

Appendix B Attraction and Retention Measures

Retention of Visitor Measures: Pre and Post match Entertainment Programme - Assumed 3PM Weekend Kick-off				
Proposal	No of Supporters	Length of retention (mins)	Data Source if applicable	Comments
PRE MATCH				
Media Pre Match* assume kick off 3pm				
Match build up programme		2.20pm		
Player Match previews		2.30pm		
Manager pre match press conference		2.40pm		
Fixture preview		2.50pm		
Retail Pre Match				
Happy Hour offer of 10% discount during certain hours before certain games	If 1400 hourly transactions - 35- 40% conversion rate to visitors so 3,500 customers in store.	Average dwell time 20 minutes	Evidence - Games vs Arsenal 1,400 transactions for 10% happy hour	
			Evidence - Footfall counting in Mega. West Brom 4,120 before Kick Off and 927 after game - total 5,047. Man City 4,920 before kick off and 839 after the game - Total 5,759 visitors. Taking Transactions for those days of West Brom 1,925 and Man City 2,052 = Conversion rates 35-40%.	
Future Scheme - Increase in Retail space from approx 9,000sq ft to 28,000sq ft outside ground and approx 20,000 sq ft in stadium	14,598 pre-match (75% of total 19464)	Average dwell time 20 minutes	Evidence - Total transaction through last season home games 70,072, an average of 2,595 transactions for each game. If conversion rate is 35-40% we had 175,180 customers last year to match day stores, an average of 6,488 customers for each game.	So by increasing sq ft by 3 times, which is a major issue that stops fans shopping at the moment, and make same increase to transactions would leave us 210,216 transactions and 525,540 customers to match day stores through a season. Take customer numbers and divide by 27 games taken from 08/09 season = 19,464 customers per game.
Museum Visits (Sold in half an hour slots) x3	300 (assume capacity 100)	Average dwell time 45 minutes		
POST MATCH				
Commercial Post Match - Extended Delays to Stadium Departure				
Hospitality Packages structured to encourage staying in lounges post match (Players appearances, Post match presentations etc)	6000	30 minutes		
Guests in hotel attending matches	300	no travel		100% occupancy of 150 bedroom hotel= 300 spectators
Shopping in Supermarket - work with retailer on incentives to encourage footfall	500	30 minutes		
THFC to work with concourse retail to encourage post match meal deals (whilst watching media).	2000	45 minutes		This would need to be positioned and priced carefully so it does not conflict with Club level package
Cashcard discount awarded for staying half an hour after final whistle (these would enhance ticket priority)	2000	45 minutes		1750 (5% Season Ticket Holders)
Post match entertainment - Kids/Family Zone (children entertainment laid on so fans can avoid the post match rush)	500	45 minutes		
Catering Kiosks stay open later - Happy Hour	3000	30 minutes		
Post match entertainment - Comedy Zone "The Last Laugh" - Mini staging areas in concourse - fans can walk from different areas to watch - show starts 15 minutes after final whistle. Use up coming London comedians	500	45 minutes		

Real-time travel information - CCTV footage of station areas so people can see when the station crowds have dispersed and buses are running past	already accounted for in above categories	45 minutes		
Credit e-purse on Stadium Access card with Club Cash that can be spent post match at a forthcoming game	already accounted for in above categories	45 minutes		
Lucky seat promotion - collect prize from megastore post match	100	45 minutes		
Formalised invite-only autograph collection area	200	45 minutes		
Match day Raffle with winning number notified after full-time with subsequent prize collection	200	30 minutes		
Within Stadium with Media/Catering Post Match *assume final whistle 4.50pm - assuming sell out crowd of 60,000 attendees				
Live studio PL round up to start	60000	4.50pm		
Videotron Post Match Highlights	30000	5pm		
TV Live Press Conference	20000	5.10pm		
Supporter reporter	17500	5.15pm		
Player stat analysis	15000	5.25pm		
Tunnel Based interviews	12500	5.35pm		
Studio debate with fan interaction	7500	5.45pm		
Player interviews	5000	5.55pm		
Retail Post Match				
Happy Hour offer of 10% discount valid half hour post game		Average dwell time 20 minutes	Evidence - Games vs Arsenal 1,400 transactions for 10% happy hour	
			Evidence - Footfall counting in Mega. West Brom 4,120 before Kick Off and 927 after game - total 5,047. Man City 4,920 before kick off and 839 after the game - Total 5,759 visitors. Taking Transactions for those days of West Brom 1,925 and Man City 2,052 = Conversion rates 35-40%.	
Increase in Retail space from approx 9,000sq ft to 28,000sq ft outside ground and approx 20,000 sq ft in stadium	4,866 (25% of total 19,464)	Average dwell time 20 minutes	Evidence - Total transaction through last season home games 70,072, an average of 2,595 transactions for each game. If conversion rate is 35-40% we had 175,180 customers last year to match day stores, an average of 6,488 customers for each game.	So by increasing sq ft by 3 times, which is a major issue that stops fans shopping at the moment, and make same increase to transactions would leave us 210,216 transactions and 525,540 customers to match day stores through a season. Take customer numbers and divide by 27 games taken from 08/09 season = 19,464 customers per game.
Museum Visits (Sold in half an hour slots) x3	300 (assume capacity 100)	Average dwell time 45 minutes		
General				
Pubs, restaurants and other outlets in local area	15,000	average duration 45 minutes		Based on Current Visitation Rates

Appendix C Emirates Monitoring Results

Report of: Director of Environment & Regeneration

Meeting of:	Date	Agenda item	Ward(s)
East Area Committee	4 th November 2008		Highbury West, Highbury East and Finsbury Park

Exempt:	No
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SUBJECT: Emirates Stadium Monitoring Programme 2007/08**1. Synopsis**

- 1.1 The purpose of the Emirates Stadium Monitoring Programme is to identify the impacts of Arsenal's new football stadium on the transport network and local environment. The monitoring programme was secured via a legal agreement (S106 agreement) between the council and Arsenal Football Club (the Club).
- 1.2 Before the new stadium opened, a monitoring programme for the 2006/07 football season was published. The programme explained in detail how the monitoring requirements in the legal agreement would be put into practice. The results of the 2006/07 monitoring programme were reported to East Area Committee in November 2007, when the Committee was asked to agree the monitoring programme for the 2007/08 football season. This was subsequently extended to include monitoring of the Bruce Springsteen concerts on 30 and 31 May 2008.
- 1.3 This report sets out the results of the monitoring programme for the 2007/08 football season and the Bruce Springsteen concerts.
- 1.4 The monitoring programme supports the following 'One Islington' priorities.

Listening to Islington

Wherever possible any views and concerns expressed by local residents, businesses, and spectators are investigated as part of the monitoring programme.

Greener, Cleaner, Safer

The Club must meet a legally binding target to reduce car travel to the stadium. The monitoring programme gathers data to demonstrate whether or not this target has been met.

2. Recommendations

- 2.1 To note the key findings of the monitoring programme identified in paragraphs 3.10 – 3.68 for the 2007/08 football season and Bruce Springsteen concerts.

3. Background

- 3.1 The S106 agreement specifies a series of transport and environmental characteristics that must be monitored. They are:

Transport Characteristics

- Achievement and maintenance of the modal split target;
- Event parking within the stadium and on-street parking in an area up to 2 miles walking distance from the stadium;
- Pedestrian movements and routing to and from the stadium;
- Public transport usage including the stations being used by event goers;
- The arrival and departure profiles and the levels of retention of spectators within Emirates stadium after an event; and
- The effects of crowd movements on the operation of the local highway network.

Environmental Characteristics

- Litter collection and disposal;
- Cleanliness of streets;
- Street vending patterns;
- Noise impacts at agreed noise sensitive facades;
- Light impacts at agreed locations;
- The effectiveness of CCTV cameras and results; and
- The effectiveness of other measures implemented as a result of the Environmental and Safety Audit.

- 3.2 Changes were made to the monitoring programme as a result of experience of monitoring the 2006/07 football season. These include:
- Use of video camera surveys to verify the accuracy of manual station counts, pedestrian flow surveys and stadium retention level surveys;
 - Car journey time surveys to improve understanding of the impacts of match day operations on the local highway network;
 - Additional parking surveys were undertaken in the Canonbury area (Zone L), Upper Holloway (Zone TW) area and Barnsbury areas (Zone N). Zone L was selected to establish a baseline set of data and to understand if there was any parking pressure in this zone around the periphery of the match-day CPZ, particularly after match day parking controls were introduced in neighbouring Hackney from 16 August 2008. Zones TW and N were surveyed after the council received complaints about parking pressure in these areas;
 - Blue Badge parking occupancy in the stadium basement car park to test the uptake of the Club's provision for Blue Badge parking;
 - An on-line survey has been introduced to expand the way spectators can respond to the travel surveys and to boost the response rate; and
 - Additional questions were inserted in the match day survey questionnaire to identify: choice of

tube line or rail line to arrive at and depart from the stadium; time of departure from the stadium; and levels of retention in the local area. These questions assisted our understanding of the popularity of public transport routes to the stadium as well as the level of retention both within the stadium and the local area.

3.3 To assist with the collection and analysis of the data referred to in sections 3.1 and 3.2 above, Electoral Reform Services (ERS) were appointed to ensure the monitoring was both robust and independent. ERS were engaged to advise on the following matters:

- The scope of the monitoring programme;
- Validity of the methodology employed;
- Verification and robustness of survey and other data; and
- Refinements and improvements to the monitoring programme.

In addition, ERS audited the overall monitoring programme and the work carried out by survey companies.

3.4 The following matches/events were monitored:

- Arsenal v Newcastle (Saturday 26 January 2008, FA Cup, Kick Off 3pm);
- Arsenal v Blackburn (Monday 11 February 2008, Premiership, Kick Off 8pm);
- Arsenal v Middlesbrough (Saturday 15 March 2008, Premiership, Kick Off 5.15pm);
- Arsenal v Everton (Sunday 4 May 2008, Premiership, Kick Off 1.30pm); and
- Bruce Springsteen Concert (Friday & Saturday 30 and 31 May 2008, 7.30pm).

The aim was to monitor a representative group of matches/events in terms of:

- When they took place during the week;
- When they took place during the football season; and
- Type of game/event.

3.5 Match day surveys included:

- Spectator Travel Survey Questionnaires;
- Spectator Face to Face Interviews;
- On-Street Parking Surveys;
- Pedestrian Flow Surveys;
- Spectator Retention Surveys;
- Station Counts; and
- Car journey time surveys.

With the exception of the Middlesbrough game and the Bruce Springsteen concert all of these surveys were carried out for every match listed in section 3.4.

For the Middlesbrough game only a parking survey was carried out. The purpose of this survey was to test parking pressure at a match where the controlled parking zone hours did not extend to the time that this match started. The controlled parking zone restrictions finished at 4.30pm, however the Middlesbrough match started at 5.15pm.

For the Bruce Springsteen concert all surveys were undertaken on Friday 30 May 2008. For the concert on Saturday 31 May an additional parking survey was undertaken to understand parking patterns for a Saturday concert.

A great deal of care was taken to ensure that a robust and representative selection of surveys was carried out across the football season. Where relevant, data from one survey was used to verify another.

Data was also collected from the public transport operators and within the council.

- 3.6 A number of control surveys were carried out on non-match days in February, May and June 2008 (specifically Saturday 9 February, Sunday 11 May, Monday 12 May and Friday 13 June). The following survey types were undertaken:
- Counts of people using local stations;
 - Pedestrian Flows;
 - On-street parking surveys; and
 - Car journey time surveys.

Additional control parking surveys were undertaken on Saturday 10 May and Saturday 14 June 2008. These surveys provide baseline data for comparison with match day data.

- 3.7 A monitoring report was prepared collating the results of these surveys, which explains how each of these surveys was carried out. A number of different independent survey companies were used. The council also carried out spot checks on the survey companies to ensure data was being collected in the agreed manner. ERS also carried out similar checks.

- 3.8 The main conclusions of the monitoring programme are summarised below.

The Mode Split Target

- 3.9 The mode - split target is defined in the S106 agreement. It requires:

‘88% of spectators to use modes other than private car to arrive within the locality of the stadium. However, until Holloway Road Station improvements are completed 80% is acceptable.’

The purpose of the mode - split target is to reduce the number of people travelling to Arsenal matches by car, despite the fact that the Emirates stadium holds 22,000 more people than Highbury did.

- 3.10 The monitoring programme surveys indicate that, for Arsenal games, between 11% and 12% of spectators arrived by car and the average percentage for car use is around 11.5%. For a non-Arsenal event, as you would expect, car use is significantly lower at around 5.5% for the Bruce Springsteen concert. The Club is therefore well within the 20% target that must be achieved. Data collected from the old Highbury stadium shows that 11,900 (31%) of spectators arrived by car. Despite an additional 22,000 seats at the Emirates stadium, the number of spectators arriving by car is now 6,205 (11.5%) on average. Last season the average percentage for car use was 12.5%. A comparison of this data reveals that car use has dropped slightly but is fairly constant around 11%-12%. A substantial reduction in car use has therefore been delivered and sustained over two football seasons.
- 3.11 Only car travel is subject to a specific target in the S106 agreement. However, predictions of the use of other modes of transport were developed to help plan match day travel. Data was collected to establish whether or not these predictions were accurate. Analysis of this data for AFC matches indicates that:
- Underground usage remains 3% higher than predicted at 63% and is consistent with last season (63%);
 - National rail is slightly higher than predicted at 12% and has increased from 10% last season.
 - Bus (4.5%), taxi (1%) and cycling (1%) are all slightly lower than predicted and similar to last season;
 - Coach parking is almost exactly at the levels predicted at 2% and similar to last season; and
 - The level of walking is slightly higher than predicted at 6% also similar to last season.

In all cases the percentage differences between predicted and actual usage of these modes of transport are very small.

The Event Day Parking Scheme (EDPS)

- 3.12 The EDPS is the match day controlled parking zone (CPZ) that extends between 1 and 1.5 miles in radius around the stadium. Existing CPZ hours are extended to deter parking by spectators. Parking surveys were carried out in the roads immediately surrounding the stadium in Zones 'E', 'F', 'G' and 'H'. The key findings from the parking surveys include that certain streets are consistently full on match days, with no available parking space:
- Zone E: Drayton Park (between Holloway Road and Bryantwood Road) and Melgund Road;
 - Zone F: Hornsey Road, Jackson Road, and Caedmon Road;
 - Zone G: Martineau Road, Hamilton Park West, and Elphinstone Street; and
 - Zone H: Avenell Road.
- 3.13 The parking surveys show that there are parking spaces available on other streets within these zones, and that:
- there are relatively low numbers of illegally parked vehicles within the area surveyed. It can therefore be concluded that the enforcement of the EDPS is operating successfully. The levels of illegal parking are lower than last season; and
 - significant levels of Blue Badge parking is taking place in these streets during a match and is contributing to parking stress, however it is unclear whether all these Blue Badges are being used legitimately. The level of Blue Badge parking is broadly down when compared to last season.
- Legally parked vehicles include residents permit holders, as well as visitor permit holders, pay and display and blue badge holders.
- Capacity is significantly reduced on certain streets because of match day parking suspensions. These are necessary to ensure the safe operation of the stadium, i.e. allow for access for emergency vehicles. However, as mentioned above, alternative parking spaces are available within the same Zone.
- 3.14 Parking surveys were undertaken for the Middlesbrough match on the 15 March 2008 to test parking pressure. This match began at 5.15pm, after parking controls had finished at 4.30pm. Surveys demonstrated that in the majority of parking zones the parking levels were comparable to a normal weekend match, and no significant additional parking was detected.
- 3.15 Parking surveys were undertaken for the Bruce Springsteen concert on the 30 and 31 May 2008 to test parking pressure. The Saturday concert began after parking controls had finished. Surveys demonstrated that in the majority of parking zones there was no significant additional parking congestion when compared to normal non-event day parking levels. Where certain streets were full during the concert, in all event-day CPZs, parking spaces were available on other local streets within the zones.
- 3.16 Blue Badge parking bays are available in the car park under the stadium. These bays were surveyed throughout the football season. It was found that the number of people parking under the stadium in the reserved Blue Badge parking area has increased over the course of the season. After lobbying by the council, additional standard parking bays are now being made available by the Club and are being used regularly. During the 2007/08 season additional spaces were used on 12 separate occasions when the numbers of Blue Badge holders exceeded the 104 spaces that are normally provided.
- 3.17 The council takes the fraudulent use of Blue Badges in on-street parking bays very seriously. Over the course of the football season the council carried out enforcement against fraudulent or inappropriately used Blue Badges. The council has worked in close partnership with both the Metropolitan Police Service and the Club, to step up this enforcement and extend the penalties applied to those found to be using Blue Badges fraudulently. During the 2007/08 season, 54 badges were confiscated and 12 vehicles towed away. The Club has also introduced a penalty issuing a three-match ban for those

found to be fraudulently using Blue Badges. If the season ticket holder is caught a second time the Club will withdraw their season ticket. There is currently a six-year waiting list for a season ticket. This represents a substantial loss for those using Blue Badges fraudulently and the work undertaken by both the Club and the Police in tackling this issue is welcome.

- 3.18 The parking surveys indicate that some spectators are parking immediately outside the CPZ and completing their journey to the stadium on foot. Surveys of walk times suggest that just under half of the people who drive to the stadium park within the CPZ with the remainder parking just outside. The report states that the average walk time, from parked vehicles to the stadium, is very similar to last season, however the travel survey shows that the number of spectators driving to the stadium has fallen slightly when compared with last season.

Cycle parking

- 3.19 The numbers of spectators cycling to and from the stadium remains lower than predicted and the council recognise that more can be done to encourage people to cycle to the stadium. We are exploring ways to deliver improvements to cycle parking provision and cycling facilities at and around the stadium through the S106 agreement with the Club. Cycling will continue to be promoted as a form of travel to and from the stadium. The Club's web pages provide information about how to access the stadium by bike.
- 3.20 The data presented in the report shows that a similar number of spectators cycle to the stadium on weekends and weeknights, and that the numbers are similar to those identified last season. The numbers of spectators who cycle to the stadium has therefore stabilised, which suggests that no additional spectators choose to cycle to the stadium.

Pedestrian movements

- 3.21 Pedestrian movements were surveyed both before and after matches at key locations. The data collected demonstrates that spectators have been using the principal pedestrian routes to get to and from the Emirates stadium from local stations or the local area.
- 3.22 **Spectator arrivals pre-match:** Observations recorded in the pre-match hour indicate that on average:
- the majority of spectators are using St Thomas's Road and Holloway Road as pedestrian routes to access the stadium;
 - significant numbers of spectators have also been recorded using Tollington Road, Arvon Road, Aubert Park, Highbury Place/Highbury Fields and Highbury Crescent; and
 - lower levels of spectators have been recorded on Prah Road when compared to other roads.
- When compared with last season:
- more spectators are using the Highbury Fields and Highbury Crescent route to access the stadium for a weeknight match; and
 - flows along St Thomas's road are slightly higher; and
 - all other routes demonstrate very similar or lower levels of pedestrian flows.

- 3.23 **Spectator departures post-match:** Observations recorded in the hour after a match indicate that on average:
- the same routes are used as set out above for arrivals;
 - there is far greater intensity of use in the hour after a match, and the numbers of pedestrians are much higher particularly on St Thomas's Road and Holloway Road; and
 - the surveys show that, in the hour after a match, more spectators are using Tollington Road, Prah Road, Arvon Road and Aubert Park than in the pre match hour.

When compared with last season:

- flows along Highbury Crescent and Highbury Fields are slightly higher; and

- all other routes demonstrate very similar or lower levels of pedestrian flows.

3.24 Key findings from the pedestrian counts include:

- The data supports the observations set out in section 3.36 (Departure Profiles) of this report that the departure of the majority of spectators occurs in the post match hour (74%). This is consistent with levels observed last season (75%);
- The highest pedestrian levels were recorded on St Thomas's Road, Holloway Road and Highbury Corner (Holloway Road southbound past Highbury & Islington station) after a match;
- When compared to the levels of pedestrians who use Holloway Road and St Thomas's Road relatively low numbers of spectators use Islington's other local roads to arrive at or depart from the stadium;
- The use of Highbury Fields as a pedestrian cut through has increased during the course of the season and the data shows that a significant number of spectators continue to use Highbury Fields as a short cut; and
- There are significant pedestrian flows down St Paul's Road and Upper Street after a match.

Highbury Fields

- 3.25 Concerns remain that spectators crossing the Fields on match days may be damaging the surface of the fields. Further to a series of crowd control barrier trials undertaken in the 2006/07 football season to attempt to modify the pedestrian desire line for spectators walking across the fields on a match day, the council has now completed measures to repair and strengthen the soil and turf along the pedestrian desire line.
- 3.26 Work has been completed on the most worn sections of the Fields where pedestrian traffic has caused the most significant damage. Works delivered include:
- de-compaction, re-aeration, sub-soiling, regrading (levelling), planting grass seeds, fertilising, using herbicides, cultivation, turfing, and work to promote healthy grass roots;
 - adjustments to the Ronalds Road access point to the Fields to alter the pedestrian desire line across the Fields, and to disperse spectators along either Highbury Place or Highbury Crescent. These measures include an extension to the existing post and rail, with a lockable rail in place for match days, and replacement of the wide cobble stone area at the Ronalds Road end of the Fields with a narrow path; and
 - additional planting around Highbury Pool to encourage pedestrians to walk further up Highbury Place rather than cutting across the Fields by Highbury Pool.
- 3.27 Notices were placed on the Fields during the course of the decompaction works to explain their purpose. Chestnut palings (temporary fencing) were left in place until early September so that spectators could see that work had been done to the Fields and to raise awareness of the problems caused by heavy pedestrian traffic across the Fields.
- 3.28 Officers will continue to monitor the use of the Fields on match days. Work will continue with the Club, local residents and the Highbury Fields Association to pursue a long-term solution that protects the Fields for the enjoyment of local residents and users. The council is in the process of forming the Highbury Fields Management Group – a collaborative and structured partnership between the council, the Highbury Fields Association and local residents - to advise on all matters relating to the future management of Highbury Fields. It is proposed that this group will meet in March 2009 to provide a detailed framework for future works that is consistent with the council's 'A Vision for Highbury Fields' document (July 2007). The Vision document helped identify a broad spectrum of ideas and improvements that were consulted upon and developed those that gained the most public support.

Public Transport

- 3.29 Over the course of the 2007/08 season spectator demand at each station has demonstrated broadly similar patterns to those identified in the 2006/07 season. The arrival and departure patterns derived from station counts for matches suggest that:
- a significant number of spectators arrive at Holloway Road station;
 - higher levels of arrivals at Arsenal Station at the weekends than on weeknights;
 - larger numbers of spectators depart from Finsbury Park station after a match at weekends than on weeknights; and
 - higher levels of departures for Highbury & Islington station on weeknights than at weekends.
- 3.30 **Spectator arrivals at stations:** For weekend matches observations show that 35% of spectators arriving at rail and underground stations use Arsenal station, 34% use Finsbury Park station, and 21% use Highbury & Islington station. Low levels of usage were recorded at Caledonian Road (2%) and Holloway Road (8%). However for weeknight matches more people use Finsbury Park (38%) and far fewer people use Arsenal station (25%), with slightly higher levels of spectators use at Highbury & Islington and Caledonian Road stations, and slightly fewer at Holloway Road station.
- 3.31 **Spectator departures from stations:** For weekend matches observations show that 40% of spectators departing from rail and underground stations use Finsbury Park station, 36% use Arsenal station, and 22% use Highbury & Islington station. Low levels of usage were recorded at Caledonian Road (2%) and Holloway Road (1%). However for weeknight matches fewer people use Finsbury Park station (37%) and more spectators use Highbury & Islington station (25%). Arsenal, Caledonian Road and Holloway Road stations have very similar spectator departure levels for both weekend and weeknight matches.
- 3.32 Key findings from the station counts include:
- Arsenal tube station surveys indicate a consistently high use by spectators throughout the season;
 - Finsbury Park station surveys indicate consistently high use by spectators throughout the season with increased demand at weekend matches; and
 - Highbury & Islington station surveys indicate consistently high use by spectators throughout the season with increased demand for departures at weeknight matches.
- 3.33 The monitoring programme contains surveys of the following tube station queue clearance times:
- Highbury & Islington – 65 minutes on average;
 - Finsbury Park – 65 minutes on average; and
 - Arsenal – 70 minutes on average.
- These queue clearance times represent a slight increase in delays to spectators using stations when compared with 2006/07 season data.
- 3.34 Findings from the monitoring programme indicate that station use has stabilised over the course of the 2007/08 season and is revealing similar patterns to the 2006/07 season.
- 3.35 It is recognised that more needs to be done to improve rail and underground access on match days. Options to upgrade both Drayton Park and Finsbury Park Stations are being pursued with our partners at Network Rail and First Capital Connect. The council continues to work with Transport for London to lobby for additional capacity on match days as part of the planned upgrades to Finsbury Park and Highbury & Islington stations.

Coaches

- 3.36 Coach parking levels are very similar to those monitored during the 2006/07 season. The monitoring

programme data indicates coach parking levels between 4 (for the Tottenham game) and 34 (for the Slavia Prague game). The average number of coaches parked for each game is 17. The coach parking areas at both Queensland Road and the Sobell Centre were able to accommodate the required coach parking for all matches with the exception of the match against Liverpool and two matches against Newcastle, when Hornsey Street was also used. Drayton Park was also used once for the Newcastle (Carling Cup) tie.

Departure/Retention

- 3.37 Observations from station count surveys show that the majority of spectator departures (approximately 74%) occur within the hour immediately after the final whistle. However a significant proportion of spectators leave in the second hour after the final whistle (21%). A small proportion (5%) has been observed leaving 15 minutes before the final whistle. These findings are very similar to those identified as part of the 2006/07 football season monitoring.
- 3.38 The S106 agreement between AFC and the council specifies that the purpose of the stadium Travel Plan is to 'To identify measures to be taken by AFC to achieve the Modal Split Target for Major Events and to ensure that Retention of Visitors Measures are effective'. As part of the Stadium Travel Plan the Club stated its intention to retain 9,000 spectators (15%) within the stadium for 20 minutes after the final whistle. This is to ease pressure on the public transport system.
- 3.39 Further work was undertaken to establish the number of people staying in the local area as part of the travel survey. The surveys revealed that between 15-23% of spectators were retained in the local area and used local amenities at the weekend, whilst this figure dropped to 10% on a weeknight. A significant proportion of spectators are therefore choosing to stay in the local area, and this is to be welcomed as it is assumed that they are using local bars and restaurants rather than facilities within the stadium.
- 3.40 The monitoring programme surveys indicate that the Club's commercial objective (to retain 9,000 spectators) is being met or exceeded for weekend matches, with approximately 10,000 spectators being retained in the stadium in the post match period. This figure was lower for the Blackburn match, which took place on a weeknight, therefore the Club is not meeting its objective for weeknight matches.

The effects of crowd movements on the operation of the local highway network.

- 3.41 Delays are occurring on the local highway network particularly in the post match period when large crowds of spectators cross Holloway Road and Seven Sisters Road. This is compounded by the need to queue spectators in the bus lane outside Highbury and Islington Station. This was also observed as part of last season's monitoring.
- 3.42 To better understand the impact of these delays car journey time surveys were undertaken as part of this season's monitoring. The surveys revealed average delays on:
- Seven Sisters Road, Parkhurst Road, Camden Road, Tollington Road and Isledon Road (A503) of up to 8 minutes (mainly westbound) before a match, and up to 26 minutes (in both directions) after a match; and
 - Holloway Road (A1) of up to 18 minutes (mainly northbound) before a match, and up to 27 minutes after a match (mainly southbound).
- 3.43 The council is working with the Police and Transport for London to reduce or mitigate these delays. For example, Variable Message Signs (VMS) are displayed by Transport for London on match days to warn motorists to avoid the area if possible. VMS is used at key locations across London on main roads that have been identified as being affected by match day traffic and can help keep non-local traffic away from the area.

Bus reliability

- 3.44 Bus reliability data has been collated by London Buses for the entire 2007/08 football season. This data enables the impact of match day traffic and crowd movements on buses to be measured. Information has been provided for routes 4, 19, 29, 43, 153, 253 and 271. A comparison has been carried out between match days and non-match days. Analysis of this data is not straightforward due to the fact that local bus services are frequently disrupted on days when no match takes place, by utilities works for example.
- 3.45 The key indicator for bus reliability on match days is the number of lost round bus trips. Broadly speaking, this measures the number of buses that are curtailed or withdrawn from service. Data has been collected for both weeknight and weekend matches. Analysis of this data indicates that delays are occurring to all local bus routes on match days.
- 3.46 Transport for London has been aware of this issue for some time, and has completed a study to identify both the causes of delay to buses on match days, and potential measures to overcome this. Transport for London is now finalising proposals for measures to help alleviate delays. The delivery of these proposed measures will be subject to full public consultation. It is hoped that with increased reliability, more spectators will travel to the stadium by bus.
- 3.47 The monitoring data indicates that, on average, bus use is fairly consistent at around 5% (or 2,500 spectators). The numbers of spectators who use buses on match days has stabilised, which suggests that no additional spectators choose to take the bus to or from the stadium.

Bruce Springsteen Concerts

- 3.48 Bruce Springsteen concerts were held at the Emirates stadium on Friday 30 and Saturday 31 May 2008. Detailed monitoring was carried out for the Concerts as mentioned in section 3.5 above.
- 3.49 The survey data indicates that car use was particularly low for the concerts at 5.5%, approximately half the number of cars that drive to the stadium on a normal match day. Tube (69%) and taxi use (3%) were much higher for the concerts, while national rail, coach and cycle use remained the same, and fewer people used buses or walked.
- 3.50 As mentioned above at paragraph 3.14, no significant additional parking congestion was observed at the concerts when compared to normal non-event day parking levels. Where certain streets were congested during the concert, in all event-day controlled parking zones parking spaces were available on other local streets within the zones.
- 3.51 The main pedestrian routes were publicised in information provided with the concert tickets. Concert-goers are more likely to be first time visitors to the Emirates stadium when compared with AFC spectators and travel patterns are much less likely to be established for concerts.

Pedestrian flow data indicates that:

- the majority of concert-goers used the main pedestrian routes to and from the stadium;
 - before the concert the most heavily used routes were Holloway Road and St Thomas Road;
 - after the concert Holloway Road, St Thomas Road, Prah Road and Tollington Road were heavily used. Highbury Place and Highbury Fields were used but not as heavily as on a match day; and
 - after the concert large pedestrian flows were observed at Highbury Corner (on Holloway Road past Highbury & Islington station) and on Upper Street when compared with a match day.
- 3.52 Station counts revealed similar usage patterns to match days for the arrival of spectators, with the exception that more people used Highbury & Islington station and fewer people used Finsbury Park. A smaller proportion of people used Arsenal station when compared to match day surveys, whilst a

higher proportion used both Highbury & Islington and Finsbury Park stations. Observations of station queue clearance times showed that queues cleared much quicker at Finsbury Park station and slightly quicker at Arsenal station than on a normal match day, but significant delays of up to 25 minutes were observed at Highbury & Islington station.

- 3.53 Approximately 3,000 spectators were retained within the stadium after the concert. This is significantly lower than after a match, however the concerts finished much later in the evening than football matches and no post-concert entertainments were arranged to help retain spectators.

Environmental characteristics

- 3.54 The environmental characteristics that were monitored by the council during the course of the 2007/08 season are listed in paragraph 3.1 above. The council observed no significant impacts of these environmental characteristics, and any issue raised during the season have been addressed or are being investigated. Further details of how these characteristics were monitored and the council's comments on these issues are set out below.

Litter collection and disposal / Cleanliness of streets

- 3.55 The council's street cleaning contractors are required to complete the post match clear up within 8 hours of the match finishing. During the last season eight matches were monitored and an independent survey was carried out. No complaints were received regarding the post match clean up.
- 3.56 During the 2007/08 season 11 street recycling bins were introduced in streets around the Emirates stadium. The locations were determined by surveys from the previous season which highlighted them as having the largest proportions of recyclable litter. The council also continued to use a recycling litter picker.

As a result of the monitoring during the 2007/08 season, 9 additional recycling bins were in place for the Emirates Cup 2008, and are being used for the 2008/09 season. All bins are emptied before and after matches.

Street vending patterns

- 3.57 A total of 43 street traders operate within the area on match days. They are permitted to set up their stalls at a maximum of 4 hours before the match and trade for up to 2 hours after the match. The entire area is patrolled to monitor the activities of the licensed traders. During the 2007/08 football season these patrols took place for all but four home games.
- 3.58 Enforcement action is taken against any traders that are found to be trading without obtaining a Street Trading Licence. During the course of the 2007/08 football season a total of 5 illegal traders had their goods confiscated.
- 3.59 As a result of complaints received regarding trading at a mid week European match at the Emirates, the council closely monitored street traders at following Arsenal games to ensure traders finished trading on time, turned off their generators at the designated time, turned off any lights that face properties behind the traders and to keep any noise to a minimum. No further complaints were received.

Noise impacts at agreed noise sensitive facades

- 3.60 The levels of background noise on the streets around the Emirates stadium were measured before the stadium opened. This information was used to agree an acceptable level of noise for the Public Address system used at the stadium on match days. During the 2007/08 season noise levels were monitored on 4 separate occasions and it was found on all of these days that the PA noise level was within the agreed limits.

- 3.61 Noise levels were also monitored at the Bruce Springsteen concerts and the noise levels did not exceed those set out in the planning agreement. 76 complaints were received during the Bruce Springsteen concerts on the 30 and 31 May 2008. Further information on these complaints was presented in the "Evaluation of the Concerts held at Emirates stadium on the 30 and 31 May 2008" report to East area Committee on the 8 September 2008.

Light impacts at agreed locations

- 3.62 Monitoring during matches is not required, as lighting has to be at a specified level within the stadium and podium to facilitate safe access and egress. This level was set as a requirement of the grant of the Safety Certificate to the stadium.
- 3.63 On non-match days it was anticipated that monitoring would take place once the units on Drayton Park were occupied. No complaints have been received and therefore there have not been any grounds for the council to visit a complainant's home to establish whether a statutory nuisance exists.
- 3.64 The council will consider conducting a survey at this location, if there is agreement from the residents and access to a property is made available. This will be investigated with residents during the 2008/09 season.

Complaints Monitoring

- 3.65 Throughout the 2007/08 season all correspondence from residents and businesses, including complaints and general comments regarding the stadium, has been monitored and analysed. All complaints and observations received were answered. The amount of correspondence received was lower than the previous season - 118 were received this season compared to 207 for last season.
- 3.66 The broad categories of concerns received can be classified as follows (in order of volume):
- Match day parking;
 - Coach parking;
 - Public transport improvements;
 - Road closures (in particular pedestrian and vehicle restrictions);
 - Spectator 'cut-throughs' across Highbury Fields;
 - Behaviour of spectators; and
 - Street trading.
- 3.67 The highest volume of correspondence is still related to match day parking, although fewer complaints were received from Highbury Hill this season than last season. The majority of correspondence was received by email and did not contain addresses, therefore it is difficult to comment on a road-by-road basis. Coach parking was the next highest area of concern, this correspondence mainly related to the use of Hornsey Street.

Public Transport Improvement Works

- 3.68 £7.595 million of funding has been secured as part of the S106 agreement to improve public transport access on match days. To date at:
- Finsbury Park interchange - £300,000 has been spent on improvements;
 - Holloway Road - £500,000 has been committed towards pedestrian improvements; and
 - Drayton Park station - £500,000 has been committed towards delivering station improvement works.
- 3.69 It was originally proposed that the remainder of the funding would be used to improve Holloway Road

station. Transport for London are not progressing this scheme, therefore £6.295 million is available to be allocated towards alternative projects. The council is currently working with TfL to prioritise the allocation of this money to address the transport issues arising from the monitoring programme. TfL has also agreed to attend East Area Committee to inform the Committee about how their station upgrade schemes will impact on match day travel.

4. Implications

4.1 Financial implications:

- 4.1.1 The monitoring programme is fully funded by the Club under the terms of the S106 agreement. A substantial amount of council staff time is also dedicated to the programme, which is met through existing resources within the Environment and Regeneration department.

4.2 Legal Implications:

- 4.2.1 Pursuant to the planning agreement made under section 106 of the Town and Country Planning Act 1990, the Club is required to implement and fund the monitoring programme. The purpose of the monitoring programme is to ensure that when major events take place at the stadium:
- adverse environmental and transport impacts are minimised;
 - the Modal Split Target (80% of spectators to arrive at the stadium other than by private car) is achieved; and
 - the retention of visitors' measures are effective.
- 4.2.2 The transport and environmental characteristics required to be monitored are set out in paragraph 3.1 of the report. At the beginning of each football season and following consultation with the club, it is for the council to specify the events, frequency and characteristics to be monitored during that season including the monitoring techniques and standards to be used.
- 4.2.3 The Council may only require such monitoring that is reasonably necessary having regard to the results of the monitoring during the previous season, the effectiveness of the event day parking scheme and public transport improvements, any complaints received from local residents and businesses and any unforeseen circumstances that warrant monitoring.

4.3 Equality Implications:

- 4.3.1 The Council must eliminate unlawful discrimination and promote equality of opportunity in relation to disability, race and gender, and take account of disabilities even where that involves treating the disabled more favourably than others (section 49A Disability Discrimination Act 1995; section 71 Race Relations Act 1976; Section 76B and C Sex Discrimination Act 1975)."
- 4.3.2 As part of the monitoring programme the level of Blue Badge usage around the stadium has been monitored and where appropriate enforcement action has been taken against those using fraudulent Blue Badges, and those using Blue Badges inappropriately. This provides a greater surety for those legitimate Blue Badge holders.

5. Conclusion and recommendations

- 5.1 The S106 agreement set out an extremely thorough and wide - ranging requirement to monitor the impacts of Emirates stadium on the transport network and local environment. The monitoring programme specified how this monitoring was to be carried out. All the requirements of the monitoring programme have been met, and its findings have been reported. ERS have been appointed to ensure that the monitoring programme is robust, fair and transparent.

- 5.2 Monitoring indicates that the mode split target has been met, but this will be kept under review. To this end, further monitoring will be carried during the current football season, and in future seasons. If requested, East Area Committee will receive an update on this season's monitoring programme in Autumn 2009.

Background Documents

- East Area Committee Report 12 November 2007 – Emirates Stadium Monitoring Programme 2006/07
- East Area Committee Report 8 September 2008 – Evaluation of the Concerts held at Emirates Stadium on the 30 and 31 May 2008

Final report clearance:

Signed by:



21 October 2008

Director of Environment and Regeneration

Date

Received by:

Head of Democratic Services

Date

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**Environment & Regeneration
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Report of: Director of Environment & Regeneration

Meeting of:	Date:	Agenda item	Ward(s)
East Area Committee	12th November 2007		Highbury West, Highbury East and Finsbury Park

Exempt:	No
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Subject: Emirates Stadium Monitoring Programme 2006/07

1. Synopsis

- 1.1 The purpose of the monitoring programme is to identify the impacts of Arsenal's new football stadium on the transport network and local environment. The monitoring programme was secured via a Section 106 (S106) planning agreement between the council and Arsenal Football Club (the Club).
- 1.2 Before the stadium opened, a monitoring programme for the 2006/07 football season was agreed and published. This explained in detail how the monitoring requirements in the S106 agreement would be put into practice.
- 1.3 This report sets out the results of the monitoring programme for the 2006/07 football season. It also proposes monitoring arrangements for the current football season.
- 1.4 **Listening to Islington**
The council has sought to ensure that wherever possible any views and concerns expressed by local residents, businesses, and spectators are investigated as part of the monitoring programme. A consultative group (the Liaison Committee) has been set up to comment on the formulation and delivery of the monitoring programme.

Greener, Cleaner, Safer

A target to reduce car travel to the stadium was specified in the S106 agreement. This supports the council's 'greener, cleaner and safer' priority. The monitoring programme has gathered data to demonstrate whether or not this target has been met.

2. Recommendations

- 2.1 To note the key findings of the monitoring report identified in paragraphs 3.10 – 3.59.
- 2.2 To note the proposals for monitoring during the 2007/08 season as set out in paragraphs 3.60 – 3.61.

3. Background

- 3.1 On the 14th November 2006, East Area Committee considered a report outlining the monitoring of the first five matches at Emirates and agreed:

‘that it be noted that a further monitoring programme as specified in the Section 106 agreement would be undertaken for at least five further matches throughout the season and that a full monitoring report would be presented to East Area Committee towards the end of the 2006/07 football season’.

This report sets out the results of monitoring programme undertaken for the 2006/07 football season. It was not possible to present this report at the end of last season as a couple of games held towards the end of the season were monitored, and the data has only very recently been analysed and verified.

- 3.2 The S106 agreement specifies a series of transport and environmental characteristics that must be monitored. They are:

Transport Characteristics

- Achievement and maintenance of the modal split target;
- Event parking within the stadium and on-street parking in an area up to 2 miles walking distance from the stadium;
- Pedestrian movements and routing to and from the stadium;
- Public transport usage including the stations being used by event goers;
- The arrival and departure profiles and the levels of retention of spectators within Emirates Stadium after an event; and
- The effects of crowd movements on the operation of the local highway network.

Environmental Characteristics

- Litter collection and disposal;
- Cleanliness of streets;
- Street vending patterns;
- Noise impacts at agreed noise sensitive facades;
- Light impacts at agreed locations;
- The effectiveness of CCTV cameras and results; and
- The effectiveness of other measures implemented as a result of the Environmental and Safety Audit.

3.3 To assist with the collection and analysis of the data referred to in section 3.2 above, Electoral Reform Services (ERS) have been appointed to perform the role of independent consultants. ERS were engaged to advise on the following matters:

- The scope of the monitoring programme;
- Validity of the methodology employed; and
- Verification and robustness of survey and other data.

In addition, ERS audited the overall monitoring programme and the work carried out by survey companies.

3.4 The following matches were monitored:

- Arsenal v Everton (Saturday 28 October 2006, Premiership, Kick Off 1500);
- Arsenal v Hamburg (Tuesday 21 November 2006, Champions League, Kick Off 1945);
- Arsenal v Portsmouth (Saturday 16 December 2006, Premiership, Kick Off 1500);
- Arsenal v Manchester United (Sunday 21 January 2007, Premiership, Kick Off 1600);
- Brazil v Portugal (Tuesday 6 February 2007, International Friendly, Kick Off 2000);
- Arsenal v Manchester City (Tuesday 17 April 2007, Premiership, Kick Off 1945);
- Arsenal v Fulham (Sunday 29 April 2007, Premiership, Kick Off 1600); and
- Arsenal v Chelsea (Sunday 6 May 2007, Premiership, Kick Off 1600).

The aim was to monitor a representative group of matches in terms of:

- When they took place during the week;
- When they took place during the football season; and
- Type of game.

3.5 Match day surveys included:

- Spectator Travel Survey Questionnaires;
- Spectator Face to Face Interviews;
- On-Street Parking Surveys;
- Pedestrian Flow Surveys;
- Spectator Retention Surveys; and
- Station Counts.

Not all of these surveys were carried out for every match listed in section 3.4. However, a great deal of care was taken to ensure that a robust and representative selection of surveys was carried out across the football season. Where relevant

data from one survey was used to verify another.

Data was also collected from the public transport operators and within the council.

- 3.6 A number of control surveys were carried out on non-match days in February 2007 (specifically Saturday 3rd February, Sunday 4th February and Tuesday 13th February 2007). The following survey types were undertaken:

- Counts of people using local stations;
- Pedestrian Flows; and
- On-street parking surveys.

Additional control surveys of pedestrian flows were undertaken on Sunday 10th June and Tuesday 10th July 2007. These surveys provide baseline data for comparison with match day data.

- 3.7 The monitoring report explains how each of these surveys was carried out. A number of different survey companies were used. The council also carried out spot checks on the survey companies to ensure data was being collected in the agreed manner. ERS also carried out similar checks.

- 3.8 In accordance with the S106 agreement a Liaison Committee was established. This consists of key stakeholders including the Police, the public transport operators and local residents and business groups. The Liaison Committee has met twice. At its first meeting it considered the draft monitoring programme, and at its second meeting it considered the interim monitoring results. More information about the Liaison Committee, including minutes of meetings, is available on the council's web site.

- 3.9 The main conclusions of the monitoring programme are summarised below.

The Mode Split Target

- 3.10 The mode - split target is defined in the S106 agreement. It requires:

'88% of spectators to use modes other than private car to arrive within the locality of the stadium. However, until Holloway Road Station improvements are completed 80% is acceptable.'

The purpose of the mode - split target is to reduce the number of people travelling to Arsenal matches by car, despite the fact that the Emirates Stadium holds 22,000 more people than Highbury did.

- 3.11 The monitoring report indicates that, for Arsenal games, between 11% and 13% of spectators arrived by car although the average percentage for car use is around 12.5%. For a non-Arsenal match, as you would expect, car use is lower at around 8% for the Brazil v Portugal game. The Club is therefore well within the 20% target that must be achieved. Data collected from the old Highbury Stadium shows that 11,900 (31%) of spectators arrived by car. Despite an additional 22,000 seats at the Emirates Stadium, the number of spectators arriving by car is now 6,849 (12.5%) on average. A substantial reduction in car use has therefore been delivered.

- 3.12 This data suggests that the Event Day Parking Scheme (EDPS or Match-Day

Controlled Parking Zone) is operating effectively. This prevents the council from claiming any further funds from the Club to modify the existing EDPS at the present time.

- 3.13 Only car travel is subject to a specific target in the S106 agreement. However, predictions of the use of other modes of transport were developed to help plan match day travel. Data was collected to establish whether or not these predictions were accurate. Analysis of this data indicates that:
- Underground usage is 3% higher than predicted at 63%;
 - Bus (4.5%), National Rail (10%), taxi (1%) and cycling (1%) are all slightly lower than predicted;
 - Coach parking is almost exactly at the levels predicted at 2%; and
 - The level of walking is slightly higher than predicted at 6%.

In all cases the percentage differences between predicted and actual usage of these modes of transport are very small.

The Event Day Parking Scheme (EDPS)

- 3.14 The EDPS is the match day controlled parking zone (CPZ) that extends between 1 and 1.5 miles in radius around the stadium. Existing controlled parking zone hours are extended to deter parking by spectators. Parking surveys were carried out in the roads immediately surrounding the stadium in Zones 'E', 'F', 'G' and 'H'. The key findings from the parking surveys include:

- That certain streets are consistently full on match days, with no available parking space:
 - Zone F: Hornsey Road, Jackson Road, Lowman Road, Caedmon Road, Shelburne Road, and Dunford Road;
 - Zone H: Prah Road; and

Zone G: Aubert Park, Stavordale Road, Martineau Road, Highbury Hill, Elphinstone Street, Gillespie Road, Elfort Road, and Drayton Park.

However, surveys show that there are parking spaces available on other streets within these zones;

- There are relatively low numbers of illegally parked vehicles within the area surveyed. It can therefore be concluded that the enforcement of the EDPS is operating successfully; and
- High levels of Blue Badge parking were observed in these streets during a match contributing to parking stress, however it is unclear whether these Blue Badges are being used legitimately.

Legally parked vehicles include resident's permit holders, as well as visitor permit holders, pay and display and blue badge holders.

Capacity is significantly reduced on certain streets because of match day parking suspensions. These are necessary to ensure the safe operation of the stadium, i.e. allow for access for emergency vehicles. However, as mentioned above, alternative parking spaces are available within the Zone.

- 3.15 There have been a number of surveys undertaken of the usage of the car park in the basement of the Emirates Stadium. The surveys have shown that the basement car park is, on average, around 50% to 60% full on a match day. There

are a total of 600 parking spaces available in the stadium car park.

Overall this low level of occupancy of the stadium car park can be attributed to the relatively few number of spectators wishing to enjoy the hospitality related to the boxes and the Diamond Club and benefiting from the parking included.

- 3.16 Blue Badge parking under the stadium was surveyed throughout the Season. It was found that the number of people parking under the stadium in the reserved Blue Badge parking area has increased over the course of the season and has almost reached capacity.
- 3.17 The council is lobbying the Club to increase the amount of Blue Badge parking provision under the stadium, and is working closely with the Club to explore ways to promote this facility. Over the course of the Season the council carried out enforcement against fraudulent or inappropriately used Blue Badges. The council has worked in close partnership with the Metropolitan Police Service to step up this enforcement. During the early part of the 2007/08 season an average of 10 badges were either confiscated or vehicles towed away for each match. The Club is considering whether it can take action against supporters who use fraudulent Blue Badges.
- 3.18 The monitoring report indicates that some spectators are parking immediately outside the CPZ and completing their journey to the stadium on foot. Surveys of walk times suggest that around two thirds of the people who drive to the stadium park within the CPZ with one third parking just outside. It is possible that many people within the latter group are parking in Hackney. Hackney is currently consulting on the implementation of a match day CPZ, following reports from local residents of high levels of match day parking.

Cycle parking

- 3.19 The numbers of spectators cycling to and from the stadium is slightly lower than predicted. This is very disappointing and it is recognised that more can be done to encourage people to cycle to the stadium – perhaps funded through the S106 agreement (see below). Improvements to cycle parking provision at and around the stadium will be sought and cycling will be promoted as a form of travel to and from the stadium. The Club's web pages provide information about how to access the stadium by bike (no other Club does this as far as we know).
- 3.20 The data presented in the report shows that more people cycle to the stadium on a weeknight. This is likely to be because they use their bike to travel to work during the week.

Pedestrian movements

- 3.21 Pedestrian movements were surveyed both before and after matches at key locations. The data collected demonstrates that spectators have been using the principal pedestrian routes to get to and from the Emirates Stadium from local stations or the local area.
- 3.22 **Spectator arrivals pre-match:** Observations recorded in the pre-match hour indicate that the majority of spectators are using St Thomas's Road and Holloway Road as pedestrian routes to access the stadium. Significant numbers of spectators have also been recorded using Tollington Road, Arvon Road, Aubert

Park and Highbury Place/Highbury Fields. Lower levels of spectators have been recorded on Prah Road and Highbury Crescent.

- 3.23 **Spectator departures post-match:** Observations recorded in the hour after a match indicates the same routes are used as set out above for arrivals. However there is far greater intensity of use in the hour after a match, and the numbers of pedestrians are much higher particularly on St Thomas's Road and Holloway Road. The surveys show that similar levels of spectators are using Highbury Crescent, Highbury Fields and Highbury Place in the hour after a match as in the pre match hour.
- 3.24 Key findings from the pedestrian counts include:
- The data supports the observations set out in section 3.36 of this report (Departure Profiles) that the departure of the majority of spectators occurs in the post match hour (75%);
 - The highest pedestrian levels were recorded on St Thomas's Road and Holloway Road after a match;
 - When compared to the levels of pedestrians using Holloway Road and St Thomas's Road relatively low numbers of spectators are using Islington's local roads to arrive at or depart from the stadium;
 - The use Highbury Fields as a pedestrian cut through has fluctuated throughout the season but the data shows that a significant number of spectators are using Highbury Fields as a short cut; and
 - There are significant pedestrian flows down St Paul's Road and Upper Street after a match.

Highbury Fields

- 3.25 Concerns have been raised that spectators crossing the Fields on match days may be damaging the surface of the fields. In response to these issues a number of barrier trials were undertaken to attempt to modify the pedestrian desire line for spectators walking across the fields on a match day.
- 3.26 The barrier trials did have some success at keeping spectators off the fields and varying their route across the fields. However overall the barrier trial proved to be an unsightly, expensive, over- prescriptive and potentially confrontational solution. The council is working with the Highbury Fields Association and the Club to explore a sustainable long-term solution.
- 3.27 At the same time as the barrier trial a technical study was undertaken into the effects of increased wear on the fields and how this might be ameliorated. This study is now complete.
- 3.28 Remediation strategies and potential treatments for the Fields that help minimise damage and improve the resistance of the surface are now being developed. Work will continue with the Club, local residents and the Highbury Fields Association to pursue a long-term solution that protects the Fields for the enjoyment of local residents and users.

Public Transport

- 3.29 Over the course of the 2006/07 season spectator demand at each station has varied. The monitoring report suggests that as spectators have familiarised themselves with their preferred journey to and from the stadium, their preferred station has changed. The arrival and departure patterns derived from station counts suggest that a number of spectators arrive at Arsenal station and then depart from Finsbury Park station after a match, with higher levels of usage for Highbury & Islington station on weeknights.
- 3.30 **Spectator arrivals at stations:** For weekend matches observations show that 37% of spectators arriving at rail and underground stations use Arsenal station, 34% use Finsbury Park station, and 21% use Highbury & Islington station. Low levels of usage were recorded at Caledonian Road (2%) and Holloway Road (6%). However for weeknight matches fewer people use Arsenal station (30%), and slightly higher levels of spectators use Highbury & Islington, Caledonian Road and Holloway Road stations.
- 3.31 **Spectator departures from stations:** For weekend matches observations show that 43% of spectators departing from rail and underground stations use Finsbury Park station, 33% use Arsenal station, and 22% use Highbury & Islington station. Low levels of usage were recorded at Caledonian Road (2%) and Holloway Road (1%). However for weeknight matches fewer people use Arsenal station (31%) and Finsbury Park station (42%) and more spectators use Highbury & Islington station (25%). Both Caledonian Road and Holloway Road stations have very similar spectator departure levels.
- 3.32 Key findings from the station counts include:
- Arsenal tube station surveys indicate a slight reduction in demand over the course of the season;
 - Conversely, Finsbury Park station surveys indicate increased demand over the course of the season;
 - Highbury & Islington station surveys indicate increased demand for weekend matches over the course of the season; and
 - Counts of people using local stations demonstrate that use of Caledonian Road tube station by spectators is low both before and after matches.
- 3.33 The monitoring report contains surveys of the following tube station queue clearance times:
- Highbury & Islington – 60 minutes on average;
 - Finsbury Park – 45 - 60 minutes on average; and
 - Arsenal – 55 minutes on average.
- 3.34 It is recognised that more needs to be done to improve rail and underground access on match days. Options to upgrade Drayton Park Station are being pursued. The council also provided evidence to a Greater London Authority Inquiry recommending that the planned upgrades to Finsbury Park and Highbury & Islington stations provide additional capacity on match days and this recommendation has been adopted into the report of the Inquiry.

Coaches

- 3.35 Coach parking levels are lower than originally anticipated. The monitoring report indicates coach parking levels between 5 (for the Tottenham game) and 35 (for the Bolton game). The average number of coaches parked for each game is 17. The coach parking areas at both Queensland Road and the Sobell Centre were able to accommodate the required coach parking for all matches with the exception of the match against Bolton, when Hornsey Street was also used.

Departure/Retention

- 3.36 Observations from station count surveys show that the majority of spectator departures (approximately 75%) occur within the hour immediately after the final whistle. However a significant proportion of spectators leave in the second hour after the final whistle (20%). A small proportion (5%) has been observed leaving 15 minutes before the final whistle.
- 3.37 The S106 agreement between AFC and the council specifies that the purpose of the Stadium Travel Plan is to 'To identify measures to be taken by AFC to achieve the Modal Split Target for Major Events and to ensure that Retention of Visitors Measures are effective'. As part of the Stadium Travel Plan the Club stated its intention to retain 9,000 spectators within the stadium for 20 minutes after the final whistle. This is to ease pressure on the public transport system. The monitoring report indicates that this commercial objective is not being met, with approximately 5,000 spectators being retained in the stadium in the post match period. This figure was higher for the Chelsea match, which was the final match of the season. Further work is needed to establish the number of people staying in the local area. If spectators are choosing to stay in the local area, this is to be welcomed as it is assumed that they are using local bars and restaurants rather than facilities within the stadium.

The effects of crowd movements on the operation of the local highway network.

- 3.38 Delays are occurring on the local highway network particularly in the post match period when large crowds of spectators cross Holloway Road and Seven Sisters Road. This is compounded by the need to queue spectators in the bus lane outside Highbury and Islington Station.
- 3.39 The council is working with the Police and Transport for London to examine how these delays can be reduced or mitigated. For example, Variable Message Signs (VMS) are displayed by Transport for London on match days to warn motorists to avoid the area if possible. VMS is used at key locations across London on main roads that have been identified as being affected by match day traffic and can help keep non-local traffic away from the area.

Bus reliability

- 3.40 Bus reliability data has been collated by London Buses for the entire 2006-07 football season. This data enables the impact of match day traffic and crowd movements on buses to be measured. Information has been provided for routes 4, 19, 29, 43, 153, 253 and 271. A comparison has been carried out between match days and non-match days. Analysis of this data is not straightforward due to the fact that local bus services are frequently disrupted on days when no match

takes place by utilities works for example.

- 3.41 The key indicator for bus reliability on match days is the number of lost round bus trips. Broadly speaking, this measures the number of buses that are curtailed or withdrawn from service. Data has been collected for both weeknight and weekend matches. Analysis of this data indicates that delays are occurring to all local bus routes on match days.
- 3.42 Transport for London has been aware of this issue for some time, and has commissioned a study to identify both the causes of delay to buses on match days, and potential measures to overcome this. It is hoped that with increased reliability, more spectators will travel to the stadium by bus.

Environmental characteristics

- 3.43 The environmental characteristics that were monitored by the council during the course of the 2006/07 season are listed in paragraph 3.2 above. The council observed no significant impacts of these environmental characteristics, and any issue raised during the early part of the Season have been addressed or are being investigated. Further details of how these characteristics were monitored and the council's comments on these issues are set out below and contained within the monitoring report.

Litter collection and disposal / Cleanliness of streets

- 3.44 The increased size of the new stadium and the increased distance from stations to the new stadium means that the council now has a larger area to clean. Street Environment Services monitored 5 games at the beginning of the 2006/07 football season. The clean ups were monitored before, during and after the games. On all occasions the clean up was completed within the specified time (within 8 hours of the match finishing) and the streets concerned were litter free. Random monitoring took place throughout the season and the same standards were achieved on each occasion.
- 3.45 Additional litterbins have been placed in Drayton Park and Hornsey Road to reduce street litter and to encourage recycling on match days. The additional bins have been in place from the beginning of the 2007/08 season. These bins will be used to collect cans, plastic bottles and glass. Recycling of street litter is also carried out during the match.
- 3.46 Residents have reported problems with fans cutting through Pollard Close, and causing a nuisance including litter and urination. Police patrols have been increased in this area but do not appear to be wholly successful in controlling this problem. Alternative solutions will be sought in conjunction with local residents and Homes for Islington. No other complaints have been received regarding the clean up after the matches and general comments received suggest people are satisfied with the current arrangements.

Street vending patterns

- 3.47 A total of 45 street traders operate within the area on match days. They are permitted to set up their stalls at a maximum of 4 hours before the match and up to 2 hours after the match. The entire area is patrolled to monitor the activities of the

licensed traders. During the 2006/07 football season this occurred for all but two home games.

- 3.48 Any traders that are found to be trading without obtaining a Street Trading Licence are dealt with. During the course of the 2006/07 football season a total of 26 illegal traders were successfully prosecuted. Approximately 60 traders were verbally warned and moved on. The number of illegal traders increases when Arsenal play a European game. All licensed traders were found to be complying with the terms of their licences.

Noise impacts at agreed noise sensitive facades

- 3.49 The levels of background noise on the streets around the Emirates Stadium were measured before the stadium opened. This information was used to agree an acceptable level of noise for the Public Address system used at the stadium on match days. During the 2006/07 football season the council received complaints about the use of the PA on match days from local residents, although none in the last two months of the season. Noise levels were monitored on 4 separate occasions and it was found on all of these days that the PA noise level was within the level set out in the planning agreement. Further monitoring will be carried out on match days during the 2007/08 football season.

Light impacts at agreed locations

- 3.50 Monitoring during matches is not required, as lighting has to be at a specified level within the stadium and podium to facilitate safe access and egress. This level was set as a requirement of the granting of the Safety Certificate to the stadium.
- 3.51 There are no properties yet situated close enough to the stadium to suffer intrusive light pollution. The situation will be reviewed when units on Drayton Park are completed and monitoring considered at that stage.

The effectiveness of CCTV camera and results

- 3.52 CCTV footage, supplied by the Metropolitan Police Service, was used to assess crowd movements. This analysis helped to provide a clear understanding of queue management arrangements and queue clearance times. In particular the purpose of this assessment was to verify the findings of the manual station counts and the assessments by both London Underground staff and the Metropolitan Police Service of the queue clearance times at each station.
- 3.53 In every case where footage was sampled it was found that queue characteristics and clearance times were consistent with the manual stations counts or recorded clearance times.

The effectiveness of other measures implemented as a result of the Environmental and Safety Audit

- 3.54 As part of the S106 agreement funding was allocated towards measures to mitigate the impacts of the Emirates Stadium on the local environment and

address any safety concerns. The total funding available for these measures is £500,000 in three tranches: i.e. £350,000, £100,000 and £50,000.

3.55 The first two tranches have been allocated following consultation with the Arsenal Liaison Committee (which met on the 13th March 2006, and the 29th March 2007). The following measures have been funded:

- Installation of CCTV to preserve crowd safety and improve local safety both on match and non-match days;
- Installation of pedestrian signage to reinforce the safe and agreed pedestrian routes to access the stadium; and
- Repair and upgrade of footways and crossings points in the immediate environs of the stadium to remove trip hazards.

The total cost of these measures accounts for approximately £350,000, with an additional allocation of £100,000 towards further CCTV and remediation measures for Highbury Fields (as mentioned in paragraph 3.28 above).

3.56 Further funding (£50,000) is available as part of the S106 agreement under this heading. It will be allocated in consultation with the third Arsenal Liaison Committee (date to be announced).

Complaints database

3.57 Throughout the 2006/07 season all correspondence from residents and businesses, both complaints and general comments regarding the stadium, have been monitored and analysed. All complaints and observations received were answered.

3.58 The broad categories of concerns received can be classified as follows:

- Match day parking;
- Road closures (in particular pedestrian and vehicle restrictions);
- Spectator 'cut-throughs' across Highbury Fields;
- Public transport improvements;
- Coach parking;
- Behaviour of spectators; and
- Street trading.

3.59 It was found that the highest volume of correspondence related to match day parking. The area with the highest level of resident complaints regarding the match day CPZ was around Highbury Hill.

Future Monitoring

3.60 To properly evaluate the ongoing effects of the Emirates Stadium on the transport infrastructure the council will require the Club to undertake the full set of monitoring surveys and additional parking surveys for two further games this Season (a weekend and a weekday night). It is proposed that the following matches be monitored:

- Arsenal v Newcastle (Tuesday 29 January 2008, Premiership, Kick Off 1945); and

- Arsenal v Everton (Saturday 3 May 2008, Premiership, Kick Off 1500);

These matches have been selected as it is anticipated that they will demonstrate characteristics that are comparable to those measured as part of the monitoring programme for the 2006/07 season. Crucially spectator surveys coupled with parking surveys will establish whether or not the mode split target continues to be met.

- 3.61 Any issues raised by ERS as to the monitoring methodology will be addressed prior to the collection of any new data to ensure that the future monitoring process is as robust as possible.

Public Transport Improvement Works

- 3.62 £7.595 million of funding has been secured as part of the S106 agreement to improve public transport access on match days. To date £360,000 has been spent on:
- Improvements to the Finsbury Park interchange; and
 - A feasibility study at Drayton Park Station to investigate works required to keep the station open on match days.
- 3.63 Work is in hand to agree the allocation of the remainder of the funding. In line with the S106 agreement funding will be provided for pedestrian improvements on Holloway Road. Other priorities for use of this money include improvements to Drayton Park station, a further contribution to Highbury Fields, and funding for crowd management measures at Finsbury Park, Highbury & Islington and other locations in the immediate vicinity of the stadium. Measures to encourage greater use of local bus services, particularly by tackling unreliability, and cycling will also be brought forward.

4. Implications

4.1 Financial implications:

The monitoring programme is fully funded by Arsenal under the terms of the S106 agreement. The mode split target has been met and consequently funding is not available under the S106 agreement to make any modifications to the boundaries of the match day CPZ. The total cost of the monitoring programme is likely to be just under £0.5 million.

4.2 Legal Implications:

The monitoring report is a legal requirement placed upon Arsenal under the S106 Agreement main deed of modification (S106 of the Town and Country Planning Act 1990).

4.3 Equality Implications:

As part of the monitoring programme the levels of Blue Badge usage around the stadium has been monitored and where appropriate enforcement action has been taken against those using fraudulent Blue Badges, and those using Blue Badges inappropriately. This provides a greater surety for those legitimate Blue Badge

holders that they will be able to find a place to park and helps prevent the system being brought into disrepute.

5. Conclusion and recommendations

- 5.1 The S106 agreement set out an extremely thorough and wide - ranging requirement to monitor the impacts of Emirates Stadium on the transport network and local environment. The monitoring programme specified how this monitoring was to be carried out. All the requirements of the monitoring programme have been met, and its findings have been reported. The Liaison Committee has been consulted as required in the S106 Agreement. ERS have been appointed to ensure that the monitoring programme is robust, fair and transparent.
- 5.2 Monitoring indicates that the mode split target has been met, but this will be kept under review. To this end, further monitoring will be carried during the current football season, and in future seasons.

Background papers:

EMIRATES STADIUM MONITORING PROGRAMME 2006/07 Season (November 2007) – Arsenal Football Club, prepared by Steer Davies Gleave.

A Question of Sports Travel: a review of travel arrangements to and from London's sports stadiums (October 2007) - Transport Committee, London Assembly

Final report clearance:

Signed by:



Director of Environment & Regeneration Date

Received by:

Head of Democratic Services Date

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Appendix G Development Specification

Tottenham Hotspur Football Club

Development Specification

7th September 2015



Project/Site Name: Northumberland Development Project

Client Name (Applicant): Tottenham Athletic Football Club Limited

Site Area: 8.97 hectares

Development Components:

1. The Stadium
2. The Tottenham Experience (including Warmington House)
3. The Hotel
4. The Extreme Sports Building
5. The Residential Towers and Flexible Community / Office Space
6. The Community Health Centre

1. THE STADIUM	
Planning Permission Sought	Full planning permission
Land Use Classification	D2 (Leisure and Assembly)
Total Floorspace (GIA) (SQM)	119,945
Capacity	61,000 seats
Maximum Height	48m to the eaves from pavement level (High Street) Maximum height of roof is 59.154 AOD
Events	A total of 16 non-THFC events per annum comprising: • 6 concerts • 10 non-THFC sporting events (of which at least 3 x NFL matches)
Car Parking	822 spaces comprising: • 732 standard spaces • 90 fully accessible spaces • 60 blue badge spaces Access and egress from Worcester Avenue

Cycle Parking	No (already included as part of Lilywhite House development)
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2. THE TOTTENHAM EXPERIENCE

Planning Permission Sought	Full planning permission Listed Building Consent for works to Warmington House
Land Use Classification	Sui Generis (the integration and mix uses do not fall within a specified use class)
Total Floorspace (GIA) (SQM)	4,311
Floorspace Breakdown (GIA) (SQM)	Megastore – 1,955 Museum - 728 Café - 260 Cinema - 400 Ticket Office - 242 Skywalk Change and Reception - 100
Maximum Height	14.1 m above ground 25.1 AOD
Car Parking	No
Cycle Parking	No (already included as part of Lilywhite House development)

3. THE HOTEL

Planning Permission Sought	Full planning permission
Land Use Classification	C1 (Hotel)
Total Floorspace (GIA) (SQM)	18,820
Units	180 hotel bedrooms 49 serviced apartments
Maximum Height	89.2 m above ground 100 AOD

Car Parking	76 spaces comprising: • 68 standard spaces • 8 fully accessible spaces
Cycle Parking	6 racks for 12 cycle spaces (located in basement)

4. THE EXTREME SPORTS BUILDING

Planning Permission Sought	Outline planning permission Matters reserved: • “Appearance” • “Scale” Matters submitted for detailed approval: • “Layout” – where the block sits on the site and relation to other buildings; • “Access” – where the building is access from the street and the podium • “Landscape”
Land Use Classification	D2 (Leisure and Assembly)
Total Floorspace (GIA) (SQM)	Maximum 2,100 sqm
Maximum Height	51.2 m above ground 62m AOD
Car Parking	No
Cycle Parking	8 racks for 16 cycle spaces (located along Park Lane)

5. THE RESIDENTIAL TOWERS

Planning Permission Sought	Outline planning permission Matters reserved: • “Appearance” • “Landscape” Matters submitted for detailed approval: • “Layout” – where the block sits on the site and relation to other buildings;
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	• “Scale” – the height, width and length of each block • “Access” – where the building is access from the street and the podium
Summary	4 residential blocks comprising a total of 580 units. 5 no. townhouses fronting Park Lane Flexible D1 community / B1 office space at ground, first and second floor level
Land Use Classification	C3 (Dwellinghouses) – four towers and townhouses D1 (Community) and / or B1 (Office) space at ground, first and second floor (within the podium, as per consented scheme)
Residential Tower A	• 24 residential storeys • Maximum height - 94m (27 storeys above ground) • 104,620m AOD • 167 units (indicative mix): ▪ 4 x studios ▪ 69 x 1 beds ▪ 88 x 2 beds ▪ 6 x 3 beds • 261 bicycle spaces
Residential Tower B	• 16 residential storeys (19 storeys above ground) • Maximum height - 67m (above ground) • 78,220m AOD • 91 units (indicative mix): ▪ 6 x studios ▪ 49 x 1 beds ▪ 30 x 2 beds ▪ 6 x 3 beds • 127 bicycle spaces
Residential Tower C	• 32 residential storeys (35 storeys above ground) • Maximum height – 121m (above ground) • 131,020m AOD • 231 units (indicative mix): ▪ 4 x studios ▪ 101 x 1 beds ▪ 120 x 2 beds ▪ 6 x 3 beds • 357 bicycle spaces
Residential Tower D	• 16 residential storeys (19 storeys above ground) • Maximum height – 69m (above ground)

	• 80,220m AOD • 91 units (indicative mix): ▪ 6 x studios ▪ 49 x 1 beds ▪ 30 x 2 beds ▪ 6 x 3 beds 127 bicycle spaces
Townhouses	• 5 x 3 bed townhouses
Car Parking (Residential Only)	Total 270 spaces (243 standard and 27 Blue Badge Holders) • First floor – 39 spaces • Ground floor – 24 spaces • Basement Level 1 – 118 spaces • Basement Level 2 – 120 spaces
Flexible Community / Office Use Floorspace (GIA) (SQM)	3,897 over ground, first and second floor

6. THE COMMUNITY HEALTH CENTRE	
Planning Permission Sought	Outline planning permission Matters reserved: • “Appearance” Matters submitted for detailed approval: • “Scale” – the height, width and length of each block • “Layout” – where the block sits on the site and relation to other buildings; • “Access” – where the building is access from the street and the podium • “Landscape” -
Land Use Classification	D1 (Health Centre)
Total Floorspace (GIA) (SQM)	Maximum 2,000 sqm
Maximum Height	21.0m above ground 31.885 AOD
Car Parking	No

Cycle Parking	6 racks for 12 cycle spaces (located to north end of Worcester Avenue)
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**Car Parking Spaces on Worcester Avenue –
56 spaces comprising:**

- 48 standard spaces
- 8 fully accessible spaces

Appendix H 2010 Off Street Parking

