

Review of the Tottenham Hotspur Transport (THFC) proposal

Introduction

The proposed site is located to the north of the existing stadium and is enclosed by recently implemented supermarket and technical college to the north, to the east by Worcester Avenue, to the west by the A1010 High Road and to the south by Park Lane. This section of the High Road has a public transport accessibility level of 4/5 which is medium /high and is part of the strategic road network (SRN). There are ten bus routes serving this area: 149, 279, 259, 341, 476, 123, 243, 318, W3 and 349 with bus stops on the High Road and on Northumberland Park. There are two national rail stations within reasonable walking distance of the site; White Hart Lane station is approximately 450m to the west and provides access to services on the Seven Sisters branch of the Lea Valley Line. Northumberland Park station is approximately 600m to the east and provides access to services on the West Anglia main line. The closest underground station is Tottenham Hale on the Victoria Line, approximately 2.2 km from the stadium; Seven Sisters is 2.3km to the south of the stadium. Although Tottenham Hale station is closer to the stadium than Seven Sisters station most spectators currently use Seven Sisters Station as it perceived to be closer, is more accessible by foot and has direct bus services.

This site has planning permission for a mixed-use development to provide a 56,250 capacity stadium, including: a supermarket, 150 bed hotel, a museum, offices and 200 residential units. There were two subsequent planning permissions HGY/2011/2350 and HGY/2011/2351 for additional floor space in the northern phase of the development including: offices 5,666 sqm (ancillary to the club use) and education space, 3,238 sqm. There was an increase in floor space in the southern development including (6,650 sqm for health care facility, 6,000sqm health club and an increase in the number of residential units from 200 to 285 residential units. The northern development has been constructed and is occupied. The applicant is seeking to amend the stadium and the southern development including the following changes:

- 1) Increase the capacity of the stadium to 61,000 seating capacity, multi-purpose stadium which includes NFL, concerts and Sky Walk' allowing visitors to climb the exterior of the stadium, increase the stadium car parking spaces from 319 to 822 including 60 designated blue badge spaces and 90 fully accessible car parking spaces. The increase in the car parking spaces will provide additional blue badge spaces.
- 2) Increase the number of residential units from 285 to 580 residential units, including 270 car parking spaces.
- 3) A 180 bed hotel and 49 serviced apartments, including 76 car parking spaces
- 4) Health centre 2,000sqm. The size of the health centre has reduced from 6,500 sqm; this will be accessed via Worcester Avenue. No dedicated car parking spaces will be provided for this element of the proposal.
- 5) The Tottenham Experience 4,311 sqm which includes club store, museum, cinema, cafe, ticket office, and skywalk changing rooms and reception.
- 6) Extreme sports facilities of 2,100sqm including climbing wall, scuba-diving tank and sports performance activities. No car parking is provided for this element of the development.
- 7) New community/ office use of 3,897 sqm within the southern development. No car parking is provided for this element of the development.

There have been a number of changes to the local transport infrastructure since the 2010 application and other transport improvements planned to be implemented between 2015 and 2018 when the stadium is proposed to be in full operation, a summary of the changes are outlined below:

- 1) The completion of the Victoria Line upgrade, which has provided faster and high frequency trains. A new timetable to be implemented in 2016 will see all trains running

to Walthamstow Central via Tottenham Hale. This will increase the capacity at Tottenham Hale for spectators pre-events who will walk to stadium and post events heading east or travelling to the south

- 2) White Hart Lane which was formally the Abellio Greater Anglia line has been taken over by TfL and is now part of the London Overground network. This will include new rolling stock from 2018 which will increase the capacity. There is also a proposal to remodel the station to provide better connectivity to the High Road (stadium) and improve platform loading as loading of the platform using the current layout is restricted by the stairs which are 3 metres wide.
- 3) Upgrade of Tottenham Hale station and bus interchange, this combined with the removal of the Gyrotory and the Green Link has enhanced the option of Tottenham Hale as an alternative to Seven Sisters station, as it has better connectivity to the High Road and is closer to the Stadium than Seven Sisters Station.
- 4) The Mayor's Cycling Super Highway 1 (CS1) is currently being implemented and will be completed in 2016. The new cycle route will provide better north/south cycling connectivity, the proposed alignment is via Church Lane which will aid cyclists to avoid the congestion on the High Road on a match day.

The transport impact of the development has been assessed in the context of the Council's Saved UDP Policies, Haringey's Local Plan Strategic Policies 2013-2026, the 2015 London Plan (FALP) Policies as below:

M9: CAR-FREE RESIDENTIAL DEVELOPMENTS

Proposals for new development without the provision of car parking will be permitted in locations where:

- a) There are alternative and accessible means of transport available;
- b) Public transport accessibility is good; and
- c) A controlled parking zone exists or will be provided prior to occupation of the development.

7.19 Residential developments without car parking provision are only likely to be viable where there are alternative and accessible means of transport available, in particular a good level of public transport accessibility and where a Controlled Parking Zone (CPZ) is in existence or planned within the timescale for the proposed development. Appropriately located on-site disabled parking will be required for wheelchair accessible homes. In addition people with disabilities may also be eligible for a parking permit. Within existing or planned CPZ's residents of car-free developments will not be eligible for residential permits. Although residents of car-free housing are unlikely to walk a long distance from their home to access their parked car on street without parking controls, the Council will seek, in the longer-term, extensions to existing controlled parking zones. Where public transport provision can be improved to increase the levels of public transport accessibility and facilitate car-free residential development the Council may seek to augment provision through a section 106 agreement.

7.20 The construction of new residential developments without car parking would support Council policies to reduce car dependency and the encouragement of other modes of transport. The Council will negotiate viable means to implement car-free developments where it is appropriate.

M10: PARKING FOR DEVELOPMENT

Development proposals will be assessed against the parking standards set out in Appendix 1. Proposals that do not meet these standards will not normally be permitted.

Parking requirement will be assessed on an individual basis as part of the Transport Assessment in cases where this is deemed necessary according to Policy UD1.

7.21 As PPG 13 Transport notes [para 49], “The availability of car parking has a major influence on the means of transport people choose for their journeys”. A limitation on the provision of private non-residential (PNR) parking for new development can help to restrain car use. Haringey Unitary Development Plan: July 2006 117 7.22 The Council will apply its parking standards to restrain car use, to reduce congestion, to improve road safety, to give priority to essential users and people with disabilities, to improve the environment, to improve local accessibility and to encourage sustainable regeneration.

Haringey’s Local Plan Policy SP7 which focuses on promoting sustainable travel and making sure all development is properly integrated with all forms of transport, in line with the Government’s transport objectives set out in section 4 of the NPPF and the Mayor of London’s strategic transport approach in the London Plan.

London Plan Policy 6.1 Strategic Approach, 6.3 Assessing Effect of Development on Public Transport capacity, 6.7 Better Streets and Surface Transport, 6.9 Cycling, 6.10 Walking, 6.11 Smoothing Traffic Flows and Tackling Congestion, 6.12 Road Network Capacity, 6.13 Parking

Non-Event Day Assessment

This application will be assessed in two main sections: Non-event days and Event days. This section comprises the Non-event day activities which include (residential development, Hotel, Extreme Sports, Tottenham Experience, Health Centre and the Sky Walk).

As above the planning permission was granted for changes to the southern development including college of 6,650 sqm, health care facility of 6,000 sqm and a health club of 2,400 sqm. In addition the applicant has approval to increase the numbers of residential units from 200 to 285; the table below shows cumulative in/out trip rates generated by the central (stadium non-event day) element of the development and the southern element of the development between the base (previous commercial light industrial), the 2010 application (HGY/2010/1000) and the 2011 (HGY/2011/2350 and HGY/2011/2351) applications.

Trip Generation

Trip generation table below which indicates the AM, PM and Saturday peak trips for the site as exists in 2010m the first application in 2010 (HGY2010/1000) and the changes in 2011 as part of (HGY/2011/2350 and HGY/2011/2351)

		2010 Base			Approved 2010			Approved 2010/12		
	Modes	AM	PM	Sat	AM	PM	Sat	AM	PM	Sat
Middle (Stadium)	Vehicle	143	153	12	219	280	99	219	280	99
	Pedestrian	0	0	0	52	63	30	52	63	30
	Public Transport	0	51	0	191	298	63	191	298	63
Southern Development	Vehicle	165	244	271	35	24	245	151	112	390
	Pedestrian	55	0	83						
	Public Transport	108	338	177	78*	266*	604*	236 *	423*	630*

*Pedestrian and public transport trips combined.

This application is seeking to change the use of some of the existing approved floor areas as well as creating additional floor areas as part of the Southern Development. The trip generation methodology is a hybrid trip generation methodology, which utilises some of the existing trip rates from the TRAVL database from the previous applications. This includes the hotel, and the health centre. The applicant's transport consultant Tim Spencer and Co has proposed calculating the trip rate for the Stadium Conference, Tottenham Experience, Sky Walk, Extreme Sports facility from first principles (yearly tips forecasted using the business averaged over months days and peak hours). These elements of the proposal have been forecasted to generate annual visitor's numbers of: Conference facility [81,180], museum, stadium tour, Tottenham Experience and club store [120,000], Sky Walk [96,600] and Extreme sports [100,000]. We agree that some elements of the development are unique and it will not be possible for the applicant's transport consultant to forecast trip rates based on sites from TRICS and TRAVL trip prediction database. The development will also include some 3,797 sqm of flexible community or B1 use. This aspect of the development has been assessed based on B1 use which represents the worst case scenario. This element of the development will not have access to dedicated off street car parking spaces and will have to utilise the 56 pay and display car parking spaces on Worcester Avenue which will have a time limitation. This element of the development has been assessed based on first principle using employee research surveys completed in 2011. We have considered that although the trip generation methodology is a departure from the standard approach using sites from the TRICS data base with modal split data from the 2011 census data, the survey methodology is acceptable as this element of the proposal will not have any dedicated car parking spaces. It is assumed that the proposed office will have up to 250 employees; the car mode share is forecasted to be 4% during the peak periods associated with car passengers, (taxis), as no dedicated car parking spaces will be provided for employees. The applicant's transport consultant has forecast the trip rates for the residential aspect of the development from first principle based on surveys of sites located in Islington in Holloway Road. Although these sites are in inner London, we consider these are acceptable given the high PTAL rating for the site and restricted on-site parking of 0.47 spaces per unit including wheelchair accessible car parking. The remainder of the development, hotel and health centre trip generation has been forecasted using the trip rates using sites from the TRAVL trip generation database agreed as part of the previous approved application. The trip generation during the peak periods (AM and PM) have been distributed between 7am-9am and from 4pm-7pm. There will be a total of 1,871 two-way persons trips during the AM peak (738 in and 1133 out) and 2,536 two-way trips during the evening peak periods (1420, in and 1112 out). The table below shows the AM and PM peak person's trip generation during the network peaks (8am-9am and 5pm-6pm). Based on the hybrid trip generation methodology the non event day element of the application is expected to generate the following peak hourly trips:

Expected All Mode Trip Generation

Activity	AM Peak Hour		PM Peak Hour	
	In	Out	In	Out
Conference/ Banqueting Tottenham Experience Sky Walk Extreme Sports	165	83	83	165
Health Centre	45	28	23	46
Office B1/Community/ D1 Use	108	17	13	77
Hotel	24	72	77	31
49 apartments	5	28	23	12
585 Residential Units	65	335	272	145
Total	412	563	491	476

Vehicular Trips (Car Driver Trips)

Activity	Peak Hour AM		Peak Hour PM	
	In	Out	In	Out
Conference/ Banqueting Tottenham Experience Sky Walk Extreme Sports	17	8	8	17
Health Centre	17	8	8	8
Office B1 Community D1 Use	4	1	1	3
Hotel	2	15	27	6
49 apartment lets	1	2	1	1
585 Residential Units	8	28	18	13
Total	49	62	63	48

The previously approved scheme(HGY/2011/2350 and HGY/2011/2351) forecasted trip generation of 151 in/out trips in the AM peak period and 112 in/out trips during the PM peak period related to the southern development. The current proposal would generate 111 in/out trips during both the AM and PM peak period with the majority of the additional trips would be by public transport. There would be a reduction in the number of vehicular trips generated by the revised development when compared to that of the 2012 approved development (HGY/2011/2350 and HGY/2011/2351). The stadium element of the proposal is forecasted to generate additional vehicular trips based on conference and other events utilising the stadium car park. The revised TA proposes restricting access to the stadium car park to all but essential conference and event organisers, with all other visitors utilising the 56 shared pay and display car parking spaces on Worcester Avenue. This will suppress the car mode share. The use of the stadium car park on non-event days will be restricted and reviewed by way of a S.106 obligation as part of the parking management plan. We have therefore considered that as the proposed non event day aspect of the development will have limited car parking provision, with dedicated car parking only provided for the residential, and hotel aspects of the development combined with the recently implemented all day Controlled Parking Zone which will have to reviewed before the occupation of the Southern Development, the trip generation methodology is considered acceptable. In addition the evidence provided as part of the transport assessment has demonstrated that there has been a reduction in the annual/ daily flow of traffic on the highways network (Tottenham High Road) since 2010, with a reduction in the average day flow next to the stadium (High Road) by 18% between 2001 to 2011 (16,708 to 13,583). Whilst we agree that the supermarket is currently under trading and the car mode share trip generation forecasted has not occurred to date, it is our opinion that the car mode share is unlikely to increase substantially beyond the current levels in the future given the proposed redevelopment NDP residential development, High Road West and Northumberland Park, our experience from previous retail impact assessment have demonstrated that the future trips (trade) generated by the supermarket is most likely to originate locally given the proposed increase in the number of residential units from the above sites.

Impact on Public Transport

We have assessed the impacts of the increase in public transport/ pedestrian trips and the impact it would it would have on the local transport network. The applicant's transport consultant has forecasted the trips that will be generated by the Southern Development including the non match day stadium activities, 32% of the trips will be via White Hart Lane, 13% via Northumberland Park station, 30% via bus to the Victoria Line and 24% by bus as the main mode, we have considered that the proposed modal split is accessible and will have to be supported by a Travel Plan to be secured by way of S.106 agreement.

The development will generate some 1377 two way public transport trips over the 3 hour AM peak period and 1,928 two way trip public transport trips over the 3 hour PM peak period, during the AM peak hour the development will generate 783 public transport trips and 754 peak hour trips during the PM peak hour period; given the distribution between the various modes of public transport and including the 13% of trips via Northumberland Park we have considered that with the improvements planned in public transport infrastructure in the local area, the proposed development would not adversely impact on the public transport system(buses, underground and rail).

Based on the forecasted trip generation the cycle mode share of trips account for some 5.2% of trips during the AM peak period and 3.8% of trips during the PM peak period, 98 and 96 cycle trips respectively we have considered that given the reduction in the number of car parking spaces provided as part of the development the forecasted cycling mode share should be much higher. We will therefore require the applicant to provide a cycling strategy for the non match day aspect of the development. The cycling strategy should review the existing cycling infrastructure, and provide measures which seek to increase the cycling modal split for the entire development such as visitors' cycle parking and changing rooms, showers and lockers for staff. These measures are to be reviewed annually as part of the Travel Plan.

Car parking and cycle parking provision

The applicant is proposing to provide 270 car parking spaces for up to 580 residential units which equated to some 0.47 car parking spaces per unit. The proposed car parking provision is in line with the 2015 London Plan (FALP), and Haringey's Saved UDP Policy M10. We will require 20% of the entire car parking provision to have active electric vehicle charging points with a further 20% passive provision. In addition the developer will be required to provide 1 space per wheelchair accessible unit. The parking allocation including the allocation of car parking to wheel chair accessible units must be done via a parking management plan to be approved by the Transportation Planning Team.

Cycle parking will be incorporated in each of the 4 towers, Tower A will have up to 167 units including 4 studios, 69 one bed units, 88 two bed units, 6 three bed units and a total of 261 cycle parking spaces. Tower B will have a total of 91 residential units, 6 studios, 49 one bed, 30 two beds, 6 three beds and a total of 127 cycle parking spaces. Tower C will have 231 units, 4 studios, 101 one bed, 120 two beds, 6 three beds and 357 cycle parking spaces. Tower D will have 91 units, with 6 studios, 49 one bed, 30 two beds and 6 three beds and 127 cycle parking spaces. In addition there will be 5 three bed maisonette houses, which will have their own cycle parking. The number of cycle parking spaces is largely in line with the London Plan, however the applicant has not proposed the provision of visitor cycle parking. We will require detail of the numbers and location of visitors' cycle parking to be submitted as part of the Travel Plan. We will also require details of cycle parking, proposed method of security of cycle parking provision, allocation of cycle parking spaces and long term maintenance strategy of the cycle parking areas and provide short stay cycle parking in line with the London Plan, to be secured by way of S.106 agreement.

Hotel and serviced apartments

The Hotel will have 180 beds and 49 serviced apartments are proposed. The applicant has proposed providing 76 car parking spaces for this aspect of the development. We consider the parking provision is high considering the good public transport accessibility of the site. The London Plan considers that in locations with PTAL of 4-6 parking provision should be limited to operational needs and parking for disabled persons. We will also require the developer to include 10% wheelchair accessible and 10% of the spaces provided to have electric charging points with a further 10% passive provision car parking. In relation to the 76 car parking spaces proposed for the hotel and serviced apartments, the developer will also be required to submit a parking management plan, which will limit the use of these car parking spaces for operational use only and should include details on how car parking will be allocated and managed. The London Plan requires the developer to provide cycle parking at 1 space per 20 beds for long stay and 1 space per 50 bed for short stay. The applicant will be required to provide the above parking management plan and cycle parking as part of the Travel Plan to be secured by way of a S.106 agreement.

Health Centre

The application will include a Health Centre of some 2,000 sqm. The health care facility will serve mostly local people and will generate most of its trips locally by walking, cycling and public transport. The applicant has not proposed providing parking for this element of the proposal. However, the revised highways layout will include 56 pay and display car parking spaces including 8 disabled car parking spaces on Worcester Avenue, which can be used by residents accessing the proposed healthcare facility by car. The applicant has not provided details of the cycle parking spaces to be provided. This will have to be secured by way of condition as part of the Travel Plan.

The Tottenham Experience

The Tottenham Experience which includes the megastore, museum, cafe, cinema, ticket office and Sky Walk will not have any dedicated car parking spaces. Visitors will make use of some of the pay and display car parking spaces on Worcester Avenue. The applicant will be required to provide cycle parking in line with the 2015 (FALP) London Plan, to be secured as part of the Travel Plan by S.106 agreement

Conference/ Banqueting and other stadium non-match day related activities

Parking for these activities will be provided in the stadium car park which has some 822 car parking spaces including 90 wheel chair accessible car parking spaces. However, it is proposed that the use of the stadium car park will be restricted to essential guests only, to reduce travel by car. We will therefore request as part of the car parking management plan that any such event is not provided with car parking in excess of that assessed as part of the 2010 planning application which assessed car parking relating to the stadium central area of some 219 in/out movement during the AM peak periods. We would therefore seek to cap the level of parking used for conference and events to essential organisers and visitors only, (not in excess of 50) to suppress the car driver mode share of trips generated by conferences which are not classified as major event car parking spaces unless trip generation and junction modelling analysis is provided to demonstrate that a high percentage of parking allocation can be accommodated on site without having any impact on the transportation and highways network.

Event Day Assessment

This section will review the proposed increase in the capacity of the stadium from 56,250 to 61,100 and 10 additional non football sporting events per year such as NFL football and 6 non-sporting events such as concerts. The applicant has planning permission for a stadium with a capacity of 56,250. The impacts of the previous stadium on the transportation and highways network has already been assessed as part of planning application HGY/2010/1000, and mitigation agreed as part of the S.106 agreement. Some of these measures have already been implemented including the first phase of the new event day CPZ. This application is seeking to increase the capacity of the stadium by 8,750, some 16.75% above the 2010 approved scheme.

Given the length of time since the 2010 approved scheme and the improvements in public transport infrastructure planned to be implemented before 2018, or has already been implemented, the applicant's transport consultant has optimised the use of public transport which in turn will reduce the need for travel by private car and maintain the key assumption of the HGY/2010/1000 transport strategy, which assumes that the increase in the capacity of the stadium will not result in increase in the car mode share and car parking demand generated by the new stadium in the area surrounding the site.

Modal Split

The table below shows a summary of the existing and proposed modal split targets; car use accounts for between 39.6 and 45.6% person trips to and from the existing stadium. The applicant has proposed to retain the modal split assumption that underpins the previous event day forecast which assumes that the number of car trips will not increase beyond the existing modal share as a result of increasing the capacity of the stadium (nil detriment effect model)

The developer's event day TA has proposed reducing the number of trips by car on a match day from 15,609 person trips to 14,030 person trips post match as a result of implementing the revised event day control parking zone. The proposed reduction in person trips would result in some 658 less car trips. We have reviewed the proposed estimated modal split targets and the resultant impact on the various travel modes in the subsequent sections.

Existing and forecasted modal split for Home and away Supporters

Mode	Existing Arrival		Proposed Arrival		Existing Departure		Proposed Departure	
	People	%	People	%	People	%	People	%
coach	363	1.0%	915	1.5%	363	1.0%	915	1.5%
local Bus	3993	11.0%	6405	10.5%	2178	6.0%	4880	8.0%
Inter SS*	2360	6.5%	3660	6.0%	2360	6.5%	4270	7.0%
Inter TH*	182	0.5%	2013	3.3%	182	0.5%	1830	3.0%
Taxi	363	1.0%	1037	1.7%	363	1.0%	915	1.5%
Walk	726	2.0%	1830	3.0%	726	2.0%	1830	3.0%
Cycle	363	1.0%	610	1.0%	363	1.0%	610	1.0%
Rail from WHL	8531	23.5%	12810	21.0%	7369	20.3%	12200	20.0%
Rail from NP	4175	11.5%	9638	15.8%	3521	9.7%	8540	14.0%
Walk to, SS tube	3630	10.0%	6893	11.3%	5227	14.4%	6405	10.5%
Walk to TH tube	363	1.0%	3172	5.2%	581	1.6%	5795	9.5%
car	13794	38.0%	11895	19.5%	15609	43.0%	14030	23.0%
Motor Cycle	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Shuttle Bus	0	0.0%	5795	9.5%	0	0.0%	4880	8.0%
Total	36300	100.0%	61000	100.0%	36300	100.0%	61000	100.0%

**note that Inter SS (interchange Seven Sisters to Victoria Line for Rail via White Hart Lane) and Inter TH(interchange Tottenham Hale to Victoria Line via Rail form Northumberland Park).*

The table above shows the home and away supporters modal split target which equates to 61,000 total stadium capacity of which 3,000 spectators are away supporters, 77-80% are forecasted to arrive by public transport. The increase in the capacity of the stadium to 61,000 will make greater use of Tottenham Hale station which is currently not very well used on match day for arrival or departure, with only some 617 spectators using the station on arrival and 763 spectators on departure. In the future situation 7930 spectators are expected to use the station on arrival and 9445 spectators on departure. The transport strategy would provide shuttle bus services as part of the mitigation strategy; two shuttle bus services are proposed - one to Tottenham Hale and the other to Wood Green and Alexandra Palace station. The provision of the shuttle bus service would also reduce the loading pre and post match at Seven Sisters and White Hart Lane stations, as it is forecasted to transport some 3050 spectators to Wood Green and Alexander Palace stations.

Arrival and Departure profile

At present 85% of spectators arrive and depart within 45 minutes of kick off and final whistle respectively, with some spectators leaving before the final whistle. This peak arrival and departure adds to the loading of the public transport system, resulting in longer queuing times at stations and traffic delays and congestion on the local highway network. The applicant has suggested that by providing better facilities at the stadium resulting from better design and post match entertainment, some 30% of spectators (18,300) will arrive at the stadium gatelines early (60-90 minutes before kickoff); with 35.2% of spectators arriving in the local area before a match.

The TA assumes that 30% of home spectators and 5% of away supporters will delay their departure for a minimum of 20 minutes. In our view insufficient evidence has been provided in the Transport Assessment to demonstrate that such a large percentage retention can be achieved post match for mid week events. However given the increase in the capacity of the stadium and the increase in demand on local transport infrastructure, it is likely that fans will arrive in the area earlier in order to ensure that they can enter the stadium before kickoff; in addition the new stadium will include attraction and retention measures. We support the applicant's desire to alleviate the peak loading on the public transport system and request that these attraction and retention measures, proposed as part of the previous planning application are retained as part of the Travel Plan measures.

Walking

White Hart Lane is the closest Station and is 6 minutes walk from the stadium. The distance to other stations are Northumberland Park station [0.8 km], Seven Sisters [2.3 km] and Tottenham Hale [2.2km]. The peak trip generation for walking trips will occur post match on a mid week evening when the spectators exit the stadium for the various public transport modes. The crowd flow and dispersion of spectators exiting the stadium has been modelled by the applicant. The proposed footways are expected to be able to cope with the flows in the area immediately surrounding the stadium with the exception of a pinch point outside number 748 and 750 High Road which reduces the footway width to between 2.2-2.6 metres. This forces spectators out into the bus lane. Although this issue has not resulted in any accidents the applicants transport consultant has highlighted this as a potential safety issue given the increase in the number of spectators. We have asked the applicant to explore a range of mitigation measures which will be addressed as part the approval of the detailed highways design to be agreed as part of the S.278 agreement and the Event Management Plan to be agreed prior to the occupation of the new stadium by S.106 agreement.

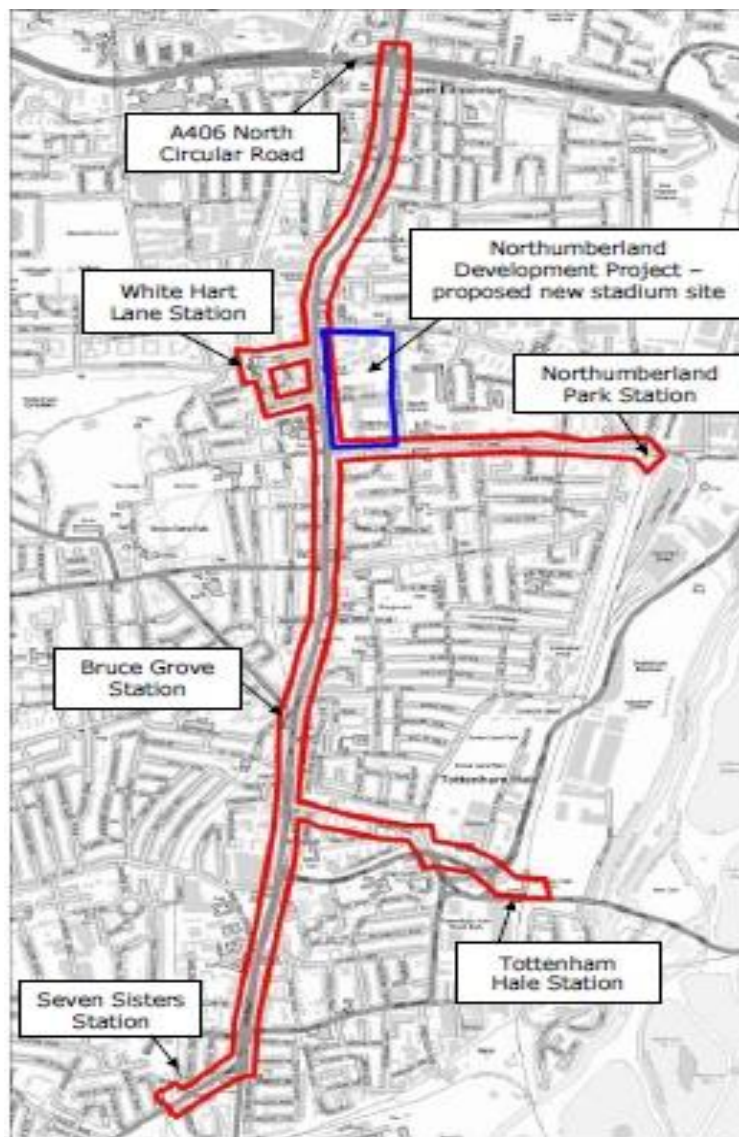
The Transport Assessment suggests that post match there will be some 12,810 spectators walking to the Victoria Line, Seven Sisters (6,710) and Tottenham Hale (6,100) station, with 14,945 spectators walking to the local rail stations, White Hart Lane (7,930) and Northumberland Park (7,015), we have considered that the proposed forecast is reasonable on balance and will have to be supported by a

communication strategy which advises spectators of the queuing times at the various interchanges to achieve the proposed distribution, otherwise as White Hart Lane is the closest station more spectators will choose to use that station resulting in longer queuing times. A communication strategy and live feed (20 minutes delayed queuing) at the various public transport interchanges are to be secured by way of a S.106 agreement as part of the communication strategy.

The applicant has submitted a revised PERS (Pedestrian Environment Review System) audit of the five main walking routes to and from the local transport interchanges.

- White Hart Lane Station , via, the High Road/ White Hart Lane and via High Road/ Whitehall Street and Love Lane
- Northumberland Park Station via Park Lane and Shelbourne Rod
- Tottenham Hale Station via the High Road, Chesnut Road and Monument Way, Hale Road and Ferry Lane.
- Seven Sisters Station via High Road and Seven Sisters Road
- To the North of the Stadium towards Enfield via the High Road

A map of the walking route can be seen below:



Map of PERS Walking Routes to Local Transport Interchanges

The PERS audit does not include the routes to the coach parking on West Road, Tariff Road, Brantwood Road and Pretoria Road and section via Northumberland Park, Blaydon Walk and a section of Willoughby Park Road. However, we have considered that as the applicants TA is only proposing a 1.5% coach mode share which is some (915 spectators by coach) and the worst case coach demand forecasted is 2% (1,220 spectators maximum), we don't consider that the PERS audit of the coach paring routes are critical to the overall transport strategy; however we will be seeking to sign the routes to the coach parking locations as part of a overall compressive signage strategy of the routes to and from the development be implemented by way of a S.106 obligation.

In respect to the 5 main walking routes identified above, we have reviewed the PERS audit and have concluded that the only route which will require direct mitigation above that which has already been secured as part the approved application HGY/2010/1000. The Stadium to White Hart Lane station route scored very poorly due to lack of resting points, personal safety (lack of CCTV), legibility (lack of route signage), quality of environment (poor surface quality) and directness due to parked cars and bollards.

In addition the PERS audit has identified some other areas where the RAG [Red, Amber, Green] rating is red these areas include:

- 1) Westside of Bruce Grove/High Road between Bruce Grove station and St Loys Road, and west Side of Bruce Grove between Bruce Grove rail station and Forster Road this area is currently been reviewed by the TFL and Haringey and a funded scheme is being developed to address some of these issues, hence no mitigation is required as part of this application.
- 2) The PERS audit as part of the review has rated a part of Chesnut Road at its junction with Fairbanks Road, Red using the RAG rating, improvements are planned for this area and £220,00 has been agreed as part of the revised S.106 agreement under planning application HGY/2010/1000.

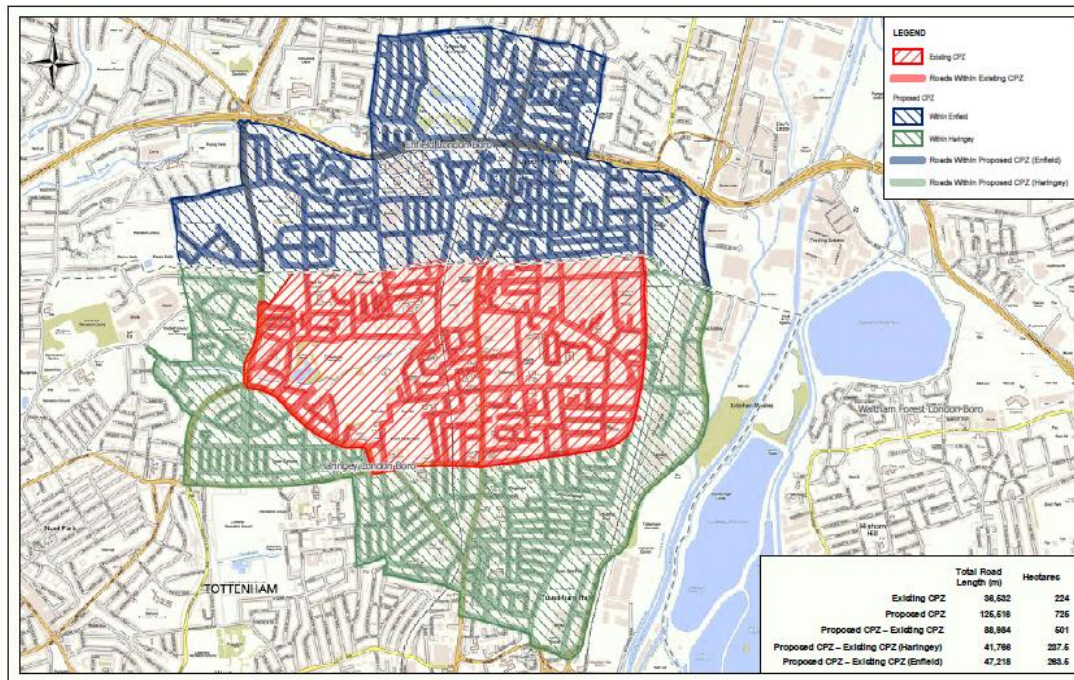
Cycle

The applicant modal split prediction suggests that some 610 people will arrive and depart by cycling. This accounts for 1% of the mode share. We would have expected the proposed mode share to be higher (3% or more) considering that 10,000 of season tickets will be prioritised for local residents combined with the fact that currently some 5% (2900) spectators live within 5km of the stadium. In addition our discussions with Islington and their experience in trying to achieve their cycling modal split target has highlighted inadequate cycle parking as a contributory factor for not achieving Arsenal's cycling modal split target. We will therefore require the applicant to produce a match day cycling strategy which seeks to actively promote cycling to and from the stadium; this should include access to adequate secure cycle parking facility and cycle maps to promote the availability cycle routes.

Match Day Car usage

The existing conditions report suggests that between 37.8%-43.9% of spectators arrive in the local area by car. There is a strategy in place to reduce the number of car parking spaces available and restrict spectator's ability to easily access on street and off street car parking spaces. This combined with the proposed enhancement in public transport infrastructure and event day travel plan measures should make it possible to achieve the proposed car mode share. The key driver to achieve the proposed modal shift is behavioural change as a result of increasing the current match-day CPZ from 221 hectares to around 716 hectares. A map of the proposed CPZ can be seen below. Phase 1 of the revised event day controlled parking zone has been implemented, and the other phases will be implemented before the stadium is completed.

Proposed CPZ



In addition the CPZ will restrict the availability of on street parking close to the stadium and disperse any on-street parking in a larger area. This will result in less congestion within the local area. The proposed expansion of the CPZ beyond the A406 will help to facilitate the free flow of buses and pedestrians along the High Road and the bus diversion route. This will help to reduce the journey time of spectators to and from the stadium. The extension to the west will also help to facilitate the shuttle bus service to Wood Green/ Alexandra Palace.

We have some concerns regarding the increase in the number of car parking spaces in the stadium and the car parking allocated to the Hotel which will be utilised by spectators on an event day. The access and egress via Northumberland Park and Park Lane are located where pedestrian flows will be very high post and pre match. Hence whilst we accept that the transport strategy includes some 22-23% of spectators arriving by car, and the redevelopment of the sites surrounding the stadium will remove some 870 off street car parking spaces, we will need safeguards to be included as part of the event management plan to restrict access to and from the car park before and after games when spectator flows are at the highest (30 minutes pre match and 40 minutes post match). We have also considered that given the proximity of the vehicular access to the hotel car park and serviced apartments, the access will require more stringent management as part of the local area management plan, with access and egress restricted to a minimum of 1 hour pre and post match.

National Rail

We have assessed the proposed modal shift for spectators using rail on arrival and departure and the resulting impact on the local transport network. The revised transport assessment forecast that some 34% of spectators will depart by rail 20% from White Hart Lane and 14% from Northumberland Park Station of whom 35% of those departing from White Hart Lane will interchange at Seven Sisters Station and 21% of those departing from Northumberland Park Station will interchange at Tottenham Hale station. On arrival 21% of spectators will arrive by at White Hart Lane Station and 15.8% to Northumberland Park station. Of the arrivals at White Hart Lane 31% interchanged from the Victoria Line, on the arrivals at Northumberland Park 17% interchanged from the Victoria Line at Tottenham Hale station, this reflects the current match day distribution.

The Event Day TA includes rail capacity analysis for all the local transport interchanges including Northumberland Park, White Hart Lane, Seven Sisters, and Tottenham Hale stations. The analysis includes mid week and weekend pre and post match, taking into consideration the existing and forecasted local demand with a growth factor applied to reflect 2021 forecasted demand at local stations, station configuration and platform capacity which will limit the flow through the station and limit loading of the platform.

The conclusion of the analysis on each interchange is as follows:

Northumberland Park/ Tottenham Hale Station:

For the purpose of the analysis the capacity of the service level based on 4 trains per hour is limited at 85% of the actual capacity as requested by TfL. Between 18:00 and 18:30 there is an increased demand from commuters which impact on the spectators ability to board the first train to travel north towards Northumberland Park Station from Tottenham Hale station. This will increase the pressure on the platform between trains (186 spectators queuing between trains), the TA assumes that the loading on the platform will not exceed capacity, TfL has raised concerns with the vertical circulation within the station and the ability of the existing escalator to clear the platform before the next train and are requesting that a second escalator is implemented as part of the new station proposal. (Discussion with TfL and Spurs)

It is forecasted that post match at Northumberland Park there will be a queue of some 1057 spectators queuing outside the station for the northbound platform. The maximum waiting time for northbound spectators will be 22 minutes from arrival to boarding a train, with total queue duration of 33 minutes. The southbound queue will have 1,099 spectators and will have a maximum waiting time of 26 minutes from arrival at the station to boarding a train with total queue duration of 35 minutes. We have concerns regarding the operation of 12 car services at Northumberland Park station, and will need assurance from Network Rail/rail operator that selective door opening will enable 12 car services to stop at Northumberland Park. In addition the footbridge to access the southbound platform is narrow and will reduce the rate of movement from the southbound platform. The applicant will need to provide a crowd and management plan to support the forecasted increase in passengers expected at Northumberland Park Station. The above forecast is based on use of the existing footbridge to the north to access the southbound platform; this bridge will be replaced as part of the proposed four tracking of the line hence the proposed transport strategy will not be affected by four tracking of the line.

Post match it is predicted there will be some 9,270 spectators arriving at Tottenham Hale, 5,585 will arrive on foot from the stadium, 1,795 will interchange from national rail, and 1,890 will use the shuttle bus service from the stadium to Tottenham Hale. An event day management plan will be required for Tottenham Hale station as access to the station will have to be managed to ensure that no congestion occurs within the station; the queue is forecasted to be a maximum of 900 spectators and will last for 29minutes with a maximum delay per spectator of 6 minutes.

White Hart Lane/ Seven Sisters Station

There will be capacity constraints for northbound services between 18:12 and 19:30 when the background demand is greatest and is combined with the spectators. This will result in fans and spectators waiting between trains at Seven Sisters station and will have a residual demand of some 1,500 passengers queuing on the northbound platform, a station management plan will be required as there is a potential risk to safety, a station management plan should be implemented as part of the event management plan.

Post match there will be some 518 spectators queuing for the northbound service at White Hart Lane with a maximum wait of 12 minutes for a spectator to board a train from arriving in the queue. Southbound spectators will have a maximum waiting time of 29 minute from arriving in the queue to boarding a train. There will be some 2177 spectators in the queue and maximum queue duration of 56 minutes. The area outside the station will require sufficient space to accommodate 2,250 spectators. This will be incorporated as part of the High Road West redevelopment in the long-term. In the interim queuing for the southbound platform will be via Love Lane, Whitehall Street and on the High Road, as above the PERS audit has highlighted that this route will require some improvements which will be secured by way of a S.106 obligation.

Pre-Match the will be 14,620 spectators arriving at Seven Sisters station, 7,208 will exit the station and walk to the ground, 3,702 will interchange to national rail northbound to White Hart Lane 3,350 will interchange to local buses, all the flows in the pre-match situation can be accommodated by the station with the exception of the Northbound platform which will need a management strategy to prevent overcrowding pre-match week days due the background demand by commuters heading north.

In the post match situation 12,993 spectators will depart on the southbound line 6,765 will arrive on foot, 4,338 will interchange from White Hart Lane station and 1,890 will interchange from local bus services. The existing conditions report has highlighted that Seven Sisters station is often closed due to overcrowding. We have concerns regarding the additional demand at this station resulting from spectators travelling from White Hart Lane interchange at Seven Sisters station. These passengers will get priority access to the Victoria Line platform over those spectators/passengers that are queuing at surface access. Access to the station will have to be managed to prevent congestion within the station, the TA forecast that there will be a maximum queue of 1,784 spectators queuing on the High Road outside the station on a weekend the queue is forecasted to last 1 hour with a maximum queuing time to board the tube of 16 minutes.

Buses

Post match the High Road will be closed for a minimum of 30 minutes, as part of the S.106 agreement under planning application HGY/2010/1000. Bus priority measures have been secured to facilitate a bus diversion route via Northumberland Park, Willoughby Lane, Shelbourne Road, and Lansdowne Road. This measure will ensure that bus services are available southbound immediately post match and return to the High Road post match. This will assist in achieving the bus modal split target. In addition the applicant is proposing to implement a shuttle bus service to Wood Green/ Alexandra Palace and to Tottenham Hale stations; the proposed shuttle bus service will account for 8.7% (5,307 spectators) on arrival and 7.7% (4,697) of spectators post match. In our view given that the journey time to Wood Green and Alexandra Palace is only some 15-20 minutes, with a maximum waiting time of 8 minutes, many supporters would chose to use this option post match, instead of queuing for the existing interchanges.

The shuttle bus to Tottenham Hale station will only cater for premium spectators (Box and Club level), the concept of a shuttle bus to Tottenham Hale is welcome. In the event that the modal split target is

not achieved within the first year of occupation the Tottenham Hale shuttle bus service must be enhanced to be open to all spectators.

One of the keys to achieving the shuttle bus frequency is the implementation of the Match Day controlled parking zone not only in Haringey but also in Enfield, this will reduce the number of spectator cars that are parked along the shuttle bus routing. Considering the importance of the shuttle bus in achieving the revised modal split target, we will require a S.106 obligation to secure the shuttle bus service level agreement in discussion with TfL and TfL buses. We will also require as part of the event management plan stewards and crowd management measures at the intersection of Willoughby Lane/Shelbourne Road and Park Lane to ensure that spectators accessing Northumberland Park station do not obstruct the bus diversion route. In addition as part of the shuttle bus strategy we will require stewarding at Tottenham Hale, Wood Green and Alexandra Palace.

The assessment of the other bus routes which includes (149, 259, 279, 349, W3, 318, 341, 476, 123, 243, W4, 34 and 444) concluded that during the pre-match there is a shortfall in bus services which provide a direct link from Seven Sisters station (149, 259, 279 and 349), the shortfall is due to the background demand, it is not possible to provide sufficient bus capacity to mitigate these impacts on an event day, hence the delay that will be experienced by spectators waiting for northbound bus services will encourage the majority of spectators to walk from Seven Sisters, or interchange to rail service, this is reflected in the forecasted modal split with 17.3% of spectators walking or interchanging to travel north to the stadium. We will be seeking signage of the walking route as part of the signage strategy.

Post match these routes also suffer from high demand from spectators resulting in demand exceeding capacity, the closure of the High Road post match will also impact bus frequency. Spectators will therefore choose to walk to the local train/ underground stations. This is reflected in the walking mode share to Seven Sisters and Tottenham Hale.

Coach

The revised Transport Assessment has a maximum forecast of 2% mode share by coach, travel by coach provides an opportunity to reduce the car mode share. Whilst we concede that it is difficult to achieve due to the dispersal in the origins of spectators, we have considered that a coach strategy is required which focus on promoting travel by supporter groups which can be promoted by way of priority ticketing. We will therefore require the applicant to submit a Coach Strategy to achieve a higher coach mode share percentage as part of the travel plan targets. We would therefore recommend that a 5% percentage modal shift is included as a travel plan target and the applicant provide a commitment as part of the S.106 agreement to promote coach service to achieve the model split target.

The existing coach parking is located to the north east of the stadium on West Road. The Transport Assessment has proposed providing coach parking on West Road, Brantwood Road, Tariff Road and Pretoria Road. Our site visit observed that a signage strategy is required to support coach parking location as part of the walking route upgrade.

The Area management plan and the coach strategy should include coach routeing pre and post matches, via Watermead Way and Leaside Road to ease congestion on the High Road and Northumberland Park. Coach parking for Pretoria Road should be routed via the A10, White Hart Lane away from the ground.

Taxi

Taxis account for between 1.5% and 1.7% (915 and 1037) of the modal split prediction. Given the number of spectators and the closure of Park Lane and Worcester Avenue pre-and post match

dedicated taxi bays on a match day will not provide any substantial benefit to taxis. We have considered that taxis will drop off and collect passengers on the High Road where possible, given that the High Road will be closed post match for a minimum of 30 minutes, taxis will have to collect spectators north and south of the road closure. We will as part of the highways design and implementation provide taxi bays on Park Lane to facilitate the drop off and collection of passengers from Park Lane.

NFL and Concerts

We have assessed the proposed NFL match day scenario which will have fewer people arriving by car; this is largely due to the origins of the trips being more dispersed with some 15% (9,150) of spectators expected to arrive by car. This will increase the loading on public transport with more spectators using the Victoria Line and the rail service to arrive and depart. The shuttle bus will be provided as on a match day. Kick off for a NFL game will be at 14:30 hours with final whistle at 18:00 hours on weekends. All the service uplift and transport infrastructure will remain the same as for a Premier League game. We have reviewed the assessment and the impacts of the proposed NFL scenario on the local public transport interchanges as follows:

The forecasted arrival profile to the stadium gate line of NFL spectators is similar to that of football spectators with approximately 70% of spectators arriving at the stadium gate line 45 minutes before kick off. However due to the nature of NFL games fans are expected to arrive earlier to spend time in tailor made fan parks. The TA forecasts that approximately 40% of fans attending NFL games will arrive earlier. The applicant is proposing that by providing retention measures within the stadium they will achieve a lower departure profile with only 45% of spectators departing within the first 30 minutes compared to 85% of spectators departing within 30 minutes of the final whistle. In our view whilst the forecast of 40% of fans arriving earlier is achievable; the forecasted retention of 20% of fans is optimistic and does not represent the peak loading of the public transport system and is not the worst case scenario. In addition the applicant has not provided sufficient evidence to support such large percentage retention. We will however support the forecasted scenario if the applicant is willing to accept a S.106 obligation to use best endeavours to achieve the forecasted departure profile by providing a range of retention measures to be agreed by the local planning authority before the stadium is occupied.

Based on the above departure profiles no queues are expected at White Hart Lane station on the northbound platform, 877 spectators are expected to queue for southbound trains, the queue is forecasted to last some 45 minutes with no single spectator forecasted to queue for more than 16 minutes post match.

Northumberland Park will have a maximum queue length of 64 people travelling northbound with a maximum queuing time of 16 minutes, maximum queuing time per spectator of 1 minute. The southbound service will have a maximum queue of 534 spectators and will last some 30 minutes with a maximum spectator queuing time of 14 minutes.

There will be some queuing for northbound spectators travelling towards the stadium, from Seven Sisters station, when interchanging from underground to rail, as some spectators will not be able to get on the first train. However this will be mitigated by the revised station management plan as part of the event management plan to be agreed by TfL. Due to the rate of arrival post NFL match at Seven Sister Station there will be a maximum queue outside the station of 101 spectators, the queue will last for 16 minutes, with a maximum queuing time of one minute per spectator.

The TA forecasts that Tottenham Hale will be used by 18% of spectators pre NFL match and 23% of spectators post match. Some additional station management measures will be required as part of the event day management plan to be secured as part of the S.106 agreement. Some queuing is expected at the gate line, which will last for approximately 22 minutes with approximately 400 spectators queuing with a queuing time per spectator of 2 minutes.

The stadium will be used as a concert venue and will have a capacity of between 45,000 and 55,000 visitors. This is a 10,000 increase in the capacity compared to the previous approved scheme which has permission for concerts of up to 45,000 visitors. We agree with the applicants TA that a concert would generate fewer trips by car due to the nature of the event with spectators travelling further to attend these events, however this will result in a greater demand for public transport services. Only 10% of visitors will arrive/ depart by car as a car driver/ passenger; approximately 50% of visitors will arrive a minimum of 75 minutes before the concert begins. The departure profile will see some visitors departing before the concert ends, only 16% of visitors will remain post the concert. We have considered that the proposed arrival and departure profiles are realistic and accurately reflect the potential loading on the public transport system.

Due to the forecasted departure profile with 65% of visitors departing within 15 minutes of the concert ending, the concert scenario at 55,000 capacity will result in queuing for a southbound service at Northumberland Park. The queue is forecasted to last 90 minutes with (maximum queue size of 2031 visitors), the maximum queue per individual is 47 minutes. The northbound service will be 15 minutes. The queue at White Hart Lane will last for some 65 minutes with a maximum waiting time for a visitor of 29 minutes. Seven Sisters will have a queue of 2,131 visitors, with maximum queue duration of 40 minutes, with a visitor waiting in the queue for a minimum of 13 minutes. Tottenham Hale will have a maximum queue size of 2,531 with queue duration of 63 minutes, and a maximum wait per individual of 15 minutes. Shuttle bus service would be provided with the service level secured by the S.106 agreement.

We have considered that the proposed concert scenario at 55,000 capacity will result in substantial queuing at the local public transport interchanges post the event. However providing the mitigation measures identified above for the football are in place the impacts of the proposed concert can be managed.

Cumulative impact Assessment

The applicants transport consultant has provided a transport note detailing the cumulative impact of the trips generated by the event day and non-event day elements of the development. Any use of the stadium over 10,000 capacity will be classified as a major event and will trigger the Local Area Management Plan which will be secure by way of a S.106 agreement. The local area management plan will remove the 56 short stay pay and display parking on Worcester Avenue, the plan will also include the management of the access to the hotel and residential car parks. We have considered that there will not be significant combined cumulative demand for public transport by the non-event day and event day trip generation as the demand for public transport on an event day is likely to be in the evening and on weekends when the peak non-event day activities are coming towards an end or closed. In addition the demand will be in opposite directions with spectators travelling towards the stadium and employees/ visitors travelling away from the stadium. The only element of the proposal that will contribute towards the spectator arrival loading of the public transport system is the residential aspect of the non-event day activity, this has been accounted for in the background growth factors which have been included in the event-day assessment.

Road Safety

The existing condition report Transport Assessment accident analysis covered a significant area from the junction of Seven Sisters Road junction in the south to Tottenham High Road borough boundary with Enfield in the north; Great Cambridge Road / The Roundway to the West and Meridian Way in the east. The accident data is over 7 years old; we would have expected the applicant to have completed analysis using more recent data. However given that there has been a reduction in the traffic flows on the High Road since the 2007 combined with the enhancement to a number of crossing points, including 2 new pelican crossings on the High Road and reconfiguring the junction on High Road with Park Lane to provide additional pedestrian benefits, it is unlikely the proposed

development will result in increasing the number of accidents in the area immediately surrounding the site.

In addition all the proposed junction improvements proposed as part of the development will be reviewed by the Highways Team to ensure that the safe movement of pedestrians, cyclists and vehicles are considered at all times, in addition all design proposals will undergo an independent Stage 1 and 2 Road Safety Audit.

Delivery and Servicing and construction traffic

The supermarket and stadium will share a service access located on Northumberland Park. This access would be used for supermarket and stadium deliveries and refuse collection. This access will be used by rigid vehicles 10 metres long and articulated vehicles 16.5 metres long. The developer has provided swept paths analysis in Drawing BHC-1071 of an articulated vehicle accessing and leaving the site in forward gear. Servicing of the development to the south of the stadium will be completed via Park Lane and Worcester Avenue. The revised highways layout includes service and delivery bays which will be used to service the development to the south. The developer will be required to provide service and delivery plans for each aspect of the development which seek to coordinate deliveries to each aspect of the development and reduce the number of deliveries to the development as a whole.

Highways Design

The works associated with the northern development (supermarket, THCF offices and university technical college) have been implemented. In relation to the highways works for the stadium and southern development, the applicant is proposing to revise the layout to include the following:

1. Improvement to pedestrian crossings:- the revised application will still include the provision of an addition pelican crossing on the on the High Road. However with the aid of dynamic modelling all the widths of all the crossings south of White Hart Lane, including the Park Lane junction are much wider than previously. The crossing locations relate to the design/layout of the major stairs to the stadium podium – north and south. The proposed crossing point would fit well with the High Road West Master Plan. Changes to the layout of the High Road will require the re-location of bus stops and associated street furniture.
2. Bill Nicholson Way is replaced by a new vehicle access to the stadium just to the north. This access will be used for the hotel car parking, with event day use limitations, and as an exit from the stadium basement car park in the post-match situation (for a small proportion of the stadium parking on the west side) once the High Road reopens. The access will be shuttered and be protected by hydraulic bollards. Hotel guests would check in before being allowed to enter the car park.
3. The layout of the Park Road junction is very similar to the consented scheme. The pedestrian facilities are upgraded at the Park Lane junction with the removal of the filter lane, as previously agreed. The vehicle stop-lines will be set back with the provision of advanced cycle stop-lines within Park Lane and the High Road – at the start/finish point of CS1, TfL has made comments on the proposed layout and its potential impact on CS, as a result of the proposed design for the junction, we will seek to address TfL concerns as part of the detailed highways design.
4. The provision of loading/delivery/waste collection bays on Park Lane and Worcester Avenue for the hotel and residential development.
5. Provision of a taxi rank opposite the hotel to be suspended on event days.
6. The junction of Park Lane and Worcester Avenue is modified to accommodate the swept path of the largest OBU TV vehicle.
7. The introduction of hydraulic bollards at each end of Worcester Avenue, to be controlled by the stadium security managers. The northern bollards would replace the existing padlocked gate. These rising bollards are part of the anti-terrorism measures on an event day. As Worcester Avenue will remain in public ownership as adopted highways to be controlled under license with an agreement for the maintenance of the bollards by the club, there is a need to have a service

access agreement which will ensure that right of public access is maintained at all times and any temporary closure is approved by the Council.

8. The applicant has proposed introducing non-match day parking on Worcester Avenue including wheelchair accessible car parking to service the non-match day activities including the new health centre. We have a concern relating to the introduction of car parking spaces on Worcester Avenue in relation to the potential conflict between turning vehicles and pupils accessing the two local schools. Hence the introduction of any such parking scheme will be subject to consultation with the 2 local schools with safeguards implemented to protect pupils.
9. The construction of two bell mouth accesses onto Worcester Avenue to access the stadium (basement and ground floor area) and the residential development car parking, details of which are included in Drawing 031627 Rev3.

The applicant has included additional improvement to the highways, a part of a cohesive landscaping scheme which includes private and public highways this is illustrated in Drawing 8000-REV0, The Transportation and Highways authority will require all the above amendments and landscaping proposals to submitted in the form of a detailed design for approval by the Transportation and Highways authority, the works are to be secured by way of a S.278 agreement, all works are to be implemented at the developers expense and implemented by the Council as highway authority.

Mitigation

As part of the HGY/2010/1000 application grant funding £3.5 million was allocated by the GLA to mitigate the local impacts of the generated by the development with a match funding of £500,000 for works to Worcester Avenue, the funding allocation is as follow:

- 1) Highways works relation to Phase 1 (Supermarket, university technical college), £1,160,000, and these works included is signalised crossings as the junction of High Road with Northumberland Park and White Hart Lane.
- 2) Phase 1 and 2 CPZ works £980,000 allocation works are ongoing and works to date include implementation of an all week CPZ around the core of the development, changes to the existing match day CPZ including extending the CPZ to the west and south of the existing match day CPZ boundaries, further work are planned for this and next financial year.
- 3) Phase 2 Highways (£1,360,000) these works will be implemented to support the increase in the capacity of the stadium. The works include bus priority measures on Northumberland Park, Willoughby Road, Shelbourne Road and Lansdowne Road, improvements to Chestnut Road, new pelican crossings on the High Road, and new crossing point at Park Lane Junction with Shelbourne Road.
- 4) Worcester Avenue £500,000 for the upgrade of Worcester Avenue post the stadium construction.

Conditions relation to the Stadium Operation

In the event that the developer cannot achieve the modal split target of 20-23% by car, within 1 year of the stadium achieving 61,000 capacity, the developer will use reasonable endeavours to implement further measures to achieve the modal split targets. These should include the following measures:

- 1) Review and improve the communication strategy with fans (further measures to be identified by the event day monitoring plan)
- 2) Provide additional funding to increase the event day CPZ from the proposed 716 hectare (additional area to be agreed with the Council)
- 3) Enhance the bus service to and from the site (shuttle bus/ TfL bus service)
- 4) Improve attraction and retention measures (additional measures to be agreed with the Council).

The following conditions should be included in the Section 106 agreement in relation to attraction and retention measures in order to ensure that the attraction and retention targets are achieved.

Attraction measures:

- 1) Pre-Match build up programme including, player match previews, the manager pre-match press conference and fixture preview.
- 2) An increased retail offer for food and drinks purchase before matches.
- 3) Retail happy hour offers which offers discounts during the hours before games.
- 4) Show other matches before games in stadium or associated facilities (club pub).
- 5) Provide pre-match live entertainment for selected games.

Post match retention measures:

- 1) Live Studio premier league round-up
- 2) Videotron Post match highlights
- 3) TV live press conference
- 4) Tunnel Bases Interviews
- 5) Hospitality packages structures to encourage staying in the lounge post match, including complementary refreshments, player appearances, post match presentation.
- 6) Loyalty points awarded for staying half hour after the final whistle (enhanced ticket priority).
- 7) E-purchase on stadium access card with club cash which can be spent post matches or at forthcoming games.
- 8) General admission packages that include free drinks post-match happy hour.
- 9) Catering kiosks and bars to stay open for a minimum of 1 hours post matches.
- 10) Post match entertainment kids/family zone.
- 11) Real-time travel information- CCTV footage of station and people queuing (CCTV feed to be delayed by 20 minutes)
- 12) Post matches entertainment "Comedy Zones".

In order to ensure that adequate attraction and retention measures are provided for each match. The developer must provide attraction and retention attraction programme for each game which should include all or a combination of the above activity. The programme should be submitted to the Council at least 4 weeks before each game for approval.

In order for the applicant to achieve the proposed modal split targets for spectators walking to and from the stadium the following conditions must be attached to the planning permission:

- 1) Provide a shuttle bus strategy including, collection drop, ticketing; enter in to a Shuttle Bus service level agreement which ensures that the shuttle bus service is implemented as per the Transport Assessment and the percentage modal split is achieved, detail of the above strategy to be approved by Transport for London and the Council before the stadium is occupied.
- 2) The walking route to White Hart Lane has been identified by the PERS audit as being unsatisfactory, considering the importance of this link in achieving the modal split target. We will require before the stadium is occupied for the developer to develop and fund a scheme to address the recommendation of the PERS audit for the route to White Hart Lane station via High Road and White Hart Lane and via Whitehall Street, Love Lane.
- 3) The PERS audit has identified the lack of route signage to and from the local public transport interchanges. Given the importance of walking as a mode to the local transport interchanges in achieving the modal split target we will require the developer to develop and submit a signage strategy for the proposed walking routes. The signage strategy should be implemented at the developer's expense and be delivered by the Council as highway authority.
- 4) We will require the developer to submit a cycling strategy which seeks to increase the cycling modal share as per of the Travel Plan measures. The plan should include: cycle parking strategy and cycle route audit with recommendations to be submitted to the Council for approval before construction of the stadium commences.

- 5) The developer uses reasonable endeavours to achieve the modal split targets by actively promoting and prioritising tickets to local residents with a minimum of 10,000 tickets allocated to the London Borough of Haringey and Enfield.

The Applicant agrees to fund the expansion of the CPZ to address displaced parking and to achieve the modal split target.

- 1) The applicant agrees to monitor the proposed event-day CPZ and areas outside the event-day CPZ. A monitoring programme to be agreed Local Planning authority before construction commences.
- 2) The applicant agrees to pay for the cost of management of the proposed CPZ above, if generated revenue is insufficient to cover the cost of enforcing the CPZ (to be monitored annually).

We will require the following conditions to be part of the planning permission in order to achieve the modal split proposed by rail and to supplement the Event Day rail strategy:

- 1) The applicant agrees by way of S.106 to use best endeavours to secure and maintain a minimum of 8 car service with the current and future train operating company with service levels of 4 trains per hour on an event day.
- 2) S.106 obligation to fund or provide staff to manage crowds during the operation of White Hart Lane and Northumberland Park on an event day as part of an area management plan.
- 3) S.106 obligation to funding platform sensors at Northumberland Park to secure selective door opening to happen in order to achieve the modal split target.

We will require the following conditions as part to the planning permission in order to support the proposed transport strategy for Seven Sisters Station:

- 1) S.106 obligation for the developer to provide stewarding to manage queues at Seven Sisters and the Junction of Seven Sisters Station with the High Road.
- 2) S.106 obligation for the developer to use reasonable endeavours to assist TfL with the development of an operations plan for Seven Sisters to maximise the operation of the station and manage queuing outside the station
- 3) S.106 obligation for the developer to use reasonable endeavours to provide as part of their Travel Plan a communication strategy for Seven Sisters.
- 4) S.106 obligation to monitor Seven Sisters station as part of the event day monitoring plan, (monitoring parameters to be agreed by the TFL and the Council's Transport Planning team before stadium construction commences).

We would request that the applicant agrees the following conditions in order to support the strategy for Tottenham Hale station.

- 1) This should include monitoring of the numbers of spectators using Tottenham Hale station.
- 2) S.106 obligation to extend the use of the shuttle bus service to all spectators to increase use of the station after the completion of the stadium development to achieve the modal split target.
- 3) S.106 obligation to provide stewards along the walking route to Tottenham Hale Station
- 4) As part of the revised station management plan to be funded by the applicant the applicant will provide additional resources (fund additional staff) to Transport for London to manage queues within the station pre-match to aid vertical circulation and maintain the safe operation of the station.

Local Area Management Plan

The applicant will be required to provide a detailed Travel Plan, Event Day Management Plan, communication strategy and Local Area Management Plan. The four plans are essential as they tie the

whole event day transport strategy together and will be a key factor in achieving the modal split targets. These plans are to be secured as part of the S.106. In the event that Tottenham Hale station has to be closed per match due to overcrowding, the local area management plan will have to provide stewarding at Blackhorse Road station and explore the possibility of extending the shuttle bus service to Blackhorse Road station.

The following sections of the Travel Plan document should be submitted in full for review post construction of the stadium above podium or 1 year before occupation.

- A) Cycle Strategy
- B) Shuttle bus strategy
- C) Communication strategy

- 1) S.106 obligation to appoint and pay the cost for an independent third party to review the event day monitoring plan, travel plans and area management plan.
- 2) S.106 obligation to pay the sum of £30,000 (thirty thousand pounds) per year for 6 years to monitor the Travel Plans, Local area management, service and delivery plan.
- 3) S.106 obligation to as part of the local area management plan to contribute £1,500 (one thousand five hundred pounds) toward cleaning and waste collection per match, cost to be reviewed annually.

We will require the developer to agree to the following conditions in order to support the proposed bus strategy:

- 1) S.106 obligation to provide stewarding and management of Willoughby Lane and Shelbourne Road bus diversion route to reduce the impact of fans crossing at the junction of Shelbourne Road junction with Park Lane
- 2) S.106 obligation to provide stewarding and additional information including signage on bus diversion stops when the High Road is closed.
- 3) S.106 obligation to monitor the proposed bus diversion route and bus use as part of the Event day monitoring Plan.

We would therefore require the following conditions to be agreed by the developer in order to support the proposed coach strategy:

- 1) S.106 obligation to provide a coach strategy to achieve the modal split target including an agreement to fund coach service and if required to achieve the modal split target, the coach strategy must be approved in consultation with Transport for London and the Borough.
- 2) S.106 obligation to manage the Coach parking area and routes to the coach parking by stewards.

We would therefore require that the following condition be applied to the use of the Stadium Parking:

- 1) The Team coach drop-off area is only used by Team coaches.
- 2) S.106 obligation to ensure that all entry and exit for drop-off in the arrival area is supervised by trained stewards.
- 3) The developer submits a vehicle management plan, which is implemented for the use of the car park and any vehicles to park on Worcester Avenue.
- 4) All stadium parking is allocated before arrival into the local area, and cars arrive at least 1 hour before the start time of the event.
- 5) That egress should be prevented until a minimum of 45 minutes after an event.
- 6) The 822 spaces under the stadium must only be used on the day of a 'major event' which is any event where the attendance is planned to be in excess of 10,000.

- 7) Usage at all other times must be limited to a maximum of 80 spaces, not including blue badge holders.

Traffic Management

It is essential to maintain a safe environment around the stadium for fans attending the stadium, especially so, post match when streets experience the most congestion. We will therefore require the developer to use reasonable endeavours to secure and pay for the closure and management of the following road closures and the management of the proposed diversions resulting from the closures of the High Road. We will require the developer to agree to the following conditions in order to safeguard fans/ pedestrians and assist in achieving the modal split targets.

- 1) S.106 obligation to fund Match day car parking restrictions and management of Worcester Avenue, which must be closed on match days to all traffic from a minimum of 2 hours before kick-off.
- 2) S.106 obligation to fund the closure and management of Park Lane, between the High Road and Vicarage Road, which will need to be closed on a match day.
- 3) S.106 obligation to fund and manage the closure of the High Road between White Hart Lane and Lansdowne Road. The developer should use reasonable endeavours to have the road reopened within 40 minutes of the final whistle.
- 4) S.106 obligation to fund the closure and management of White Hart Lane between Pretoria Road and the High Road.
- 5) The introduction of hydraulic bollards at each end of Worcester Avenue, to be controlled by the stadium security managers. The northern bollards would replace the existing padlocked gate. These rising bollards are part of the anti-terrorism measures on an event day. As Worcester Avenue will remain in public ownership as adopted highway to be controlled by the club, the Council will require the club to enter into an Access Agreement to retain vehicular access to the public as part of any licensing and an agreement for the maintenance of the bollards.

Conditions relating to non-event days

On reviewing this application the highways and transportation authority would not object to this application subject to the following conditions:

- 1) A residential and school travel plan must be secured by the S.106 agreement, as part of the travel plans, the following measures must be included in order to maximise the use of public transport.
 - a) The developer must appoint a travel plan co-ordinator for the residential and commercial aspect of the development and must work in collaboration with the Facility Management Team to monitor the travel plan initiatives annually.
 - b) Provision of welcome residential induction packs containing public transport and cycling/walking information like available bus/rail/tube services, map and time-tables to all new residents, travel pack to be approved by the Council's transportation planning team.
 - c) Establishment or operation of a car club scheme, which includes at least 3 car spaces. The developer must offer free membership to all residents of the development for at least the first 2 years, evidence of which must be submitted to the Transportation planning team.
 - d) Provide a cycling strategy for the non match aspect of the development which reviews the existing cycling infrastructure, and provide measures which seek to increase the cycling modal split for the entire development, these measures should include, the provision of employee and visitors cycle parking in each aspect of the development, changing rooms, showers and lockers for all aspects of the development which have employees, these measures are to be reviewed annually as part of the Travel Plan.
 - e) A site parking management plan, the plan must include, details on the allocation and management of on-site car parking spaces in order to maximise use of public transport, family size units should have priority for car parking allocation.

f) The level of parking used as for conference and events must be no more than 50 car parking spaces, unless trip generation and junction modelling analysis is provided to demonstrate that a high percentage of parking allocation can be accommodated on-site without having any impact on the transportation and highways network.

g) We will require the applicant to submit for approval the: the location, type of cycle parking, proposed method of security of cycle parking provision, allocation of cycle parking spaces and long term maintenance strategy of the cycle parking areas and provide short stay cycle parking in line with the London Plan.

Reason: To minimise the traffic impact generated by this development on the adjoining roads, and to promote travel by sustainable modes of transport.

2) The applicant is required to enter into a S.106 agreement including provision that no residents within the proposed development will be entitled to apply for a resident's parking permit under the terms of any current or subsequent Traffic Management Order (TMO) controlling on-street parking in the vicinity of the development. This should be included in all marketing, lease and sales agreements.

Reason: To mitigate the parking demand generated by this development proposal on the local highways network by constraining car ownership and subsequent trips generated by car, resulting in increased travel by sustainable modes of transport hence reducing the congestion on the highways network.

Reason: To reduce congestion and mitigate any obstruction to the flow of traffic on the transportation network.

Planning obligation and condition in relation to the entire development

Highways S.278 commitment

The applicant has included additional improvement to the highways, a part of cohesive landscaping scheme which includes private and public highways this is illustrated in Drawing: 8000-REVO and revised layout BUR-xx-xx-GA-CI-2001 RV45, the transportation and Highways authority will require all the above amendments and landscaping proposals to be submitted in the form of a detailed design for approval by the transportation and highways authority, the works are to be secured by way of a S.278 agreement, all work above the Phase 2 highways allocation (£1,360,000) are to be implemented at the developers expense.

Service and Delivery

We will therefore require the following condition to be attached to the planning permission; the applicant is also required to submit a service and delivery plan (DSP).

Reason: To reduce congestion and mitigate any obstruction to the flow of traffic on the transportation

- 1) The developer is to provide further swept path analysis to demonstrate that large delivery vehicles can exit the site safely without causing delays to eastbound traffic along Northumberland Park.
- 2) The developer will be required to provide a detailed service and delivery plan for the entire development including no deliveries via the High Road and the junction of the High Road with Northumberland Park and deliveries to be outside the morning and evening peak hours.

- 3) We will require the developer to provide a drawing to demonstrate that articulated vehicles enter and leave the Megastore service yard in forward gear.

Construction management

The applicant/developer is required to submit a Construction Management Plan (CMP) and Construction Logistics Plan (CLP) for the local authority's approval 3 months (three months) prior to construction work commencing on each phase of the development. The Plans should provide details on how construction work (inc. demolitions) would be undertaken in a manner that disruption to traffic and pedestrians on the High Road and Park Lane, Worcester Avenue and the roads surrounding the site is minimised. It is also requested that construction vehicle movements should be carefully planned and co-ordinated to avoid the AM and PM peak periods. The plans must also include measures to safeguard and maintain the operation of the adjacent bus stands and routes to the two local schools.