

communities including those in Edmonton, the Tottenham corridor to Stoke Newington and around Blackhorse Lane.

- 14.2.18 In addition, the London Plan identifies large parts of Haringey, including Northumberland Park Ward as an "Area for Regeneration" (Policy 2.14). These areas are intended to be the focus of spatial policies that bring together regeneration, development and transport objectives with improvements in learning and skills, health, safety, access, employment, environment and housing.
- 14.2.19 The Plan also contains policies intended to promote and to realise the potential of Outer London. Policy 2.6 seeks to ensure that the quality of life in outer London is enhance for both present and future residents. In particular, Policy 2.7 identifies the need to address constraints on economic growth in outer London by enabling existing sources of growth, increasing outer London's attractiveness to new sectors which can contribute to a "step change" in employment, promoting key clusters of activity, ensuring the promotion of outer London visitor attractions and the capacity of large scale commercial leisure in north London, ensuring that developments address the needs of areas for regeneration, and ensuring that appropriate weight in decision making is given to the economic benefits of business and residential development, and identifying and addressing local pockets of deprivation, and especially the strategic priorities identified in the Plan as regeneration areas.
- 14.2.20 The Upper Lee Valley is specifically identified as having a strategic function of greater than sub-regional importance in terms of leisure/tourism/arts/culture/sports.
- 14.2.21 Paragraph 2.35 states that "there is considerable scope for growth in the leisure, cultural and visitor economy sectors with scope for encouragement of cultural quarters in Outer London – particularly in town centres, the promotion, diversification and tighter management of the night time economy and possible potential for very large-scale commercial leisure facilities'.
- 14.2.22 The need for more and better quality homes provided as part of mixed and balanced communities is another key focus for the London Plan. Policy 3.9B states that 'a more balanced mix of tenures should be sought particularly in neighbourhoods where social renting predominates and there are concentrations of deprivation'.
- 14.2.23 The London Plan highlights that sports and recreation facilities are important parts of the social infrastructure offer which provide a range of social and health benefits for communities and neighbourhoods. Policy 3.19A notes that The Mayor's Sports Legacy Plan aims to increase participation in, and tackle inequality of access to, sport and physical activity in London particularly amongst groups/areas with low levels of participation.
- 14.2.24 Additionally, Policy 4.6A states that "the Mayor will, and boroughs and other stakeholders should, support the continued success of London's diverse range of arts, cultural, professional sporting and entertainment enterprises and the cultural, social and economic benefits that they offer to its residents, workers and visitors".

Housing

- 14.2.25 The need for greater levels of housing delivery is a key priority at all spatial levels. The recently adopted London Plan (including Further Alterations) sought to take into account the higher than anticipated levels of population growth across the capital and as a result revised borough housing targets as well as the

minimum targets set for Opportunity Areas.

- 14.2.26 Policy supports the provision of a range of homes of a range of types, sizes and tenures in order to meet a variety of needs and in order to create mixed and balanced communities. There is also greater emphasis on the delivery of homes as part of mixed use development and at higher densities, particularly in Opportunity Areas and where there are high PTAL ratings. This approach has been reiterated in the recently published **Draft Housing SPG (2015)** which seeks to reflect the changes in housing standards at a national level which came into force in April 2015 and also to reflect and build upon the updated policies of the London Plan 2015.
- 14.2.27 The overriding aim of the GLA's **London Housing Strategy (2014)** is to "increase the supply of housing of all tenures and to ensure that these homes better support London's continued economic success". It set out ambitious plans to increase supply "to levels not seen since the 1930s" to enable all Londoners access to decent and affordable homes.
- 14.2.28 Policy P1 sets out targets to deliver 42,000 new homes per annum, with at least 17,000 of these being affordable and 5,000 for long-term market rent.
- 14.2.29 The strategy also sets out a commitment that all new homes should "meet high design standards, with minimum space standards and should be designed to be accessible and adaptable for people at all stages of their lives".
- 14.2.30 The need to increase the supply of good quality homes in the Private Rented Sector is highlighted.
- 14.2.31 There is also greater recognition of the need to remove barriers to housing delivery which has resulted in the introduction of initiatives such as Housing Zones. Housing Zones were announced in 2013 and to date 15 zones have been announced, including Tottenham in the London Borough of Haringey. Delivery of housing in these areas will be supported by a menu of planning and financial measures.
- 14.2.32 The **Upper Lee Valley Opportunity Area Planning Framework (OAPF) (2013)** reiterates the policy priority for a range of homes to be delivered but recognises that the precise proportion of family housing may vary from site to site determined by criteria such as 'local character, existing built form, flood risk, proximity to social infrastructure and to parks and open spaces' (pg.28).

Economic Development

- 14.2.33 Following the General Election of 2010, the Government committed to establishing local enterprise partnerships (LEPs) to replace the Regional Development Agencies (RDAs). The first LEPs were established in April 2011 and there are now 39 across England including the London Enterprise Panel. The purpose of the LEP is to advise the Mayor of London on action to support and promote London's economic development and wealth creation, including through its regeneration, housing, skills and other social or environmental improvement.
- 14.2.34 In April 2013, the LEP published its **Jobs and Growth Plan** which identified a series of aims and recommendations based around the following priorities:
- Raise skill levels and increase employment opportunities to ensure Londoners can compete for London's job needs;

- Champion small and medium sized enterprises to support and grow businesses;
- Support the digital creative, science and technology sectors to position the capital globally as a world leading hub;
- Encourage infrastructure investment into London to keep the city moving and functioning.

14.2.35 In a more recently published report – **London 2036: An Agenda for Jobs and Growth (2014)** – the LEP identified the current challenges facing London in terms of its economic growth. These challenges include: a large infrastructure gap across multiple areas; poor levels of inclusion as lower-skilled workers compete in a highly competitive labour market; uneven development across the city; and limited capacity to invest and deliver.

14.2.36 The London Plan highlights the need to maintain the economic strength of central London but also build on the potential for Outer London to play a more integral role. There is recognition of the need to support existing sectors of the economy but also encourage growth in emerging sectors in areas through supporting: London as a research location; higher and further education; the delivery of a range of workspaces; the development of green enterprise districts; and the evolution of London's science, technology, media and telecommunications (TMT) sector.

14.2.37 Underpinning all of this is an objective to ensure that Londoners are able to access jobs and other opportunities within their city. Policy 4.12 of the London Plan seeks to improve employment opportunities for Londoners, remove barriers to employment and progression and tackle low participation in the labour market.

14.2.38 The London Plan makes reference to the objectives of the Mayor's Economic Development Strategy which identifies the following objectives:

- Tackle worklessness and get more Londoners into work;
- Address the root causes of low skills;
- Promote equality and tackle deprivation;
- Ensure more effective education, training and employment support for all;
- Help people get into work, stay in employment and progress their career; and
- Provide more personalised support and improve delivery.

14.2.39 The **Upper Lee Valley Opportunity Area Planning Framework (2013)** reflects the jobs targets set out within the London Plan and indicates that by 2031, the area could deliver over 15,000 new jobs across a range of industries and a green industrial hub creating greater learning and employment opportunities. Key economic sectors of focus in the OAPF include: sport and recreation; visitor economy; knowledge economy; and logistics, distribution and advanced manufacturing sectors.

Community and Social Infrastructure

14.2.40 The **GLA Supplementary Planning Guidance (SPG) on Shaping Neighbourhoods: Play and Informal Recreation (2012)** document provides guidance on the need for adequate provision of playspace in new residential developments in London. Specifically, it sets a target of providing at least 10sqm of playspace per child for new housing developments.

- 14.2.41 In accordance with London Plan Policy '3.6 - Children and Young People's Play and Informal Recreation', new developments that will include housing should make provision for playspace. This provision should normally be made on-site, especially for children under 5 or in close proximity to the site for older children, and be in accordance with the Local Development Framework play policies for the area.
- 14.2.42 Wherever possible, neighbourhoods should be child-friendly and the public realm should be safe, welcoming and enjoyable for children and young people.
- 14.2.43 The GLA **Social Infrastructure SPG (2015)** seeks to provide guidance on the implementation of London Plan policies (particularly Policy 3.16) which relate to the delivery of social infrastructure. There is recognition that planning for social infrastructure in London is complex with a changing service commissioning and delivery landscape, an expanding population and an increasingly complex demography. The SPG encourages London boroughs to make regular assessments of need and highlights that housing development particularly in Opportunity Areas / Intensification Areas / Areas for Regeneration will place significant pressure on existing social infrastructure. The co-location of social infrastructure not only with housing but with other social infrastructure uses is identified as a cross-cutting theme and is an important consideration in the context of increasing housing targets and the need to make the most efficient use of land whilst ensuring the long-term funding of facilities.
- 14.2.44 Great importance is placed on ensuring that sufficient choice of school places is available to meet the needs of existing and new communities. New sites are required to be secured, particularly in Opportunity Areas, Intensification Areas and areas subject to large residential development. Key considerations in identifying new school sites include: accessibility by public transport, population growth, existing educational performance and known parental demand for the creation of free schools. New schools are expected to consider the options for co-location of facilities, sharing facilities and cross-subsidising school facilities with residential development (Policy 3.18).
- 14.2.45 The provision of sports facilities is challenging in the context of scarcity of public funds and, therefore, maximising sports facility use is crucial. This could include the shared use of existing sports facilities to reduce demand for new provision. A similar approach is suggested in respect of faith buildings i.e. the provision of multi-faith prayer facilities that meet the needs of a number of faith groups.

Local Planning Policy

Current Planning Policy

- 14.2.46 The Haringey **Local Plan Strategic Policies** document (formerly the Core Strategy) was adopted by the Council in March 2013, and sets out a vision and key policies for the future development of the borough up to 2026 including specific policies on employment and economic development, housing and community facilities. In terms of site-specific policy, this document also outlines (in Policy SP1: Managing Growth) the redevelopment of the White Hart Lane area.
- 14.2.47 Policy SP1 states that Haringey's growth will focus on the most suitable locations to meet and exceed housing targets in Growth Areas and Areas for Change (including Northumberland Park). Northumberland Park would deliver a total of 410 residential units by 2026, and the High road would deliver 623 units. The policy recognises that Northumberland Park suffers from a poor quality street scene, deprivation and labour market inequalities, a lack of green space, high crime, low educational attainment and a high concentration of social rented housing. Aspirations for the area include a mix of uses including stadium

redevelopment, provision of retail and leisure uses and appropriate contributions to open space, community facilities, regeneration initiatives and employment and training schemes.

14.2.48 Policy SP2 (Housing) aims to make full use of Haringey's capacity to deliver its target for new homes from 2011-2021, including adequate provision of lifetime homes, affordable housing and a mix of tenures.

14.2.49 Policy SP8 and 9 (Employment; Skills and Training; Access to jobs) outline the Council's commitment to protect employment in the borough including supporting local employment and regeneration aims, and specifically enabling Regeneration Areas to provide a mix of uses. Policy SP9 encourages the facilitation of training opportunities, particularly in areas of high unemployment, and to support new and expanding employment sectors. The success of this policy should be measured against the proportion of people claiming out-of-work benefits, with low or no qualifications, and the number of people accessing work having been long-term unemployed.

- Policies SP13, 14, 15 and 16 set out the Council's approach to community facilities, including health, education, open spaces, play facilities and leisure. The overarching approach is to ensure that where development increases the demand for community facilities and services, that it makes appropriate contributions towards providing new (or improving existing) facilities. Key points include:
- Enhance areas of identified open space deficiency and deliver key open space infrastructure programmes as set out in the Infrastructure Delivery Plan, monitored through applications submitted within areas of deficiency with proposed measures to mitigate deficiencies;
- Deliver new health infrastructure, including that required in Haringey's growth areas and areas with GP deficiency against the benchmark, monitored through (for example) the number of residents per GP, health inequalities of vulnerable groups, and health indicators also contained in the Joint Strategic Need Assessment.
- Protect, expand and enhance culture and leisure facilities throughout the Borough, and improve access to culture leisure and sports facilities particularly in areas of deficiency. Measures to monitor this include level and type of sports facility usage and library visits per 1,000 population.
- Address deficiencies of community infrastructure and deliver key infrastructure as set out in the Infrastructure Delivery Plan (see 14.2.63 below). Deliver additional space for community use and provision of additional school places.

14.2.50 Additionally, Haringey Council's emerging **Economic Development and Growth Strategy (2015)** will be relevant to the Project as it identifies proposals to secure significant investment of £1bn in Tottenham's growth.

14.2.51 Haringey's **Joint Strategic Needs Assessment (JSNA) (2012)** bring together a number of related needs assessment covering several elements of health – including child poverty-related needs, dental health, emotional wellbeing, older people's needs, and mental health needs amongst others.

14.2.52 Key issues across the borough are linked with deprivation and socio-economic factors that determine health and health outcomes. The level of health inequality within the borough is stark, with a 7.7 year difference in male life expectancy between the most and least deprived areas.

14.2.53 In Northumberland Park, the areas of pressure include:

- High rate of A&E attendance;
- Low life expectancy and high mortality rates;
- Limited access to primary healthcare (GP practices) with many residents having to travel outside the ward;
- High proportion of people on disease registers for conditions such as heart failure, diabetes, severe mental health issues, depression and kidney disease;
- High birth rate and proportion of young people, sexual health and teenage pregnancy and low recorded birth weights, suggesting an increased need for services aimed at mothers, children and young people; and
- The highest rates of smoking and obesity in the borough, with low levels of physical activity.

- 14.2.54 The JSNA summarises that facilities that respond to key inequalities should be prioritised in the areas that need them most, suggesting that opportunities to develop 'safe play areas', open gyms, maternity clinics, sexual health clinics and services for children and young people with complex health needs, among other facilities, should be explored.
- 14.2.55 The **Haringey Health and Wellbeing Strategy 2012-2015** outlines three objectives; to give every child the best start in life; to reduce the gap in life expectancy between different areas of Haringey; and, to improve mental health and wellbeing. Currently, Haringey Council is undertaking a public consultation to change the focus of the strategic priorities to; Reducing obesity; Increasing healthy life expectancy; and, Improving mental health and wellbeing.
- 14.2.56 Haringey's **Community Buildings Review** outlines the Borough's role as a provider of community spaces of buildings, and identifies any key areas of deficiency, capacity constraint and need arising from voluntary and community organisations.
- 14.2.57 The Review finds that Haringey would benefit from wider access to community spaces for many smaller/newer community organisations, helping to improve utilisation, shared use, flexibility and the management of community buildings.
- 14.2.58 Haringey's **Open Space and Recreational Standards Supplementary Planning Document (2008)** and **Open Spaces Strategy (2006-2016)** supports the Local Plan Strategic Policies, identifying areas deficient in public open space, play areas, and indoor sports facilities.
- 14.2.59 Much of Northumberland Park is identified as 'outside of 400m pedestrian catchment' from public open spaces, with the nearest being the Lee Valley to the east (although separated by the train line), Hartington Park to the south, and Bruce Castle Park to the west.
- 14.2.60 Northumberland Park ward performs well in terms of access to pitches in secured public use via Frederick Knight Sports Ground and Northumberland Park Sports Centre directly to the east of the Project Site.
- 14.2.61 This facility – part of the school – also includes a large swimming pool which results in much of the ward being deemed within sufficient access. In terms of indoor dry sports, there are two large indoor public sports halls (Middlesex University WHL and Tottenham Community Sports Centre) alongside the Frederick Knight Sports Ground, Northumberland Park School and a private facility at the Galaxy Gymnasium.

- 14.2.62 Part of the overarching regeneration strategy for Tottenham is the emerging **Tottenham High Road West Masterplan (2014)**, which has recently undergone consultation. It includes plans for the High Road area to deliver 1,200 new homes, public realm and transport improvements, community infrastructure, and to become a new sports and leisure destination for North London. It specifically identifies the catalytic effect of the development of a new stadium and associated development at Tottenham Hotspur FC.
- 14.2.63 The **Haringey Community Safety Strategy 2013-2017** seeks to address concerns about high crime levels and community safety in the Haringey area. It contains a set of six priorities to deliver a safer place for people to live, work and visit. Amongst the outcomes it wishes to achieve is a reduction of re-offending, with a focus on young people aged 16-24 who were found to be disproportionately more likely to be involved in a wide range of offences, including violent crimes, in the Haringey area.
- 14.2.64 LB Haringey's **Infrastructure Delivery Plan (Appendix 4 of the Local Plan Strategic Policies)** identifies some specific physical infrastructure requirements for the borough and Northumberland Park. Combined with a review of existing socio-economic baseline and other needs and deficiency assessments, the following infrastructure could be required in Tottenham:
- Sports, leisure and open space facilities
 - Education provision – including school places but also wider employability and training facility
 - Local primary healthcare, public health or community support facility specific to key inequalities – e.g. mental health or maternity and post-natal care
 - Safer Neighbourhoods centre
 - Community / meeting / voluntary group space.
- 14.2.65 The **Haringey Economic Development and Growth Strategy (2015)** outlines how the borough will secure economic growth in the context of London's economy, highlighting the importance of inward investment and aiming to secure more than £1bn in new investment in the next three years, concentrated in Tottenham.
- 14.2.66 The specific areas identified for new opportunities include:
- Harnessing the talent of residents, through investment in skills, different types of education and training and children's services as well as better informing residents of the opportunities available;
 - Increasing the number of skilled jobs in Haringey, by marketing Haringey as a location for expanding businesses and entrepreneurs;
 - Reversing the decline of high streets and town centres; and
 - Investing in infrastructure (which includes transport, digital connectivity, accommodation, social infrastructure and planning and regulation).
- 14.2.67 Through these channels, the Council has targeted 1,100 people supported into work, 200 young people taking up apprenticeships, 1,235 new jobs created and 50 new business established by 2018. Longer term plans include achieving full employment in the borough by 2030, along with increases to earnings in line with the London average for lower quartile earners, and improving the proportion of young people attaining NVQ 3/4 qualifications by 5%.

14.2.68 The **Tottenham Strategic Regeneration Framework and Delivery Plan (2014)** outlines the strategies that will be used to revitalise Tottenham through seven areas over the next 20 years:

- World-class education and training, including working with both existing schools and partners and new providers;
- Improved access to jobs and business opportunities, including attracting major investment in successful business sectors;
- A different kind of housing market – responding to the fact that demand is outstripping supply, and improving housing and neighbourhood quality by providing a range of housing in a range of tenures and prices particularly in Northumberland Park;
- A fully connected community with even better transport links;
- A strong and healthy community, particularly for young people;
- Great places, including improvement to the physical environment; and
- The right investment and high quality development.

14.2.69 Specific visions are outlined for the High Road West / Tottenham Hotspur and Northumberland Park areas, including creating a new residential neighbourhood, focusing on place-making, commercial opportunities and leisure, and encouraging a mixed and sustainable community.

14.2.70 Priorities of the **Plan for Tottenham (2012-25)** include developing enterprise, growth and attracting new businesses to the area, improving attractiveness with a better range of high quality public open space, shops and activities that will encourage residents to stay in the area and attract new visitors.

Emerging Planning Policy

14.2.71 A number of key planning policy documents in Haringey are currently under review following a consultation period in Spring 2015, including:

- Proposed Alterations to Haringey's Adopted Strategic Policies;
- The Development Management Development Plan Document;
- The Site Allocations Development Plan Document; and
- The Tottenham Area Action Plan Development Plan Document.

14.2.72 **Proposed Alterations to Haringey's Adopted Strategic Policies** were consulted on in early 2015, and include amendments that respond primarily to changes in National (e.g. Housing Zone) and London-wide policy and employment, population and household projections, and the findings of the SHLAA that was used to inform the most recent London Plan. The key amendments to strategic policies include:

- Policy SP1 – to include the promotion of development in North Tottenham (including Northumberland Park, the redevelopment of Tottenham Hotspur Football Stadium and High Road West) and to revise the provision of new homes in strategic housing locations from 5,000 to 13,000 (North Tottenham is now a Growth Area rather than an Area for Change);
- Policy SP2 – to review the proportion of affordable housing required in development from 50% to 40% and re-distribute the affordable tenures within this; and to highlight Northumberland Park as a priority area of need for housing estate improvement

- 14.2.73 The “**preferred option**” **Development Management DPD** includes a number of policies related to development, housing, open space, employment and community infrastructure.
- 14.2.74 Policies DM16 and 19 (Housing Supply, Affordable Housing) support proposals for new housing to sites allocated for residential development including mixed use residential development, within the Site Allocations Local Plan and Area Action Plans. Policy DM17 considers that housing mix should have regard to individual site circumstances and character, and states that the Council “will not support mono-tenure developments or proposals which contain a mix exclusively made up of 1 or 2 bedroom units unless they are part of larger developments or within neighbourhoods where such provision would help to address existing imbalances with regard to housing choice”
- 14.2.75 Policy DM2(C and D) promote the importance of healthy and inclusive, secure environments through design standards including compliance with ‘secured by design’ principles. The policy on inclusive environments is closely aligned to the requirements of the GLA’s SPG Accessible London: Achieving an Inclusive Environment, promoting a high quality, inclusive, accessible environment for visitors and residents including families with small children and older people whose mobility is impaired.
- 14.2.76 Policy DM26 requires that all residential developments in Areas of Open Space Deficiency, and in wads which fall below the Borough-wide target of open space of 1.64ha per 1,000 population to provide new open space and/or make financial contributions to enable the provision of new open spaces or improvements to the accessibility and quality of existing open space.
- 14.2.77 In terms of economy/employment, Policy DM50 (Facilitating Site Regeneration and Renewal) supports mixed use development within designated Regeneration Areas, and where there is no net loss of employment floorspace. In Town Centres, Policy DM53 highlights that proposals should have active frontages at ground floor level, and upper levels with residential or employment uses.
- 14.2.78 Policy DM57 (Access to Jobs and Training) stipulates that the Council will seek planning contributions to facilitate opportunities for local employment and training, including apprenticeships and work experience placements in order to reduce imbalances between Haringey and other areas of London. This applies to both construction and end-use employment opportunities, and is linked to sustainable commuting principles on co-location of homes and jobs.
- 14.2.79 Community infrastructure is managed by Policies DM58 and DM59, which states that proposals for new and extended facilities will be supported subject to their ability to respond to local need, and should take into account the Council’s **Infrastructure Delivery Plan**.
- 14.2.80 LB Haringey consulted on its **Tottenham Area Action Plan** in January 2014, with a strong focus on delivery and implementation in-line with Government guidance for areas of significant change. The AAPs are consistent with Haringey’s 2013-2026 Local Plan and Upper Lee Valley OAPF, and emerging local DPDs on Site Allocation and Development Management.
- 14.2.81 The AAP identifies the following socio-economic characteristics for Tottenham:
- Tottenham’s population is young, ethnically and culturally diverse and economically disparate;
 - Unemployment – and youth unemployment in particular – is high;

- Crime and anti-social behaviour are key concerns.

14.2.82 It also recognises the scale of change – with 10,000 new homes and 5,000 new jobs, a reinvigorated high street and leisure destination at High Road West, set in the context of major transport improvements secured through the Government's £500m borrowing guarantee scheme to support housing and transport infrastructure in Tottenham.

14.2.83 The following challenges to achieving successful regeneration are outlined:

- Underperformance of the High Road in terms of commercial and retail activity;
- Barriers to movement in all directions which has meant the physical structure of Tottenham has lost contact with the open space of the Lee Valley;
- Poor streetscape and run-down buildings;
- The lack of a strong 'sense of place' in Northumberland Park and High Road West;
- Poor transport infrastructure in North Tottenham; and
- The need to improve the quality and amount of social infrastructure.

14.2.84 The Northumberland Park AAP identifies Northumberland Park, and the area around Tottenham Hotspur in particular, as a sports and leisure destination (forming part of the wider commercial and residential development plans. Public realm improvements to bring railway arches back into use and redevelop White Hart Lane station are an important aspect of any redevelopment.

14.2.85 Employment and education are identified as catalysts for neighbourhood regeneration, alongside the major transport improvements led by the West Anglia Line.

14.2.86 A driver of change for Tottenham will be the Council's Housing Investment and Estate Renewal Strategy, part of which is based on fixing previous poor public realm and estate design that has in part contributed to anti-social behaviour.

14.2.87 Wider indicative opportunities outlined in the AAP for Northumberland Park include:

- A focal area for cultural, sport and leisure activities;
- Visitor and recreational facilities; and
- Accessibility improvements.

14.2.88 The London Borough of Haringey is currently consulting on a **Draft Corporate Plan (Building a Stronger Haringey Together)** for the period 2015-2018. This Plan is relevant as it will aim to drive growth and employment, by securing infrastructure and creating environmental conditions that support investment, and focuses growth in homes and jobs within Tottenham specifically.

14.3 Assessment Methodology

14.3.1 The approach to socio-economic impact assessment is based on a defined impact area and baseline conditions for housing, population/demographic, economic and community facilities, identification of a range of receptors within these elements, and a quantitative and qualitative assessment of the impacts of various elements of the Project on people and the economy.

- 14.3.2 The scale of significance described below, together with expert judgement, would be used to assess the potential and residual impacts of the Project against the baseline conditions. The assessment process will aim to be objective and quantify the impacts as far as possible – however some impacts can only be evaluated on a qualitative basis.
- 14.3.3 Impacts will be direct or indirect; temporary or permanent; and short, medium or long-term.
- 14.3.4 While having regard to the generic assessment framework outlined earlier in this report, the following terms have been used to define the significance of the impacts identified, based on the magnitude of change as a deviation from the baseline conditions and dependent on the sensitivity of the receptor to change:
- **Major impact:** Where the Project could be expected to have substantial impact (either positive or negative) on local residents, new residents or existing community facilities. These effects are likely to be important considerations at a regional or district scale.
 - **Moderate impact:** Where the Project could be expected to have a noticeable impact (either positive or negative). While important at a local scale, these are not likely to be key decision making issues.
 - **Minor impact:** Where the Project could be expected to result in a small, barely noticeable impact on local or new residents and community facilities.
 - **Neutral:** No discernible impact as a result of the Project.

Consultation

- 14.3.5 Formal pre-application discussions have been held the Council, and the GLA since mid-2014, with weekly meeting held since May 2015 where at a number of planning application requirements and environmental assessments were discussed. Community consultation was undertaken in the run up to the submission of the application which is outlined in the Statement of Community Involvement (SCI) (which accompanies the planning application documentation).

Construction

- 14.3.6 Construction impacts have been assessed using standard ratios of construction employment to output, assuming an average output per employee per year.
- 14.3.7 The Project will involve a variety of construction techniques and methods and it is not possible, at this stage, to assess accurately specific skill types and the proportion of employment which will be on or off site.

Operation

- 14.3.8 Due to the variety of different uses proposed within the Project, a number of different approaches have been used to quantify the effects of the impacts on different receptors.

Employment

- 14.3.9 In relation to use of the **Stadium**, a number of assumptions have been made on the advice of the Club, and based on evidence from other stadium developments including the Emirates Stadium and Wembley Stadium. This would include the provision of match-day, non-matchday, hospitality and permanent office-

based staff.

- 14.3.10 For other operational employment within the **commercial, hotel, retail and leisure uses** within the Project, standard floorspace-to-job ratios have been used³⁹. In order to identify the net employment effects, the baseline employment level (employment within existing uses) has been estimated using information provided by the Club's 2014 Annual Report.
- 14.3.11 Economic impacts have been referred to in terms of their additionality where applicable, with reference to methodology outlined in the HCA's Additionality Guide (4th Edition, 2014).

Visitors and Expenditure

- 14.3.12 Average annual visitor numbers, and associated expenditure, have been estimated using a range of sources and split between matchday and non-matchday (non-football) events and uses.
- 14.3.13 For football events, the number of annual matchday visitors has been estimated using the average attendance and number of home games over the last 5 seasons. There are a number of metrics used by economists and researchers to estimate the amount of time and money spent inside and outside football stadia by supporters on matchdays on food, drink and entertainment. Local spending estimates from a number of studies range from around £2 to £10 per supporter, with around 60% of supporters spending money outside the stadium in the local area. More optimistic estimates of spending, for example that used in Brentford FC's recent "Community Benefits Statement" appended to their planning application for a new stadium, estimate that this figure could be up to £17 per patch day, with around 63% being spent outside the stadium in the local area.
- 14.3.14 Recent research by Deloitte into a match at the current stadium in April 2015 estimated that fans visiting THFC from elsewhere in London (31% of visitors) spend around £34 per visit in the Wider Impact Area (see 14.3.24 below) and £5 elsewhere in London, while those from elsewhere in the UK (55% of visitors) spent an average of £20 in the Wider Impact Area and £10 elsewhere in London.
- 14.3.15 Visitors and expenditure for **non-football** events, including other periodical sporting events and concerts, the Tottenham Hotspur Experience and extreme sports centre have been estimated based on the above methodology where applicable, using additional visitor estimates where data is available and feasibility studies undertaken by the Club - for example based on current take-up of conferencing facilities, and studies into the economic impacts of specific events (for example, using research by Deloitte into the economic effect of the NFL series at Wembley Stadium).
- 14.3.16 **Hotel** visitors have been estimated based on a 5+ year average occupancy of hotel rooms in London and revenue per available room estimated by PWC (2014/15).
- 14.3.17 **Household expenditure** generated by the proposed residential element buying food and services locally will be based on the average household expenditure in London per week (ONS Family Spending Survey 2012).
- 14.3.18 **Expenditure by employees** in the local area will be estimated based on survey information identifying average spend per day, carried out by research agency Loudhouse for Visa Europe.

³⁹ HCA (2010) Employment Densities Guide 2nd Edition

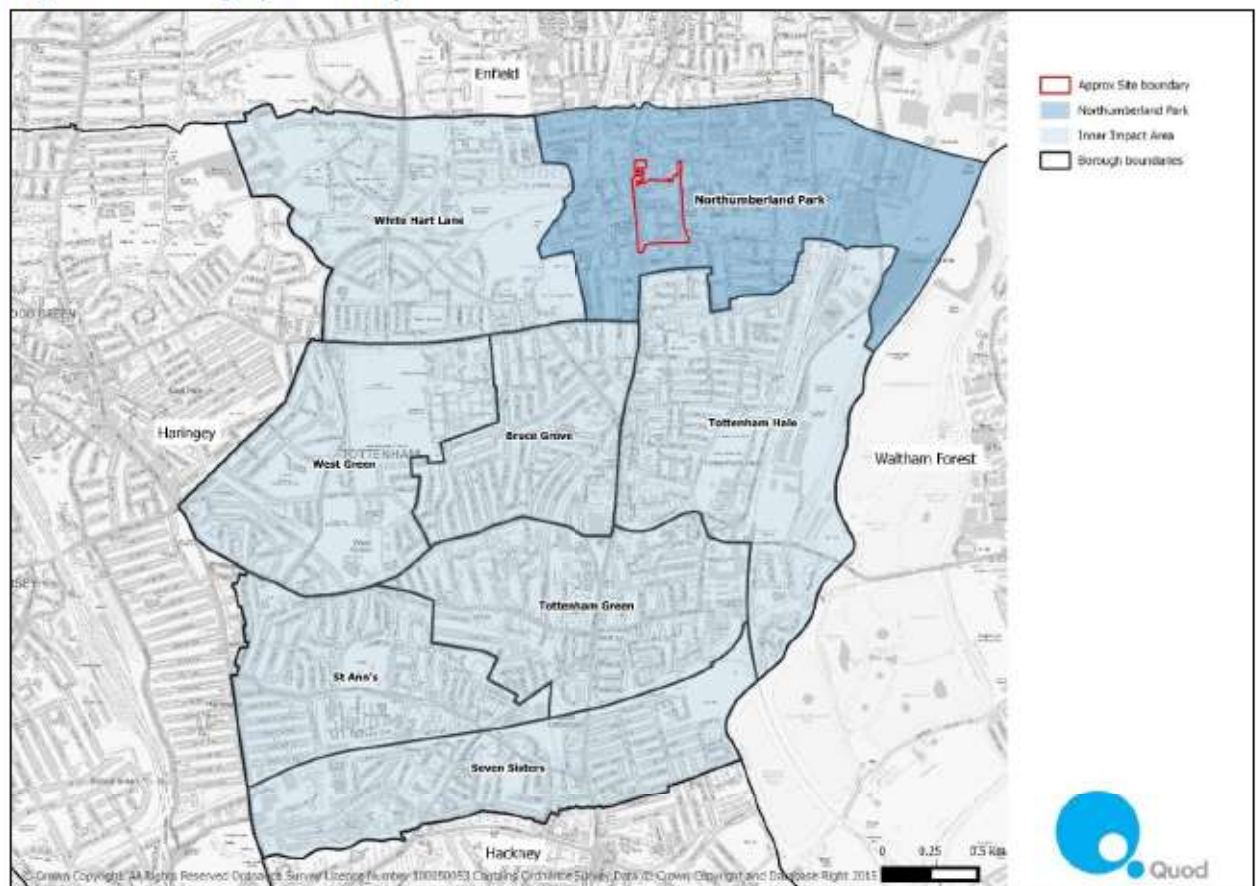
Population and Community Facilities

- 14.3.19 The methodology for population modelling, including child yield assessments, can be based on a number of data sources including Census moving groups data, Council-defined population yields, GLA-defined yields and population forecasts, CORE Lettings data from DCLG, and DMAG / Wandsworth population models. Quod uses these and other datasets to develop its own propriety model.
- 14.3.20 Assessment of the effect of the Project on current **capacity in schools** has been based on information from the Local Education Authority's School Admissions Documents (2015/16), and 2014 Annual Schools Census data.
- 14.3.21 Effects on the **availability of health facilities** (GP surgeries, pharmacies, dentists, opticians and acute care) in the local area have been assessed using published NHS data, cross-referenced with a register of healthcare facilities published by local health authorities and Haringey Council.
- 14.3.22 **Community and social impacts** have been assessed in terms of community access to the stadium and any measures taken to design out crime described in the Design and Access Statement, which accompanies the planning application documentation. A full audit of existing community facilities and an assessment of the level of demand for community facilities resulting from the Project has been undertaken.

Geographical Scope

- 14.3.23 Socio-economic baseline data is usually collected and presented on an administrative geography scale. The baseline assessment for this Chapter considers the current (and consented) uses within the Project Site boundary, and the impacts of the current Stadium uses on the surrounding area.
- 14.3.24 The immediate ward area (Northumberland Park Ward) is used as the basis of comparison of baseline conditions against an 'Inner Impact Area' level, including Northumberland Park and surrounding wards (Seven Sisters, St Ann's, Tottenham Green, Tottenham Hale, Bruce Grove, West Green, White Hart Lane); and a 'Wider Impact Area', based on the Boroughs of Haringey and Enfield, and where appropriate against broader London as a whole.

Figure 14.1: Geographical Scope



14.3.25 Impacts on social infrastructure provision are assessed by looking at reasonable travel distances/catchments relevant to specific types of facility. For general community facilities, healthcare, day nursery and primary education provision has been assessed within 1km (about 10 to 15 minutes' walking distance) from the Project Site, and secondary education across the two Boroughs of Haringey and Enfield.

Cumulative Development

14.3.26 Cumulative socio-economic impacts may occur where economic and employment, housing, population and community facility / employment effects of committed development may occur during the operational phase. There are a number of ways in which development in the immediate and wider area surrounding the Project Site could contribute to the socio-economic impacts generated by the Project including (inter alia):

- Residential development has the potential to accommodate new resident populations in the area. This could affect demand for the provision of public services and capacity of community facilities; and
- New commercial floorspace would be expected to provide economic benefits through job creation and spending.

- 14.3.27 Cumulative effects have been assessed by identifying (from the schedule of developments agreed between the Club and LB Haringey) extant planning permissions that qualify as 'major development' within the Inner Impact Area (Northumberland Park and surrounding wards (Seven Sisters, St Ann's, Tottenham Green, Tottenham Hale, Bruce Grove, West Green, White Hart Lane, and Upper Edmonton).
- 14.3.28 Only 'major developments' have been included in the cumulative impact assessment due to the comparative size of the Project – it is expected that any impact of a smaller development would not materially affect the significance of the effects already assessed as part of the Project on its own. Other major developments will have a similar scale of effects which are therefore more likely to influence the cumulative or combined effects in the area.
- 14.3.29 In this instance, these are schemes which:
- Meet LB Haringey's definition of 'Major Development' – e.g. schemes comprising 200+ residential units and/or provides 10,000+ sqm of floorspace; or
 - Are referable applications (Large Scale Development) to the Mayor of London (e.g. any development comprising or including 150+ residential units, and/or 15,000+ sqm of commercial floorspace – as defined by the Town and Country Planning (Mayor of London) Order 2008).
- 14.3.30 In addition, information on policy-committed development proposals without planning applications / permissions (i.e. for High Road West and Northumberland Park Regeneration) has been identified through a review of the Tottenham Strategic Regeneration Framework.
- 14.3.31 Information on housing provision and commercial floorspace provision has been sought from the planning application documents and policy documents (in the case of High road west and Northumberland Park Regeneration) from relevant schemes identified in Chapter 3.

Limitations to the Assessment

- 14.3.32 All socio-economic effects are based on the set socio-economic baseline at a single point in time, as the production of future baseline is not possible to a good degree of certainty.
- 14.3.33 The scale of effects also differs based on the element of the baseline – for example, the effects on Primary Schools are assessed in the area within 1km of the Project Site as this is the distance that children resident within the Project Site are likely to walk to school (approx. 10-15mins), whereas at secondary school level the distance travelled by pupils is much greater and a Wider Impact Area is used.

14.4 Baseline Conditions

Site Context & Previous Consents

- 14.4.1 The Project Site is located at the northern end of Tottenham High Road in the London Borough of Haringey, close to the border with the London Borough of Enfield. The High Road runs for approximately 2.5km from Seven Sisters in the south, with a fairly continuous shopping frontage which extends north into Enfield where it is called Fore Street.
- 14.4.2 The area on either side of the High Street is predominantly residential; including both terraced housing

and larger purpose built mainly social housing blocks. It also contains industrial and distribution uses, particularly towards the northern end. The area is bounded to the east by railway lines, the Lea Valley Regional Park and larger scale industrial uses. This buffer, which effectively runs from the Thames in the south to the M25 in the north provides major social and physical severance from the Borough of Waltham Forest on the eastern side of the park.

- 14.4.3 The Lee Valley was once one of London's main industrial locations but has been in decline since the 1960s with major reductions in manufacturing employment. This has impacted severely on the economic vitality of the area and underlies the socio-economic baseline described below.

Demographic Baseline

- 14.4.4 The Project Site is adjacent to Tottenham High Road in Northumberland Park ward. Northumberland Park has a relatively young and ethnically diverse population, with over a quarter of residents aged under 16 years, and only 8% over 65 years. The wider area in Tottenham also has a younger age profile than Haringey, Enfield and London averages. London's population has continued to become more ethnically diverse, and this has accelerated in Northumberland Park and Tottenham where Black, Asian and Minority Ethnic (BAME) groups make up 61% and 52% of the population respectively.
- 14.4.5 Annual population growth has been around the same rate in Northumberland Ward and Tottenham as London as a whole at 1.4% per annum since 2001. Over the 20 years from 2011 population growth is predicted to be significantly higher in the local area in comparison with the growth projected for the Wider Impact Area and London overall.

Table 14.1 – Demographic Baseline Summary (Source: 2011 Census; GLA 2014 Round SHLAA Capped Population Projections – capped)

Measure	Northumberland Park	Tottenham - Inner Impact Area	Haringey and Enfield - Wider Impact Area	London
Population				
Total Population	14,429	115,965	567,392	8,173,941
Growth Rate (p.a. since 2001)	1.4%	1.7%	1.6%	1.4%
Population Projections 2031 (2011 base)	34%	24%	20%	20%
BAME Residents				
White	39%	48%	61%	60%
Mixed	7%	7%	6%	5%
Asian	8%	11%	10%	18%
Black	40%	28%	18%	13%
Other	5%	6%	5%	3%
Age Profile				
0-15	27%	23%	22%	20%
16-24	13%	14%	12%	12%

Measure	Northumberland Park	Tottenham - Inner Impact Area	Haringey and Enfield - Wider Impact Area	London
25-49	40%	43%	41%	42%
50-64	13%	12%	14%	14%
65+	8%	8%	11%	11%

Economic and Employment Baseline

- 14.4.6 Residents of the Inner Impact Area are less likely to be economically active than residents of the Wider Impact Area or across London overall. The proportion of unemployed residents is also higher in Northumberland Park where 10% of working-age adults are unemployed, compared to 6% across the Wider Impact Area, and 5% across London as a whole.
- 14.4.7 A lower proportion of Northumberland Park ward and Inner Impact Area residents work in management/professional roles (27% and 34% respectively) compared to approximately half of residents in the Wider Impact Area and in London overall. Local residents are also more likely to have no qualifications, and less likely to have higher qualifications than residents living across London as a whole.

Table 14.2 – Economic/Employment Baseline Summary (Source: 2011 Census; ONS JSA Claimant Count, July 2015)

Measure	Northumberland Park	Tottenham - Inner Impact Area	Haringey and Enfield - Wider Impact Area	London
Economic Activity				
Economically Active	62%	66%	70%	72%
Unemployed	10%	7%	6%	5%
Inactive – Retired	7%	7%	9%	8%
Inactive – Student	10%	10%	8%	8%
Inactive – Home/Family	8%	6%	6%	5%
Inactive – Sick/Disabled	7%	6%	4%	4%
Inactive – Other	7%	5%	4%	3%
JSA Claimant Count*				
JSA Claimant Rate	5.7%	3.5%	2.5%	1.9%
Total Claimants	560	2,940	9,700	111,800
JSA Claimants - Sought Occupation				
Sought Occupation – Management/Professional	20%	23%	17%	14%
Sought Occupation – Admin/Skilled/Personal/Sales	59%	57%	64%	66%
Sought Occupation – Process/Elementary	19%	19%	17%	16%
Sought Occupation – Not	1%	1%	3%	3%

Measure	Northumberland Park	Tottenham - Inner Impact Area	Haringey and Enfield - Wider Impact Area	London
Known				
Skills Level				
No Qualifications	29%	25%	21%	18%
Higher Education Qualifications	20%	27%	34%	38%

- 14.4.8 There are just over 8,000 jobs in Northumberland Park ward and approximately 29,000 work in the Inner Impact Area. Larger proportions of jobs in the local area are in the manufacturing, wholesale, accommodation and food services sectors compared to the Wider Impact Area and in London overall. A lower proportion of jobs in the local area are in professional, scientific and technical and business admin sectors.

Table 14.3 – Local Area Jobs Baseline Summary – Key sectors in the local area (Source: Business Register and Employment Survey, 2013)

Industry	Northumberland Park	Tottenham - Inner Impact Area	Haringey and Enfield - Wider Impact Area	London
Accommodation / Food Services	25%	10%	7%	8%
Wholesale / Retail	20%	20%	19%	12%
Arts, Entertainment, recreation & other services	13%	6%	6%	5%
Education / Health	12%	20%	25%	18%
Manufacturing	11%	8%	5%	2%
Professional / Financial / Property / Business admin	10%	14%	21%	41%

- 14.4.9 In terms of employment trends over time, although all spatial areas have seen absolute growth in jobs over the last 30 years, this growth has not been even across industries. In particular, the share of manufacturing jobs in the local economy at both ward and Inner Impact Area level has fallen significantly. In Northumberland Park ward manufacturing jobs made up almost half of all jobs in 1984, but by 2013 this share had decreased to just 11%. Though the decreasing significance of the manufacturing industry has been a London-wide (and UK) economic trend, the effect on the local area has been particularly significant due to the much larger proportion of local jobs that were in manufacturing in the 1970s and 80s.

Table 14.4 – Share of total employment in Manufacturing 1984 and 2013 (Source: BRES/ABI)

Proportion of total employment	Northumberland Park*	Tottenham - Inner Impact Area	Haringey and Enfield - Wider Impact Area	London
Manufacturing 1984	49%	41%	28%	16%
Manufacturing 2013	11%	8%	5%	2%

*Due to changing ward boundaries, Northumberland Park's boundaries in 1984 represent a slightly larger area than the size of the

study ward in 2013 (Northumberland ward did not exist in 1984 and data is based on 1984 Coleraine and Park ward boundaries)

Housing Baseline

- 14.4.10 Almost half of households in Northumberland Park ward live in social rented homes – this is a higher proportion compared to wider scales. There is also a higher proportion of purpose-built flats, and a lower proportion of houses in Northumberland Park ward in comparison with the other study areas. Levels of overcrowding are generally higher in the local area compared to the Wider Impact Area and London as a whole – this is particularly pronounced in rented homes (both social and private rented tenures).

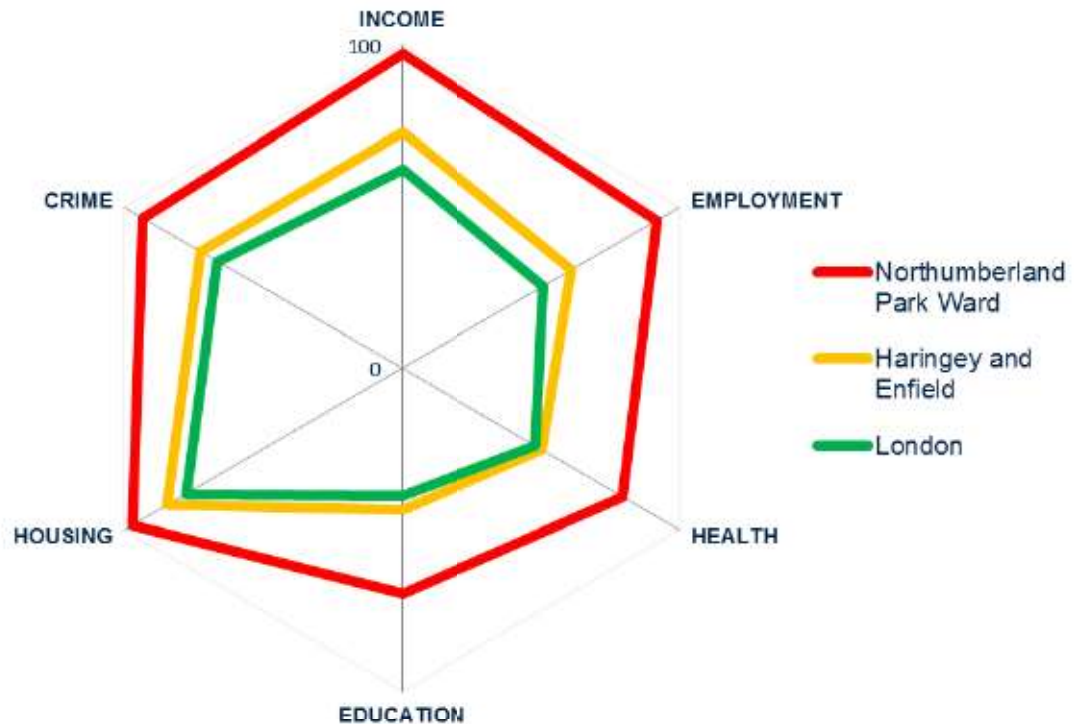
Table 14.4 – Housing Summary (Source: Census, 2011)

Measure	Northumberland Park	Tottenham - Inner Impact Area	Haringey and Enfield - Wider Impact Area	London
Accommodation Tenure				
Owned	21%	31%	49%	48%
Shared Ownership	3%	2%	1%	1%
Social Rented	49%	37%	22%	24%
Private Rented	26%	29%	26%	25%
Accommodation Type				
Purpose-built Flat	52%	36%	31%	38%
Other Flats	14%	19%	17%	15%
Whole house (Detached, Semi-detached, Terraced)	33%	46%	52%	48%
Levels of Overcrowding (bedrooms)				
In all Homes	23%	21%	13%	11%
In Privately Owned Homes	11%	9%	6%	5%
In Social Homes	24%	24%	21%	17%
In Private Rented Homes	31%	30%	21%	18%

Deprivation

- 14.4.11 Northumberland Park ward is the most deprived ward in London. In terms of employment measures, it is the third most deprived ward in London, and in terms of income it is the fifth most deprived. Haringey overall is the 11th most deprived local authority in England.

Figure 14.2: Indices of Multiple Deprivation 2010 – Spatial areas comparison



14.4.12 A comparison between levels of deprivation in the local area and the other spatial scales, including a breakdown of the six dimensions of deprivation included in the IMD analysis, is shown in Figure 14.2. Northumberland Park ward has higher levels of deprivation in terms of all six dimensions of deprivation compared to the wider spatial areas – though levels of deprivation in terms of income, housing, crime and employment are particularly high. Of LSOAs within Haringey that fall into the top 10% of deprived areas in the UK, 81% are located within the wards of the Inner Impact Area – indicating that high levels of deprivation are concentrated in the east of Haringey.

Figure 14.3: Indices of Multiple Deprivation 2010 - Inner Impact Area

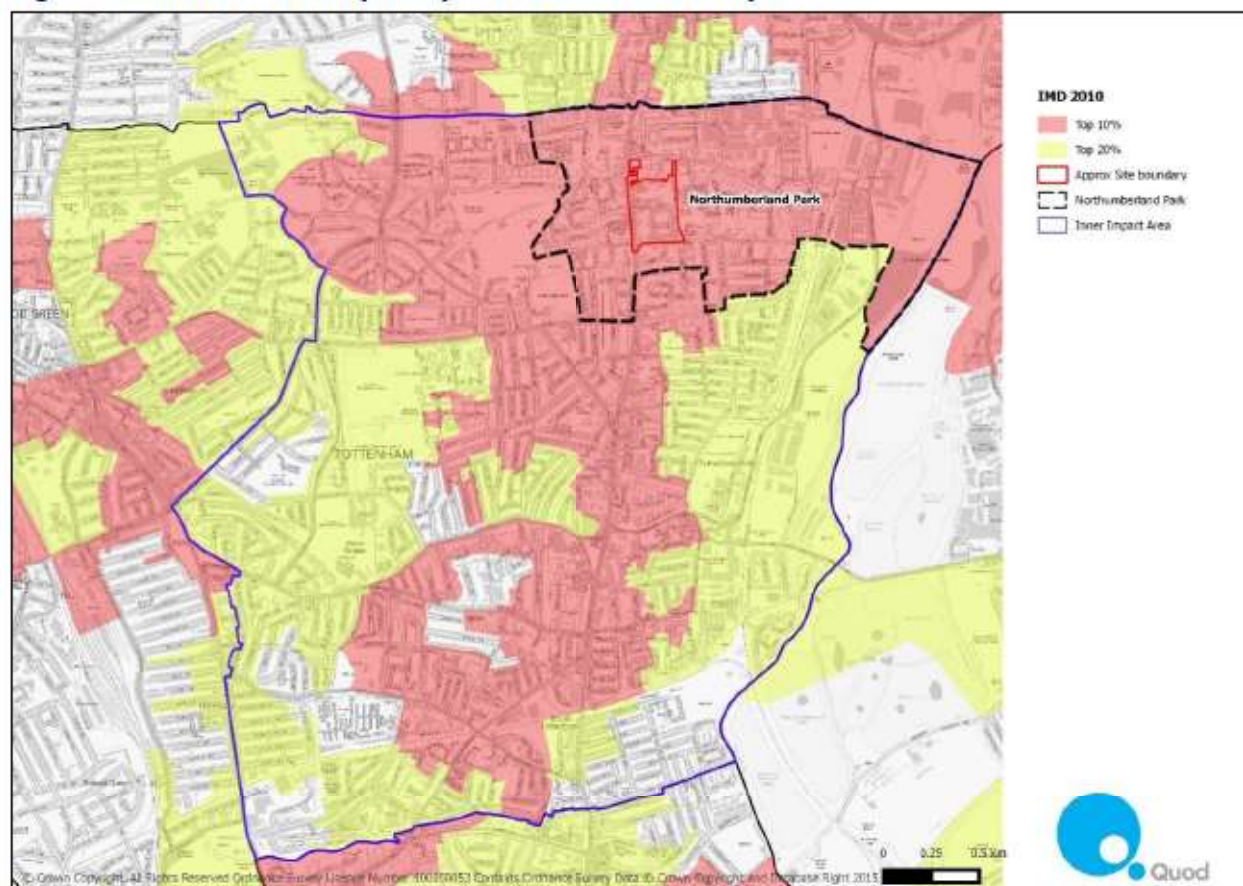
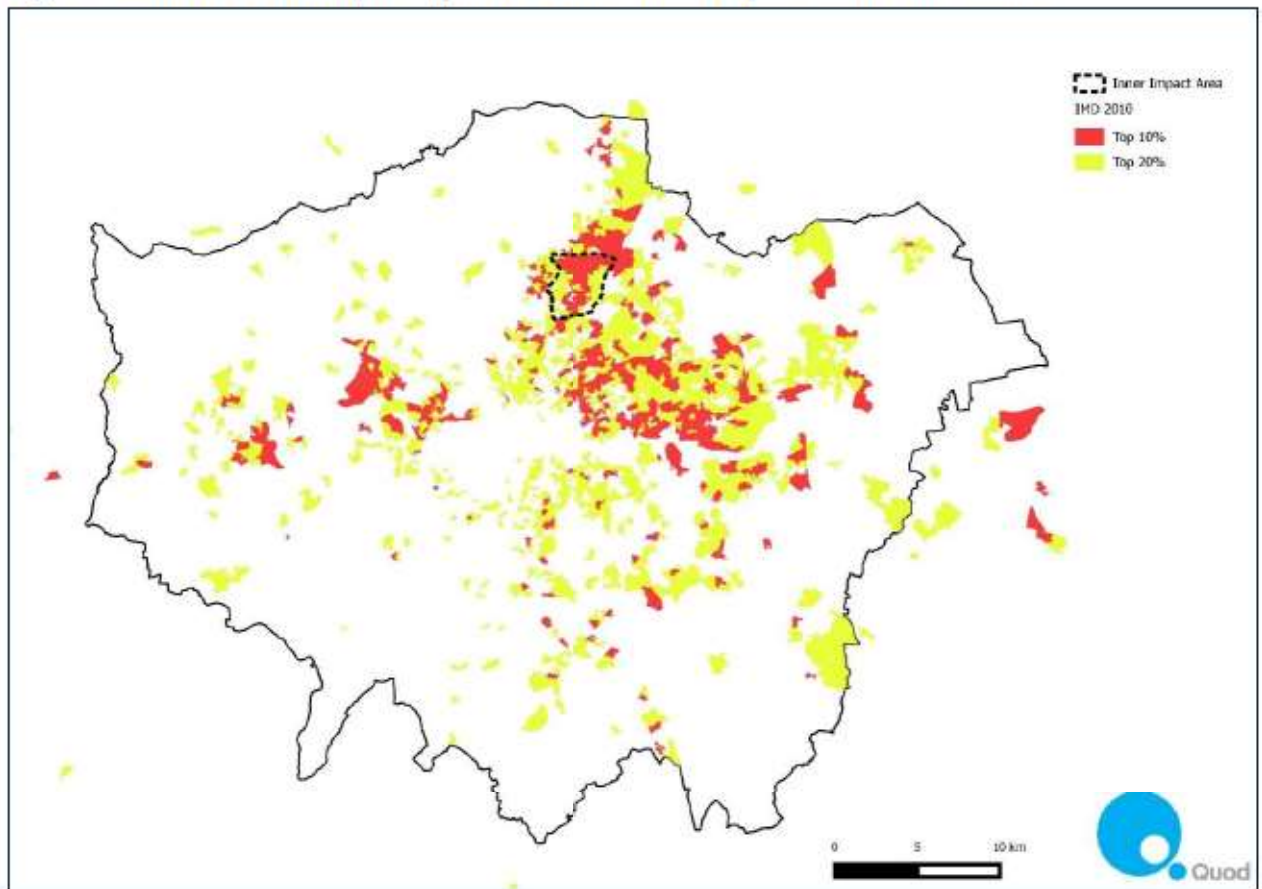


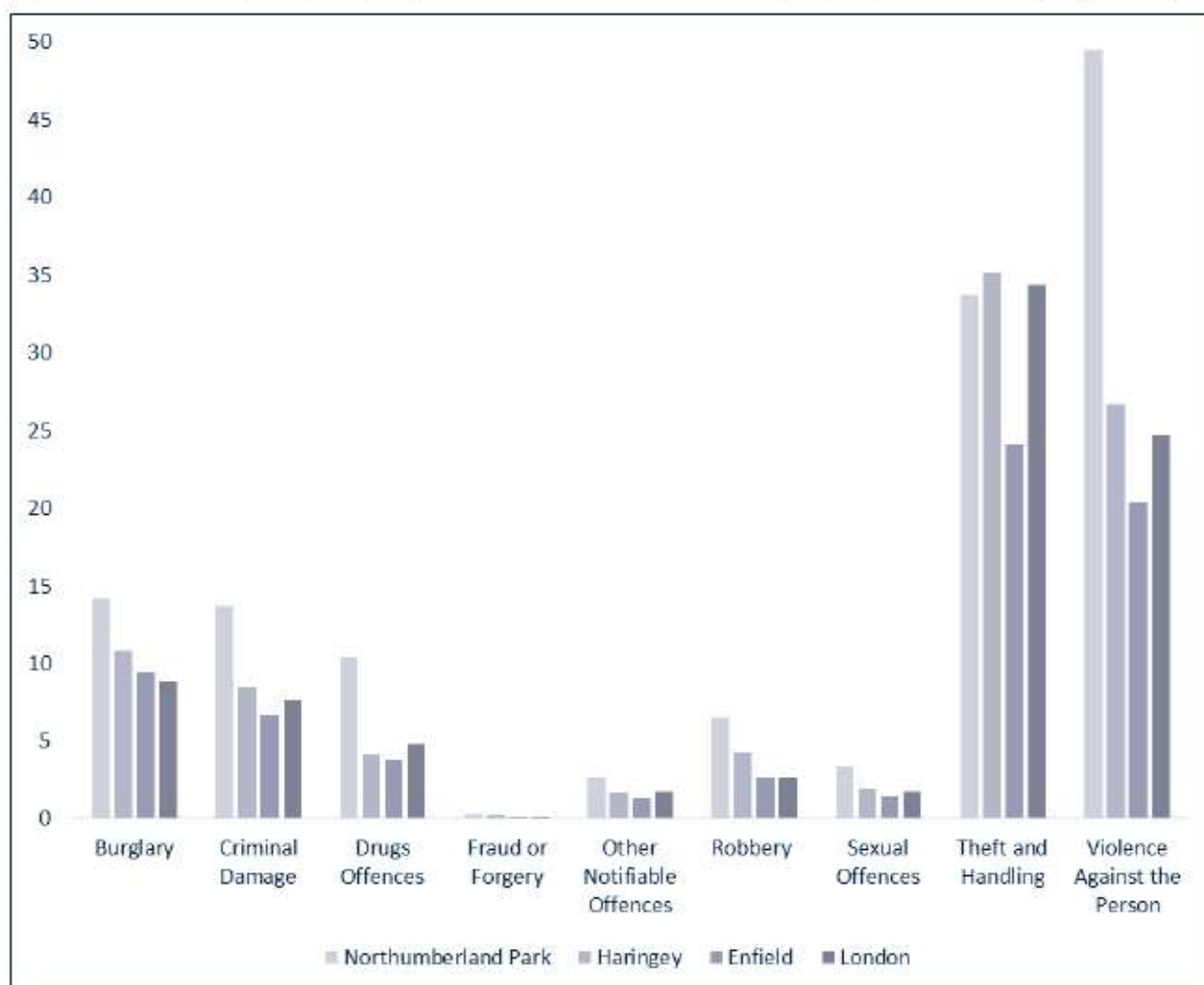
Figure 14.4: Indices of Multiple Deprivation 2010 – Inner Impact Areas and London



Crime and Safety

- 14.4.13 In terms of crime and safety, Metropolitan Police data recording crime rates per 1000 of the population report generally higher incidences of crime in Northumberland Park ward compared to Haringey and London as a whole. Rates of violence against the person were the highest in the local area at 50 per 1,000 people for the 12 month period to June 2015 (Figure 14.5).

Figure 14.5: Crime per 1,000 people – 12 months to June 2015 (Metropolitan Police, July 2015)



14.4.14 Haringey's Community Safety Strategy (2013-2017) aims to set priorities and deploy resources effectively in order to make Haringey one of the safest boroughs in London. The report notes that crime levels across Haringey have fallen in recent years and are now roughly in line with London averages, and generally, personal robberies, serious violent crime and some types of anti-social behaviour tend to occur in areas around major transport hubs (Wood Green, Turnpike Lane, Bruce Grove and Seven Sisters stations). The report also states that 40% of all offences reported in the borough are committed by people aged 18-24.

14.4.15 Home Office statistics on football related arrests and banning orders state there were 25 arrests of Tottenham Hotspur supporters at home matches during the 2013-14 season – with the majority of arrests being made in relation to public disorder offences. This represents a slightly higher rate of arrests compared to the previous season when just 9 arrests were made at home matches. However, rates remain low representing approximately 4.3 arrests per 100,000 visitors across the season (which is broadly in line with the rates of arrests seen at other London clubs including Chelsea (4.6), Arsenal (3.8), West Ham (1.9) and Fulham (2.2)).

Summary

- 14.4.16 Northumberland Park ward is one of the most deprived areas in the country – with particularly high levels of deprivation in terms of income and employment measures. Deprivation is also relatively high across the broader Inner Impact Area with lower levels of economic activity, higher JSA claimant rates, and higher levels of residents with no qualifications compared to the Wider Impact Area and London as a whole. The local economy has seen significant restructuring over the last 30 years due to the impact of the declining manufacturing sector in this once thriving manufacturing area.

Social Infrastructure and Community Facilities

Childcare & Education

- 14.4.17 Nurseries in Haringey provide early years care and education for children aged from 6 weeks up to pre-school five year olds. There are three main types of provision: council nurseries, private nurseries and community nurseries. Within 1 km of the Project Site there are 7 operating nurseries registered with Ofsted – as shown in Figure 14.4 below.
- 14.4.18 In terms of primary provision, there are 10 primary schools, two infant and two junior schools within 1km of the Project Site. The location of these schools is also shown in Figure 14.4.
- 14.4.19 Based on Annual Schools Census data and 2015 admissions documents, the current combined capacity at these schools is approximately 3%, or 155 places. There is a surplus of just 2% (22 spaces) at reception level. Existing capacities of all schools within 1km of the Project Site are detailed in Table 14.6 below.
- 14.4.20 Meridian Angel Primary School (free school) opened in 2014 on Dyson's Road, Edmonton. The school is currently 1FE, but will open a new school building in 2015, with an additional 1FE. The new school building will open with classes in each year from reception to year five, and will be located within the 1km study area on Ladysmith Road (close to the existing Meridian Angel Primary School building as shown in Figure 14.4 below).

Table 14.6 – Primary School Provision within 1km of the Project Site (Source: Annual Schools Census, 2015; LBH and LBE Schools Admissions Documents 2015)

Map ref	School Name	Number on Roll	Capacity	Surplus Places	Surplus Capacity	Ofsted
1	Meridian Angel Primary School*	141	150	9	6%	N/a not yet inspected
2	Raynham Primary School	719	720	22	3%	Good (2013)
3	St John and St James CofE Primary School	400	420	20	5%	Good (2014)
4	Devonshire Hill Primary School	414	420	6	1%	Good (2012)
5	Harris Primary Academy Coleraine Park	385	420	35	8%	Outstanding (2014)
6	Lancasterian Primary School	427	406	0	0%	Good (2013)
7	Lea Valley Primary School	420	420	0	0%	Good (2013)
8	Bruce Grove Primary School	410	420	10	2%	Good (2012)

Map ref	School Name	Number on Roll	Capacity	Surplus Places	Surplus Capacity	Ofsted
9	Risley Avenue Primary School	620	630	10	2%	Good (2013)
10	Mulberry Primary School	630	630	0	0%	Good (2013)
11	St Paul's and All Hallows CofE Infant School	173	180	18	10%	Good (2013)
12	St Paul's and All Hallows CofE Junior School	225	240	15	6%	Good (2013)
13	St Francis de Sales RC Junior School	350	360	10	3%	Requires Improvement (2014)
14	St Francis de Sales RC Infant School	270	270	0	0%	Good (2014)
Totals		5,584	5,686	155	2.7%	

14.4.21 Analysis of secondary school provision is carried out at a borough level to allow for pupil preference, and since it can reasonably be expected that secondary-age students are willing and able to travel further to attend school. There are 33 secondary schools across LBH and LBE. Existing capacities of these schools are detailed in Table 14.7, showing surplus capacity in spaces of approximately 10% across both boroughs.

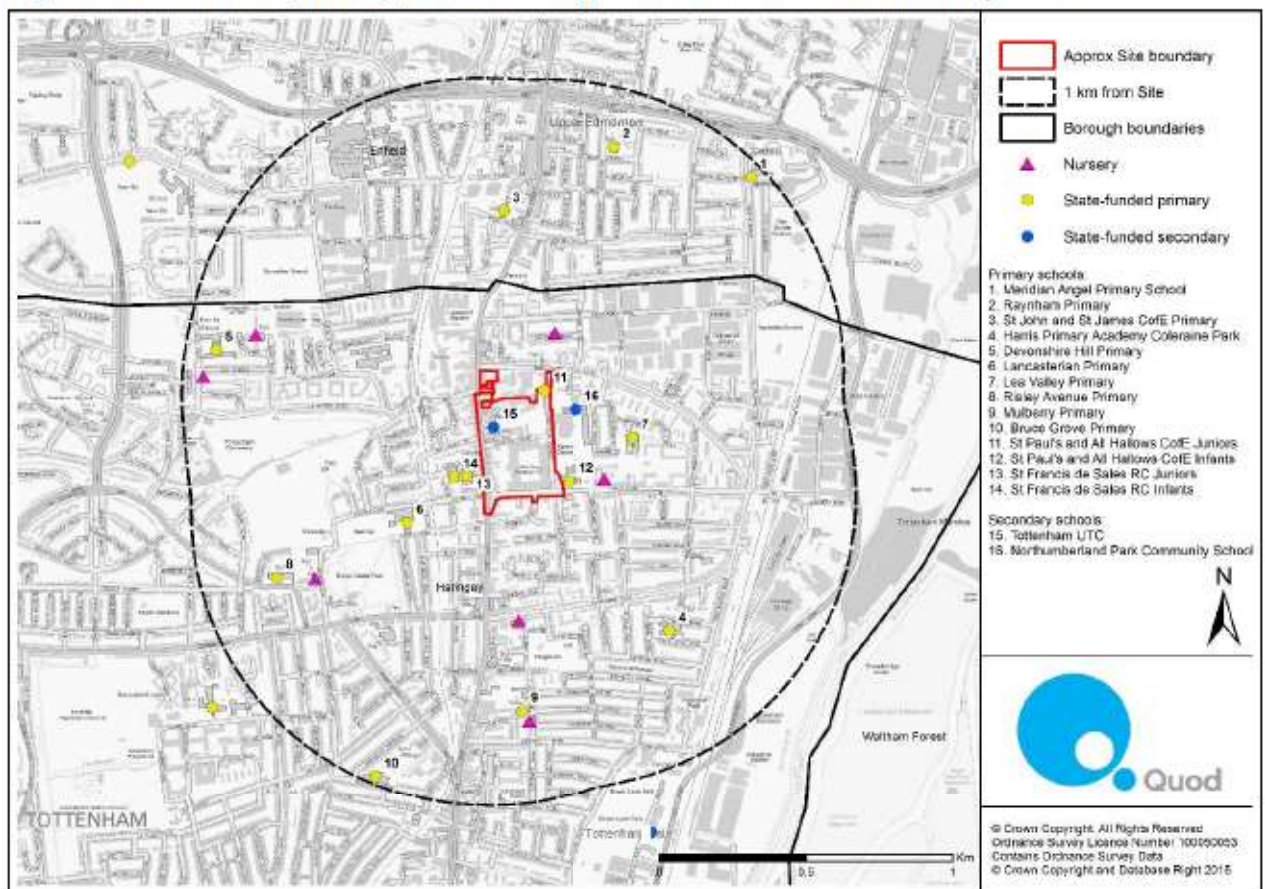
14.4.22 The closest schools to the Project Site accepting secondary-age pupils are Tottenham UTC (college accepting secondary-age pupils in Years 10 and 11, and up to age 18), and Northumberland Park Community School, located on Trulock Road. The location of these schools is shown in Figure 14.6.

Table 14.7 – Secondary School Provision in the London Boroughs of Haringey and Enfield (Source: Annual Schools Census, 2015; LBH and LBE Schools Admissions Documents 2015)

Map ref	School Name	Number on Roll	Capacity	Surplus Places	Surplus Capacity
1	Heron Hall Academy	172	180	8	4%
2	ARK John Keats Academy	135	180	45	25%
3	Edmonton County School	1316	1350	34	3%
4	Kingsmead School	1203	1210	7	1%
5	Winchmore School	1183	1200	17	1%
6	Southgate School	1214	1250	36	3%
7	Enfield County School	912	930	18	2%
8	Chace Community School	1042	1050	8	1%
9	Lea Valley High School	1036	1200	164	14%
10	Highlands School	1215	1200	0	0%
11	Bishop Stopford's School	615	930	315	34%
12	St Anne's Catholic High School for Girls	860	900	40	4%
13	The Latymer School	919	930	11	1%

Map ref	School Name	Number on Roll	Capacity	Surplus Places	Surplus Capacity
14	Broomfield School	691	1150	459	40%
15	St Ignatius College	864	900	36	4%
16	Enfield Grammar School	891	900	9	1%
17	Oasis Academy Enfield	877	900	23	3%
18	Oasis Academy Hadley	847	1200	353	29%
19	Aylward Academy	1126	1200	74	6%
20	Nightingale Academy	627	900	273	30%
21	Harris Academy Tottenham	73	90	377	19%
22	Tottenham UTC	32	210	178	85%
23	Homsey School for Girls	804	1080	276	26%
24	Highgate Wood Secondary School	1183	1215	32	3%
25	Northumberland Park Community School	1026	1050	24	2%
26	Fortismere School	1202	1215	13	1%
27	Gladesmore Community School	1223	1215	0	0%
28	Woodside High School	809	810	1	0%
29	Alexandra Park School	1081	1080	0	0%
30	Park View	1039	1080	41	4%
31	St Thomas More Catholic School	661	960	299	31%
32	Heartlands High School	968	945	0	0%
33	Greig City Academy	868	1000	132	13%
Totals		28,714	31,610	3,303	10.4%

Figure 14.6: Nurseries, Primary and Secondary Schools within 1km of the Project Site

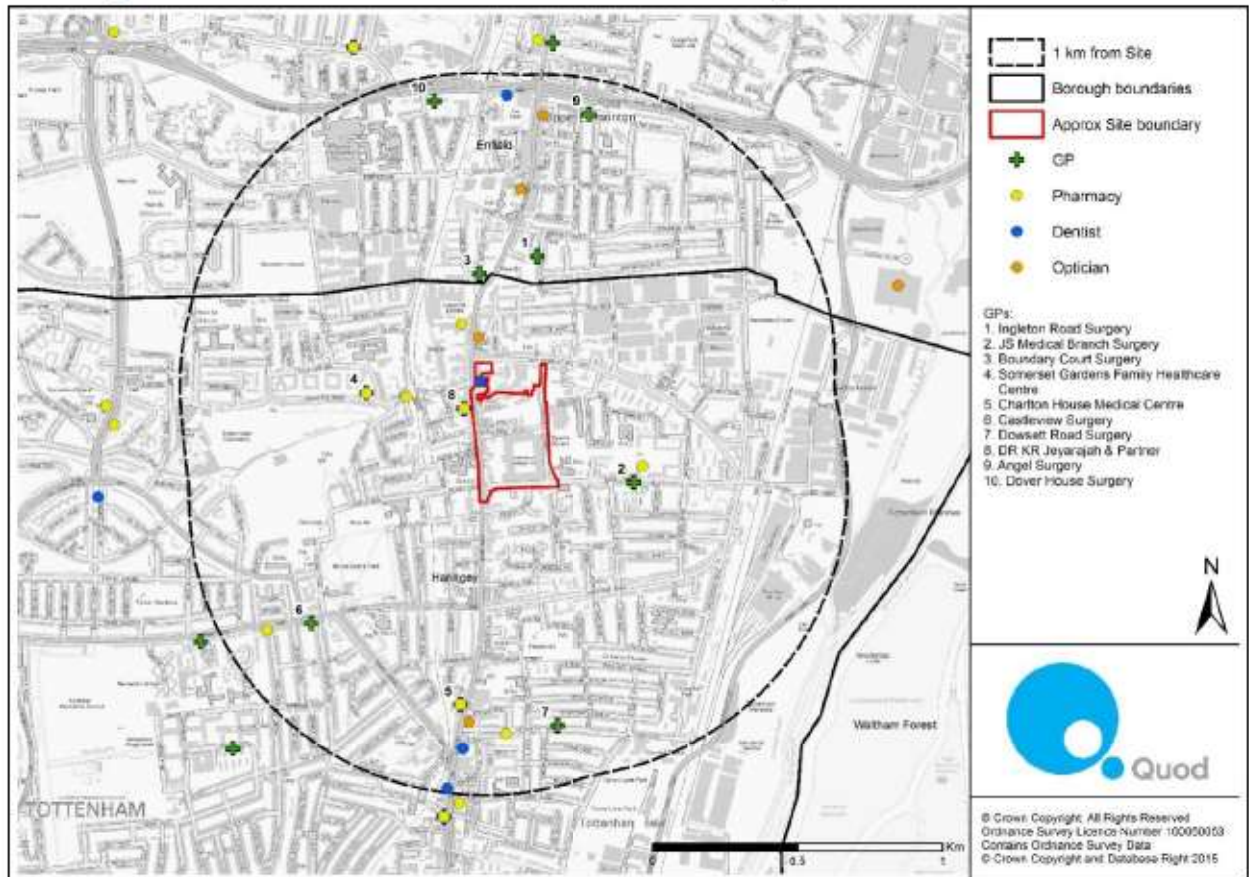


Healthcare Facilities

- 14.4.23 Existing healthcare facilities within 1km of the Project Site are shown in Figure 14.7 below.
- 14.4.24 There are 10 GP surgeries within 1km of the Project Site, with an average list size of 1,802 patients per GP (NHS Choices, 2015)⁴⁰. The Healthy Urban Development Unit (HUDU) suggests benchmark provision of 1,800 patients per GP. This indicates there is currently no surplus GP capacity available locally.
- 14.4.25 In addition, there are 8 dentists, 10 Pharmacies and 4 opticians within the 1km study area.

⁴⁰ Data unavailable for Ingleton Road Surgery, therefore this GP has been excluded from the analysis of existing capacity.

Figure 14.7: Healthcare Facilities within 1km of the Project Site



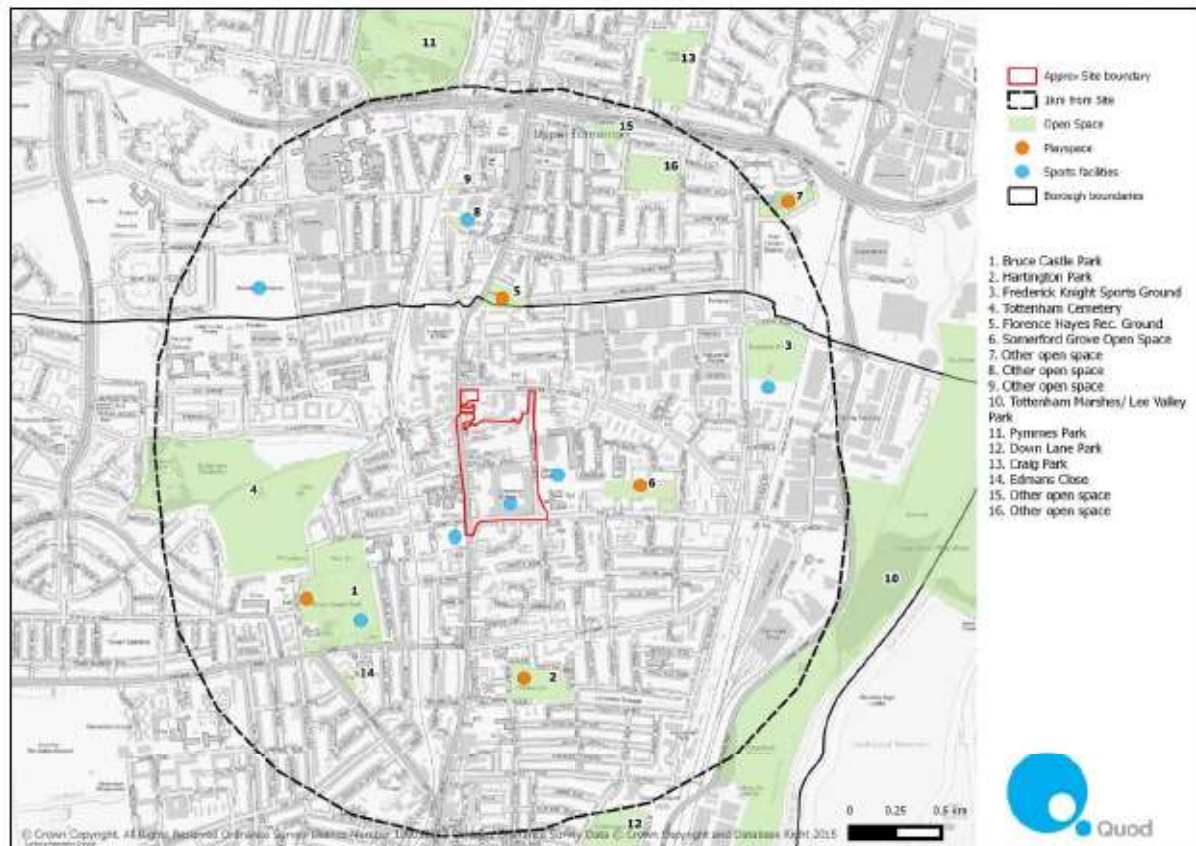
Public Open Space

- 14.4.26 LB Haringey policy identifies a need to use physical regeneration opportunities to create more and better open space and public realm. This is considered to be particularly important for parts of the borough with an identified deficiency of open space (including Northumberland Park).
- 14.4.27 Strategic Policy 13 (Open Space and Biodiversity) of LB Haringey's Local Plan (2013) outlines a requirement to enhance areas of identified open space deficiency and deliver open space infrastructure programmes as set out in the Infrastructure Delivery Plan (2012). Haringey's Open Space and Recreational Standards Supplementary Planning Document (2008) and Open Spaces Strategy (2006-2016) supports the Local Plan Strategic Policies (2014), and identifies areas deficient in public open space and play areas.
- 14.4.28 Much of Northumberland Park is shown as falling 'outside of 400m pedestrian catchment' from public open spaces in LB Haringey's evidence base. The nearest spaces are the Lee Valley to the east (although separated by the train line), Hartington Park to the south, and Bruce Castle Park to the west. However, Northumberland Park ward does perform well in terms of access to pitches in secured public use via Frederick Knight Sports Ground and Northumberland Park Sports Centre directly to the east of the THFC stadium.

14.4.29 Within 1km of the Project Site, there are eight public open spaces, including one 'Local Park' (Bruce Castle Park). It should also be noted that Tottenham Marshes District Park and Lee Valley Regional Park are located to the east of the Project Site, and Tottenham Cemetery is located within 1km to the west of the Project Site.

14.4.30 The open spaces within 1km of the Project Site are mapped in Figure 14.8 below.

Figure 14.8: Public Open Space, Playspace and Sports Facilities within 1km of the Project Site (Source: LBH Open Space Strategy; Greenspace Information for Greater London; Sport England)



Sports Facilities

- 14.4.31 Including the Tottenham Hotspurs Foundation, there are ten sports facilities within 1km of the Project Site. This includes four gyms/sports centres, three sports pitches and two community centres. These facilities are shown in Figure 14.8 above.

Tottenham Hotspur Foundation

- 14.4.32 Tottenham Hotspur Foundation, a not-for-profit body established in 2006, provides community benefits beyond the functions of the football stadium including programmes focussing on benefitting the community in terms of employment, education and health outcomes. Research suggests these programmes generated savings for central government totalling £7.8million in the 12 months to October 2014 – based on the Foundation having delivered 95,000 hours of work relating to community benefits. In addition it is estimated that the foundation, through its programmes and partnerships, leveraged approximately £7 million in additional investment to the tri-borough area over the last 7 years. Programmes relating to community benefits include:

- Employment and skills – research by Deloitte states the Foundation's job brokerage scheme has enabled hundreds of local people to find jobs, including by working with residents to develop skills to secure employment. This includes 216 jobs at Sainsbury's and 123 jobs at Centreplate taken by local residents. Jobs fairs are also regularly held at the stadium in order to connect local residents with employers – in the

first six months of 2015 four jobs fairs have been coordinated by the Foundation;

- Community development – a community development team delivers over 6,500 hours of free activities involving 1,500 young people every week – including facilitating sports activities, and mentoring and skills programmes;
- Health and wellbeing – the Foundation delivers programmes encouraging cycling, delivering health checks, and supporting with people with long-term and mental health issues;
- Education – the Foundation provides student mentoring programmes as well as degree-level education on-site in partnership with Middlesex university (as of June 2015, 100 students were studying a degree using the club's facilities), and also runs skills building programmes with young people with disabilities and long-term health problems;
- Inclusion – the Foundation runs a number of programmes targeting members of the community at risk of exclusion, including older people older people and people facing long-term health problems and mental illness; and
- Sports Development – a number of programmes delivered by the Foundation seek to provide pathways into sport and physical activity – including through coaching and maintaining clubs in badminton, judo, table-tennis and volleyball.

14.5 Potential Environmental Impacts and Effects

- 14.5.1 This assessment of operational impacts of the Project is set against policy objectives and baseline conditions summarised above.

Construction

- 14.5.2 Using standard ratios of construction employment to output, applied to estimated construction costs for the Project, it is possible to forecast the number of construction jobs that would be generated by the Project.
- 14.5.3 The construction impact of the Project is based on construction cost estimates for the various different elements of the scheme. A labour coefficient, or ratio between expenditure and FTE jobs supported is applied to the overall construction spend to estimate the person years generated. Based on the data outlined in the methodology section, construction employment is therefore assessed as approximately 3,560 person-years of employment. The Construction Industry Training Board (CITB) estimate that up to half of this employment may be situated off site in design, management, engineering, logistics and architectural roles⁴¹.
- 14.5.4 By convention 10 person-years of employment is equated to one permanent full-time equivalent job. On this basis the construction phase of the Project would generate around 356 full time equivalent (FTE) jobs. Over a four-year construction period this is equivalent to 890 FTEs. Works are currently underway in demolition and site preparation for the northern part of the Project, which will include a small proportion of these FTE jobs in civils contracting roles.
- 14.5.5 A programme of construction training will be agreed via a Section 106 Agreement with the Council to ensure that local people have access to employment arising from the Project.
- 14.5.6 The net effect of the Project during the construction phase against the baseline is considered to provide a

⁴¹ CITB Labour Forecasting Tool, 2015

minor beneficial impact at local and district level. At a regional level the employment impact of the construction phase is considered likely to be **negligible** due to the mobile nature of construction employment.

Occupation

Gross Employment

Football and Commercial Elements

- 14.5.7 The operation of a new, increased capacity football stadium will require extra on-site employment, particularly in part-time matchday roles, including stewarding and catering, hospitality, catering, ticket sales and other support staff. The most recent information from Tottenham Hotspur FC's Annual Report notes that there are currently 125 administration staff, and 67 retail and distribution staff at the stadium. In addition, around 570 staff are employed on matchdays in temporary, part-time positions.
- 14.5.8 Arsenal's move from Highbury to the Emirates Stadium is the best source of recent, London-based information for the requirement for additional employment resulting from stadium size increase. This suggests that there would be an expected increase of around 100 FTE jobs in a range of positions within the Stadium itself including the management of matchday and non-matchday events, and around 330 additional matchday staff employed in temporary, part-time positions due to the increased capacity and higher levels of catering and hospitality provided.
- 14.5.9 There would be further opportunities for employment related to non-football related activity seven days per week, some of which is accounted for in the increase in employment at the Club described above, but also in temporary and part-time employment in catering and hospitality for events and conferences.
- 14.5.10 There will also be a number of jobs created by the other commercial, leisure and retail elements of the Project, including the hotel, extreme sports centre and Tottenham Experience (including rooftop walk) set within a plaza environment.
- 14.5.11 The proposed 180 room 4* hotel (with 49 serviced apartments) would lead to an additional 185 FTE jobs (gross), based on standard assumptions of jobs per room.
- 14.5.12 The Tottenham Experience includes a museum and cinema, retail megastore and café along with ticket office and rooftop experience. Based on standard floorspace per job assumptions, this would lead to an additional 125 gross FTE jobs.
- 14.5.13 The extreme sports centre would be likely to include specialist climbing, diving and other facilities. Based on standard floorspace per job assumptions, this would lead to an additional 25 gross FTE jobs.
- 14.5.14 An area of flexible space will be provided within the Southern Residential Development, which would be brought forward as office or community space. Based on standard floorspace per job assumptions, this could generate between 55 and 265 FTE jobs.
- 14.5.15 Overall, the gross employment effect from the Project would amount to the creation of at least an estimated 490 FTE jobs (up to 700 FTE jobs dependent on the flexible space) and around 330 part-time roles on matchdays. If further growth of the Tottenham Foundation were to occur as planned, this figure would be higher. The level to which the stadium is used for non-football uses, including conferences,

events, other sports and concerts would have the potential to significantly increase the overall direct and indirect employment generation of the Project.

- 14.5.16 The Project would bring forward gross employment considered to be a **major beneficial** effect at the local scale and a **moderate beneficial** effect within the Wider Impact Area.

Labour Market Fit

- 14.5.17 The additional employment generated will primarily be in the service sector – in retail, leisure, hospitality and catering. The occupational breakdown of jobs in these sectors is comparable to both the local skill set of residents, but more crucially the sought occupation of current unemployed people - almost half of the people looking for work in Tottenham are seeking jobs in personal service, sales or customer service sectors (around 1,500 people), with a further 20% looking for process/elementary level work.
- 14.5.18 This demonstrates a very good fit between the large number of entry-level jobs in the Project and the types of jobs in demand locally. There is also a high proportion of managerial employment in these sectors, and large employers are keen to train and retain staff, offering opportunities for local residents to gain and keep jobs, and progress to other opportunities in the sector while gaining new skills.
- 14.5.19 The 'gateway' role of retail employment has been noted as a major beneficial role of the sector in London's economy. The sector can provide part time, flexible work for local residents, often those at risk of exclusion from the labour market, but can also reduce under-employment, and allow people to gain key employability skills.
- 14.5.20 Retail employment in London tends to have a strong local catchment. Currently, around 13% of jobs in Northumberland Park are taken by residents, and around 50% from the Wider Impact Area. GLA data shows that of retail jobs in London, over 40% are taken by residents of the same borough compared to 30% for all jobs.
- 14.5.21 Overall, the employment generated through the operation of the completed Project is considered to be a **major beneficial effect** at the local level. The baseline assessment indicates that the local area has high unemployment levels and low skills attainment, and this Project presents the opportunity for the Club and Council to work together with local agencies to improve job prospects for local people in-line with the objectives of Haringey's planning and regeneration policies.

Local Spending

Household Spending

- 14.5.22 Increased levels of spending would be expected as a result of the introduction of a new residential population. The average household expenditure in London (excluding non-local expenditure) is around £260 per week⁴², including food and local services. The additional 585 homes provided within the Southern Development would therefore be expected to generate around £7.9m per year in household spending, dependent on the local comparison and convenience retail offer.
- 14.5.23 There are currently around 5,600 households in Northumberland Park ward. If the average household expenditure above is applied to the current households in the ward, the Project would increase local

⁴² ONS Family Spending (2014 Edition) Ae 2011-2013

household expenditure by around 10%.

Employee Spending

- 14.5.24 There is expected to be an associated increase in local spending caused by increased employment. Total net additional FTE employment created by the Project is estimated to be around 407 FTE jobs at the club and commercial development, not including temporary matchday staff, in the Inner Impact Area. Based on an average daily spend of £10.59 per day on food and drink alone, this would result in an increase of around £950,000 per year.

Football Spending

- 14.5.25 Over the past five seasons, Tottenham Hotspur played on average 28 friendly and competitive home matches per season, with an average attendance at around 98% of the official capacity. Increasing the stadium to 61,100 capacity could increase the number of match-related visits by almost 700,000 per year (approx. 70% increase from the current visitor draw).
- 14.5.26 There are a number of metrics used by economists and researchers to estimate the amount of time and money spent inside and outside football stadia by supporters on matchdays on food, drink and entertainment. Based on a conservative 60% of supporters spending locally outside the ground, and an estimated range of between £2 to 10 per supporter, the improved stadium could result in an additional £0.8m to £4.2m being spent in the local area each year.
- 14.5.27 More optimistic estimates of spending, for example that used in Brentford FC's recent "Community Benefits Statement" appended to their planning application for a new stadium estimate that this figure could be up to £17 per match day, with around 63% being spent outside the stadium in the local area. If this is achieved, the benefit to the area around THFC could be up to an additional £7.5m each year.
- 14.5.28 Recent research by Deloitte into a match at the current stadium in April 2015 estimated that fans visiting THFC from elsewhere in London (31% of visitors) spend around £34 per visit in the Wider Impact Area and £5 elsewhere in London, while those from elsewhere in the UK (55% of visitors) spent an average of £20 in the Wider Impact Area and £10 elsewhere in London. Visitors from overseas spend substantially more (£20 in the Wider Impact Area and £94 in London) and make up the remainder of the visitors. If these figures were applied, football activities would generate around £41m in the Wider Impact Area and £34m spending elsewhere in London each year.

Major Events (including NFL) and Concerts

- 14.5.29 It is anticipated that the stadium would host up to 10 'major events' each year, including at least two NFL games (this could increase over time and has the potential to develop into a permanent franchise base).
- 14.5.30 This approach has the potential to deliver long-term economic and social benefits to businesses and residents already in Tottenham and LB Haringey, but also goes beyond this in terms of anchoring regeneration strategies and plans for new homes and developments (and transport links e.g. at White Hart Lane) to the south and west of the new stadium.
- 14.5.31 The critical mass generated by promoting the Stadium as an NFL venue would be seen directly, for example through NFL retail and enhanced tours, but also indirectly through its branding as a 'destination' in North London – with increased visitor draw supporting other leisure and retail facilities in and around

the stadium (cinema, shops etc).

- 14.5.32 Research by Deloitte suggests that a two game series could attract at least an additional 120,000 visitors to the area each year, estimated to generate a direct economic impact of £21.4m in terms of spending across London. The proportion estimated to be retained in the Wider Impact Area is around £2.4m. This is based on an average spend per visitor in London that is consistent with recently available public information from the 2012/13 London Tourism Report (London & Partners, 2014).
- 14.5.33 This impact assessment is based on the understanding that the NFL International Series would be increased to 4 matches, split between Tottenham Hotspur FC and Wembley. Given the growth in popularity and demand for tickets, once established there is the potential more games per season are played in London and at the new stadium, or a scenario in which a franchise takes up occupancy at the new stadium, resulting in significantly higher economic benefits.
- 14.5.34 The multi-use surface would be laid under the grass football pitch, which would be removable, so as not to interfere with the Stadium's primary football function. However, it would create the opportunity for a multitude of other events to take place here, intensifying the (currently fortnightly) use of the arena and bringing with it the economic benefits of increased visitor draw.
- 14.5.35 The (up to) eight additional major events, based on a similar level of attendance and expenditure as football matches described above, could generate an additional 480,000 annual visitors with an expenditure of up to £12m in the Wider Impact Area and £10m in London. This is regarded as an upper estimate and would depend on the type, timing and characteristics of the events.
- 14.5.36 In addition to these major events, the stadium will be able to hold up to 6 concerts per year, with a capacity of 55,000, generating a total of up to 330,000 visitors per year. Based on expenditure figures outlined above, this could generate an additional £0.7 to £8m expenditure in the Wider Impact Area on food, drink and recreation, and up to £6.7m in London.

Conferences

- 14.5.37 Conferencing/banqueting currently has a turnover of £560k in the current facilities at the stadium – planned to increase to £1m in 2015. A Report by The Right Solution Ltd to THFC outlined assumptions that between 73,800 to 81,180 'delegate days' could be achieved by the improved and increased facilities, of which 30% are assumed to require accommodation in the area, leading to an additional 24,540 overnight stays. Due to the nature of these events, spending in the local area on food and drink is likely to be low, although there is a possibility for enhanced tourism through linked trips. Revenue to the club and enhancement of the area's reputation as a business destination are likely to be the key benefits.

Tottenham Experience and Rooftop Walk

- 14.5.38 The Tottenham Experience includes a café, retail store and museum, and is expected to generate visits both on matchdays but also as a destination in its own right, catalysed by the active environment created by the rest of the commercial and residential elements in the Southern Development. A feasibility study has indicated that the rooftop walk could draw between 45,500 to 96,600 per year. If spending is anticipated to be in the same range as football visits, with the same proportional split of London-based, UK-based and international visitors, this could generate annual spending in the Wider Impact Area of £91,000 to £2.4m and up to £2m in London.

14.5.39 The current museum and tours at the stadium generate 18,500 visitors per year. It is anticipated that an improved offer, along with linked trips to events, rooftop walk, retail and leisure elements would substantially increase this figure to around 120,000 based on comparator facilities in London. If spending is anticipated to be in the same range as football visits, with the same proportional split of London-based, UK-based and international visitors, this could generate annual spending in the Wider Impact Area of £200,000 to £2.9m and up to £2.4m in London.

14.5.40 Commercial arrangements may mean that an element of the visitors to the Tottenham Experience and Rooftop Walk would visit both facilities, and to some extent the economic impact outlined above would therefore be a maximum estimate.

Hotel

14.5.41 Assuming a conservative approach to hotel occupancy at one person per room and around 81.25% capacity used (London average 2008-2013, PWC, 2014) the 180-room hotel would bring a further 53,000 overnight visitors to the area each year. Assuming that match day visitors would account for around 10,000 of these overnight stays, and non-match day event visitors a further 10,000 this would leave a net additional number of visits of 33,000. Using the expenditure range described above this would provide a net additional £65,000 to £560,000 additional expenditure.

Extreme Sports Centre

14.5.42 Analysis of similar facilities in London, including those with regionally-significant visitor draw as a result of climbing facilities, suggests that the extreme sports centre could attract in the region of 100,000 visitors per year. If spending is anticipated to be in the same range as football visits, this could generate net additional annual spending in the Wider Impact Area of £200,000 to £2.4m and up to £2m in London.

Spending - Combined

14.5.43 The increased spending would generate more employment in the wider area as a result of jobs supported by spending on goods and services. The impact of football and other event-related visitor expenditure is likely to increase substantially, and is considered a **major beneficial effect at the local scale**, and a **moderate beneficial effect in the Wider Impact Area**.

Population & Homes

14.5.44 The Project includes the construction of 585 new homes split between 20 studios, 268 1-bedroom flats, 268 2-bedroom flats, 24 3-bedroom flats and 5 3-bedroom townhouses set in four towers of between 16 and 32 storeys to the south of the new stadium. It is currently assumed that all of these homes will be privately rented or sold.

14.5.45 The Project represents a contribution to Haringey's minimum annual new homes target for 2015/16 to 2024/25 as set out in the London Plan 2015 (consolidated with alterations since 2011) of 1,502 homes, and represents a significant contribution to reaching the targets of the Upper Lee Valley Opportunity Area.

14.5.46 The effect of new homes therefore represents a **major beneficial effect** at the local and district levels, and a **minor beneficial effect** at the regional scale. The impact is in-line with policy aspirations at all scales.

Community Facilities – Healthcare & Education

- 14.5.47 The population of the residential element of the Project is likely to be around 900 people, of which around 40 would be children. This population could create demand for community facilities, including education and healthcare, open space and other community facilities, and is assessed in terms of both these potential effects on capacity and expenditure generated.
- 14.5.48 The additional primary healthcare needs of the population forecast would equate to demand for around 0.5 GPs to maintain current levels of provision. The Project includes the provision of a community health facility which will host an NHS health centre including a GP surgery, facilities for other health specialists and represent increased access for new and existing residents. As such, the Project will have a **minor beneficial** effect on access to healthcare in the local area.
- 14.5.49 The total number of school age children within the residential element of the Project is estimated at around 40, of which around 10 would be of primary school age and 5 would be of secondary school age.
- 14.5.50 There are currently around 155 surplus places in Primary Schools within 1km of the Project Site, equating to around 3% surplus capacity. The additional primary school age population generated would result in a **negligible** impact at all scales, as it would be expected that these children could be accommodated in existing capacity.
- 14.5.51 Children of secondary school age are likely to travel further to school than primary age children and therefore capacity is assessed across Haringey and Enfield. Within schools in the two boroughs, there is currently a surplus capacity of around 3,000 places across all ages, including the recently opened Tottenham UTC. The effect on demand for school places is therefore expected to be **negligible** at all scales.

Open Space and Public Realm

- 14.5.52 LB Haringey's Planning Obligations SPD (2014) highlights that the whole borough is deficient in publicly accessible open space, and in accordance with the Local Plan Strategic Policies, the Council will seek to deliver open space as strategic infrastructure via CIL in the case of Metropolitan Open Land and Strategic Local Open Land. The Infrastructure Delivery Plan states that, in the east of the Borough, opening up access to the Lea Valley Regional Park is a key priority. Other measures such as tree planting and improving access to allotments, and the creation of green routes are also identified as having a role in improving green infrastructure provision.
- 14.5.53 The Planning Obligations SPD (2014) states that public, communal, amenity and private open spaces will be required in line with standards set out in the Mayor's Housing Design Guide SPG. However, this SPG does not provide definitive standards in terms of public open space.
- 14.5.54 Currently, the emerging LB Haringey Preferred Options Draft Development Management DPD (2015) refers back to standards set out in the Open Space & Recreation Standards SPD (2008) for 1.64 ha of public open space per 1,000 people. Applied to the housing mix in this Project, and using the average household occupancy levels in Table 1.5 of the SPD, this would require approximately 1.48 ha of public open space (park) to maintain baseline standards.
- 14.5.55 The Mayor's Housing SPG Standard 4.10.1 (2012) / London Housing Design Guide (2010) state that

residential development should seek to provide a minimum of 5sqm of private outdoor space for 1 and 2 person dwellings and an additional 1sqm should be provided for each additional occupant. This standard has since been carried through to the Draft Interim Housing SPG (2015).

- 14.5.56 With a total of 585 homes proposed, the majority of which will be flats, the Project could generate a requirement for approximately 3,260sqm of external private open space based on GLA guidance.
- 14.5.57 All flats will have private amenity space, either as inset or semi inset balconies, wintergardens or private roof or plinth-level terraces. A minimum of 5sqm of private outdoor space is provided for 1-2 person dwellings and an extra 1sqm is provided for each additional occupant, to meet GLA guidelines.
- 14.5.58 In addition, each tower will have a roof garden, with the combined area comprising 860sqm, and there will be a combined 2,850sqm of community amenity space provided at a residential plinth between Towers A and B.
- 14.5.59 Public open space will be provided within an area comparable in size to Trafalgar Square to the south of the stadium and includes a multi-use games area, high quality landscaping, cafes, dedicated events and community programmes managed by the Tottenham Hotspur Foundation.
- 14.5.60 In the context of open space deficiency outlined in the policy and baseline sections above, this provision of space will bring a **major beneficial effect** at the local scale. In addition to the amenity benefits provided by the investment in new buildings, the retained listed buildings and the public realm will also contribute to maximising the economic benefits described above.
- 14.5.61 The improved amenity space and public realm is also likely to increase both footfall and dwell time along the High Road supporting existing businesses and creating the potential for vacant buildings to be returned to beneficial uses.

Children's Play Space

- 14.5.62 The Mayor's SPG (Shaping Neighbourhoods, 2012) requires 10sqm per child of play space to be provided as part of the Project. By applying the Mayor's child yield calculator to the proposed unit mix, it is expected that approximately 41 children (between 0 and 17 years of age) will live within the residential element of the Project. The age profile of those children and the play space requirements of each age group is provided in the following table:

Table 14.8: Indicative Play Space Requirements⁴³

Age Group	No. of Children	Play space Requirement
Under 5	25	250 sqm
5 to 11	9	90 sqm
12+	7	70 sqm
Total	41	410 sqm

- 14.5.63 The Mayor's SPG (Table 4.7) requires that developments which expect to accommodate between 30-49

⁴³ Child yield model used in the Mayor's Shaping Neighbourhoods – Play and Informal Recreation SPG (2012)

children should seek to provide on-site play space for all children aged 11 and younger. Provision for older children (12+) may be provided off-site within 800m from the Project Site. There are parks comprising play space for older children within 800m of the Project Site, including Bruce Castle Park.

- 14.5.64 According to Table 14.8 above, the scheme generates demand for 340sqm of play space for 0 to 11s on-site. The needs of these children will need to be met within the Project Site. The spatial layout of the Project Site should be designed sensitively to avoid shortfalls in play space provision, particularly for younger children, as under 5s are expected to be able to access play space within 100m of their homes.
- 14.5.65 The Project Site provides a combined 410sqm of playspace within the residential plinth at Tower D and in two areas between Towers B and C, which meets and exceeds the required amount of playspace on-site for residents of the Project Site. In addition to the significant public realm within the plaza to the south of the stadium, the proposed playspace provision will have a **minor beneficial** effect at the local scale.

Sport & Recreation

- 14.5.66 LB Haringey's Key Infrastructure Delivery Plan (Appendix 4 to the Local Plan Strategic Policies) identifies the White Hart Lane Community Sports Hub as a sub-regional hub on the advice of the London Playing Fields Association needs analysis. In the wider area, there are aspirations to develop Tottenham High road as a sub-regional sports and leisure hub.
- 14.5.67 The Infrastructure Delivery Plan refers to LB Haringey's Open Space and Sports Assessment SPD (2008) for assessments of current deficiency and need.
- 14.5.68 The Project provides formal sport and leisure provision in the form of an Extreme Sports Centre which would aid in the aspirations of local policies in developing a sub-regional sports and leisure hub at Tottenham High Road. In addition, the plaza to the south of the new stadium will include a multi-use surface on which the Tottenham Hotspur Foundation will run community sports activities.
- 14.5.69 The likely impact of a net additional 900 residents, against the standards set out in LB Haringey's Open Space and Sports Assessment SPD (2008) and development that has occurred in Northumberland Park and Tottenham since the assessment, combined with the additional facilities created by the Project, would be of **moderate beneficial** significance within the Inner Impact Area.

Crime and Safety

- 14.5.70 Propensity for crime is affected as much by underlying social factors as the physical environment, and as such it is not possible to provide a quantified assessment of the impact of a development project on crime (or fear/perception of crime).
- 14.5.71 The new stadium will see an increase in matchday visits, as well as non-match event visitors. The residential element will increase the overall population, and the public realm, open space, community facility and commercial development will increase visits, expenditure, improve the active street scene and physical environment.
- 14.5.72 Research into the Home Office dataset on football-related arrests and banning orders identified that for clubs who have increased their capacity by moving to or replacing a stadium have not experienced significant increases in arrests. Evidence from the closest London-based comparator (Emirates Stadium)

highlights that match-day arrests have remained constant since Arsenal's move from Highbury, and crime rates in the wider area have fallen.

- 14.5.73 A larger stadium can broaden the range of fans attending, and can allow more room for family or corporate areas. A modern design will allow for improved crowd management, and the Club will continue to work with the Metropolitan Police and other bodies to manage and mitigate the potential for disorder.
- 14.5.74 The wider Project Site provides a range of uses that will animate the newly created public areas and provide an enhanced level of natural surveillance. The creation of high quality and well-maintained spaces with increased activity would contribute to an improved perception of safety and reduced fear of crime. The public spaces will be well lit and monitored by CCTV, and incorporate the principles of the Metropolitan Police's "Secured By Design" guide and general measures to design out crime.
- 14.5.75 Details of the scheme's design in accordance with modern accessibility, design and safety standards are provided within the **Design & Access Statement**.
- 14.5.76 To ensure that crime rates are not unduly affected by increases in capacity at Tottenham Hotspur, the Club is committed to the production and implementation of a **Stadium Management Plan** which would deal with all public safety, crime, prevention and local transport management issues related to the Project Site whenever the Stadium is in operation for football or non-football events. The Stadium Management Plan includes:
- Event Management Plan led by the Club;
 - Operations Plan led by Metropolitan Police;
 - Local Area Management Plan led by the Club;
 - Stadium Travel Plan led by the Club; and
 - Monitoring Programme led by the Club.
- 14.5.77 Overall, the improvement to the physical environment, improved activity levels, and mitigation by design principles committed to by the Club represent a **major beneficial effect** at the local level.

Community Activity – Tottenham Hotspur Foundation

- 14.5.78 The Project will enable the Tottenham Hotspur Foundation to take up new office space in Percy House. The Foundation will continue to operate within the community, and there could be scope to increase its impact and effectiveness given the improved facilities and increased brand presence of the Club. The Foundation will be able to build on its role of brokering employment opportunities, engaging hard-to-reach groups, facilitating educational programmes, and attracting investment.
- 14.5.79 There would be scope for the Foundation to further increase its contribution to the local area, using the public space to the south of the new stadium as a platform for community building events and managing the space in a way that maximises its use by all members of the community. The Foundation and Club have developed a range of potential activities that could utilise the new stadium and public open space as well as roll out further off-site activities. The public space is a key part of this, with a multi-use surface that would be used to organise sports, leisure, health and well-being activities.

Club Moving off site

- 14.5.80 The Project necessitates that for at least one season the Club will play its home fixtures away from its current location. At this stage, the Club is holding discussions with regard to possible venues for this season, and as such it is not possible to identify whether there would be net effects on employment and spending at a London-wide scale.
- 14.5.81 At the local scale, there is likely to be a temporary, short-term adverse effect related to loss of local spending on the average matchdays per season, and associated with other events. However, there would be a level of mitigation in terms of the temporary spending effect of construction workers in the local area.
- 14.5.82 Given that this is a short-term effect, which is necessitated by the design and which would result in a faster construction period with less disruption than proposed in the consented scheme, and bring forward significant, long-term, permanent economic benefits above and beyond the current Project Site and its uses, no specific mitigation is envisaged.

14.6 Additional Mitigation, Compensation and Enhancement Measures

- 14.6.1 The likely impacts of the proposals described above are largely positive and support the delivery of local, regional and national Government objectives. The measures proposed by the club are therefore largely focussed on enhancing these effects rather than mitigating impacts.

Construction

- 14.6.2 The Club will work with Haringey Council and other partners to maximise the significant beneficial impacts of the construction phase of the Project. This will include:
- A **Construction Employment Programme**, including provision of labour demand information, local advertisement and recruitment and customised training;
 - A **Local Labour Programme**, including targeted activities to ensure local people can access employment at the Club and with its suppliers; and
 - Business engagement and supply chain initiatives.

Operation

- 14.6.3 The Club will work with Haringey Council and other partners to maximise the significant beneficial impacts of the operational phase of the Project. This will include:
- Engagement in local area management, town centre management and area promotion, involving the Club, its suppliers, the hotel and events organisers;
 - Enhanced engagement by the Tottenham Hotspur Foundation with local schools, and in sports development activity in the local area;
 - The integration of a dedicated training programme for the hospitality industry within the 180-room hotel within the Project Site; and
 - Business engagement and supply chain initiatives.

Cumulative Impacts

- 14.6.4 A number of prospective developments in the Inner Impact Area could have cumulative socio-economic effects with respect to employment, spending, housing provision, population, and demand for social infrastructure such as schools, healthcare and open space. These developments are detailed in Chapter 3.
- 14.6.5 The assessment of cumulative effects presented below considers the effect of prospective Major Development (development comprising 200 or more residential and/or 10,000 sq m commercial floorspace) within, or very close to, the boundary of the Inner Impact Area. The expected effects of the Project have been included as it is expected these effects would supersede those associated with the consented scheme should the Project come forward.
- 14.6.6 Only 'major developments' have been included in the cumulative impact assessment due to the comparative size of the Project – it is expected that any impact of a smaller development would not materially affect the significance of the effects already assessed as part of the Project on its own. Other major developments will have a similar scale of effects which are therefore more likely to influence the cumulative or combined effects in the area.
- 14.6.7 In addition, information on policy-committed development proposals without planning applications / permissions (i.e. for High Road West and Northumberland Park Regeneration) has been identified through a review of the High Road West Masterplan (September 2014) and the Northumberland Park Strategic Framework Report (February 2015).

Construction

- 14.6.8 There is insufficient publically available information to carry out a quantitative assessment of the construction effects of the cumulative developments, due to the sensitive nature of construction cost information. However, due to the mobility of the construction workforce and in the context of the size of the existing construction workforce at a regional level, the overall effect is likely to be negligible to minor beneficial at the regional level, although there is the potential for local benefits to be derived through employment and training programmes.

Operation

- 14.6.9 The cumulative schemes would bring forward a range of uses including residential, student accommodation, office, retail, leisure, hotel and community floorspace.
- 14.6.10 Cumulative effects on employment have been assessed by reviewing the planning applications and policy documents relating to the relevant schemes. Where an employment figure was not available, the methodology used within this chapter has been applied to the employment generating floorspace in order to estimate the jobs associated with the planned development. Should all schemes assessed come forward as planned, they would generate up to approximately 1,090 net full-time equivalent jobs. These jobs will offer employment opportunities for local people and will generate significant spending effects. Both employment and associated spending from employees is assessed to be a **moderate beneficial** impact at the borough level. In addition, policy documents associated with the Northumberland Park Regeneration plans state that new development would include employment generating uses such as workspace and new shops. However, detail regarding the quantum of net employment this would

generate is not yet available and has therefore not been included as part of this assessment (although any further net additional employment created would be expected to have a beneficial effect at the borough level).

- 14.6.11 In terms of effects on housing provision, overall, the cumulative schemes are expected to bring forward up to an estimated additional 6,360 residential units and 700 units of student accommodation. Including the Project, and excluding the student accommodation, this represents 6,940 homes which represents a significant contribution towards borough housing targets of 1,502 homes per annum. These units comprise approximately 45% of Haringey's 10 year housing target for the years 2015-2025 (London Plan, 2015). The cumulative effect on housing provision in the borough is therefore assessed to be a **major beneficial** effect, and a **minor beneficial** effect in the context of London-wide housing targets.
- 14.6.12 The residents accommodated by the residential units would create an increase in demand for community facilities including schools, open space, healthcare and leisure facilities. Population assumptions have been made for this assessment of cumulative effects using the average household size for LBH for all types of homes. This provides an estimate that the cumulative schemes would accommodate approximately up to an additional 16,600 residents within, and just beyond the boundary of, the Inner Impact Area. Some demand for community floorspace will be met through the provision planned as part of a number of the cumulative schemes. This includes:
- The provision of a primary school, a crèche and a healthcare centre as part of the Hale Village scheme;
 - Provision of space for community/leisure uses as part of the Haringey Heartlands scheme – located just beyond the boundary of the Inner Impact Area;
 - Planned provision of a health centre, crèche, sports centre, and learning centre (to include a library, ideas store, enterprise workspaces and a community centre) as part of the High Road West Masterplan; and
 - Provision of a new health centre, and new/expanded education facilities including a new all-through school and potentially a new primary school as part of the Northumberland Park Regeneration Area.
- 14.6.13 These facilities will contribute towards meeting the needs of the new population brought to the area by these and other planned cumulative schemes. It is expected that those effects not mitigated through on-site physical provision will be delivered through S106/CIL monies in line with the infrastructure requirements identified in LB Haringey's Planning Obligations SPD (2014). Following mitigation where required, the cumulative effect in terms of demand for social infrastructure is expected to be **negligible**.
- 14.6.14 Overall these schemes together with the Project, would generate new employment, have a positive impact on the local economy through increased spending, and deliver new housing and new social infrastructure, which together would have a **beneficial** effect in terms of socio-economics.

14.7 Assessment Summary and Residual Environmental Impacts and Effects

Construction

- 14.7.1 The employment impacts associated with the construction phase are beneficial and therefore do not require additional mitigation. However, The Club will work with Haringey Council and other partners to enhance the beneficial impacts through programmes identified in the previous section.

Operation

- 14.7.2 The additional mitigation and enhancement activities referred to above will enhance the beneficial effects described above and ensure a **major positive impact** at the local level.
- 14.7.3 The benefits of visitor expenditure will be enhanced through the **Transport Strategy**, which details aims to stagger the arrival of fans by offering better facilities in and around the stadium. THFC already has a relatively high proportion of fans that arrive in the area early on matchdays, and therefore this is a significant contribution to the positive aspects of visitor expenditure.
- 14.7.4 The Club will adopt a **Stadium Management Plan**, which will deal with all the public safety, crime prevention and local transport management issues and mitigate the impacts of increased visitor numbers. The residual impact on these issues will therefore be **negligible**.
- 14.7.5 The Project will provide a significant improvement in the public realm at the Project Site and a true public square for community use on the High Road, and has developed a clear vision for the multi-functional public space in front of the stadium, which will act as a focus for events (some organised and run by the TH Foundation) and activities.
- 14.7.6 The proposed residential element of the Project will yield an estimated population of around 910 people, requiring community facilities including primary healthcare and education. Due to relatively small child numbers in the Project Site the impact of this on schools will be **negligible**.

Table 14.9 Socio-Economics Assessment Summary

Environmental Effect	Sensitivity of Receptor	Nature of Impact	Impact Magnitude	Significance	Additional Mitigation	Residual impact Magnitude	Residual Significance of Effect
Construction Effects							
Employment generation	Medium	Beneficial	Low	Minor (local) Negligible (regional)	None required	Low	Minor (local) Negligible (regional)
Operational Effects							
Gross Direct Employment	Medium	Beneficial	Medium/High	Major (local) Moderate (Wider Impact Area)	None required	Medium/High	Major (local) Moderate (Wider Impact Area)
Visitors & Spending	Medium	Beneficial	Medium/High	Major (local) Moderate (Wider Impact Area)	None required	Medium/High	Major (local) Moderate (Wider Impact Area)
Provision of new homes	Medium	Beneficial	Medium/High	Major (local and Wider Impact Area) Minor (regional)	None required	Medium/High	Major (local) Moderate (Wider Impact Area)
Healthcare requirements (including delivery of Community Medical Centre)	Medium	Beneficial	Low	Minor (local)	None required	Low	Minor (local)
Education	Low	Neutral	Low	Negligible	None required	Low	Negligible
Open Space and Public Realm including provision of plaza and improvements to public realm	Medium	Beneficial	Medium	Major (local)	None required	Medium	Major (local)
Play space provision	Low	Beneficial	Low	Minor (local)	None required	Low	Minor (local)
Sport and recreation	Medium	Beneficial	Medium	Moderate (local)	None required	Medium	Moderate (local)
Crime and Safety	High	Beneficial	Medium	Major (local)	None required	Medium	Major (local)

15. Traffic and Transport

15.1 Introduction

- 15.1.1 This chapter of the ES has been produced by Tim Spencer & Co and has had input from other members of the project team including, Buro Happold Consulting Engineers and Movement Strategies. It has also drawn from documents produced for the 2010 and 2012 applications including the Transport Assessment, the PERS Audit undertaken by TRL in 2015 and the visitor assessment by Quod.

15.2 Assessment Criteria and Methodology

Previous Assessment

- 15.2.1 The Project Site is split into three areas:
- The Northern area – located south of Northumberland Park has recently been developed and now comprises a Sainsbury's superstore, offices, education uses and car parking.
 - The Central area – located to the north of Paxton Road is currently under development to provide a 61,000 seater stadium for Tottenham Hotspur Football Club.
 - The Southern area – is located to the south of Paxton Road. The new stadium will incorporate Paxton Road and the southern stand is to the south. It is proposed that a hotel, residential uses, the Tottenham Experience and an extreme sports facility are provided on this site.
- 15.2.2 A planning application covering all three areas was submitted in 2010 and a Transport Assessment prepared to accompany the submission. Since the original submission, the proposals for the northern area have been implemented and occupied. In addition, revised development proposals for the central and southern areas have come forward and a revised planning application for them has been submitted. Two updated Transport Assessment documents have been prepared as follows:
- Non-Major Event Day Transport Assessment and Travel Planning 2015; and;
 - Major Event Day Transport Assessment and Travel Planning 2015.

Scoping Opinion

- 15.2.3 There has been a series of pre-application meetings held with TfL and LB Haringey, to discuss the key transport issues arising from the Project. A substantial amount of information has been submitted before and after the meetings, with on-going dialogue between all the parties. The Major Event Day TA was discussed in May to July 2014 and the Non-Major Event Day was discussed in August 2015.

Legislative Context

- 15.2.4 There is no legislation relevant to this topic. The key guidance is given in planning policy.

Planning Policy and Guidance

- 15.2.5 The London Plan, the Mayor's Transport Strategy and various documents produced by the London Borough of Haringey have been used to provide a framework which has informed the development of the proposals and the Transport Assessments.
- 15.2.6 The key policies which are of relevance to this chapter are the local transport improvements either, completed, underway or committed and the car parking standards.

15.3 Baseline Conditions

Baseline Data Collection

- 15.3.1 The existing transport conditions are similar but not exactly the same as those comprehensively surveyed in 2003, 2007, 2008 and 2009. In particular highway traffic flows were resurveyed in 2015 and give an updated baseline.

Highway Network

- 15.3.2 The highway network is dominated by the A1010 High Road which runs in a north south direction and links to the A406 North Circular in the north and the A10 in the south.
- 15.3.3 The updated traffic information gathered in 2015 shows that there has been a significant decrease in traffic flows in the local area since the previous surveys carried out in 2009. This finding is in line with the 2011 census data which reveals that at the DfT count point along the High Road there has been a drop of 18% in flows between 2001 and 2011. The results should also be seen in the context of the removal of uses, and therefore trips, from the central site and that the northern development has been completed and occupied.
- 15.3.4 There have been comprehensive changes made to the Controlled Parking Zones (CPZs) across Tottenham. These changes were brought into effect in early 2014 and now cover match days and non-match days.
- 15.3.5 An analysis of accident data shows that the accident rate along the High Road for a three year period 2012 to 2014 indicates that the accident rate is well below the national average for an A road and below the average for Haringey. Although the yearly average is for 19 accidents (18 slight and 1 serious) there have been no fatalities in three years. Therefore, there is no accident issue associated with the Project proposals.

Public Transport

- 15.3.6 The local area is very well served by public transport. An indicator of this are the PTAL ratings for various locations of between 3 and 5, which is 'average' and above.
- 15.3.7 The rail stations (national rail and Overground) at White Hart Lane, Bruce Grove, Seven Sisters, Northumberland Park and Tottenham Hale can all be accessed from the Project Site. Seven Sisters and Tottenham Hale Stations are also served by the Victoria Underground Line. National Rail and Overground services have high train frequencies of between 2 and 10 trains per hour in the periods. The Victoria Line is currently running a reduced service as engineering works take place to facilitate the new 36 trains per hour timetable. The rail and underground surveys indicate that there is spare capacity available on all

services.

- 15.3.8 The Project Site is well served by a range of bus services, all running high frequency services.

Pedestrians

- 15.3.9 The 'Pedestrian Environment Review System' Audit, a method developed by TRL to assess the quality of the pedestrian environment, was updated in 2015. Although, the updated PERS Audit undertaken notes that the local environment for pedestrians has improved since 2010, the report still makes recommendations for some quick wins which will improve the local area. In particular gum, litter and graffiti removal, de-cluttering and works to dropped curbs and tactile paving are suggested.

Census Data

- 15.3.10 Data from the Office of National Statistics has been used to give an indication of direction of commuting trips from London Borough of Haringey in 2011. Two thirds of people travelled to six destinations, Westminster/City of London (22.7%), Haringey (15.9%), Camden (12.6%), Islington (9.7%) and Enfield (5.2%). The data also reveals that public transport use for the journey to work has increased by 14%.

Existing Stadium

- 15.3.11 The existing stadium currently provides little in the way of event day facilities (such as bars or restaurants) or entertainment to attract or retain spectators before or after the event. The result is that people arrive close to the start of the event and leave soon after the end.
- 15.3.12 The results of the 2003 surveys highlighted a perception amongst spectators of the stadium being inaccessible by public transport, with the result that in 2003 survey up to 62% of spectators were travelling to matches by car. Following the 2003 survey, an event day Controlled Parking Zone (CPZ) was introduced, there were match-day increases in local train frequencies and a programme of transport information provision was introduced through the THFC website. By 2008 the results showed that these measures had resulted in increased use of public transport and a reduction in car travel (reduced to between 38% and 43% for the final leg of the journey).
- 15.3.13 Separate mode splits were measured for weekday and weekend matches. Table 15.1 below shows the Weekday mode splits.

Table 15.1 Weekday mode splits

Mode	Arrival Mode		Departure Mode	
	People	%	People	%
Underground	4,321	12.0%	6,043	16.8%
Rail	12,626	35.1%	10,916	30.3%
Bus	4,179	11.6%	2,451	6.8%
Car	13,054	36.3%	14,901	41.4%
Cycle	59	0.2%	58	0.2%
Coach	366	1.0%	277	0.8%

Taxi	357	1.0%	413	1.1%
Walked all the way	728	2.0%	547	1.5%
Motorcycle + Others	311	0.9%	396	1.1%
Total	36,000	100.0%	36,000	100.0%

15.3.14 For weekends, the mode splits are shown in Table 15.2.

Table 15.2 Weekend mode splits

Mode	Arrival Mode		Departure Mode	
	People	%	People	%
Underground	4,700	13.0%	6,632	18.4
Rail	11,213	31.1%	10,613	29.5%
Bus	3,735	10.4%	2035	5.7%
Car	14,969	41.6%	15,558	43.2%
Cycle	96	0.3%	96	0.3%
Coach	72	0.2%	24	0.1%
Taxi	292	0.8%	218	0.6%
Walked all the way	707	2.0%	536	1.5%
Motorcycle + Others	217	0.6%	287	0.8%
Total	36,000	100.0%	36,000	100.0%

15.3.15 Around 85% of spectators arrive at the stadium in the 45 minutes before the start of the match, with up to 40% of spectators arriving in the final 15 minutes. There is a little variation depending on the day of the week, with the Sunday match survey showing slightly earlier arrivals. Departures show a similar pattern, with around 85% leaving within the 45 minutes after the final whistle, and relatively small numbers leaving before or after that time.

15.3.16 The current situation sees coach passengers dropped off on High Road opposite Cedar Road before the event with the coaches then driven to West Road, where they are parked during the event. After the event, coaches travel back to Worcester Avenue to pick up spectators. The existing arrangements are able to cope with the demand.

Assessment Methodology

15.3.17 A major event is defined as an event at the stadium with more than 10,000 spectators. A non-major event day is when there are less than 10,000 spectators. For Major Event Days at the stadium the following scenarios have been assessed:

- Football matches – c.25-30 matches per season, with a seating capacity of 61,000 people;

- NFL Matches/Other sporting events – at least two and up to ten per year, with up to 61,000 people; and
- Concerts – up to six concerts per year with up to 56,000 spectators.

15.3.18 The football scenarios are the most onerous in transport terms due to the of numbers of spectators, although this is mitigated by the fact that football fans are generally more familiar with and will make more efficient use of the transport network than the other scenarios.

15.3.19 Capacity forecasts are developed for all three forms of public transport: National Rail and London Overground, London Buses, and London Underground. In all three cases, these are based on match-day service levels and non-spectator background demand. For National Rail and London Underground, the overall capacities also depend on station capacity forecasts.

15.3.20 For the Non-Major Event Day an assessment of the trips generated by the residential development, the Tottenham Experience, the health centre and non event day attractions etc has been made together with an assessment of construction traffic.

15.3.21 All of the assessments have used existing local sites as comparators, and best practice guidance and the methods discussed with TfL and LB Haringey.

15.3.22 The methodology and assumptions for the demand and capacity forecasts for the Project are described in detail in the Major Event Day Transport Assessment and Travel Planning 2015 document.

Geographical Scope

15.3.23 The geographical scope of the assessment in the area generally bounded by the local stations, White Hart Lane, Bruce Grove, Northumberland Park, Seven Sisters and Tottenham Hale. The A406 North Circular Road forms the northern boundary.

15.3.24 The geographical scope of the pedestrian network being modelled is determined by the set of public transport nodes primarily used by spectators on match days. This is informed by studies undertaken from 2008 to 2014 to identify travel conditions associated with the current stadium.

15.3.25 The geographical scope of the forecasts is shown in Figure 15.1 below.

Figure 15.1: Geographical Scope of Demand Forecasts



- 15.3.26 Separate modules have been generated to assess the demand at the interiors of the rail stations at White Hart Lane, Northumberland Park, Tottenham Hale and Seven Sisters. Although the various modules are not linked, the assumptions used and demand volumes and patterns are consistently applied across each.
- 15.3.27 Whilst some pedestrian journeys start or end outside this scope, for the purpose of demand forecasts journeys are assumed to start or finish at points on the extremity of this area.
- 15.3.28 The initial model covered event-day scenarios, with matches taking place on a Saturday afternoon or midweek evening. A survey was undertaken in 2008 to highlight differences between Saturday, Sunday and Midweek matches. Additional surveys in 2014 confirmed that the 2008 patterns remain valid. The forecasts cover the pre-match and post-match periods, from three hours before kick-off to three hours after the final whistle.

Significance

- 15.3.29 The 2007 Department for Communities and Local Government (DCLG) and Department for Transport (DfT) publication *Guidance on Transport Assessment* (now withdrawn) refers to Circular 02/99: *Environmental Impact Assessment* (Circular 02/99) published by the former Department of the Environment, Transport and the Regions (DETR)(also withdrawn), provides details on environmental assessment in general. However, Circular 02/99 does not provide specific guidance on the approach to traffic and transport related assessment.
- 15.3.30 Therefore, this assessment has been undertaken in accordance with the guidance provided in the 1993 Institute of Environmental Assessment (IEA) publication *Guidance Notes No. 1: Guidelines for the Environmental Assessment of Road Traffic*, hereafter known as the IEMA guidelines.
- 15.3.31 This guidance is the only document available which sets out a methodology for assessing potentially significant traffic-related environmental impacts where a proposed development is likely to give rise to changes in traffic flows.
- 15.3.32 The following rules, summarised from the IEMA guidelines, have been used as a screening process to define the scale and extent of this assessment.
- Rule 1: Include roads where traffic flows are predicted to increase by more than 30% (or where the numbers of HGVs are predicted to increase by more than 30%).
 - Rule 2: Include any specifically sensitive areas where traffic flows are predicted to increase by 10% or more.
- 15.3.33 The IEMA guidelines elaborate on Rule 1 stating that projected changes in traffic of less than 10% create no discernable environmental impact, given that daily variations in background traffic flow may fluctuate by this amount, and that a 30% change in traffic flow represents a reasonable threshold for including a highway link within the assessment.
- 15.3.34 The IEMA guidelines also identify groups, locations and areas which may be sensitive to changes in traffic conditions and which should be considered for assessment. Groups, locations and areas could, for example, include pedestrians, cyclists, shopping areas, schools and accident hotspots. Where traffic flows are predicted to increase by 10% or more, those relevant sensitive groups, locations and areas will be assessed. It should also be noted that the IEMA guidelines also state that other affected parties could be added if the assessor considers it appropriate.
- 15.3.35 The significance of each impact is considered against the criteria within the IEMA guidelines, where possible. However, the IEMA guidelines state that:
- “for many effects there are no simple rules or formulae which define the thresholds of significance and there is, therefore, a need for interpretation and judgement on the part of the assessor, backed-up by data or quantified information wherever possible. Such judgements will include the assessment of the numbers of people experiencing a change in environmental impact as well as the assessment of the damage to various natural resources.” (paragraph 4.5)
- 15.3.36 In this assessment, significance falls into two categories; not significant and significant. The latter

corresponds to significant impacts in accordance with the EIA Regulations. In the absence of established significance criteria for traffic and transport impacts, professional judgement has been used to assess whether the impacts on traffic and transport are considered to be significant.

Assumptions and Limitations

- 15.3.37 Pedestrian surveys were undertaken to understand the numbers of spectators, as well as the direction of flow, that could be expected at different parts of the local pedestrian network. The spectator analysis suggests that event day visitors to the site are willing to walk greater distances than are usually considered in public transport accessibility analysis.
- 15.3.38 Station and train surveys indicated that mid-week event day services had the highest level of passenger demand, particularly for trains that coincided with the commuter peak. In the post-event surveys there were some short periods where levels of increased crowding occurred, as would be expected. The results suggest that the mid-week event day scenario provides a worst case. Station and carriage surveys were also carried out at Underground stations, for which the busiest times correlated closely with the train surveys.
- 15.3.39 Surveys of bus stop boarding and alighting activity highlighted that there was higher background demand on bus services in general on a weekday evening, accounting for commuter journeys. On this basis, the weekday scenario provides a worst case for future analysis. Analysis of Bus Origin Destination Survey (BODS) data has shown that area wide there is considerable capacity on the existing bus network.
- 15.3.40 High Road is currently closed for up to 45 minutes in the post-match period. The closures are put in place by the MPS in order to maintain separation between home and away fans. The proposed stadium allows better separation and is expected to reduce the time for which High Road will need to be closed to traffic.
- 15.3.41 For demand forecasting, it is assumed that spectators travelling by rail will use White Hart Lane, Northumberland Park, Seven Sisters or Tottenham Hale stations. Bruce Grove is served by the same trains as White Hart Lane, is further from the stadium and is unlikely to be heavily used.
- 15.3.42 It should be noted that White Hart Lane station is on the same route as Seven Sisters. It is assumed that any spectators using these services will board and alight at White Hart Lane due to its proximity to the ground. Similarly, Northumberland Park is on the same line as Tottenham Hale, but substantially closer to the Stadium. Therefore, any attendees walking to or from Seven Sisters and Tottenham Hale are assumed to use the Victoria Line.
- 15.3.43 Upon arrival, all spectators are assumed to walk from the station along White Hart Lane towards the High Road, and then circulate via the 'shortest' route to the four Stadium entrance gates. For other rail stations, the shortest distance is the default assumption.
- 15.3.44 During the immediate post-event period, it is assumed that attendees walking to White Hart Lane station will take different routes depending upon their direction of travel. This is in accordance with the assumption that different station entrances will be used for each platform. Northbound travellers are assumed to approach from the High Road via White Hart Lane and southbound travellers are assumed to approach via Whitehall Street and Love Lane.

15.4 Inherent Design Mitigation

- 15.4.1 There has been considerable progress with the implementation of the THFC transport strategy between 2010 and 2015. There has been significant investment over recent years, particularly to the Victoria Line, thereby improving the service for fans and the local community. New faster and higher capacity trains have already been delivered and a new 36 trains per hour frequency will be introduced in the near future (April 2016).
- 15.4.2 Many of the improvements currently being implemented were in the very earliest stages of development in 2010 when the previous planning application was submitted. For example:
- The first part of the Seven Sisters station interchange improvements have been completed with further work to improve the quality of the station interchange for all passengers.
 - The London Overground devolution will improve services and rolling stock at White Hart Lane and other stations.
 - A planning application for proposals to improve White Hart Lane Station is expected in late 2015. The station will be linked to the stadium by a more direct route, Moselle Square, which is being promoted by Haringey Council.
 - The upgrade to Tottenham Hale Station was in the earliest stage of development in 2010, construction will start in the near future.
 - Northumberland Park station will be reconstructed as part of the 3 tracking scheme, facilitating significant service improvements for the route to Stratford. This should be finished well before the development is finished.
 - The removal of the Tottenham Hale Gyratory was a TfL Business Plan commitment in 2010. In 2015 it is substantially complete. The final stage has involved the construction of a major bus station at Tottenham Hale interchange.
 - The construction of the new Cycle Superhighway CS1 that connects the stadium to Liverpool Street started in July 2015. A large cycle park has been built in the northern development next to Lilywhite House.

PERS Audit

- 15.4.3 Although, the updated PERS Audit undertaken notes that the local environment for pedestrians has improved since 2010, the report still makes recommendations for some quick. In particular gum, litter and graffiti removal, de-cluttering and works to dropped curbs and tactile paving are suggested.

Local Highway Improvements

- 15.4.4 As part of the Project some improvements are proposed to the High Road, Park Lane and Worcester Avenue. The improvements and swept path analyses are illustrated in the Buro Happold drawings submitted with the Transport Assessment. There are no proposed changes to Northumberland Park, or the High Road junctions with Northumberland Park or White Hart Lane. The recent improvements are considered to be working well.

Car Parking Provision

- 15.4.5 The policy guidance indicates that in appropriate locations, then car free residential development should be promoted. In general, the approach to car parking in the Project is to under provide compared to standards, which are in place to set maximum figures. So, whilst the Project is not car free, the provision of car parking is significantly less than the standard. For example, the standard applicable to the residential units is up to 1 space per unit, however, the ratio proposed is 0.46 per unit.
- 15.4.6 Similarly, if the LBH maximum standard of 0.66 spaces per room was applied to the hotel, there should be 120 spaces provided rather than the 53 allocated.
- 15.4.7 Wheelchair accessible Blue Badge parking is set at 10% or more of the supply. For the residential units this would give a minimum standard of 24.3 spaces (10% of 243). The actual number proposed is 27 spaces which equates to 0.046 blue badge spaces per unit. Within the general population, 4.6% is well in excess of wheelchair users that are car owners.
- 15.4.8 In the 2010 assessment, the stadium had 319 parking spaces and access to a total of 727 on the stadium site. The revised stadium proposals has increased capacity for 785 parking spaces. However, this increase is more than offset by the London Borough of Haringey's High Road West Masterplan, which has already led to 870 off-street parking spaces being removed from the surrounding area, leading to a net decrease in parking availability in the local area. Furthermore, the stadium features a removable grass pitch which, when removed, is inserted into a 'pitch pocket' in the car park, reducing the number of spaces by 217 to just 518.
- 15.4.9 Blue Badge parking in the stadium is increasing under the proposal from 58 (under the 2010 submission) to 150 in the current proposal, of which 90 will be wheelchair accessible.

Travel Plans

- 15.4.10 A series of Travel Plans was prepared for the previous application. These living documents will be updated and new ones added for different aspects of the Project. The revised, proposed s106 Agreement sets out commitments to develop the Travel Plans, appoint a Travel Plan Co-ordinator for the whole development and to establish a Travel Plan Management Group. Arrangements for monitoring the plans will be discussed with the London Borough of Haringey.

Match Day Arrangements

- 15.4.11 The new stadium will be actively promoted as a 'Public Transport Destination', as has been achieved at Wembley Stadium, with service improvements, new shuttle bus links, better pedestrian connections, real-time travel information points, clear signage and regular transport updates on the THFC website, in printed programmes, and directly to fans from several sources.
- 15.4.12 The Spurs Travel Plan was introduced in 2008 and was very highly rated when independently assessed by the Campaign for Better Transport. It forms the basis for the future when all the transport and station improvements come online in advance of the stadium completion.
- 15.4.13 There has already been a significant shift in travel patterns to the stadium area. In 2003, over 60% of fans came by car. For weekend fixtures that figure had reduced to 42% by 2014 and the intention is to bring that number down to a maximum of 23% in future. In future all supporters will be actively encouraged to arrive earlier and stay later in the stadium area to take full advantage of the new facilities in and around the redeveloped stadium and to enjoy a new post-match events programme, reducing the pressure on

transport services.

- 15.4.14 The Club will operate two new shuttle bus services on major event days. The first service will run from Alexandra Palace station by way of Wood Green. The model for this service is the Allianz Park service which carries more than 3,000 Saracens supporters before and after games. A second service will provide a high frequency link between the upgraded Tottenham Hale interchange and the stadium area for premium ticket holders to relieve the pressure on the scheduled bus services to and from the Victoria Line at Seven Sisters station.
- 15.4.15 Road closures have previously been in place for at least 30 minutes following the post-match closure of the High Road, requiring buses to be diverted in the post-match period. Highway works on junctions, planned by LB Haringey in 2010 in order to reduce the duration of closures, have now been completed, and TfL Buses have previously undertaken to reduce the bus diversion time. The result is that diversions are expected to end, in future (in 2018), around 15 minutes after the road closure is lifted. There will also be increased use of the W3 and the new high frequency shuttle bus services that connect the stadium to the Piccadilly Line, as an alternative to using Seven Sisters.
- 15.4.16 The reconfiguration of seating for away supporters will make it easier to manage interactions between home and away supporters, reducing the need to divert public transport services, and the Club will continue to fine-tune its operation to improve the service for supporters and minimise disruption to local residents.
- 15.4.17 Coach parking requirements are highly variable and are heavily dependent on the requirements of away team supporters. Using conservative assumptions the total coach demand is forecasted to be less than 30 per game in 2018. Parking to meet this demand will be accommodated in the industrial area. Access to this site accessed via Leaside Road, Watermead Way and the A406. None of these roads are residential.
- 15.4.18 On the rare occasion that overflow capacity is required, this can be accommodated on Pretoria Road. Similar arrangements are in place at other large stadiums with overflow capacity only required a few times over the course of a decade.
- 15.4.19 The multiple stadium access points and the extensive public realm being planned will make it easy for spectators to reach their preferred arrival and departure routes and provide easier access to alternative venues in the local area pre- and post-match.
- 15.4.20 Pedestrian flows will quickly be dispersed into the wider street network; unlike at stadiums such as Wembley, where major pedestrian flows dominate the local area. This will be supported by carefully targeted investment in the local area to assist the organised dispersal of pedestrian movements after a game; including CCTV at strategically important locations, the removal of unnecessary obstructions in footways, comprehensive signage providing real time travel information, and effective stewarding. Further information on the pedestrian environment in the locality of the stadium is provided by the Environmental and Safety Audit (which has been submitted as part of the planning application).
- 15.4.21 Historically, the number of people choosing to walk or cycle has been relatively low compared with many other football stadiums. Around 5% of spectators live within 5km of the stadium. This suggests scope for a higher share of journeys to be made by cycle or on foot. This proportion could grow further with

prioritisation to local residents in the season ticket allocation system, as has happened at the Emirates, where 6.5% (or over 3,500) spectators now walk. Under the Section 106 agreement, approximately 5,000 local residents who register their interest with the club will be offered season tickets with a preferential choice of seating, after existing season ticket holders' seats have been allocated.

15.4.22 As part of the stadium move THFC is proposing to:

- Actively promote and prioritise tickets to local residents;
- Agree a full range of away supporter seating area strategies to deal with the full range of possibilities;
- Ensure that all normal (non-evacuation) access for away supporters is via Worcester Avenue;
- Update and modify the car parking restrictions in Worcester Avenue on event days;
- Actively promote and encourage away fans to travel by coach, including implementation and management of segregated coach parking when necessary; and
- Make improvements to footways and signage, providing enhanced facilities for pedestrians between the station and stadium area. To be agreed with TfL and LBH.

Cycling

15.4.23 As well as the start of construction on the Cycle Superhighway CS1, which will connect the stadium to Liverpool Street in the south, a large cycle park has been built in the northern development next to Lilywhite House. Approximately 5% of spectators live within five kilometres of the site. Along with improved facilities and promotion of their availability, this provides scope for increased cycling mode share.

15.4.24 The Club will actively promote cycling by providing spectators with information on cycle routes and on the availability of secure cycle parking. The aim is to provide them in locations that can be easily accessed from each of the major approach routes and in locations that can also suit the needs of other buildings in the local area such as stations, community buildings, recreational areas, and the new retail and office developments.

15.4.25 THFC aims to:

- Actively promote cycle access to the local area on event days;
- Provide a non event day primary cycle parking facility; and,
- Support the provision of dispersed cycle parking at a variety of locations within the local area that would also fulfil a non event day demand for cycle parking.

15.4.26 A range of transport mitigation measures will be formalised through the Section 106 agreement. These include:

- Implementation of the Stadium Travel Plan;
- Achieving a designated modal split target of 77% spectators using non-car modes;
- Implementation of an Event Day Monitoring Programme;
- Extension of the event-day Controlled Parking Zone;
- Two shuttle bus services;

- The Home Supporter Travel Initiative – a programme of communication with Home supporters to encourage non-car modes;
- Retention of Visitor Measures – a programme of pre- and post-match entertainment;
- Improved signage;
- A Cycle Superhighway terminus;
- Additional traffic suspension on Worcester Avenue; and
- Provision of electric charging points at a proportion of car parking spaces.

15.5 Potential Environmental Impacts and Effects

Construction

- 15.5.1 The only additional significant transport issue related to the construction of the new basement to that of the previous assessment is the removal of a proportion of the excavated material (spoil) to off-site locations. The increased volume of new building construction is far less significant given that it would probably equate to less than a 10% net increase in the overall stadium building construction activity for example, in terms of the volume of concrete needed to build the Project.
- 15.5.2 It was proposed that the basement excavation would occur in 3 stages – all of which were of a lesser scale, in traffic terms, to the already completed spoil removal from the Northern Development area.
- 15.5.3 Surveys have revealed that the new food store private vehicle trip generation is actually very similar to that related to the old store which was located just to the north of the NDP area. Levels are actually two-thirds less than those predicted and accepted by TfL/LBH. The effect of the construction work has happened after the new supermarket opening is therefore unlikely to be a significant issue.

Central and Southern Areas

- 15.5.4 The next phase of the work would also relate to the area north of Paxton Road which would entail deeper excavations. The timescale for the activity is predicted to be 3 months (69 working days). This will average at 4 HGV trips per day into and out of the construction site.
- 15.5.5 The final phase of the site preparation works would relate to the area south of Paxton Road. The timescale for the activity is also predicted to be 3 months (69 working days). This will average at 11 HGV trips per day into and out of the construction site. The 2 stages of work will actually yield more re-usable material than could be beneficially used on the site. Of the 58,500 cubic metres that would be recovered some 20,000 cubic metres (34%) would be sold for off-site use. Over the two 69 day periods that would result in a further 16 HGV trips a day to and from the work site.
- 15.5.6 On the basis of an 'effective cap' of 75 arrival and departure trips, as per the worst case assessment in the May 2010 ES, this level of activity would be well within the threshold deemed to be acceptable.
- 15.5.7 If the piling and foundation works are closely integrated in sequence with the excavation works that might add another 9 HGV trips per day into and out of the site, i.e. 36 (9+11+16) in total during the second stage, which would still result in a level of HGV trip generation of much less than the 'effective cap' assessed to peak at 75 two-way HGV trips per day.

New Stadium Proposals – Construction Traffic

- 15.5.8 The new stadium construction is now forecast in 2015 to generate 27,330 1-way trips – an increase of 33%. This increase is based on a like-for-like comparison with the 2010 application. This increase is significantly related to the volume of concrete required to build the stadium basement and the pitch pocket. The stadium will be constructed in 31 months from January 2016 to July 2018.
- 15.5.9 The peak trip generation for the stadium construction will occur in May and June 2017 – at 75 1-way trips a day – i.e. a peak of 37 vehicles arrivals and departures each day – which is similarly related to the, re-assessed, demolition of the existing stadium. This level of construction traffic is well below the 'effective cap', in terms of the highest monthly forecast of NDP construction traffic, which was established and accepted in 2010, and is also less than the peak daily stadium-related construction traffic forecast in 2010, at 84 1-way trips (as forecast to occur in December 2013).
- 15.5.10 All these vehicles would be directed to travel to and from the site by way of the A1010 to the Fore Street junction with the North Circular Road. The environmental impacts would be no worse than as forecast in 2010.
- 15.5.11 It is proposed that a construction compound off White Hart Lane to the east of the railway tracks is used. Although this would not significantly reduce the peak daily forecast of trips, there are three main benefits to using the site:
- It would be possible to use larger vehicles to shuttle between the works sit and the stadium site
 - The total vehicle mileage would be significantly reduced, 1 km trips rather than 20 km trips.
 - The site would provide a local storage area away from the construction site for all the material to be re-used in construction.
- 15.5.12 With the construction compound in place the new stadium construction is forecast to generate 21,307 1 way trips an increase of 3% compared to the 2010 information. This increase mainly relates to the additional works required for the stadium basement and pitch pocket.
- 15.5.13 The biggest benefits of the construction compound would be apparent in 2016 when there would be a 95% reduction to the volume of construction traffic within the A1010 north of the construction site i.e. a reduction from 42 daily 1-way movements to 2 daily 1-way trips. In 2017 the benefit of the construction compound to the A1010 corridor would be much less, with a forecast reduction from 47 daily 1-way trips to 32 daily 1-way trips.

Southern Area

- 15.5.14 The construction of the proposed Southern Development will be a big bigger undertaking than that assessed in 2010. The number of residential units is more than 3 times greater, the hotel is slightly larger and there is the addition of the Extreme Sports building plus a slightly larger Tottenham Experience building.
- 15.5.15 It is assumed overall that the construction activity will be 3 times greater than as assessed in 2010 but over a much longer timeframe commencing in 2018 and completing in December 2021.

- 15.5.16 The peak monthly construction traffic would occur in the second half of 2019 and October/November 2020. On each occasion the peak activity would equate to 13 1-way trips per day, i.e. 6-7 daily arrivals and departures. This level of construction traffic trip generation for the Southern Development is well below the 'effective cap' of 150 1-way trips as established as an acceptable level of trip generation in 2010.
- 15.5.17 It has been possible to 'validate' the 2010 assessment of the Northern Development (which is now operational) spoil removal phase – the previously defined worst case situation. This shows that the traffic impact was lower than expected and there is no evidence of problems caused by the longer than expected duration of the HGV activity.

Occupation

Stadium – Football Matches

- 15.5.18 The worst case spectator arrival and departure profiles are forecast to be as follows:

Table 15.3 Assumed Spectator Arrival Profiles at the Stadium Gatelines (Midweek Evening)

Minutes before kick-off	Proportion of Spectators Arriving - Midweek Evening
0-15	30.0%
15-30	25.0%
30-45	15.0%
45-60	10.0%
60-75	10.0%
75-90	10.0%

Table 15.4 Assumed Spectator Departure Profiles from the Stadium Gatelines (Midweek Evening)

Minutes after final whistle	Proportions of Spectators Departing - Midweek evening
0-15	75%
15-30	10%
30-45	10%
45-60	5%
60-75	0%
75-90	0%

- 15.5.19 Based on surveys undertaken in March 2008, the pre-match lengths of stay shown in Table 15.5 have been assumed, applied to Home and Away fans regardless of the final mode of transport.

Table 15.5 Assumed Times spent by Spectators at pre-match destinations (Midweek Evening)

Minutes spent at pre-match destinations	Proportion of Spectators spending time in the Local Area
0-15	3.50%
15-30	15.40%
30-45	19.50%
45-60	15.90%
60-75	10.50%
75-90	11.00%
90 - 105	8.30%
105 - 120	6.70%
120 - 135	9.20%

15.5.20 Post-match lengths of stay were not recorded in the March 2008 survey. However, for those who do stay, the main rationale is to allow crowds to dissipate before attempting to travel. For forecasting the base case, spectators who stay in the local area are nominally assumed to spend ninety minutes at the post-match destination, taking them outside the period of peak demand at the transport nodes. 30% of Home fans and 5% of Away fans are assumed to spend time in the local area after the match.

15.5.21 Surveys undertaken in 2008 indicate that the most popular pre- and post-match destinations are pubs, cafés or restaurants in the local area.

Mode Splits

15.5.22 Extensive measures have been undertaken to ensure a substantial mode shift away from cars and towards walking, cycling and public transport. The resulting mode split of Home and Away fans on arrival is as shown in Table 15.6 (assuming non-London opposition for the Away fan mode splits). The mode splits recorded in the March 2008 spectator surveys are shown for comparison.

Table 15.6 Assumed Home Spectator Final Mode Split on Arrival

Mode	Assumed Home Fan Mode Split - Arrival	Home Fan Mode Split v. Chelsea (19 th March 08)	Assumed Away Fan Mode Split - Arrival	Away Fan Mode Split v. Chelsea (19 th March 08)
Coach	1.5%	0.4%	16.0%	0.0%
Local Bus	10.5%	11.7%	13.0%	9.7%
<i>of whom interchange at SS</i>	5.5%		10.0%	
Taxi	1.7%	0.9%	0.0%	1.7%
Walk	3.0%	2.0%	0.0%	5.1%
Cycle	1.0%	0.2%	0.0%	0.0%
Rail to WHL	21.0%	17.9%	26.5%	26.9%
Rail to NP	15.8%	14.0%	8.5%	7.2%
Tube to SS, then Walk	11.3%	11.3%	22.5%	29.4%
Tube to TH, then Walk	5.2%	1.8%	2.5%	1.3%

Car	19.5%	39.6%	11.0%	18.8%
Motorcycle	0.0%	0.2%	0.0%	0.0%
Shuttle Bus	9.5 %	0.0%	0.0%	0.0%

15.5.23 Forecast mode splits for Home and Away fans on departure are shown in Table 15.7, with recorded mode splits from May 2014 spectator surveys for comparison.

Table 15.7 Assumed Home Spectator Final Mode Split on Departure, with actual mode splits recorded in May 2014

Mode	Assumed Home Fan Modal Split - Departures	Home Fan Mode Split v. Chelsea (19 th March 08)	Assumed Away Fan Modal Split – Departures
Coach	1.5%	0.1%	16.0%
Local Bus	8.0%	6.9%	13.0%
<i>of whom interchange at SS</i>	5.0%		10.0%
Taxi	1.5%	1.1%	0.0%
Walk	3.0%	1.4%	0.0%
Cycle	1.0%	0.2%	0.0%
Rail from WHL	20.0%	15.5%	26.5%
Rail from NP	14.0%	12.0%	8.5%
Walk to SS, then Tube	10.5%	13.6%	22.5%
Walk to TH, then Tube	9.5%	3.4%	2.5%
Car	23.0%	45.6%	10.0%
Motorcycle	0.0%	0.2%	0.0%
Shuttle Bus	8%	0%	0.0%

15.5.24 Table 15.7 Assumed Home Spectator Final Mode Split on Departure, with actual mode splits recorded in May 2014

15.5.25 Table 15.8 sets out the assumed direction of travel for spectators arriving at the National Rail stations.

Table 15.8 Assumed Proportions of Spectator Arrivals by Rail from each Direction

Station	Split of Demand -Midweek Evening	
	From Central London (incl. those interchanging at TH and SVS)	From the North
White Hart Lane NR	63% (of whom 31% interchange from Victoria Line at Seven Sisters)	37%
Northumberland Park NR	53% (of whom 17% interchange from Victoria Line at Tottenham Hale)	47%

- 15.5.26 For departing passengers, Table 15.9 shows the assumed direction of travel post-match, based on the findings of surveys and observations made during matches in March 2008, for both Home and Away fans.

Table 15.9 Assumed Proportions of Spectator Departures by Rail from each Direction

Station	Split of Demand – Midweek Evening	
	To Central London (inc. those interchanging at TH and SS)	To the North
White Hart Lane NR	60% (of whom 35% interchange to Victoria Line at SS)	40%
Northumberland Park NR	50% (of whom 21% interchange to Victoria Line at TH)	50%

National Rail

- 15.5.27 Surveys of matches at the existing stadium have found that around 27% to 32% of Home spectators travel to matches by rail, via White Hart Lane or Northumberland Park stations.
- 15.5.28 The new stadium proposals entail significant efforts to encourage mode shift away from cars and towards rail and other modes of public transport. The measures involve restricting car parking availability through the expanded Controlled Parking Zone, improved information about public transport, and improvements to Major Event Day services on the rail network. These measures are described in the Stadium Travel Plan, and in the associated Section 106 obligations.
- 15.5.29 The measures are expected to increase rail mode share to around 34% to 37% at future events.
- 15.5.30 This proportional increase, combined with the absolute increase in stadium capacity, brings a large overall increase in the number of passengers using the rail network. These additional passengers are accommodated through service improvements, station upgrades and better balancing between the available services and stations.

White Hart Lane Station

- 15.5.31 White Hart Lane is expected to accommodate around 21% of all spectators in the pre-match period,

around 37% of whom arrive from the north, with the remainder from the south.

- 15.5.32 The principal capacity constraints on both platforms are the 3m staircases to street level. Whereas the southbound platform has 15-minute headways and can easily clear the platform between trains, the northbound platform have occasional shorter headways of just 5 to 8 minutes pre-match. The platform clearance time is 6.5 minutes for the busiest train, meaning the clearance time can exceed the train headway for the busiest trains. However, the station is currently undergoing a redesign, expected to increase its platform capacity above the 166 people/min/m that would be required to clear the platform within the headway time for the busiest train.
- 15.5.33 In the post-event period, queueing is anticipated outside the station for access to both platforms. For weekday events:
- Queueing outside the station for northbound services will last for 21 minutes with a maximum wait of 22 minutes from arrival at the back of the queue to boarding a train;
 - Queueing for southbound services will last 32 minutes with a maximum individual wait of 29 minutes.
 - For weekend matches, results are slightly different due to different background demand and train headways:
 - Queueing outside the station for northbound services will last for 12 minutes with a maximum wait of to board a train of 32 minutes;
 - Queueing outside the station for southbound services will last for 56 minutes with a maximum 29-minute individual wait time.
- 15.5.34 Queues outside the station will be managed and stewarded throughout their duration.
- 15.5.35 The maximum queues are comparable with those forecast under the previous 2010 submission, and certainly within the range measured at other stadiums, such as Emirates. On this basis, these are deemed to be within acceptable limits.

Northumberland Park

- 15.5.36 The capacity of Northumberland Park Station has been assessed based on assumptions detailed fully in Appendix D, with detailed analysis found in Appendix I. The assessment assumes the existing station layout and current matchday timetable, with all trains operating with eight cars and that the Stratford-Standed service uplifted to four trains per hour. Background demand patterns were provided by Abellio.
- 15.5.37 In the midweek post-match scenario, queues are forecast to form outside the station for access to the northbound platform. The maximum queue length is 463 people. The duration of queueing is 23 minutes with the maximum wait for any individual being 19 minutes from arrival to boarding.
- 15.5.38 Queueing for the southbound platform is expected to last for 27 minutes, with a maximum queue length of 576 people and a maximum wait time for any individual of 16 minutes.
- 15.5.39 In the weekend pre-event scenario, queueing for the northbound platform will last for 33 minutes, with a maximum length of 1,057 people and a maximum individual wait of 22 minutes. Queueing for the southbound platform will last for 35 minutes, with a maximum queue length of 1,099 people and a

maximum individual wait time of 26 minutes.

- 15.5.40 As with White Hart Line, the queue lengths and durations are well within the bounds found to be acceptable during monitoring at Emirates, and on that basis are deemed to be acceptable.

London Underground

- 15.5.41 Two Underground stations, Seven Sisters and Tottenham Hale, provide access to the Victoria Line, both also providing an interchange with National Rail and London Underground services. In the existing situation around 16% to 17% of spectators walk to the London Underground services, mainly to Seven Sisters.
- 15.5.42 The new stadium proposals entail significant efforts to encourage mode shift away from cars and towards London Underground and other modes of public transport. These measures involve restricting car parking availability through the expanded Controlled Parking Zone, improved information about public transport service, and improvements to Major Event Day services on the Victoria Line.
- 15.5.43 The measures are expected to increase the walk to London Underground mode share from its current level to around 17% to 21% at future events.
- 15.5.44 This increased mode share, combined with the increase in stadium capacity, brings a significant increase in the absolute number of passengers using the Victoria Line. However, the peak demand is reduced through attraction and retention measures, and the impact is further mitigated by better balancing demand between stations and services, and can be accommodated more easily with the expected improvements in services, station upgrades and better queue management and stewarding.

Seven Sisters

- 15.5.45 Seven Sisters provides an interchange between London Underground and National Rail services. The SPSP special events guidance proposes conservative flow rates that, based on observations and surveys at Seven Sisters Station, are regularly exceeded in reality.
- 15.5.46 Observation of spectator throughput at the home match against Portsmouth on 23rd March, 2008 found flow rates of 162 people per minute entering the station, with 90% of these travelling on the southbound line. Both London Underground staff and British Transport Police suggested at the time that observations were typical for matchdays and, in agreement with TfL, these higher flow rates and capacities have been used for analysis.

Table 15.10 Seven Sisters Results

Weekday pre-match	Constraints at LU/ NR interchange
Weekday post-match	Queues managed outside station from 22:25 to 22:55
Weekend pre-match	No capacity constraints
Weekend post-match	Queues managed outside station from 17:30 to 17:39

- 15.5.47 During the weekday pre-match period, vertical circulation elements provide sufficient capacity to accommodate all flows without causing delays. Interchanges between London Underground and National Rail services will be busy. Peak platform loading will reach up to 1,000 people and some passengers may have to wait for a train to pass before boarding.
- 15.5.48 To prevent congestion inside the station during the midweek post-match period, access to Seven Sisters via the High Road entrance will be regulated on Major Event Days. Entry to the station of 165 people per minute can be maintained using six ATGs and one Wide Access Gate (WAG), and queues are expected to form outside the station from 22:25 for approximately 30 minutes, with a maximum length of 62 people and a maximum individual waiting time of less than one minute.
- 15.5.49 Spectators interchanging from the National Rail southbound line onto the Victoria Line services use different parts of the station and so no queueing is anticipated on stairs from the National Rail platform. Queueing is expected on the escalator descending to the Victoria Line, expected to reach around 250 people at its maximum, but would clear before the arrival of the next train. Delays for an individual are anticipated to be less than three minutes.
- 15.5.50 No queueing is expected in the National Rail to London Underground southbound interchange. The London Underground southbound platform demand is expected to be within its capacity.
- 15.5.51 During the weekend pre-match period, all station vertical circulation elements will provide sufficient capacity for background and spectator flows. Weekend background demand is lower than during weekdays and the demand on the northbound platform, with peak loading of fewer than 300 passengers, will be well within its capacity.
- 15.5.52 As with the weekday scenario, flows into the station during the post-match period will be restricted at the High Road entrance to 165 people per minute. Queues will form outside the station from 17:30 for approximately nine minutes, with a maximum queue of 109 people and a maximum individual waiting time of less than one minute.
- 15.5.53 Passengers interchanging from the National Rail platform will be able to clear the platform within two minutes of trains arriving. Queues of around 50 people will form at the head of the escalator linking to the Victoria Line. The maximum delay per individual would be less than two minutes and queues will clear before arrival of the following train. No queueing is anticipated at the base of the escalator. The southbound platform is expected to operate safely without management intervention.

Tottenham Hale

- 15.5.54 During the weekday pre-match period, the most significant constraint is the vertical circulation from the London Underground platforms. Recent observations indicate that queues of up to one minute form at the escalators at the busiest times. Queues will be mitigated through increased frequency of the Victoria Line Service, which by 2016 is planned to reach 36 trains per hour in both directions during the midweek match period. Space at the base of the stairs can accommodate 40 people queueing. This analysis suggests that some queueing can be expected for up to 45 minutes (with use of stairs) or 2 hours (without use of stairs) prior to a midweek event.
- 15.5.55 Weekday post-match access to the station is via four automated ticket gates, with sufficient capacity to

accommodate all entry flows, assuming maximum shuttle bus frequency during peak times.

- 15.5.56 Post-match connections from the Northumberland Park service transferring to the Victoria Line is via five automated ticket gates. These have sufficient capacity to enable alighting passengers to clear the gates within three minutes, with only short-lived queuing at the gates. Sufficient space for short term queuing is available within the reconfigured concourse. No capacity issues are anticipated for the Northumberland Park service.
- 15.5.57 The current entrance to the ticket office provides sufficient capacity to accommodate all flows entering the station. Modification of this entrance, adding a series of individual doors, will add flexibility for staff to manage queues outside the station.
- 15.5.58 Access to the London Underground is via six automated ticket gates and one wide aisle gate. Some queuing is anticipated at the gates for 29 minutes, with a maximum size of approximately 900 people and a maximum delay for any individual of six minutes. Most passengers will experience no delay or a delay of less than one minute. Both London Underground platforms will operate below capacity, with all passengers boarding the first train after they arrive at the platform.
- 15.5.59 The weekend scenario is accommodated more comfortably than the midweek scenario due to the lower background demand and lower numbers of spectators using this route. The peak weekend pre-match arrival occurs between 13:15 and 13:30. The station has sufficient capacity for all spectators and background traffic during this period, with no queuing at the base of stairs or escalators.
- 15.5.60 No delays are anticipated at the National Rail gateline in the post-match period at weekends. All those alighting are able to clear the line within two minutes of train arrival. Passengers boarding the National Rail service at Northumberland Park will be able to board the next train after arrival with no capacity issues on the platform. Trains are anticipated to leave Northumberland Park at capacity. The number of people alighting at Tottenham Hale (to interchange to London Underground) exceeds those wishing to board, allowing sufficient capacity on the trains to carry all passengers wishing to board.
- 15.5.61 The ticket office provides sufficient capacity to accommodate all flows entering the station during this period. Entry to the Victoria Line is controlled by six automated ticket gates and a wide aisle gate. Their capacity is matched to the vertical circulation capacity, preventing queues at the head of escalators and stairs. Some queuing at the ticket gates is anticipated for 24 minutes. Maximum queue size is expected to be 566 people with a maximum individual wait to be less than four minutes. The majority of passengers will not experience any delay. Platforms in both directions will operate below capacity. Passengers are expected to be able to board the first train after arrival at the platform.

Shuttle Bus

- 15.5.62 Two shuttle bus services will operate on Major Event Days: one from Tottenham Hale Station and one from Alexandra Palace Station.
- 15.5.63 In most cases, limited delays are experienced on the shuttle buses, with the longest delays occurring during pickups from the stadium post-match. No individual is expected to have to wait more than ten minutes to use the service. However, the ability to deliver these services with minimal queuing will be driven by the operator, who has not yet been contracted. Operational requirements will be specified at that time.

Bus

- 15.5.64 Road closures on High Road, leading to bus diversions, mean that bus stops immediately outside the stadium are not currently available for spectators for at least 30 minutes after the road closure is lifted. Discussions with TfL Buses in 2008 led to the creation of a new plan to reduce the time for which bus diversions are in place. With a reduced diversion time, it will be possible for passengers to wait at the most convenient bus stop for their journey until the service recommences, rather than move to stops further from the stadium. Services are in future expected to resume normal routes within 15 minutes of High Road being reopened.
- 15.5.65 During the midday pre-match period, a shortfall in capacity may occur on the four routes travelling along High Road between 18:30 and 19:00 (149, 259, 279 and 349). However, the forecasts are based on the conservative assumption that just 85% of the plated capacity will be used. Observations of current behaviour suggest that the full plated capacity of buses will in fact be used during this period. If use of the full plated capacity is assumed, the shortfall is eliminated.
- 15.5.66 In the post-match scenario, there may be a shortfall in capacity on the same four routes between 22:30 and 23:45. However, as with the pre-match period, this capacity shortfall will be significantly reduced if full plated capacity is utilised. As most trips are to Seven Sisters Station, which is only a short walk from the stadium, a number of spectators are likely to walk to the station instead, further reducing this impact.
- 15.5.67 In the weekend pre-match period, a shortfall is anticipated between 12:45 and 14:45 on routes 149, 259, 279 and 349. However, as in the midweek, this shortfall is significantly reduced when capacity is fully utilised. As the shortfall occurs more than one hour before kick-off, there is plenty of time to walk the short distance to the stadium and a number of spectators are expected to choose this option. A small post-match capacity shortfall may also occur between 18:30 and 18:45. However, the queue does not exceed 100 people, with a maximum individual wait of less than 10 minutes.
- 15.5.68 No capacity issues have been identified on other services.
- 15.5.69 Car mode share has in the past been as high as 60% for Home spectators. A major focus of the transport strategy for the stadium is to try to reduce the number of spectators driving to matches. This will be achieved through a variety of measures to encourage sustainable modes, improve public transport capacity and service levels and discourage driving. The primary tool used to discourage driving is the expansion of the Event Day Controlled Parking Zone, which decreases the availability of parking spaces close to the stadium.
- 15.5.70 In future, the number of people driving to events is forecast to drop to around 23%. The club is committed to achieving car mode split targets through obligations in a Section 106 agreement with the possibility to expand the CPZ further if it proves to be necessary to achieving this objective.

Stadium – NFL Matches

- 15.5.71 THFC has successfully developed a strong national support base. Both regular THFC attendees and NFL season ticket holders have very similar home location distributions. However, significantly more NFL spectators will travel longer distances to attend the games. Consequently, staging of NFL games at the proposed stadium will not create any challenges not already being addressed by the Club in implementation of its proposed stadium transport strategy.

- 15.5.72 The main difference between the football and NFL forecast is that the NFL games will take place on a Sunday, with assumed start and finish times of 14:30 and 18:00, respectively.
- 15.5.73 The arrival profiles, shown in Table 15.11 below, reflect the time at which spectators enter through gatelines, not the time at which spectators take their seat. These assumed arrival profiles have been derived from observations of NFL games at
- 15.5.74 Wembley Stadium in 2014. The arrival profiles of football and NFL forecasts are very similar.

Table 15.11 Assumed Spectator Arrival Profiles at the Stadium Gatelines (Sunday Afternoon)

Minutes Before Kick-Off	Proportion of Spectators Arriving – Sunday Afternoon
0-15	15.0%
15-30	35.0%
30-45	20.0%
45-60	10.0%
60-75	10.0%
75-90	5.0%

15.5.75 The assumed departure profiles, shown in Table 15.12, reflect the times at which spectators pass out of the stadium building and onto the public highway. This profile has been generated on the basis of retention measures that will be in place to encourage spectators to remain in the stadium during the post-match period. In comparison to the football forecast, in which there is a 75% departure peak 0-15 minutes after the final whistle, there is a much lower departure peak of 40% 15-30 minutes after the final whistle for the NFL forecast, indicating a more dispersed profile post-match.

Table 15.12 Assumed Spectator Departure Profiles from the Stadium Turnstiles

Minutes after Final Whistle	Proportion of Spectators Leaving – Sunday Afternoon
0-15	5.0%
15-30	40.0%
30-45	15.0%
45-60	10.0%
60-75	10.0%
75-90	0.0%

15.5.76 With respect to the time that NFL spectators spend in the local area pre- and post-match, assumptions are based on those obtained for the football forecast. Approximately 40% of spectators attending the NFL match are assumed to arrive early to spend time in the local area, and 20% are assumed to spend time in the local area after the match before travelling home.

15.5.77 In total 50% of the pre-Event and post-Event activity is expected to occur at tailor-made NFL fan parks in the local area. The Fan Parks have been factored into the travel demand and pedestrian flow forecasts. The Fan Parks will require subsequent approvals from LBH.

15.5.78 In line with the football scenario, extensive measures will be implemented to ensure a mode shift away