: Jobs in Wembley Town Centre

Key Information

Critical Area:	**Economy and Work**	Units:	**#**
Value:	**2006: Wembley Town Centre: 1,436**	Date Recorded:	**Mar 27 – Apr 10**
Past years information:	None Available		

Resources/ Contacts

- Brent Council Network - V Drive
- Photo Documentation Database – V Drive – WPI 2006 Folder

Description/ Purpose

- This indicator is meant to show the number of full and part time jobs currently provided in the Wembley Town Centre.
- Wembley Town Centre: High Road, Central Square, St. John's Road, Park Lane, Ealing Road, Harrow Road, Wembley Hill Road, London Road and Lancelot Road
- This was determined by speaking with the manager from each business along the Town Centre to determine how many employees they had for both full and part time positions. Only 74% of the businesses released this information so the collected amount of total jobs was divided by .74 to estimate for the rest. This is the value given above.
- The importance of this indicator is that if more jobs are being created in the Wembley Town Center then unemployment may decrease and the Town Centre is becoming more attractive to shoppers from other areas.
- Brent would like to see number of jobs in the Wembley Town Center increase.

E8: Jobs in Wembley Town Centre (Big Business)

Key Information

Critical Area:	**Economy and Work**	Units:	**#**
Value:	**2006: Wembley Town Centre: 684**	Date Recorded:	**Mar 27 – Apr 10**
Past years information:	None Available		

Resources/ Contacts

- Brent Council Network - V Drive
- Photo Documentation Database – V Drive – WPI 2006 Folder

Description/ Purpose

- This indicator is meant to show the number of full and part time jobs currently provided in the Wembley Town Centre by big businesses. This indicator is not factored into the "Wembley Regeneration Index" because indicator 'E7: Jobs in Wembley Town Centre' already gives the big picture. This indicator is merely for monitoring purposes.
- Big Businesses are described as having 11 or more employees.
- Wembley Town Centre: High Road, Central Square, St. John's Road, Park Lane, Ealing Road, Harrow Road, Wembley Hill Road, London Road and Lancelot Road
- This was determined by speaking with the manager from each big business along the Town Centre to determine how many employees they had for both full and part time positions. Only 74% of the businesses released this information so the collected amount of total jobs was divided by .74 to estimate for the rest. This is the value given above.
- The importance of this indicator is that if more jobs are being created by big businesses in the Wembley Town Center then more big businesses may be moving in
- It is unknown what Brent would like to see in this value.

E9: Jobs in Wembley Town Centre (Small Business)

Key Information

Critical Area:	**Economy and Work**	Units:	**#**
Value:	**2006: Wembley Town Centre: 792**	Date Recorded:	**Mar 27 – Apr 10**
Past years information:	None Available		

Resources/ Contacts

- Brent Council Network - V Drive
- Photo Documentation Database – V Drive – WPI 2006 Folder

Description/ Purpose

- This indicator is meant to show the number of full and part time jobs currently provided in the Wembley Town Centre by small businesses. This indicator is not factored into the "Wembley Regeneration Index" because indicator 'E7: Jobs in Wembley Town Centre' already gives the big picture. This indicator is merely for monitoring purposes.
- Small Businesses are described as having 10 or less employees.
- Wembley Town Centre: High Road, Central Square, St. John's Road, Park Lane, Ealing Road, Harrow Road, Wembley Hill Road, London Road and Lancelot Road
- This was determined by speaking with the manager from each small business along the Town Centre to determine how many employees they had for both full and part time positions. Only 74% of the businesses released this information so the collected amount of total jobs was divided by .74 to estimate for the rest. This is the value given above.
- The importance of this indicator is that if more jobs are being created by small businesses in the Wembley Town Center then more small businesses may be moving in
- It is unknown what Brent would like to see in this value.

E10: Stadium and Arena Jobs Occupied by Brent Residents

Key Information

Critical Area:	**Economy and Work**	Units:	**%**
Value:	**Stadium not yet opened**	Date Recorded:	**Unknown**
Past years information:	None Available		

Resources/ Contacts

- *Brent in2 Work*
  - 2006: Chantelle Daniels – chantelle.daniels@brent.gov.uk

Description/ Purpose

- This indicator is meant to show the percentage of jobs at the Wembley Stadium and Arena that are occupied by Brent residents
- *Brent in2 Work* holds this information as one of their key objectives is to place only Brent residents into jobs in the surrounding area. However, no information is currently available as the Stadium and Arena have not yet opened yet.
- The importance of this indicator is that the Stadium and Arena is the base to the current regeneration efforts and provide the largest source of jobs in the area. Brent wants to see that the building of the Stadium and renovating of the Arena help Brent residents as much as possible.
- Brent would like to see this value increase.

E11: Sustainable Vacancies

Key Information

Critical Area:	**Economy and Work**	Units:	**#**
Value:	**2006: Brent: 5,000**	Date Recorded:	**March 2006**
Past years information:	None Available		

Resources/ Contacts

- *Brent in2 Work*
  - 2006: Chantelle Daniels – chantelle.daniels@brent.gov.uk

Description/ Purpose

- This indicator is meant to show the number of sustainable jobs available in Brent.
- Sustainable jobs are defined as 16 hours a week or more.
- *Brent in2 Work* holds this information as one of their key objectives is to place Brent residents into sustainable jobs.
- The 2006 value will probably be significantly higher than in later years because of the opening of the New Wembley Stadium.
- The importance of this indicator is that the more sustainable jobs available for Brent residents, the more Brent residents will see steady incomes.
- Brent would like to see this value increase.

E12: People Trained

Key Information

Critical Area:	**Economy and Work**	Units:	**#**
Value:	**2006: Brent: 160**	Date Recorded:	**March 2006**
Past years information:	None Available		

Resources/ Contacts

- *Brent in2 Work*
  - 2006: Chantelle Daniels – chantelle.daniels@brent.gov.uk

Description/ Purpose

- This indicator is meant to show the number of people who have been trained by *Brent in2 Work* for sustainable positions.
- Sustainable jobs are defined as 16 hours a week or more.
- *Brent in2 Work* holds this information as one of their key objectives is to train Brent residents and place them into sustainable jobs.
- The importance of this indicator is that the more Brent residents trained, the more Brent residents will have skills needed to do work for sustainable jobs.

E13: Wembley Town Centre Use

Key Information

Critical Area:	**Economy and Work**	Units:	**%**
Value:	**29% : More then once a week**	Date Recorded:	**July 2005**
Past years information:	None Available		

Resources/ Contacts

- Shoppers Survey, 2005
- Only 2005 data available through survey and it is recommended this indicator data be collected annually or bi-annually.

Description/ Purpose

- This indicator is meant to show how often people in the Wembley Town Centre actually come and use the Town Centre.
- This indicator must be looked at skeptically because the people surveyed were already in the Wembley Town Centre so they will be more likely to select the more frequent options. A more accurate representation could be obtained by surveying all Brent residents.
- The 2005 Shopper's Survey had 509 people participate in the survey. The survey also noted that for this specific indicator, frequent users tended to be women, 16-24, in full-time education, single, weekday users, living in the area or living and working in the area locally.
- The importance of this indicator is that if Brent is creating a more attractive area with a very serviceable town centre then more people will be using the Wembley Town Centre.
- Brent would like to see this value increase.

E14: Length of Stay in Wembley Town Centre

Key Information

Critical Area:	**Economy and Work**	Units:	**Hours, Minutes(Length of time w/ highest populous**
Value:	**90 min**	Date Recorded:	**July 2005**
Past years information:	None Available		

Resources/ Contacts

- Shoppers Survey, 2005
- Only 2005 data available through survey and it is recommended this indicator data be collected annually or bi-annually.

Description/ Purpose

- This indicator is meant to show how long people attend the Wembley Town Centre when the do use it.
- This indicator must be looked at skeptically because the people surveyed were already in the Wembley Town Centre so it is a very small representation. A more accurate representation could be obtained by surveying all Brent residents.
- The 2005 Shopper's Survey had 509 people participate in the survey. The survey also noted that for this specific indicator, longer stayers tended to be visitors and high spenders on food and non-food products.
- The importance of this indicator is that if Brent is creating a more attractive area with a very serviceable town centre then more people will be using the Wembley Town Centre for a longer period of time.
- Brent would like to see this value increase.

T1: Traffic Flow

Key Information

Critical Area:	**Transportation and Mobility**	Units:	**% increase**
Value:	**2003: Brent: .8%**	Date Recorded:	**December 2004**
Past years information:	None Available		

Resources/ Contacts

2004-2005 Brent Annual Monitoring Report

Description/ Purpose

- This indicator is meant to show the percent increase/decrease of traffic flow through Brent by any vehicle.
- The value given in the Annual Monitoring Report is an estimated value produced by the London Transportation Department. In order to calculate the percent increase or decrease you must subtract the past year's value from the current year's value and divide by the past year's value.
- The importance of this indicator is that it has ties to environmental issues and also if Brent is trying to have more people use public transportation then one possible indicator for that is a decrease in traffic flow.
- Brent would like to see this value decrease.

T2: Transportation Residents' Use for Work

Key Information

Critical Area:	**Transportation and Mobility**	Units:	**Average % of type of travel**
Value:	**Percent of transportation used**	Date Recorded:	**2001**
Past years information:	**2001 Ward Census**		

Resources/ Contacts

- 2001 Census
- Brent Transportation Department
  -2006: John McCrae – john.mccrae@brent.gov.uk

Description/ Purpose

- This indicator is meant to show the most common use of transportation for Brent residents to get to work.
- Census data is collected every 10 years.
- The importance of this indicator is that it has ties to environmental issues and also if Brent is trying to have more people use public transportation then one possible indicator for that is an increase in public transportation to work.
- Brent would like to see less private transportation used.

T3: Transportation to Wembley Town Centre

Key Information

Critical Area:	**Transportation and Mobility**	Units:	**Average % of type of travel**
Value:	**2005: Wembley Town Centre: 38% Bus**	Date Recorded:	**July 2005**
Past years information:	None Available		

Resources/ Contacts

Shopper's Survey 2005

Description/ Purpose

- This indicator is meant to show what the average means of travel to the Wembley Town Centre is.
- This indicator must be looked at skeptically because the people surveyed were already in the Wembley Town Centre so it is a very small representation. A more accurate representation could be obtained by surveying all Brent residents.
- The 2005 Shopper's Survey had 509 people participate in the survey and 38% traveled on the bus.
- The importance of this indicator is that it has ties to environmental issues and also if more private transportation is being used then parking becomes a concern in the Town Centre
- Brent would like to see less private transportation used.

T4: Land Devoted Roads

Key Information

Critical Area:	**Transportation and Mobility**	Units:	**%**
Value:	**33% Percent of land devoted to roads**	Date Recorded:	**April 14, 2006**
Past years information:	None Available		

Resources/ Contacts

- GIS Department
  - 2006: Nicolas Doubtfire – nicola.doubtfire@brent.gov.uk
- Brent Council Planning Services: Map of regeneration area
- Brent Council Network – V Drive – WPI 2006 Folder

Description/ Purpose

- This indicator is meant to show the percentage of land devoted to roads in Wembley Central.
- This was determined by using the GIS Mapping System
- It is recommended that a system be put in place to collect this data regularly as there are no current efforts to do so.
- The importance of this indicator is that the percentage of roads can dictate whether more public or private transportation will be used and depending on the value, may or may not alienate pedestrians from the area.
- Brent would like to see this percentage decrease or at the very least, remain constant.

T5: Land Devoted to Pedestrians

Key Information

Critical Area:	**Transportation and Mobility**	Units:	**%**
Value:	**87% of Road network**	Date Recorded:	**April 15, 2006**
Past years information:	None Available		

Resources/ Contacts

- GIS Department
  - 2006: Nicolas Doubtfire – nicola.doubtfire@brent.gov.uk
- Brent Council Planning Services: Map of regeneration area
- Brent Council Network – V Drive – WPI 2006 Folder

Description/ Purpose

- This indicator is meant to show the percentage of total road network devoted to pedestrians in Wembley Central.
- This was determined by using the GIS Mapping System
- It is recommended that a system be put in place to collect this data regularly as there are no current efforts to do so.
- The importance of this indicator is that the percentage of pedestrian footpaths can dictate whether more or less vehicle transportation may be used. A greater amount of pedestrian walkways could also increase the Town Centre usage.
- Brent would like to see this percentage increase.

T6: Bus Usage

Key Information

Critical Area:	**Transportation and Mobility**	Units:	**%**
Value:	**2004: Brent: 15.9%**	Date Recorded:	**2005**
Past years information:	2003: Brent: 13%		

Resources/ Contacts

2004-2005 Brent Annual Monitoring Report

Description/ Purpose

- This indicator is meant to show the annual increase/decrease of bus usage in Brent.
- This value is given in the Annual Monitoring Report and is recorded by the TFL. Each time someone gets on a bus in London, it is recorded producing very accurate data.
- Only the buses with a majority of route in Brent were considered
- The importance of this indicator is that it's a straightforward, accurate, description of an increase or decrease in public transportation.
- Brent would like to see this percentage increase.

T7: Train Usage

Key Information

Critical Area:	**Transportation and Mobility**	Units:	**%**
Value:	**2004: Brent: 2.3%**	Date Recorded:	**2004**
Past years information:	None Available		

Resources/ Contacts

- Transport For London (TFL)- www.TFL.com
- Brent Transportation Department
  -2006: John McCrae – john.mccrae@brent.gov.uk

Description/ Purpose

- This indicator is meant to show the annual increase/decrease of train usage in Brent.
- This value is made available on the TFL website.
- Each time someone goes through a turnstile in London, it is recorded producing very accurate data.
- The two stations considered were Wembley Central and Wembley Park.
- The importance of this indicator is that it's a straightforward, accurate, description of an increase or decrease in public transportation on the tube. It can also indicate that more or less people are traveling from outside the area. More detailed breakdowns can be seen on the TFL website
- Brent would like to see this percentage increase.

H1: New Homes

Key Information

Critical Area:	**Housing**	Units:	**#**
Value:	**2005: Brent: 19.5%**	Date Recorded:	**2005**
Past years information:	2004: Brent: 18%		

Resources/ Contacts

2004-2005 Brent Annual Monitoring Report

Description/ Purpose

- This indicator is meant to show the percent of new homes over the annual milestone target. The target was set in 1997 of 13,510 new homes and plans to be reached by 2016. That leaves a target of about 711 new homes a year.
- This value can be found in the Annual Monitoring Report.
- The importance of this indicator is that it's very much in the context of urban sustainability. Although there is a 'milestone target,' that is only for guidance for year to year progress. If over the annual target then Brent's efforts can be seen as above average.
- Brent would like to see this percentage increase.

H2: Affordable Homes

Key Information

Critical Area:	**Housing**	Units:	**%**
Value:	**2005: Brent: 8.3%**	Date Recorded:	**2005**
Past years information:	2004: Brent: 9%		

Resources/ Contacts

2004-2005 Brent Annual Monitoring Report

Description/ Purpose

- This indicator is meant to show the percent of new affordable homes over the annual milestone target. The target was set in 1997 of 4,800 affordable homes and plans to be reached by 2016. That leaves a target of about 253 new homes a year.
- This value can be found in the Annual Monitoring Report.
- Affordable housing relates cost of housing to income.
- Affordable housing is available to people that cannot afford to rent or buy homes generally available on the open market
- The importance of this indicator is that it's very much in the context of urban sustainability. Although there is a 'milestone target,' that is only for guidance for year to year progress. If over the annual target then Brent's efforts can be seen as above average.
- Brent would like to see this percentage increase.

H3: Unsuitable/Unaffordable Homes

Key Information

Critical Area:	**Housing**	Units:	**#**
Value:	**2004: Brent: 24,404**	Date Recorded:	**2005**
Past years information:	None Available		

Resources/ Contacts

2004-2005 Brent Annual Monitoring Report

Description/ Purpose

- This indicator is meant to show the total number of households living in unsuitable/unaffordable homes.
- This value can be found in the Annual Monitoring Report.
- Unsuitable/Unaffordable refers to households where the house is overcrowded, the house has no running water, or the residents cannot afford the rent or mortgage.
- The importance of this indicator is that it relates to indicator 'H2: Affordable Housing' and shows how much more of a need there is for affordable housing
- Brent would like to see this number decrease.

H4: Overcrowded Households

Key Information

Critical Area:	**Housing**	Units:	**%**
Value:	**2004: Brent: 10.6%**	Date Recorded:	**2005**
Past years information:	None Available		

Resources/ Contacts

2004-2005 Brent Annual Monitoring Report

Description/ Purpose

- This indicator is meant to show the percentage of 'overcrowded' households.
- This value can be found in the Annual Monitoring Report.
- Overcrowded households refers to houses where there are not enough rooms/beds to accommodate everyone.
- The importance of this indicator is that it relates to *indicators* 'H2: Affordable Housing' and 'H3: Unsuitable/Unaffordable Homes.' This indicator breaks down the previous two *indicators* and shows how much of a need there is for new homes.
- Brent would like to see this percentage decrease.

H5: Type of Affordable Housing

Key Information

Critical Area:	**Housing**	Units:	**%**
Value:	**2004: Brent: Social: 74% Shared: 26%**	Date Recorded:	**2005**
Past years information:	None Available		

Resources/ Contacts

2004-2005 Brent Annual Monitoring Report

Description/ Purpose

- This indicator is meant to show the percentage of affordable homes that are social compared to the percentage that are shared.
- This value can be found in the Annual Monitoring Report.
- Social homes are ones where a rent is paid while shared homes or ones with shared ownership.
- The importance of this indicator is that Brent also uses this indicator when monitoring their housing efforts. Brent's goal is to always have a 70/30 ratio social to share. More than 70% social is even better
- Brent would like to see the ratio of 70/30 maintained.

H6: Cost of Average Home

Key Information

Critical Area:	**Housing**	Units:	**GBP**
Value:	**2005: Brent: £250,239**	Date Recorded:	**2005**
Past years information:	None Available		

Resources/ Contacts

2004-2005 Brent Annual Monitoring report

Description/ Purpose

- This indicator is meant to show the average cost of a home in Brent
- This value can be found in the Annual Monitoring Report.
- The importance of this indicator is that if the average cost of the homes begins to fall then that means more affordable homes are available and people will begin to move into the area and overcrowded homes will begin to decrease. Also, if the cost of the average home increases and the gross income decreases or stays the same as seen in indicator 'E2: Gross Income' then problems could arise with people paying their mortgage or rent.
- Brent would like to see the average decrease.

H7: Rent

Key Information

Critical Area:	**Housing**	Units:	**GBP**
Value:	**2005: Brent: £169.31**	Date Recorded:	**2005**
Past years information:	None Available		

Resources/ Contacts

2004-2005 Brent Annual Monitoring Report

Description/ Purpose

- This indicator is meant to show the average weekly rent for a one bedroom flat in Brent.
- This value can be found in the Annual Monitoring Report.
- The importance of this indicator is that it has ties to 'E2: Gross Income.' If the rent for social flats increases however, the average gross income decreases or stays the same then people may not be able to afford their rent.
- Brent would like to see the value decrease.

H8: New housing on Previously Developed Land

Key Information

Critical Area:	**Housing**	Units:	**%**
Value:	**2004: Brent: >95%**	Date Recorded:	**2005**
Past years information:	None Available		

Resources/ Contacts

2004-2005 Brent Annual Monitoring Report

Description/ Purpose

- This indicator is meant to show the percentage of new homes built on previously developed land.
- This value can be found in the Annual Monitoring Report.
- The national goal is 60%, Brent's goal is 95%
- The importance of this indicator is that it is completely in context with urban sustainability. Urban sustainability is about development and meeting the needs of the people without sacrificing the environment. Brent has set a very high standard for itself.
- Brent would like to see this percentage stay very high.

H9: New Housing Density

Key Information

Critical Area:	**Housing**	Units:	**#**
Value:	**None**	Date Recorded:	**None**
Past years information:	None Available		

Resources/ Contacts

Brent Annual Monitoring Report

Description/ Purpose

- This indicator is meant to show the number of homes per Ha in Brent.
- This value can be found in the Annual Monitoring Report.
- No current value could be obtained due to computer problems the last time Brent tried to collect this data.
- The importance of this indicator is that with London continuously growing, land usage must be used to its max for homes to accommodate the growing population.
- Brent would like to see this number increase.

Chapter 4: Analysis

The final product of this project is a system that can generate reports, show trend lines, and give a final value that will guide regeneration efforts. This system was placed into an Excel file because most Brent Council employees consulted were familiar with this program. There are three types of reports the program can produce, *Key Indicator, Critical Area,* and Final Report. Our program automatically calculates a value associated with each *indicator* and tells the viewer where Wembley stands in terms of their regeneration objectives. The Excel system created has the ability to perform many different functions. To describe 'how to' use this system in detail, reference Appendix I.

4.1 Effects of Changing the Scale

The scales for each *indicator* are what define the point system (Barry, 2004). For each *indicator*, a point value must be imposed in order for a final value to be produced. Each *indicator* will receive points in a different manner. Some *indicators*, like E1: Unemployment, will receive more points for a lower value. Others, like E2: Gross Income will receive more points for higher values. In the system created, an *indicator* can receive between one and ten points. To define the difference between values that receive two points' verses four points' thresholds were created. A threshold is that number that sits on the border of two different point ranges. This system requires four thresholds for each *indicator*. These thresholds are the numbers that define the difference between a two and four point value, a four and a six point value, and so on through the difference between eight and 10 point value. If the thresholds are set incorrectly the system will not produce an accurate final number, therefore their initial set up is critical.

There are two different ways in which the scale for an *indicator* can be changed. First, you have the ability to change the actual number that defines the thresholds for each point range. The second method is to change the total amount of points that an *indicator* can receive. Making changes in either of these areas will have some effect on the system. How big these affects are will depend on the weighting changed. The point of changing the scale is to eliminate larger numbers, and to allow for easy comparison between *indicators*. If you are dealing with thousands of GBP and only hundred of new homes developed, you will need a scaling factor to bring these numbers to the same measurable level.

Setting the thresholds for each indicator is very important. If the thresholds are not set correctly then the *indicator* values' will be skewed and the final evaluation will not be accurate. This can be better explained through an example. Say an average income of £30,000 is considered high and you take the average gross annual income *indicator* (E2: Gross Income) and set the two point range as anything less than £50,000. The *indicator* will return a point value of two even though the indicator is doing well when it is above £30,000. This means the *indicator* will not be producing the high value it should receive. This will affect the overall *critical area* because it is not receiving as many points as it should. And further more, the final number and overall evaluation will not be as high as it should, producing a false sense of poor progress. The same idea will work in the opposite way. If the threshold is set to give an *indicator* too many points the end result will be a false sense of forward progress.

The second way of changing the scale is by changing the total possible points an *indicator* can receive. Currently, this system is set up so that each *indicator* is worth the same amount in the *critical areas*. Each *indicator* can receive a total of ten points. If an *indicator* is changed to be out of twenty points, then that *indicator* will have twice as much of an effect as another *indicator* within the same *critical area*. This means that if all the more heavily weighted *indicators* are doing well, the corresponding *critical area* will most likely be doing well. Also if they are doing poorly, that *critical area* will most likely be doing poorly. If the weight is changed it will only affect its respective *critical area*. The weighting of *indicator* will not affect the overall evaluation because the weighting system that is applied to each *critical area* will counteract any weight changes made to each individual *indicator*.

4.2 Affects of Changing the Weighting factor

The weighting factor is meant to allow Brent Council to adjust the importance of each *critical area* in the final assessment. By changing the weighting factor the amount of total points a *critical area* can receive can be increased with out changing the overall percentage of points that was received. It should be noted that the *critical area*s are naturally weighted. The *critical area* of economy and work has a total of 110 possible points compared to 70 for transportation and 90 for housing. A *critical areas* weight is based off of what percent it has of the total points. So by multiplying them by a factor you can make different *critical areas* have a higher or lower percentage of importance compared to the others. Since there is no definite way to track

sustainable regeneration, this allows Brent Council the ability to change the weighting of *critical area*s depending on the final objectives of the regeneration.

4.3 Point System Calculations

Although not every *indicator* in Figure 10 was used in the overall assessment as stated in Section 4.1, they all play a role in showing Brent Council how the regeneration is affecting the local area. An example of this is given when we look at the indicator E7: Jobs in Wembley Town Centre. We use E7 in our final index but we also collect data for E8: Jobs in the Wembley Town Centre (Small Business) and E9: Jobs in the Wembley Town Centre (Big Business), which are not used in the final index. These extra two *indicators* can be reviewed to see not only how, but why employment is changing. Since Brent Council wants employment to go up, it is useful for the Council to know why it is going up. Is it going up because of one big new business or because of a variety of new shops in the Town Centre? Brent Council would like to see bigger business move in rather then more pound stores and the additional *indicators* E8 and E9 will be able to determine if this is the case. Although this information is redundant to put into the overall assessment, it provides additional insight into why some of the *indicators* are behaving they way they are.

Brent Council will be able to look at these *indicator* reports to track how each one is doing over time. This system is updateable and there should not be a need to change the formatting for years to come.

4.4 Viewing Indicator Reports

This first part of our system (or Excel program) allows straightforward access to information on all the indicators analyzed. To use this system, a person is required to type in the Indicator ID they wish to see statistics for. This is circled in green in Figure 16. The first letter of the indicator represents the *critical area* of the *indicator*.

- e=Economy and Work
- t=Transportation
- h=Housing

The next numbers are the indicator numbers. These numbers correspond to their respective indicators in Figure 10. For instance, if someone wanted to view the ‘average gross income’ they would need to type “e2” under the ‘Indicator ID’.

Once this indicator ID number is typed into the program, it will bring up all that data available for each field and generate a graph of the data. Currently there is place holder data for each *indicator* to give an idea of what the data might look like after having been recorded for several years.

Additionally, the indicator report provides details of each indicator and the points it had received for the current year. The indicator reports are the base of the *critical area* and *WRI* reports because the data used in those reports is derived from the *key indicator* reports. When information is updated it will directly affect the appearance of the *key indicator* report first.

Some of the indicators are not given a point value in the system because to do this would be redundant and it might skew the *Wembley Regeneration Index* Value. These indicators are considered important as they break down other information into its components as seen in an example of employment in Wembley Town Centre. The overall number is included in our point system but the break down of part and full time jobs is not. The big and small business indicators are directly related to one another and to the total employment. If total employment increases then one, if not both, of the indicators must increase. This would give the *critical area* "Economy and Work" more points then it earned. Although these indicators are not in the overall evaluation, they will still contain a graph of their raw data in the *key indicator* report. The reason for not eliminating one of these indicators is because it is important to have an idea of the quality of jobs. This can be seen in a comparison of big business to small business jobs as well as when we look at average gross income.

Key Indicator Report

Indicator ID	Name	Critical Area	Date Updated
e1	E1: Unemployment	Economy and Work	April/7/2006

General Description

Percentage of Unemployed Population Eligible to Work

Location

Wembley Central

Point Scheme

2	4	6	8	10
≥8%	(<8%)-6%	(<6%)-4%	(<4%)-2%	<2%

Year	2003	2004	2005	2006	2007	2008	2009	2010
Value	4.8	4.6	4.3	3.6	0	0	0	0
Points Received	6	6	6	8	10	10	10	10

Contact/Resources

Nomis National Statistics- www.nomisweb.co.uk

Description/Purpose

- This indicator is meant to show the percentage of unemployment for Wembley Central residents and also compares the percentage to Brent overall unemployment percentage.
- The specific filters used in 'Nomis' were as followed (Same used by Brent in2 Work):
  - o Data Set: Claimant count with rates and proportions
  - o Rates and Proportions: Proportion of resident working age population
  - o Sex: Proportion of resident working age population
  - o Geography (Wembley): 2003 CAS Wards - Wembley Central
  - o Geography (Brent): Local Authorities - County - Brent
  - o Date: January of selected year
- The importance of this indicator is that it has ties to other critical areas of regeneration other than "Economy and Work". It can affect what form of transportation one might use or the type of home they live in or may purchase.
- Brent would like to see the percentage of unemployment decrease.

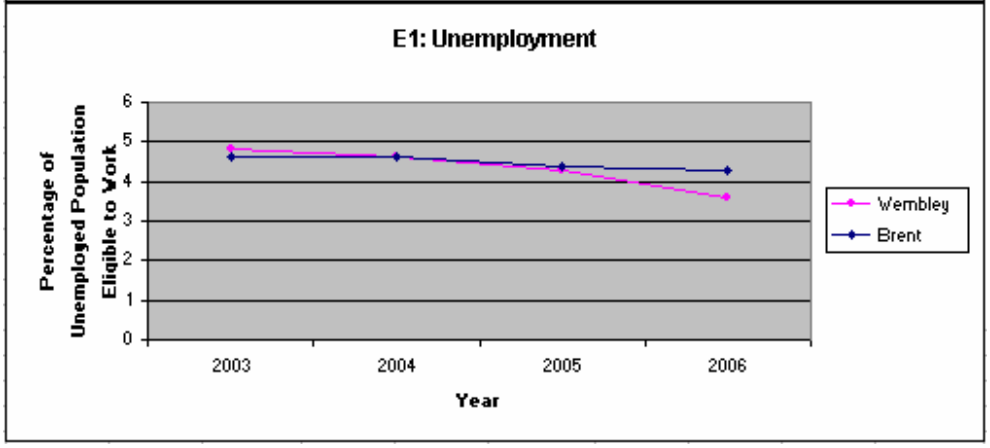


Figure 16: Key Indicator Report

4.5 Viewing the Critical Area Report

The *critical area* report shows each *indicator* that is used in the final assessment. To change between **critical area reports** the **critical area ID letter** needs to be typed into the upper left hand corner. The place to type the critical area ID is circled in. The same letters used for the key indicator reports are also used for this report so there is no confusion as to what *indicators* are in each *critical area*. At the top is the name of the *critical area*, along with the total possible points that the area can receive. Once the ID letter is typed in, all the *indicators* are displayed along with the point values they have received. The point values are used in this step, instead of the raw data, so that indicators of different units can be compared. At the bottom, the total number of points received is calculated along with the percent of total possible points. Lastly, a graph of the *critical area's* progress can be seen in order to display the trend for that particular area *critical area* across several years. An example of a *critical area* report can be seen below in Figure 17.

The *critical area* which represents its *key indicator*s is a value created to represent all of the *indicators* and is labeled the *critical area* value. This value is then given a 'regeneration status' which is determined through the point system (Barry, 2004), which like the actual *critical area* value is a guide that shows the course of regeneration.

Critical Area Report

Critical Area ID	Critical Area	Total possible points
e	Economy and Work	110

Indicator	Point Values 2006	2007	2008	2009	2010
E1: Unemployment	8	10	10	10	10
E2: Gross Income	2	2	2	2	2
E3: Number of Shops	2	2	2	2	2
E5: Vacant Store Frontage	2	10	10	10	10
E6: Store Tenure	4	2	2	2	2
E7: Jobs in Wembley Town Centre	2	2	2	2	2
E10: Stadium and Arena Jobs Occupied by Brent Residents	4	2	2	2	2
E11: Sustainable Vacancies	8	2	2	2	2
E12: People Trained	6	2	2	2	2
E13: Wembley Town Centre Use E14: Length of Stay in Wembley Town Centre	2	2	2	2	2
Total Points Received	40	36	36	36	36
Percent of total	36.4	32.7	32.7	32.7	32.7
Regeneration Status	Poor	Poor	Poor	Poor	Poor

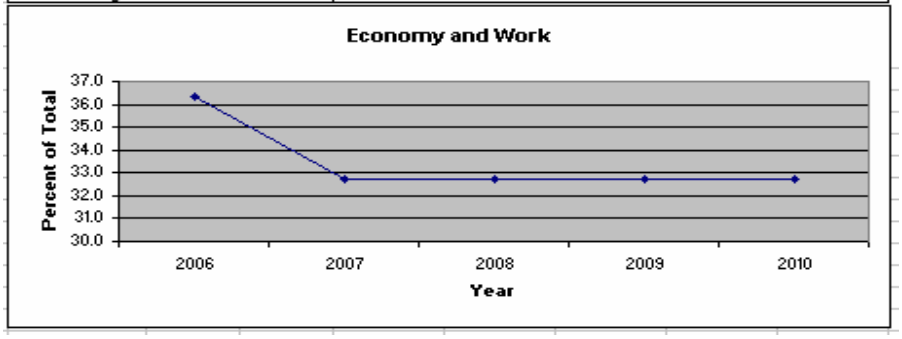


Figure 17: Critical Area Report

4.6 Viewing the WRI

The final *Wembley Regeneration Index* (WRI) report can be seen below in Figure 18. On this report each *critical area* is displayed along with how many points each *critical area* received over the years. Also displayed is the weighting factor for each *critical area*. This weighting factor is used to calculate the weighted number for each area. These calculations are described in Appendix J. The right side of the report shows the percent of total possible points (in orange)

along with the regeneration status. At the bottom left of the report is a graph showing all three *critical areas* on the same plot. This will allow Brent officials to compare one *critical area* to the rest. To the right of this is the graph of the overall final number for Wembley. This allows Brent officials to see how Wembley is doing overall.

The WRI is the final step in calculating a weighted score. Of the three reports created, this is the 'final report' that provides the 'Wembley Regeneration Value'. This value should be used as a reference to measure the progress of the regeneration. The trend line displayed in the 'overall regeneration' graph is used to track whether the policies in place guiding the regeneration are being effective. This final value should act as a guide and not be interpreted as a definite success or failure, since sustainable regeneration has no real definition.

Final Report

Critical Area	Economy and Work			Transportation and Mobility			Housing				
Possible points	Raw =110	Weighted=4400		Raw =70	Weighted=2100		Raw =90	Weighted=2700			
Weighting Factor	40			30			30			Total possible points (Overall)=	9200
Year	Raw	Weighted	Percent of Total (Weighted)	Raw	Weighted	Percent of Total (Weighted)	Raw	Weighted	Percent of Total (Weighted)	Percent of total possible points	Regeneration status
2006	40	1600	36.4	35	1050	50.0	50	1500	55.6	45.1	Average
2007	36	1440	32.7	24	720	34.3	50	1500	55.6	39.8	Poor
2008	36	1440	32.7	24	720	34.3	50	1500	55.6	39.8	Poor
2009	36	1440	32.7	24	720	34.3	50	1500	55.6	39.8	Poor
2010	36	1440	32.7	24	720	34.3	50	1500	55.6	39.8	Poor

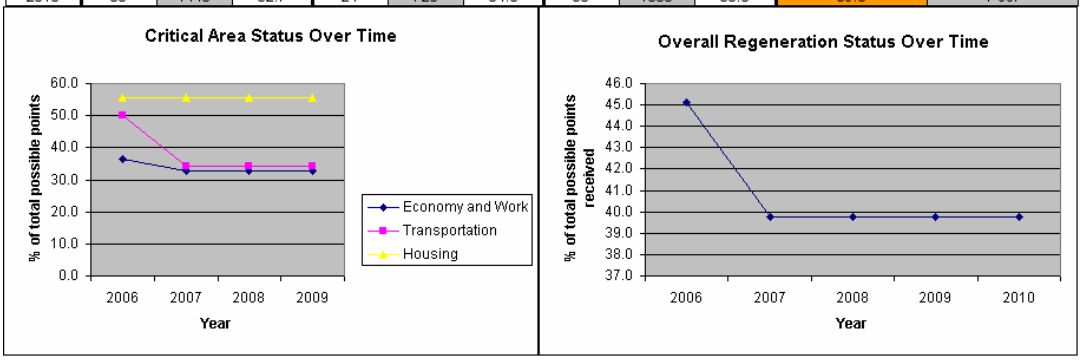


Figure 18: Final Report

Chapter 5: Conclusion

The regeneration of Wembley stadium is the catalyst of the reconstruction of Wembley, and in order for an accurate account of the ward's improvement, the changes must be monitored. Over the past seven weeks, our group has been provided with a number of housing, business, and public opinion surveys, as well as economical and statistical data of the Wembley area. From our previous research and research conducted on-site we collected baseline data for a list of indicators specific to Wembley. The indicators we explored are what we, in accordance with our sponsor, UDP (UDP 2004) WMP (WMP, 2005) and Barry System (Barry, 2004) believe to be the most beneficial indicators for monitoring the future development of 'Destination Wembley'.

With the opening of Wembley Stadium being postponed, we did not have the opportunity to witness any 'ramp-up events', and the effects of these events on Wembley. In light of this, we still pressed forward with our goal of creating a measurement system. Baseline data win the form of visual and statistical data was collected so that Brent Council may have a gauge off of which to compare all future measurement. Our project provides future groups information on exactly what areas of regeneration in Wembley were studied, and the sources where we obtained the information. These were some of the major problems our group faced, so by detailing all of our sources into one proposal, we hope to eliminate the need for future groups to do as much background research as we did.

Our indicator list was a large part of our project and helped us to develop the *Wembley Regeneration Index.* The indicator reports detail specifically what each indicator monitored, who should monitor it and when, and the area and type of measurement recorded for each, and where that data was obtained. The indicators themselves were broken down into three groups, Economy and Work, Transportation and Mobility, and Community Benefits. Each group covered a different critical area which could potentially have more indicators, but focusing on those important to the Wembley area.

The final system that we developed is known as the *Wembley Regeneration Index.* This index is an easily updatable data base that stores the Indicator Reports, the Critical Area Reports, and the Final Wembley Report. The system gives weighting to specific indicators of importance to give precedence to the areas goals stated in the UDP (UDP, 2004) and WMP (WMP, 2005). This system is easily updated by using the step by step instructions listed in section 4.3.

The finalized Wembley Regeneration Index is a valuable resource for Brent Council to be able to monitor the future effects of the stadium. Its data base will provide trend graphs and an overall picture of where 'Destination Wembley' is headed in the future. We expect that this monitoring system be used for the next ten years, and hopefully more, to track the regeneration effort in Wembley.

Appendix A: Key indicators and Objectives from WMP (WMP, 2005)

Overall Objectives from the Wembley Masterplan (WMP, 2005)

1. To Promote Wembley as a Major Visitor Destination
2. To Deliver a 'World Class Setting for a World Class Stadium'
3. To Provide Development to Local People *(Economy, Transportation, Housing)*
4. To Create Better Transport Linkages *(Transportation)*
5. To Promote Wembley as One of London's Most Accessible Destinations *(Transportation)*
6. To Promote Best Practice in Sustainable Development
7. To Achieve a 'Business Wembley' *(Economy)*

Transportation Objectives

1. Promoting accessible/sustainable modes of transport, thus minimizing car use and allowing access to facilities by all those with impaired mobility
2. Promoting a choice of modes
3. Integration between different modes and between land use and transportation
4. Improving infrastructure/promoting quality
5. Improving international access
6. Minimizing the impact on the residential and business community
7. Improving access to employment opportunities
8. The creation of a balanced mix of uses that reduces the need to travel
9. Minimizing pedestrian-vehicular conflict

Indicators Created

- T1: Traffic Flow in Wembley
- T2: Mode of Transportation Wembley Residents' use for work
- T3: Mode of Transportation to Wembley Town Centre
- T6: Bus Usage in Brent
- T7: Train Usage in Brent

Appendix B: Key indicators and Objectives from UDP (UDP, 2004)

Wembley Objectives stated in the Unitary Development Plan

- To promote the development of the National Stadium, and associated sporting, leisure, tourism, and mixed-use development so that Wembley becomes a major visitor destination, capable of attracting international sporting festivals and other major events to London.
- *To ensure that the development around the National Stadium is compatible and co-coordinated with comprehensive regeneration proposals in the surrounding area and that the vitality and viability of* ***Wembley Town Centre is enhanced.***
- *To ensure that the local community benefit from the new National Stadium and other regenerative development.*
- To provide a world class setting for a world class stadium
- To secure the preservation and enhancement of the integrity and setting of the three listed buildings close to the stadium.
- *To provide an enhanced transport system which can clear event pedestrians and traffic, whilst minimizing nuisance to local residents.*
- *To achieve a shift away from use of the car in favour of public transport, walking, and cycling.*
- To ensure that the infrastructure of Wembley is upgraded to support the proposed developments.
- To minimize any negative environmental impacts of the new National Stadium and associated development.
- To ensure that the development of the area is environmentally stable.

Indicators Created from UDP

- T1: Traffic Flow in Wembley
- T2: Mode of Transportation Wembley Residents' use for work
- T3: Mode of Transportation to Wembley Town Centre
- T6: Bus Usage in Brent
- T7: Train Usage in Brent
- Creation of photo documentation database
- E1: Unemployment in Wembley and Brent
- E2: Gross income for Wembley and Brent
- E3: Number of shops in Wembley Town Centre
- E4: Number of vacant or demolished shops in Wembley Town Centre
- E5: Percentage of vacant store frontage in Wembley Town Centre
- E6: Percentage of shops existing for more than 5 years
- E7: Number of jobs in Wembley Town Centre
- E10: Percentage of jobs in stadium and area occupied by Brent residents
- E11: Number of sustainable vacancies in Wembley
- E12: How many people were trained by Brent in2 Work
- E13: Frequency of Wembley Town Centre use
- E14: Length of stay in Wembley Town Centre

Appendix C: Indicators Derived from UDP, WMP, and Brent Officials

Local Business and Economy

- Store frontage for Wembley high Road and other important areas
    - Document what types of stores are currently there (possibly even take pictures of the area to establish a base line showing the present conditions)
    - Number or percentage of Pubs, restaurants, pound stores, vacant buildings or lots, etc.
- Real-estate Value
- Number of quality shops within centre
- Distance/average distance of key leisure developments/shopping facilities/services from town centre
- Public opinion on changes to town centre
- Shop diversity in terms of types of services in town centre
- Job creation in the town centers
- Vacant buildings
- Average income
- Net profit of individual business in the area (based on location)
    - Comparing business on the high road to the well established areas along Wembley Park drive (Area which should be better connected to ASDA)
- Employment densities
    - Higher employment densities were desired in the "Wembley master plan".
- Percentage of jobs occupied by residents
- Percentage of skills training programs

Community and Land Use

- School overcrowding
    - New schools are being built to address the issue
    - School capacities can be monitored to see if they are exceeded
- High density housing
- Health facilities
    - Are there adequate facilities?
    - Accessible to residents of the borough?
- Housing
    - Cost of average home
    - Annual gross needed for mortgage
    - Annual gross income for employee in the borough
    - Affordable homes rented out by local authority
    - Affordable homes rented out by housing associations
    - Affordable homes lost through right to buy sales
    - Additional homes completed through hosing corporation funding
    - New lettings made to local authority homes

- New lettings made to local association homes
- Households on local authority waiting lists
- Households in temporary accommodation including B&Bs
- Average weekly rent 1 bedroom private sector flat
- Average weekly rent for 3 bedroom private sector flat
- Average net weekly income for full-time worker

Transportation

- Appearance of stations/noise
- Public transit traffic flow through the stations and bus stops
- Foot traffic to different areas
    - Survey conducted near ASDA
- Amount of private/public transportation use for work
- Amount of private/public transportation use for leisure
- Amount of new roads created
- Distance to public transportation
- Car parking provisions

Appendix D: Barry System Indicators

Economy and Work

- Number of Jobs Created per 1000 square meters
- Net jobs created – percentage of employees from local area
- Number of new enterprises created – percentage of original still operating after 3 years
- Quality of jobs created – ratio of high-value jobs to low-value jobs
- Leverage ratios
- Performance of incentive mechanisms—uptake of grants/user reasons for locating
    - Points allocated on a scale of 1–10 by end-user
- Partnership structure performance
    - Points allocated on a scale of 1–10 by end-user
- Effectiveness of management after disposal—exit strategy
    - Points allocated on a scale of 1–10 by end-user
- Incorporation of training programs—company policy/location factors
    - Points allocated on a scale of 1–10 by employee
- User responses—satisfaction with the overall scheme
    - Points allocated on a scale of 1–10 by end-user

Building Use

- Ratio of open spaces to built form
- Ratio of redeveloped building to new build
- Reclamation of contaminated land-percentage of contaminated area reclaimed
- Density levels in relation to plot size
- Mixed use combinations-residential/commercial/recreational
- Occupancy levels-residential/commercial
- Amount office rents below prime CBD (*not sure what this is*)
- Quality of the final product—space utilization/building design
    - Points allocated on a scale of 1–10 by end-user
- Quality of urban design
    - Points allocated on a scale of 1–10 by architect/developer/end-user
- Quality of public space
    - Points allocated on a scale of 1–10 by residents
- Quality of private space
    - Points allocated on a scale of 1–10 by residents

Transport + Mobility

- Land devoted to roads—percentage of site area occupied by roads
- Land dedicated to pedestrians—percentage of road network
- Reorientation of road network—safety, accessibility, congestion
- Work traveling habits—mode of transport Private transport
- Leisure traveling habits—mode of transport Private transport
- Public transport links—walking distance to nearest facilities (in meters)
- Car-parking provision—number of spaces per residential dwelling
- Car-parking provision—number of spaces per square meter of office development
- Integration of land use and public transport—frequency, efficiency
    - Points allocated on a scale of 1–10 by employees/residents

Community Benefits

- Access to open space—average journey time for residents/employees by foot (minutes)
- Access to leisure facilities—average journey time for residents/employees by foot (minutes)
- Access to retail facilities—average journey time for residents/employees by foot (minutes)
- Access to educational needs—average journey time for residents on foot (minutes)
- Access to medical facilities—average journey time for residents on foot (minutes)
- Access to entertainment facilities—average journey time for residents on foot (minutes)
- Access to entertainment facilities—average journey time for residents on foot (minutes)
- Access to housing—affordability and choice
    - Points allocated on a scale of 1–10 by estate agent/LA
- Retail facilities located on site—range, choice
    - Points allocated on a scale of 1–10 by residents/employees
- Effectiveness of LA21 policy—extent to which any was incorporated
    - Points allocated on a scale of 1–10 by architects/developers
- Community ownership—sense of pride created by local community
    - Points allocated on a scale of 1–10 by residents/employees
- Community group involvement
    - Points allocated on a scale of 1–10 by residents

Resource Use

- Reclamation of building materials—percentage reclaimed from existing buildings
- Retention of environmental features—percentage of site area
- Waste disposal—percentage of household waste recycled
- Waste minimization—percentage of firms undertaking waste audits
- Energy efficiency—building lay-out and design Points awarded according to energy efficiency checklist
- Energy efficiency—building materials/construction methods Points awarded according to energy efficiency checklist
- Conservation of built heritage resources—percentage of built form retained for culture
- Incorporation of environmental design—percentage of total building stock
- Performance of environmental management
    - Points allocated on a scale of 1–10 by end–user

Appendix D-1: Barry Economy and Work Point Allocation

This table shows the *Economy and Work* indicators and point scales determined by the Barry research paper.

Indicator description	Points scoring framework
1. Number of jobs created per 1000 square metres	1–25 = 2 points 26–50 = 4 points 51–75 = 6 points 76–100 = 8 points > 100 = 10 points
2. Net jobs created—percentage of employees from local area	0–9 = 2 points 10–19 = 4 points 20–29 = 6 points 30–39 = 8 points > 40 = 10 points
3. Number of new enterprises created—percentage of original still operating after 3 years	< 50 = 2 points 50–64 = 4 points 65–79 = 6 points 80–94 = 8 points > 95 = 10 points
4. Quality of jobs created—ratio of high-value jobs v. low-value jobs	> 1:20 = 2 points 1:16–1:20 = 4 points 1:11–1:15 = 6 points 1:6–1:10 = 8 points < 1:5 = 10 points
5. Leverage ratios	< 1:2 = 2 points 1:2–1:5 = 4 points 1:6–1:9 = 6 points 1:10–1:12 = 8 points > 1:12 = 10 points
6. Performance of incentive mechanisms—uptake of grants/user reasons for locating	Points allocated on a scale of 1–10 by end-user
7. Partnership structure performance	Points allocated on a scale of 1–10 by end-user
8. Effectiveness of management after disposal—exit strategy	Points allocated on a scale of 1–10 by end-user
9. Incorporation of training programmes—company policy/location factors	Points allocated on a scale of 1–10 by employe
10. User responses—satisfaction with the overall scheme	Points allocated on a scale of 1–10 by end-user

Appendix D-2: Barry Transportation and Mobility Point Allocation

This table shows the *Transportation and Mobility* indicators and point scales determined by the Barry research paper.

Indicator description	Points scoring framework
1. Land devoted to roads—percentage of site area occupied by roads	>25 = 2 points 20–25 = 4 points 15–20 = 6 points 10–15 = 8 points <10 = 10 points
2. Land dedicated to pedestrians—percentage of road network	<30 = 2 points 30–44 = 4 points 45–59 = 6 points 60–75 = 8 points >75 = 10 points
3. Reorientation of road network—safety, accessibility, congestion	Points allocated on a scale of 1–10 by residents/end–users
4. Work travelling habits—mode of transport	Private transport = 2 points Share a car = 4 points Public transport = 6 points Walk/cycle = 8 points Live/work on site = 10 points
5. Leisure travelling habits—mode of transport	Private transport = 2 points Public transport = 6 points Cycle = 8 points By foot = 10 points
6. Public transport links—walking distance to nearest facilities (in metres)	>1000 = 2 points 750–1000 = 4 points 500–750 = 6 points 250–500 = 8 points <250 = 10 points
7. Car-parking provision—number of spaces per residential dwelling	>2 spaces = 2 points 1.5–2 spaces = 4 points 1–1.5 spaces = 6 points 0.5–1 space = 8 points Car free = 10 points
8. Car-parking provision—number of spaces per square metre of office development	> 1 space: 50 square metres = 2 points >1 space: 100 square metres = 4 points >1 space: 150 square metres = 6 points Essential users only = 8 points Goods delivery only = 10 points
9. Integration of land use and public transport—frequency, efficiency	Points allocated on a scale of 1–10 by employees/residents

Appendix E: Shoppers Survey

In Wembley, 509 street interviews were conducted with residents, workers, and visitors of the Town Centre. This survey was then divided into different graphs for data representation for residents, workers, and visitors. Conclusions from this survey were drawn to reflect means to improve the Town Centre, travel of those getting to the Town Centre, and the motivations of people for coming to the Town Centre.

Questions Asked:

- Which of these descriptions best applies to you when it come to the Town Centre? *(Respondents were given options regarding weather they live, work, or are visiting the area)*
- Main reason in this part of the Town Centre today? *(Respondents were given the option of shopping, visiting, working, education, and entertainment)*
- Frequency of using the Town Centre to shop or use other services
- How traveled here today?
- How long have you been using the Town Centre?
- Where is main food shopping done?
- Where is main non-food shopping done?
- Frequency of use of main shops / centres used
- How good is the Town Centre at fulfilling needs?
- Estimated spend on food today?
- Estimated spend on non-food today?
- Estimated length of stay in Town Centre?
- Reasons for not shopping in the Town Centre?
- Frequency of visiting to drink or socialize or eat out (excluding takeaways)?
- Reasons for never visiting the Town Centre to eat out (excluding takeaways)?
- Reasons for never visiting the Town Centre to socialize?
- How should the Town Centre be improved?
- Which would you like to see more of in the area? *(They were then given a selection of facilities)*

- Which would you like to see less of in the area *(They were then given a selection of facilities)*
- If you were to promote the idea of coming to this Town Centre to people who didn't know it, what would you tell them? *(Open response)*

Appendix F: Brent in2 Work

There are about 6,000 jobs projected to come from Wembley Stadium, including event day jobs. Currently, *Brent in2 Work* is looking to fill about 1,600 jobs. According a manager at *Brent in2 Work*, about 1/3 of those jobs available will be assigned to people in the Wembley area. Unfortunately, it is impossible to determine the exact number of jobs at the present, by late October into November, *Brent in2 Work* should have a more defined number of jobs available and jobs issued. The goal of *Brent in2 Work* is not to employ event day jobs because they are not sustainable. Their goal is to create **sustainable vacancy**, which is a job that provides a minimum of 16 hours a week. Most of the jobs the partnerships provide *Brent in2 Work* fall into the category of sustainable vacancy.

Training is required for the sustainable vacancy positions, and *Brent in2 Work* provides 2 to 3 week courses for free to all applicants. These courses focus on the job specific duties they apply for, (i.e. security, sanitation, or hospitality) and teach them the "Realities of the Industry" (Chantelle, *Brent in2 Work* manager). The focus of the course is to train and make the applicants aware of conformities they may need to make to acquire the position. Whether the applicant acquires the position or chooses to withdraw, *Brent in2 Work* has an "After Care" program that monitors the employment status of the applicant for the following 6 months.

Appendix G: Previous Photo Documentation

The Brent Council has conducted photo documentation surveys in the past. The first one was done back in 1995 and a more updated version exists from 2005. Neither of these photo documentations concentrated on Wembley Town Centre (as ours will in section 3.2.1). The documentation conducted in 1995 consisted only of hard copies of pictures which were then placed in an album. These pictures were only taken of the industrial estates within Brent and were not even specific to Wembley.

The more recent documentation was of conservation properties in Brent. These conservation pictures were stored in a Microsoft Access data base. This idea of using Microsoft access is one that we borrowed for our methodology. This system was important for us in organizing our information as well as keeping continuity within the Councils photo documentation records.

Appendix H: Wembley Stadium Transport

This table shows data collected during major events at the Old Wembley Stadium. What is shown is the attendance for each event, how the people arrived at the stadium, and the times when the event began and how long it took for the car park to be completely evacuated.

WEMBLEY STADIUM MAJOR EVENTS
1996 SEASON

	A	B	C	D	E	F	G	H	I	J	K	L	M
3									Event	Event	Car park	Schemes	
4	Date	Event	Attendance	Cars	Coaches	M/bus	M/c	Removals	Start	Finish	Empty	Out	Time
5	09-Mar	S/boys Eng. v Spain	14500	964	219	41	0	0					
6	17-Mar	Anglo Italian Cup	12663	1494	158	54	0	8		1526	1601	1621	55
7	24-Mar	Coca Cola Cup	77054	5053	394	144	13	28+1		1855	2042	2104	51
8	27-Mar	England v Bulgaria		2622	94	70	5	12		2156	2223	2250	54
9													
10	14-Apr	Auto Windscreen Final								1644	1755	1801	76
11	24-Apr	England v Croatia	33650	2701	124	64	8			2156	2245	2255	59
12	27-Apr	Rugby League Cup		3138	532	143	13			1610	1725	1742	92
13													
14	11-May	F.A. Cup Final	80,000	4589	306	55	7	27		1648	1805	1842	114
15	12-May	F.A Vase	5461							1651	1708	1718	27
16	18-May	England vHungary	34184	2411	159	66	6			1648	1725	1747	59
17	19-May	F.A. Trophy	7500approx	818	114	46				1751	1828	1838	47
18	25-May	3rd Div. Play Off	43431	2716	262	96	1	25		1651	1811	1844	113
19	26-May	2nd Div. Play Off	40000	2545	278	81	0	18+1		1649	1748	1835	106
20	27-May	1st Div. Play Off	73573					22		1630	1751	1844	134
21													
22	08-Jun	Euro 96 Eng v Switzerland	76567	4102	345	44	12			1653	1746	1751	58
23	15-Jun	Euro 96 Eng v Scotland	76864	4495	218	46	48	16		1649	1732	1757	68
24	18-Jun	Euro 96 Eng v Holland	74269	4238	326	71	93			2100	2221	2222	82
25	22-Jun	Euro 96 Eng. v Spain	75440	4148	171	38	80			1734	1828	1830	56
26	26-Jun	Euro 96 Eng. v Germany	75862	4564	223	68	52			2205	2323	2327	82
27	30-Jun	Euro 96 Final											
28		Germany v Czech Rep.	66246	4957	500	116	79	24		2102	2217	2218	76
29													
30	06-Jul	Three Tenors Concert	49034	4793	201	43	6	23+1		2240	2356	0016	96
31	13-Jul	Eagles Concert	44806	4841	98	47	98	37	1600	2231	2342	2355	84
32	14-Jul	Eagles Concert						38	1600	2229	2350	2358	89
33	20-Jul	Tina Turner Concert	70022	6701	169	48	71	40	1600	2221	0018	0042	141
34	21-Jul	Tina Turner Concert	72636					42	1530	2202	2400	0023	141
35	27-Jul	Bryan Adams Concert	59487	5394	130	29	122	44	1545	2218	2338	2400	102
36													
37	03-Aug	Eagles Concert	50300	4649	98	32	110	29	1600	2230	2325	2340	70
38	11-Aug	Charity Shield	73214					29	1500	1652	1820	1900	128
39													
40	09-Oct	England v Poland	74663	3696	280	118	8		2000	2148	2240	2300	72

wemstats.xls
sheet 1

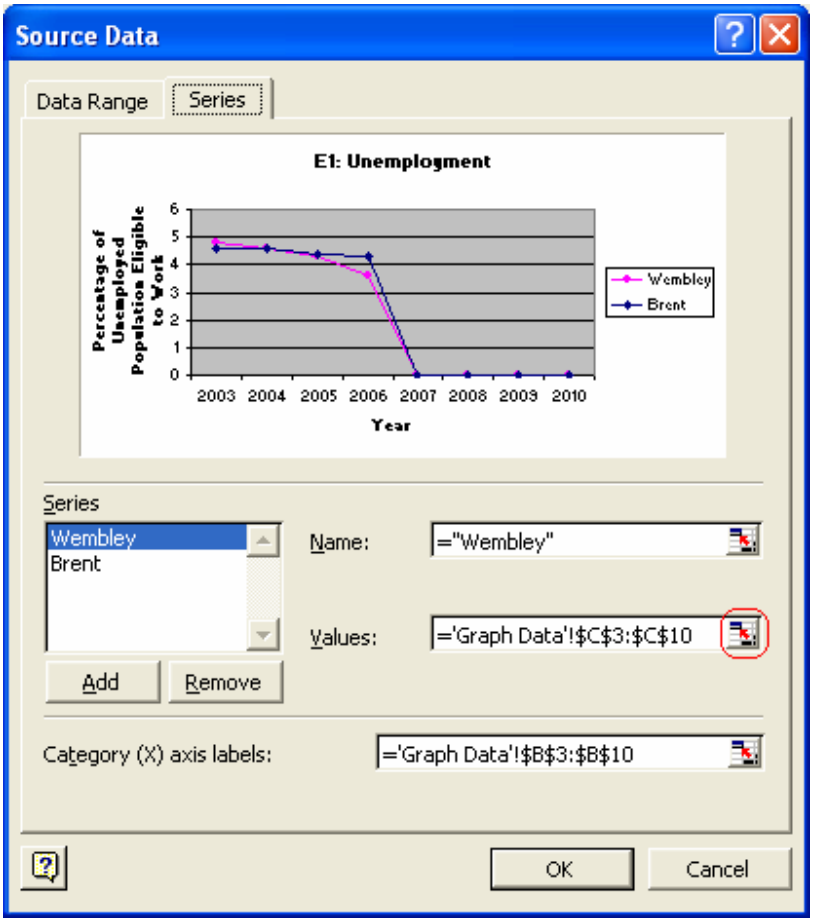
Appendix I: Users Guide

This appendix provides a detailed description of how to use the *Wembley Regeneration Index* excel program.

Graph Changes

Below is a step by step process on how to change the range of the key indicator report graph.

1. Open up the excel file and open up the “Key indicator report” work sheet.
2. Right click on the graph and select the “Source Data” option.
3. On the top of the menu that pops up click on the “Series” option.
4. About half way down the menu click on the series title “Wembley”
5. Next click on the button circled in red as shown below. This will bring you to the cell witch contain the data seen in the graph. Click and drag so the box contains the data for the years you wish to graph. **Only circle the *values* you wish to graph and not the years.** The year will be adjusted automatically.
6. On the left about half way down click on the series titled Brent.
7. Repeat Step 4.



Adding next year's data and changing information

To add new information to this program is simple. Below is a step by step description on how to do it.

1. Open the file and click of the worksheet titled Data. Here to will be looking at all of the information that the program collects from
2. Find the indicator ID on the left hand side that you wish to add or change data for.
3. Scroll across to the column with the year for which you are going to input data and enter it. If you are changing information scroll to the column for which you wish to change information and change it in the designated cell.
4. Once the information is all input into the Data sheet you are done and can now look at all of the information in report form seen on the worksheet titled "Key indicator report.

Range and Weighting Changes

Below are step by step instruction on how to change these ranges and weighting values. Changing the indicator scales

1. Open up the excel program and open the worksheet titled "Data"
2. Scroll across the top of the data till you see the column titled "Points awarded." This is the column that calculates the value that will be used in the system.
3. Scroll Down to the indicator you wish to change the scale value of. Click on the cell that corresponds with your indicator.
4. After clicking this cell a format seen below should appear in the formula bar at the top of the sheet
    a. =IF(D15<6,10,IF(D15<7,8,IF(D15<8,6, IF(D15<9,4,2))))
5. The numbers written in red are the ones that you will want to change. This number will be different for every indicator but will remain in the same place in the formula. In blue is the cell that the function is calculating a value for. You will *not* need to change to value in blue
6. Each of these numbers corresponds to a threshold. There are 5 different ranges to receive points so you will need to have 4 thresholds to separate them. This first number will represent the value in which you what everything above/below to receive 10 points for. Most of the indicators should have proper greater than less that signs. However you should check to make sure it is in the proper direction base on what is considered both good and bad.
    a. Example: Unemployment might want everything below 2% to receive ten points. This would look like: <2 Gross incomes might want everything above £30,000 to receive 10 points. This would look like: >30000
7. As stated in step 6, your first value (Seen as 6 above) will be the 10 point threshold. Whatever value you put here will *not* receive ten points. The next value will be the threshold for 8 points. Your "less than" or "greater than" should be in the same direction as your 10 points threshold. Although the range for 8 points will cover that of the range used for 10 points, it will not affect the end result. The program will give a value based on the first range that produces a "True" result. In other words, if the value does not fit in the 10 point threshold it will move to the 8 point threshold and continue till a true value is reached.

8. The last threshold value you input (seen as 9 above) will be the separator between the 2 and 4 point values. The program will automatically give a value of 2 if the data does not fit into any of the ranges.
    a. If your last threshold for unemployment is 10. I should look like: <10 What this last threshold will be saying in the case of unemployment is that everything ten and higher will receive 2 points
9. After step 8 you should have inputted all of the new thresholds. The only job that remains is to show the ranges on the report sheet. To do this find the columns titled "2", "4", "6", "8", and "10". Change the values in each of these cells to represent the changes that you made in the formula. An example of what this looks like, for the formula shown in step 4, can be seen below.

Column Title	2	4	6	8	10
	<6%	6%-(<7%)	7%-(<8%)	8%-(<9%)	9% and greater

10. Once this last step is complete you're done with the changes and the new values will be incorporated into the over all points system.

Changing the Weighting scale:

1. Open the excel file and open the worksheet titled Final number.
2. Directly below each critical area there is a number with a row title of "Weighting factor" This is the number that you want to change based on how you want each critical area weighted.

Appendix J: Final Number Calculation

Below are the different steps used in calculating a final number for Wembley.

1. Each different indicator is given a point value that is determined based on a scale from 1-10. Thresholds are determined to decipher the differences between the different point values. This is explained in further detail in section 4.2.
2. The points received for each critical area are added up. The number received for each critical area is then multiplied by its respective weighting factor. The points receive are now "weighted"
3. The total possible points are added up for each critical area and are then multiplied by their respective weighting factor. This is the same factor used on the total points received. The total possible points are now "weighted"
4. Next all of the "weighted" points for each critical are added together.
5. Now all of the "weighted" possible points are added together.
6. The final number for regeneration is a percent of total possible points. The number is calculated by dividing the number from step 4 by that of step 5.
    - Final Number= (Step 4 result/Step 5 result)
7. The percent received is then applied to the scale seen in figure 7 to produce a final regeneration status.

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