4.3.8 By the end of 2014, an expanded bus station, taxi rank and a new public space will be created (not part of this planning application). The existing bus station is currently undergoing expansion, including new bus stops, alighting points, bus stands, which will significantly improve interchange between bus and train services and a new public space with trees, benches and additional cycle parking. There will also be a remodelled access road (off Watermead Way) leading to the taxi rank (not part of this planning application).

4.4 Passenger circulation within Station

4.4.1 The Station currently comprises a single ticket hall providing direct access to the Network Rail platforms and an escalator barrel with two escalators and a fixed stair between the two escalators that link to a lower concourse separating the north and south-bound Victoria line platforms. The Station includes a lift which provides step free access from ticket hall to LU platform levels. The surface platforms and associated facilities including platform interchange access stairs, escalators and the bridge are part of the Network Rail network, operated by GA.

4.4.2 The current ticket hall at Tottenham Hale Station is relatively small and its size often leads to passenger congestion. New ticket gates have recently been installed by Greater Anglia adjacent to the northbound platform 2. This is an interim arrangement which will be changed as a result of the proposed development. The main issue is that passengers arriving from GA services in the AM peak are funnelled through the existing narrow station entrance alongside others accessing the station from surface level, which impedes passenger flow.

4.4.3 In addition, where customers from LU services need to buy a rail ticket for GA’s services this further adds to cross flows leading to congestion in the LU ticket hall. As the Station is a principle interchange for express services to Stansted Airport and Cambridge, the Station maintains high passenger demand levels, throughout the traffic day especially with passengers who have heavy luggage.
4.4.4 Passengers arriving on foot or by bus, approach the LU concourse from the north via steps and a switch-back ramp. There is also a subway access from the south of Ferry Lane, which is not step-free.

4.4.5 Figure 4.4 (Ref: 2-1, Page 22) illustrates the principal Station access and interchange arrangements and the indicative interchange arrangements when the Greater Anglia gateline is

Figure 4.4: Existing Station Access and Interchange

4.5 Passenger Demand

4.5.1 LU demand data from 2012 (Ref: 4-1) show that approximately 7,700 passengers use the Station during the morning peak period (07:00-10:00) and 8,400 passengers in the evening peak (16:00-19:00). By comparison, in 2002 approximately 5,700 passengers used the Station in the AM peak
4.5.2 The heaviest flows in the AM peak are passengers interchanging from south-bound GA services to south-bound Victoria line services (41%), and access from the street to south-bound Victoria line services (23%).

4.5.3 In the PM peak the heaviest flows are passengers interchanging from north-bound Victoria line services to north-bound GA services (35%), and egress from north-bound Victoria line services to street (51%).

4.5.4 It has to be emphasised that passenger demand has increased steadily at Tottenham Hale Station; between 2002 and 2012 demand grew by 35% in the AM peak and 64% in the PM peak, as stated above. Furthermore, with the majority of trips at the Station being interchange between NR and LU services (6 out of 10 journeys in the AM Peak and 5 out of 10 journeys in the PM peak), this leads to passenger circulation conflicts at the ticket hall level of the Station.

4.5.5 In 2002, the total number of passengers on a typical weekday was 15,549. By 2007, this had increased to 24,964 and by 2012 the number of passengers had reached 30,579. The growth in passenger usage has increased between 2002 and 2012 by 97%. If a straight-line average approach were taken this would suggest a steady growth rate of 9.7% per annum.

4.6 Pedestrian and cycle network

4.6.1 The area around the site is currently dominated by motorised vehicles which do not encourage the use of sustainable transport modes such as walking or cycling. Limited cycle facilities, unsuitable and unattractive walking routes, and poor linkages between transport services further exacerbate the use of non-car travel and segregation.

4.6.2 Figure 4.2 shows the pedestrian and cycle facilities in the vicinity of the site, which will be in place following completion of the gyratory works. Upon completion of the gyratory improvement and bus station works, there will be new pedestrian and cycle crossings as well as 25 cycle parking spaces (not part of this planning application).

4.6.3 Figure 4.5 shows cycling routes in the wider area; there are also designated cycle lanes that form part of Route 1 of the National Cycle Network.
4.6.4 Access to Tottenham Hale Station includes a pedestrian subway beneath Ferry Lane, providing a direct route from south of Ferry Lane (on the opposite side of the Station building) who require access to the Station.

4.6.5 Data supplied by TfL from observed surveys shows that on 11 June 2013 during the period 07:45 – 08:45, 168 people used the subway. The limited use of the subway is further confirmed by TfL modelling which shows that, across the full AM peak period (0700-1000), currently only 270 journeys to the station from south of Ferry Lane could potentially utilise the subway to access the station.

4.7 Car Parking

4.7.1 The existing car park for staff and public remain unchanged; the public car park is operated by NCP and has a capacity of 51 spaces and 6 accessible bays. Note that during the construction phase, the public car park will be used as the construction compound site.
5 Future Demand

5.1.1 The data used for the station passenger modelling was based on the latest Railplan outputs for Tottenham Hale (run in June 2012) and is calibrated against observed survey data. The Railplan model is based on London Plan growth projections.

5.2 AM Peak

5.2.1 In 2031, AM peak demand (07:00-10:00) at the Station is forecast to increase to over 16,000, which is approximately double the existing level of demand.

5.2.2 For example, the interchange flow from southbound GA services to LU southbound services of around 6,000 people is approximately twice as high as the same existing flow. It will be vital to provide sufficient capacity to accommodate this high level of movement, without the current congestion and queuing.

5.2.3 Likewise, the number of people entering into the station from street-level is forecast to increase from under 2,000 to over 4,000

5.3 PM Peak

5.3.1 The forecast increase across the PM peak is slightly less than the AM peak. In 2031, total demand at the Station between 16:00 and 19:00 is forecast to be 14,000. This is an increase of around 5,000 on existing levels of demand.

5.3.2 The main increase in forecast demand is on the interchange flow between northbound Victoria Line services to northbound GA services, as well as people leaving the station from the Victoria Line. In total, these two flows represent approximately 6,000 of overall passenger movements through the Station.

5.4 PM Peak with Tottenham Hotspur Football Club (THFC) event

5.4.1 On weekday match days at THFC, thought to occur on average around 12-14 times a year, demand at the Station is forecast to increase to around 19,000. This is approximately 5,000 higher than during a normal PM peak scenario.

5.4.2 The flow that experiences the largest increase is people leaving the station from northbound Victoria Line services, which make up 6,000 of the total demand. This approximately 4,000 more people than on a non-match day.

5.5 Existing station layout performance with forecast demand

5.5.1 The existing station, without any of the proposed improvements included in this planning application, would be unable to cope with this forecast demand.

5.5.2 In the AM peak journey times become slower and more congested with the routes from NR operating at Level of Service (LOS) E for most of their route into the ticket hall. The interchange
route is also experiencing heavy congestion. The GA southbound platform also experiences significant congestion at the base of the stair and escalator off the platform.

5.5.3 The vertical transport elements on the GA side of the station also experience significant levels of congestion operating at LoS E.

5.5.4 The problems observed in the AM peak are also apparent in the PM peak scenarios. In particular, the interchange route is reaches LoS E at the base of the staircase from GA, which is leads to slower journeys through the whole station.

5.5.5 The proposed improvements that form the basis of this planning application and the associated anticipated benefits to the transport network are outlined in the following section.
6 Proposed Scheme

6.1 Overview of development

6.1.1 The primary objective of the Station upgrade project is to increase capacity, improve access to the public transport network and reduce journey times. The proposed enhancements will substantially improve accessibility and legibility within the station as well as providing seamless, generous and step free routes in and to the Station.

6.1.2 The proposed development will provide improved facilities and accessibility for Station users; easier circulation within the Station; urban realm improvements in the vicinity; reduce severance and aid in the regeneration of Tottenham.

6.1.3 Specifically, the proposed Tottenham Hale Station Upgrade development comprises the following elements:

- creating a new landmark entrance to the Station;
- increasing the capacity of the Station concourse, by doubling the size of the current ticket hall;
- improving interchange by relocating the Greater Anglia and London Underground gatelines;
- providing new access to platforms via the new Access for All (AfA) bridge being delivered separately by Network Rail;
- removing the existing subway which links the south side of Ferry Lane with the Station;
- extending the existing bridge to form a new Station entrance from Hale Village, providing improved access from the east to Tottenham Hale transport interchange;
- re-routing the London Underground escape route and relocating the vent shaft;
- providing a new, upgraded Station control facility; and
- retail units.

6.1.4 The aforementioned extension of the existing pedestrian footbridge currently serves as a platform interchange only for GA services. Specifically, it is proposed to extend this footbridge eastwards to link the Hale Village development, over NR tracks.

6.1.5 This bridge extension will create a new direct link between the Station and Hale Village. Residents and visitors will be able to use this link to access the Station and also as an unpaid through route towards the bus station and local services. This new connection will improve connections between Hale Village and the wider Tottenham Hale area.

6.1.6 The extension of the existing NR bridge to the east which will provide a direct connection to Hale Village, meets one of the key aspirations of the Council and local landowners. Beyond local modification of the platform screen and the end of the bridge structure itself, this has a limited impact on the operational railway. This link is reliant on use of the existing steps at the western
end of the bridge. A step free route to the station from the east is provided, along the northern Ferry Lane pavement; the station therefore meets requirements of providing one step free access to the station. However discussions with the Council and local landowners have indicated that passive provision should be made for a lift associated with the Hale Village link in future. It is recommended that the exact location and impacts of this lift should be reviewed once the programme of works for the Stratford to Angel Road Rail (STAR) project is understood in more detail during 2014.

6.1.7 In addition to the above, the Station design incorporates the following accessibility benefits:

- Reduction of entrance steps from 10 stair risers today, to 3 in the future;
- Provision of a single-flight ramp into the station at less than a 1:20 gradient, which follows the same desire line and environment as the entrance steps;
- Step-free access to all surface rail platforms via new, 16 person capacity and fully accessible lifts;
- Creation of much clearer, more legible interchange connections following natural desire lines, which remove obstructions and allow open lines of sight between gatelines / stair and escalator connections for staff and passengers;
- Provision of ticket counters and machines that meet full accessibility standards including induction loops;
- Material selection (e.g. indoor cladding) which provides necessary visual contrast at key locations, notably for staircases and ramps;
- A lighting strategy that aides natural wayfinding; and
- An architectural treatment of the elevations that aides natural wayfinding.

6.2 Ferry Lane subway removal

6.2.1 As noted earlier, the development proposals will make the station inherently more accessible and offer significant improvements over the existing station layout. However, in order to accommodate the extension of the ticket hall box and implement these accessibility improvements, removal of the Ferry Lane underpass northern stair core is considered essential.

6.2.2 This will require closure of the existing subway and consequently change access to the station from the south. Options for retention of this stair core, which will falls directly on the main LU to NR interchange desire line, have been examined in detail but rejected on the following reasons and illustrated in Figure 6.1 below:

- **A.** There would be major pedestrian conflict between flows entering / exiting the LU gateline and the head of the entrance ramp which provides step free access to the station. This ramp cannot be moved to the north side of the entrance as it would conflict with ticketing facilities;
- **B.** Retention of the Ferry Lane subway would impose significant constraints on the arrangement of the LU gateline. This would require a split layout and a more constrained
entry/exit configuration. As well as making day-to-day operations more congested and difficult to manage, this constraint would also preclude a 3rd escalator serving the Victoria Line from being added at some point in the future;

- **C.** Wayfinding would be compromised with no direct lines of sight between the LU escalator and NR stairs and entry to the LU gateline would be through two narrow ‘doorways’ as opposed to one generous opening;

- **D.** The main NR gateline serving the primary interchange flow would need to be located further east and the ‘run off’ zone beyond the gates would be narrow and space-constrained. The gates would not therefore have the necessary capacity for anticipated growth; and

- **E.** The main interchange flow between LU and NR would be forced to the south of the Ferry Lane stair, in close proximity to the foot of the NR staircase. This would preclude the use of the NR stair as an unpaid link to Hale Village.

6.2.3 Relocation of the Ferry Lane north stair has been reviewed, however, in order to overcome the issues noted above, the subway would have to be moved some distance, either to the north side
of the enlarged concourse, or adjacent to the main station entrance. This would increase walk times in the subway considerably. In addition, relocation of the stair would require provision of lifts at either end of the subway to provide step free access as the scale of change would necessitate compliance with current accessible design standards. Construction of new, excavated lifts would be very expensive, offer poor value for money and are not considered affordable within the scope of the project's funding limitations.

6.2.4 While it is acknowledged that this subway currently provides an alternative route into the station from the south of Ferry Lane, the quality and convenience of this route is poor (see photos in Figure 6.1). It requires the pedestrian to negotiate 46 steps arranged in three flights of stairs and to make three right-angle turning movements with no direct lines of sight and no passive surveillance.

6.2.5 The most direct approach route to this subway from the Ferry Lane Estate is via a dead-end side road (leading to the Hale Village vehicle servicing gates) and up three flights of narrow steps. This is an unpleasant, dimly-lit environment with several possible places of concealment; fear of crime is clearly an issue. The photographs in Figure 6.2 show the staircase core that currently links the Hale Village service road with the south side of Ferry Lane. The pedestrian environment and wayfinding are both very poor.

![Figure 6.2: Ferry Lane access from Ferry Lane Estate](image)

6.2.6 An analysis of the impact of the Ferry Lane subway removal is included in Section 6.4. The new bridge link to Hale Village in combination with the new pedestrian crossings and cycle lanes (not part of this application) on Ferry Lane would mitigate against any adverse effects to pedestrians who currently use this subway.

**Ferry Lane crossing analysis**

6.2.7 TfL has reviewed the potential for a new surface crossing along Ferry Lane Estate road frontage to establish if this offers additional accessibility benefits to local residents. The location of a new crossing is constrained by a sequence of engineering structures associated with the railway, the Lee River and the steep embankment on the south side of Ferry Lane.

6.2.8 Along the western stretch of the Ferry Lane Estate frontage, these structures and the associated raised kerbs constructed to protect over-running vehicles preclude a new crossing, which will need to be step-free. While a new crossing would be viable to along the eastern stretch of the Ferry Lane Estate frontage, this is in close proximity to the existing crossing at the Mill Mead Road/Ferry Lane junction and would therefore offer little benefit. Figure 6.3 illustrates these points.
6.2.9 The optimum location for a new crossing is in the central part of the Ferry Lane Estate frontage. At this point there are no engineering structures that would prevent a step free crossing and several footpaths converge, linking with the northern section of Jarrow Road. However, a westbound bus stop currently occupies this position serving routes 123, 230 and W4 and it is close to another existing crossing (shown in Figure 6.3).

6.2.10 While initial discussions with TfL’s bus routes team suggests that this stop could potentially be removed or relocated once the new bus interchange is created in late 2014, while maintaining the maximum guideline of 400m between stops, this would take away a well-used stop serving the Ferry Lane Estate and would therefore be a dis-benefit for people living directly south of the Station.

Figure 6.3: Potential Ferry Lane crossing analysis

6.2.11 Based on these constraints and impacts, and in light of the substantive access benefits offered by the new Hale Village link in combination with the upgraded crossing to Station Square being implemented as part of the Gyratory Removal project, TfL is not progressing proposals for a new crossing on the Ferry Lane Estate frontage at this stage.

6.2.12 The proposed station upgrade requires the relocation of 6 cycle stands which are to be located on the western frontage of the station as part of the Gyratory Removal project, as these sit within the area allocated as a new retail unit facing the Station Square within this Application. Further cycle parking for the interchange as a whole is being delivered within the bus station, as part of the Gyratory project.
6.3 **Assessment of Effects during Construction**

**Effects upon highway network**

6.3.1 The maximum anticipated levels of construction traffic are set out in Table 6.1. A maximum daily peak hour flow of 20 HGVs each way, has been estimated (based on a calculation of earth required to be removed for foundations and then divided among 25tonne lorries). Construction traffic will access the site via the Watermead Way, Ferry Lane, Broad Lane and Monument Way, thereby minimising impacts upon local residents. It is assumed that the construction traffic will be divided in proportion to current flows on these roads.

<table>
<thead>
<tr>
<th>Road Link</th>
<th>Peak Daily Construction Traffic (HGV(^*) movements)</th>
<th>Daily Construction traffic (PCUs)</th>
<th>Baseline traffic (0800 to 1800 hours)</th>
<th>% increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Watermead Way</td>
<td>11</td>
<td>25</td>
<td>20,248</td>
<td>0.1</td>
</tr>
<tr>
<td>Ferry Lane</td>
<td>11</td>
<td>25</td>
<td>21,116</td>
<td>0.1</td>
</tr>
<tr>
<td>Broad Lane</td>
<td>5</td>
<td>12</td>
<td>9,442</td>
<td>0.1</td>
</tr>
<tr>
<td>Monument Way</td>
<td>13</td>
<td>30</td>
<td>27,732</td>
<td>0.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>40</strong></td>
<td><strong>92</strong></td>
<td><strong>78,538</strong></td>
<td><strong>0.1</strong></td>
</tr>
</tbody>
</table>

\(^*\) Note that one HGV movement is equivalent to 2.3 PCUs

6.3.2 The effect of construction vehicles to the surrounding road network is negligible, with less than 0.1% increase in daily Passenger Car Units (PCU) flows.

**Impact upon station-related parking**

6.3.3 It is understood that during construction, the 51 existing station car park spaces will be suspended to form a construction compound. This is unlikely to have a significant impact upon passenger access to the station.

**Construction Management/Logistics Plan**

6.3.4 A Construction Logistics Plan (CLP) details the construction process for each development phase. A CLP helps to manage all types of freight vehicle movement to and from construction sites and improves the safety and reliability of deliveries to a site, reduce congestion and minimise the environmental impact.

6.3.5 A CLP for the Tottenham Hale Station Upgrade will be prepared before construction commences by the principal contractor, in consultation with LBH. The CLP identifies the key issues that need to be addressed during the construction phases, for example congestion, accessibility and management of construction vehicle traffic, the hours of operation and to agree measures are in place to mitigate against the impact of construction.

6.3.6 TfL has recently published the ‘Construction Logistics Plan Guidance’ (Ref: 5-1) to support sustainable construction practices in London. This guidance is part of a series of documents that are designed to give specific help to transport planners and people working in the construction
industry. Other relevant CLP literature is the ‘London Freight Plan’ (Ref: 5-2) which aims at reducing the impact of construction traffic during peak hours through ‘reducing the contract duration and considering consolidation to minimise lane closures and illegal waiting/loading’.

6.3.7 Deliveries to Site will be strictly scheduled to avoid vehicles waiting to be unloaded, causing local congestion. Deliveries will also be scheduled where feasible, outside the morning and evening rush hours. During peak periods of construction vehicles accessing the site will be “called in” by phone. This will prevent vehicles waiting on adjacent roads to gain access to the site. The movement of construction vehicles will be part of a Construction Management Plan which will be agreed with Haringey Council following grant of consent.

6.3.8 Appropriate measures will be taken to avoid material from site being deposited on the public highway e.g. wheel washing.

**Effects upon public transport network**

6.3.9 The Station site has a very good Public Transport Accessibility Level (PTAL) of 6a. In view of the high level of accessibility by sustainable modes and the initiatives being promoted to recruit a locally-based workforce, it is anticipated that all construction staff will access the site by public transport, walking or cycle.

6.3.10 Construction employees will tend to arrive on site early during the AM peak and depart again early in the PM peak, when the Station is less used thereby minimising stress on the public transport network.

6.3.11 The outline construction methodology assumes that the Station will remain operational during construction works. Construction works are anticipated to be carried out across an 18 month period, with work likely to start on site towards the end of 2015. Any potential impacts likely to result from the Station redevelopment will be temporary. The location of potential effects at any point within the construction period will depend on the phasing of the works, which will be worked up in detail during the final stage of design in 2014.

6.3.12 The effects of the ridership increase on the public transport network during construction are considered to be negligible.

**Impacts upon pedestrian/cycle network**

6.3.13 The location of potential impacts at any point within the construction period will depend on the phasing of the works. Pedestrian egress/ingress routes to the Station and cycle lanes may be subject to temporary closures and/or rerouting during construction for public safety and construction reasons. In order to mitigate against these potential temporary disruptions to cycle/footways, wayfinding and signs can be utilised to re-direct pedestrians and cyclists in an efficient and safe manner.

6.3.14 The scheme will require the permanent closure of the pedestrian subway under Ferry Lane. This is essential to achieve the desired improvements in interchange times that is one of the key objectives of the project and which are outlined below.
6.3.15 A comparison of the walking route from the intersection on Ferry Lane (using the southern pedestrian pathway) to the Station entrance, results in an increase of approximately 100m of walking distance, as illustrated in Figure 6.4. However, the increase in walking distance is partly mitigated by the benefit that the street-level route is step free; the subway route currently has three set of stairs, including one inside the subway (total of 46 stair risers).

Figure 6.4: Impact on pedestrian walking distances because of Ferry Lane subway closure (construction phase)

6.3.16 Based upon data supplied by TfL, the closure of the subway will affect 168 pedestrians between 07:45 – 08:45, however the additional journey time and distance penalty is considered small.

6.4 Assessment of Effects during Operation

Impacts upon highway network

6.4.1 As noted above, there would be no changes to traffic activity compared to the current Station and associated retail units, because the proposed development is a public transport scheme with no increase in car parking provision or vehicular trips and provision of better pedestrian links. Therefore, there would be a neutral impact upon the surrounding highway network.

Impacts upon public transport network

6.4.2 The station has been designed to accommodate the forecast 2031 passenger demand outlined in section 4 and will offer significant benefit in terms of interchange and journey time improvements compared with the existing station layout.

6.4.3 Detailed Legion passenger modelling has been carried out against a range of population, transportation and development growth scenarios as part of the station’s design development by TfL, in collaboration with Network Rail and Greater Anglia. This includes potential additional passenger movements associated with the Tottenham Hotspur development and development of all opportunity sites identified in local and regional planning policy.
6.4.4 The data used for the station passenger modelling was based on the latest Railplan outputs for Tottenham Hale (run in June 2012) and is calibrated against observed survey data. The Railplan model is based on London Plan growth projections.

6.4.5 The AM modelling suggests that the proposed Station design is appropriately sized for the 2031 AM peak demand levels, with the staggered vertical circulation arrangement and 4.4 metres wide bridge performing well and allowing the platform clearance times and circulation routes to operate within targets.

6.4.6 Specifically, with regards to platform 1 and platform 3, the staggered vertical circulation arrangement provides sufficient capacity to accommodate single and simultaneous arrivals within 3 minutes; which meets the 4 minute platform clearance time target based on Network Rail standards. Platform 2 was not found to have any issues during the AM period.

6.4.7 In the future scenario following completion of the West Anglia Main Line upgrade (being delivered by Network Rail and not part of this planning application), the AFA bridge achieves a Level of Service (LoS) C, with isolated pockets of LoS D-E following simultaneous P1 and P4 train arrivals; boarding movements will face conflicts for short periods, but this is not considered to be an issue given the low boarding volumes. Overall, the bridge at 4.4m width operates within capacity and is considered to be appropriately sized.

6.4.8 Within the concourse, interchange flows are better accommodated with the more direct interchange route and larger concourse enabling an improvement in journey times and reduced congestion and queuing.

6.4.9 Overall, concourse circulation is within LoS targets and gateline provision generally acceptable.

6.4.10 The proposed improvements will enable improved access from the east of the station. Modelling shows that the proposed Hale Village link is well used and improves access for over 1,500 people. Nearly 1,000 of these people are accessing southbound Victoria Line services and 400 take advantage of the new unpaid link to access bus services via the station.

6.4.11 In order to understand the impact of a Tottenham Hotspur FC home match (post stadium upgrade), a normal weekday PM peak (16:00-19:00) demand was combined with an evening match day additional demand. The data used for the demand associated with an evening match day was provided by Tottenham Hotspur FC transport consultants. This is the busiest station scenario during a match day.

6.4.12 Again, the larger station concourse and greater number of ticket gates in the proposed station is well-equipped to cope with the forecast uplift in demand during these match day scenarios.

6.4.13 The modelling suggests that a third escalator from the ticket hall to Victoria Line platforms (not included in this planning application) may be needed in the late 2020s.

6.4.14 While a third escalator is excluded from the current design, the proposed gateline modifications would provide sufficient run-off space at the head of the escalator to cope with the increased throughput of the third escalator. In addition, the significantly increased concourse area proposed
in this stage of design would provide ample movement and accumulation space capacity for third escalator flows, without further modification.

**Impacts upon pedestrian/cycle network**

6.4.15 Overall, Station users are likely to benefit from an increased number of pedestrian crossings, the new bridge link to Hale Village, as well as an improved urban realm in the vicinity of the Station. These accessibility improvements will ensure safer links for pedestrians/cyclists in the area which can promote walking and cycling as a sustainable travel choice and reduce the number of pedestrian road accidents.

6.4.16 The proposed development makes provision for extending the existing (platform interchange) bridge eastwards and over the NR tracks to enable pedestrian access to Hale Village. This pedestrian route will be unpaid (i.e. no ticket required to use the bridge) so local residents can use as a through route towards the bus station, The Hale, Hale Road and the retail facilities around the former gyratory. This new link will be accessible during the Station's normal operating hours.

6.4.17 Hale Village is a mixed use development which includes 1,200 residential units, hotel, 1,000 student units, offices, retail and a school; the early phases of the development have been constructed. Opposite Hale Village, the Hale Wharf waterfront development will be residential led (approximately 470 units) with a mix of retail and leisure land uses. As set out in Haringey Council's “A Plan for Tottenham”, it is envisaged that by 2025 the Tottenham Hale area around the Station will become a new town centre and deliver 4,000 new jobs, 5,000 new homes and a wide range of community and commercial services.

6.4.18 The bridge extension will be of particular benefit to the considerable number of residents and visitors to the aforementioned developments and future trip attractors, as it will shorten the access distance to the Station. For example, from the centre of Hale Village, the link will result in a decrease of approximately 100 metres walking distance; compared with the current pedestrian route along Ferry Lane. This represents a time saving of 80 seconds each way.

6.4.19 TfL has analysed walking routes to the Station for residents living south of Ferry Lane - this is summarised in **Figure 6.5**. Data and analysis provided by TfL show that there are a total of 1,093 households that could potentially be use the Ferry Lane subway, who in the future may be using the Hale Village bridge or the new pedestrian crossings.

6.4.20 The conclusion of this analysis is that there is actually an overall improvement in journey time to the station for 648 of these households, due to introduction of the new Hale Village bridge and pedestrian crossings, despite the removal of the subway.

6.4.21 Overall, this demonstrates that for the majority of these residents, walking routes will be substantially shorter (and more pleasurable) in the future than they are today, despite removal of the subway.
6.4.22 When assessed holistically, it is considered that the dis-benefit of removing the Ferry Lane subway is substantially outweighed by the accessibility and Station operational benefits associated with its removal.

Figure 6.5: Impact (time/distance) of Ferry Lane subway closure and new bridge link
7 Conclusions

7.1 Impacts during construction

7.1.1 During the construction phase, the scheme is anticipated to have a negligible impact upon the surrounding pedestrian, public transport and highway networks.

7.1.2 A relatively small number of pedestrians will be inconvenienced by the closure of the subway beneath Ferry Lane. However, the affected pedestrians will be able to make use of the extended bridge proposed as part of the scheme and the nearby new pedestrian crossing delivered by the gyratory scheme (not part of this application).

7.2 Impacts during operation

7.2.1 During the operational phase, the scheme is anticipated to have a negligible effect upon the surrounding public transport and highway networks.

7.2.2 The circulation enhancements within the Station will reduce pedestrian congestion and improve journey quality.

7.2.3 The bridge link will also reduce pedestrian access times to/from Hale Village and will also provide a shorter and more attractive alternative to use of the subway under Ferry Lane which will be closed as part of the scheme.

7.3 Overall conclusions

7.3.1 The proposed Tottenham Hale Station Upgrade provides a significant improvement for passengers at Tottenham Hale. The introduction of an enhanced interchange between LU, NR and bus services, creates additional sustainable journeys and opportunities for both residents and employers in the area, as well as improving accessibility to the Station.
References:

- Ref. 2-1: Draft Conceptual Design Statement – Tottenham Hale Station. Sinclair Knight Merz for TfL (2013)
- Ref. 3-1: National Planning Policy Framework. Department for Communities and Local Government (March 2012)
- Ref. 3-2: The London Plan. Greater London Authority (July 2011, with amendments in 2013)
- Ref. 3-4: Upper Lee Valley Opportunity Area Planning Framework. Mayor of London (July 2013)
- Ref. 4-1: Tottenham Hale Station Interchange: Business Case Narrative (Inception & Early Feasibility). TfL (Autumn 2013)
- Ref. 5-1: Construction Logistics Plan Guidance for Planners. TfL (April 2013)