

TECHNICAL NOTE TN01

Former Nestle Site, Nestle Avenue, Hayes,

PERS AUDIT

Project No. 16018-01

19th January 2017

Author: Gemma Elias

Approved: Jenny Baker (Markides Associates)



CONTENTS

	Page
1.0 Introduction	1
2.0 Methodology	3
3.0 Identification of Audit Material	5
4.0 Audit Results	8
5.0 Links	9
6.0 Crossings	16
7.0 Public Transport Waiting Areas	22
8.0 Conclusions	26

APPENDICES

Appendix A – Site Location Plan

1.0 INTRODUCTION

Preamble

- 1.1 Markides Associates (MA) have been instructed by Barratt London Ltd and SEGRO PLC (the Applicants), to prepare this Technical Note (TN) in support of their development proposals for the Former Nestle Site, Nestles Avenue, Hayes, UB3 4RF (the Site). A site location plan is attached to this TN as **Figure 1.1**.
- 1.2 The Site is located to the south-east of Hayes Town Centre as shown in **Appendix A**, bounded to the north by the Great Western Rail Line and Grand Union Canal and to the south by Nestles Avenue. The former Nestle Factory has been split into two separate development parcels. The land being redeveloped by Barratt London Ltd is the western portion of the site with the eastern portion being developed by SEGRO for complementary employment uses.
- 1.3 The Site has an established B2 General Industrial land use and was occupied by Nestle up until 2014 when Nestle finally vacated the Site. The Nestle Factory in total has a floor area of approximately 91,000 sqm GFA.

Pre-application discussion

- 1.4 It was agreed with Hillingdon Council and TfL that a PERS audit be undertaken for the routes connecting the Site with the local area, as well as routes to key facilities and recreation grounds. The exact location of the site is provided in **Appendix A**.

Pedestrian Environment Audit

- 1.5 This report discusses in detail the methodology for the PERS assessment, and identifies a baseline relating to the pedestrian infrastructure and environment in the vicinity of the site.
- 1.6 The 'PERS for London (TfL edition) Review Handbook' (Version 2 - September 2005), which provides a structured method for defining a baseline pedestrian environment (which can be compared to other sites across London) has been referred to in undertaking this study. The assessment also allows future assessment of the value of any improvements to the assessed pedestrian environment.

2.0 METHODOLOGY

- 2.1 As recommended in the 'Street Audit Assessment Handbook' (TRL 2010), the PERS audit has been undertaken following the five stage process outlined below:

Stage 1: Definition of Study Area

- 2.2 It was agreed with Hillingdon Council and TfL that a PERS audit be undertaken for the routes connecting the Site with the local area, as well as routes to key facilities and recreation grounds. The exact location of the site is provided in **Appendix A**.

Stage 2a: Desktop Identification of Links, Crossings, Routes, Spaces

- 2.3 A desktop study was undertaken to identify the location, suitability and viability of the links, crossings, routes and spaces to form part of the audit.

Stage 2b: Optional Collation of Existing Information

- 2.4 Further information relating to pedestrian accessibility gathered as part of the Transport Assessment was also reviewed, including the OS mapping and public transport service data.

Stage 3: On Street Evaluation

- 2.5 The audit was undertaken on Tuesday 10th January 2017 by two auditors. This date was considered to represent a typical day in terms of pedestrian activity.

- 2.6 The weather when undertaking the audit was sunny.

- 2.7 The original evaluation sheets used in the audit are available on request.

Stage 4: Data Analysis Using Street audit assessment forms

- 2.8 The data collected from the audit was assessed using relevant street audit assessment forms and each element of the study area has been scored accordingly.

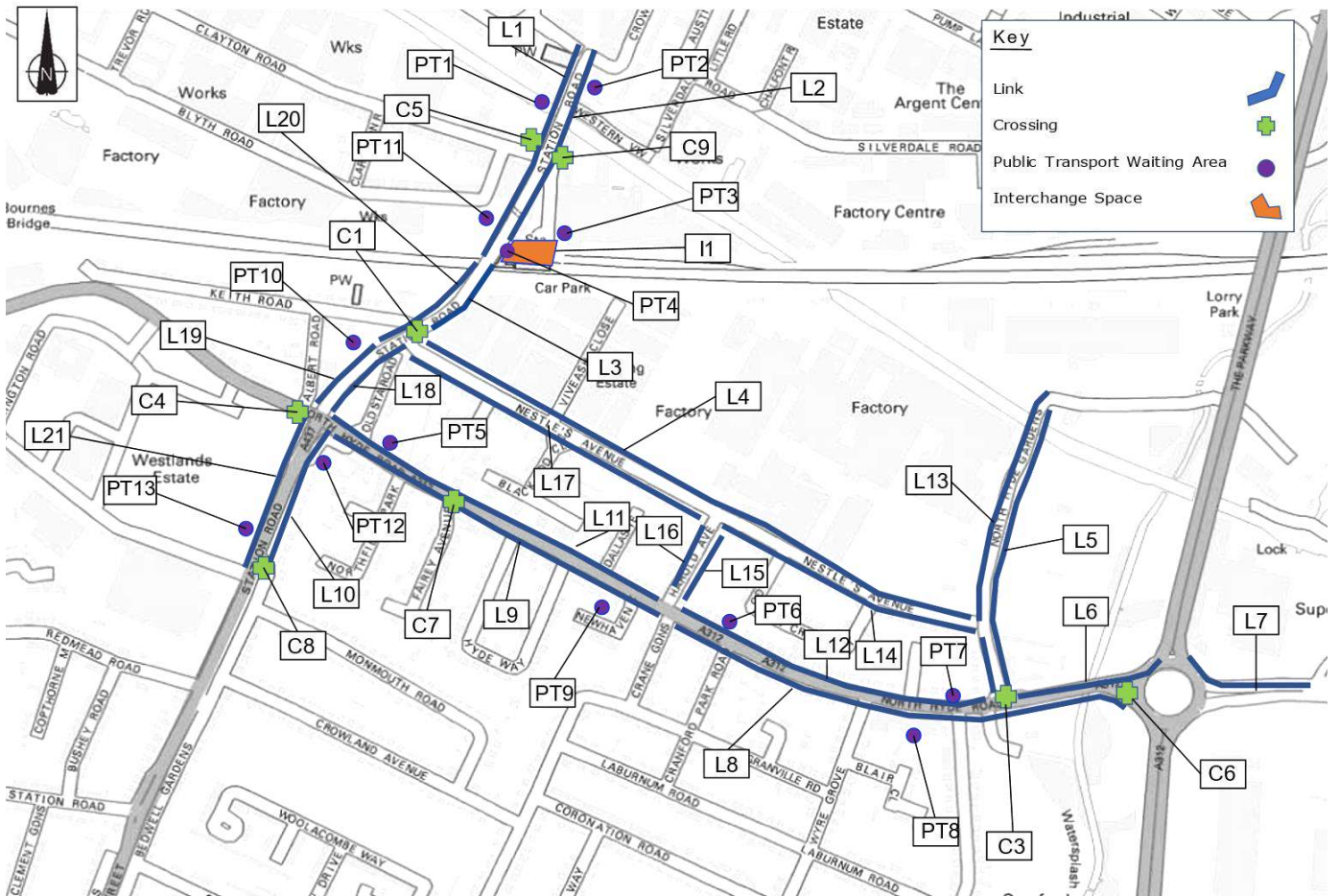
Stage 5: Display and Review of Outputs

- 2.9 The resultant output from street audit assessment forms has been analysed as outlined in the remainder of this report.

3.0 IDENTIFICATION OF AUDIT MATERIAL

3.1 The routes, links, crossings and public transport waiting areas assessed in the PERS audit are shown in **Figure 3.1** below.

Figure 3.1 – Identified Route and Audit Material



3.2 The name, ID code and location of each audit point in **Figure 3.1** is shown in **Table 3.1** below:

Table 3.1 – PERS Audit Material Details

ID Code	Details
	Link
L1	Station Road - north western side
L2	Station Road - north eastern side
L3	Station Road - Hayes and Harlington Station eastern side
L4	Nestle Avenue - north side
L5	North Hyde Gardens – north section
L6	North Hyde Road, Bulls Bridge Roundabout section
L7	Bulls Bridge Roundabout Underpass and Hayes Road
L8	North Hayes Road - south eastern side
L9	North Hyde Road – south western side
L10	Station Road – south eastern side
L11	North Hyde Road - north western side
L12	North Hyde Road - north eastern side
L13	North Hyde Gardens – south section
L14	Nestle Avenue - south eastern side
L15	Harold Avenue – eastern side
L16	Harold Avenue – western side
L17	Nestle Avenue – south western side
L18	Station Road – west side (Near Old Station Road)
L19	Station Road – west side (Near Keith Road)
L20	Station Road - Hayes and Harlington Station western side
L21	Station Road – south western side
	Crossing
C1	Station Road / Nestle Avenue / Keith Road - Refuge Island Crossing
C2	Station Road - Zebra Crossing opposite Hayes and Harlington Station
C3	North Hyde Road / North Hyde Gardens - Signalised Crossing
C4	Station Road / North Hyde Road - Signalised Crossing
C5	Station Road - northern section - Zebra Crossing
C6	North Hyde Road - Bulls Bridge Roundabout - Toucan Crossing
C7	North Hyde Road - Refuge Island Crossing
C8	Station Road - southern section - Signalised Crossing
C9	Station Road - northern section - Refuge Island Crossing
	PT Waiting Area
PT1	Station Road - North eastern side - Sheltered Bus Stop
PT2	Station Road - North western side - Sheltered Bus Stop
PT3	Hayes and Harlington Station - Station Road

PT4	Station Road - eastern side opposite Hayes and Harlington Station - Sheltered Bus Stop
PT5	North Hyde Road - north eastern side - Sheltered Bus Stop
PT6	North Hyde Road - north eastern side - Flag Bus Stop
PT7	North Hyde Road- north eastern side near North Hyde Gardens - Flag Bus Stop
PT8	North Hyde Road – south eastern side - Sheltered Bus Stop
PT9	North Hyde Road – southern side near Newhaven - Sheltered Bus Stop
PT10	Station Road – western side - near Keith Road
PT11	Station Road - western side opposite Hayes and Harlington Station - Sheltered Bus Stop
PT12	Station Road – south eastern side - Sheltered Bus Stop
PT13	Station Road – south western side - Sheltered Bus Stop

4.0 AUDIT RESULTS

4.1 The results of the PERS audit are detailed in the remainder of this report.

4.2 In accordance with the relevant guidance, each route, link, crossing and public transport waiting area has been scored using a relevant street audit assessment form. Elements have been assigned a 'RAG' (Red, Amber, Green) colour that represents the average of all the individual scores collated for that particular item. The colours represent:

- **Green** – 'Good' overall positive score (Rating 2 to 3);
- **Amber** – 'Average' overall average score, and (Rating -1 to 1);
- **Red** – 'Poor' overall negative score. (Rating -3 to -2)

5.0 LINKS

5.1 Particular emphasis has been given to the likely routes ('links') taken by pedestrians when travelling to and from the site via Hayes and Harlington Railway Station with such links listed below in **Table 5.1**, which additionally summarises the PERS audit score for each link and its associated RAG colour.

Table 5.1 – PERS Scores for Links

ID	Place Name	Total RAG Score	RAG
L1	Station Road - north western side	18	Amber
L2	Station Road - north eastern side	31	Amber
L3	Station Road - Hayes and Harlington Station eastern side	8	Amber
L4	Nestle Avenue - northern side	26	Amber
L5	North Hyde Gardens – northern section	-19	Amber
L6	North Hyde Road, Bulls Bridge Roundabout section	47	Green
L7	Bulls Bridge Roundabout Underpass and Hayes Road	-5	Amber
L8	North Hayes Road - south eastern side	-10	Amber
L9	North Hyde Road – south western side	-10	Amber
L10	Station Road – south eastern side	58	Green
L11	North Hyde Road - north western side	15	Amber
L12	North Hyde Road - north eastern side	-17	Amber
L13	North Hyde Gardens – south section	18	Amber
L14	Nestle Avenue - south eastern side	22	Amber
L15	Harold Avenue – eastern side	12	Amber
L16	Harold Avenue – western side	12	Amber
L17	Nestle Avenue – south western side	28	Amber
L18	Station Road – west side (Near Old Station Road)	42	Green
L19	Station Road – west side (Near Keith Road)	37	Amber
L20	Station Road - Hayes and Harlington Station western side	32	Amber
L21	Station Road – south western side	63	Green

5.2 The audit identified that the majority of the links in and around the development site had an overall Moderate ('Amber') score, with 4 links being allocated / receiving a Positive ('Green') score and no links receiving a Negative ('Red') Colour (as discussed below).

- 5.3 Many of the links benefit from wide accessible footways which are well lit, and which accommodate dropped kerbs and tactile paving at crossing points. **Photo 1** shows a typical footway along the northern side of Nestle Avenue which runs along the southern boundary of the site.

Photo 1 – North Western side of Footway, Nestle Avenue



- 5.4 The majority of Nestle Avenue has a wide and safe footway, however trees along the pathway have affected the footway creating trip hazards and reduced footway widths. These potential issues are demonstrated in **Photo 2**.

Photo 2 – Trip hazard North Western side of Footway, Nestle Avenue



- 5.5 **Photos 3 and 4** show a typical footway on the roads surrounding the site (Station Road and North Hyde Road) which both received an overall 'Average' (Amber) RAG score. The footways have widths varying between 2m-4m, are well lit, and benefit from desirable gradient, however both suffer with low to average surface quality. Station Road benefits from pedestrian friendly markings with pedestrian way-finder signs and Legibility London boards in different locations along this route.
- 5.6 North Hyde Road provides an effective footway width which is adequate for the capacity using this route, however North Hyde Road scores negatively for tactile information and drop kerb facilities. North Hyde Road either provides poor quality tactile information or none at all, discouraging pedestrians from using this route.
- 5.7 **Photo 5 and 6** present Station Road travelling south, which has recently experience major improvements due to the ASDA supermarket development. Station Road on both the eastern and western side scored highly, with high quality surfaces and wide and effective footways. The eastern side of Station Road was awarded a high level for its segregation from the cycle lane, providing a safe pedestrian and cycle route for both users, which is presented in **Photo 5**.

Photo 3 – Station Road access leading to Hayes and Harlington Station and the town centre, with way-finding signs on the Station Road and Nestle Avenue junction.



Photo 4 – North Hyde Road footway widths and lack of tactile information on the North Hyde Road / Dallas Terrace junction



Photo 5 – Station Road eastern side, with segregated pedestrian footway and cycle lane



Photo 6 – Improved pedestrian footpath and pedestrian crossing outside the new ASDA supermarket



- 5.8 **Photo 7** shows the south-western side of the North Hyde Road (L7), which received an 'Average' (Amber) score. The link was scored negatively for surface quality, lack of tactile information at junctions, trip hazards due to raised footpath due to tree roots and an uneven footpath, cleanliness and drainage. **Photo 7** below demonstrates the poor quality of the footway and the bins bags which are outside every house along the street.

Photo 7 – Residential bin-bags located along the south-western side of the North Hyde Road



- 5.9 The photos shown above represent the 'typical' conditions of the links along Nestle Avenue, Station Road and North Hyde Road pedestrians can use when moving to and from the site on the routes to local facilities.
- 5.10 In summary, and as indicated in **Table 5.1**, the majority of assessed links benefit from wide pedestrian spaces that are well lit, have accessible waiting areas for public transport, good colour contrasts to assist partially sighted users and well maintained tactile dropped kerb

facilities. It is noted that the links surrounding the site achieved only an average score suggesting that footpath's improvements will provide a better pedestrian linkage between the station and other local facilities located in close proximity to the site. The only improvements needed in regards to links are along Nestle Avenue. Improvements are needed to ensure that footpath surfaces are flat and free of trip hazards / obstacles such as the uneven footpaths adjacent to trees.

- 5.11 The new Hayes and Harlington Crossrail station will improve the pedestrian pathway surrounding immediate station area, and will be implemented by TfL and Hillingdon Council, which will provide better pedestrian linkage between the site, the new station, and the town centre.

6.0 CROSSINGS

6.1 All the main crossings between the Site and the selected destinations, have formed part of this audit.

6.2 **Table 6.1** below summarises the PERS audit scores for each crossing.

Table 6.1 – PERS Scores for Crossings

ID	Crossing	Total RAG Score	RAG
C1	Station Road / Nestle Avenue / Keith Road - Refuge Island Crossing	26	Amber
C2	Station Road - Zebra Crossing opposite Hayes and Harlington Station	47	Green
C3	North Hyde Road / North Hyde Gardens - Signalised Crossing	32	Green
C4	Station Road / North Hyde Road - Signalised Crossing	51	Green
C5	Station Road - northern section - Zebra Crossing	16	Amber
C6	North Hyde Road - Bulls Bridge Roundabout - Toucan Crossing	23	Amber
C7	North Hyde Road - Refuge Island Crossing	20	Amber
C8	Station Road - southern section - Signalised Crossing	57	Green
C9	Station Road - northern section - Refuge Island Crossing	16	Amber

6.3 The majority of the crossings within the audit area were rated as 'Good' (Green) or 'Average' (Amber). These crossings were judged to display a suitable crossing type, appropriate gradients without deviation from pedestrian desire lines, however a lot of the 'Average' scoring crossing suffered from tactile information issues. There were no Red ('Poor') ratings for crossings along the assessed routes.

6.4 **Photo 8 and 9** shows the staggered signalised pedestrian crossings at Station Road / North Hyde Road (C4) and these crossing were rated as 'Good' (Green). As is evident, the tactile paving and dropped kerbs are fit for purpose, adequately maintained and are located along pedestrian desire lines. The refuge island is of adequate width and size for the capacity of people using the crossing.

Photo 8 – Station Road / North Hyde Road - Signalised Crossing (C4)



Photo 9 – Station Road / North Hyde Road - Signalised Crossing (C4)



- 6.5 **Photo 10** show details of the Station Road / Nestle Avenue / Keith Road refuge island crossings (C1). **Photo 10** displays that the crossing provides adequate refuge island width, tactile information with colour contrast to help the partially sighted and benefits from a desirable gradient. However, the crossing didn't score so highly for cleanliness, drainage, and trip hazards. The photo displays evidence of mud and ponding which could cause people to slip.

Photo 10 – Junction of Nestle Avenue / Station Road – Refuge Island Crossing (C1)



- 6.6 **Photo 11 and 12** identify the zebra crossing located on Station Road (C2), located north of Hayes and Harlington Station. This zebra crossing was awarded a 'Good' score (Green) due to crossing performance, crossing capacity and the short waiting time to cross. The crossing scored negatively for tactile information. **Photo 12** also identifies that although the tactile information has colour contrast, there are drain covers over the tactile on the centre island as well as on the eastern side of station road, which could be confusing for blind or partially sighted pedestrians. The crossing also suffered negative scoring for clear crossing lines and litter/chewing gum, which is clearly presented in **Photo 11 and 12** below.

- 6.7 The Station Road / Clayton Road zebra crossing (C5) was awarded a low 'Average' (Amber) score, and is shown below as **Photo 13**. The low scoring is due to the lack of tactile information on both sides of the zebra crossing. Therefore, this is a dangerous crossing for partially sighted and blind pedestrians due to the lack of tactile and lack of signalised crossing information. The crossing also scored negatively due to drainage and trip hazards on the crossing, as well as unclear zebra crossing lines.

Photo 11 – Station Road - Zebra Crossing (C2)



Photo 12 – Poor tactile information on the Station Road – Zebra Crossing (C2)



Photo 13 – The Station Road / Clayton Road zebra crossing (C5)



6.8 The North Hyde Road was awarded low scores while being assessed as a number of links (L8, L9, L11 and link L12), due to lack of tactile information along this road on a number of different

small junctions. **Photo 14** below conveys the typical crossing along this road, showing the lack of tactile information, which is dangerous for partially sighted and blind pedestrians crossing here.

Photo 14 – Lack of tactile at the North Hyde / Dallas Terrace junction



6.9 In summary, and as indicated in **Table 6.1**, although some of the highlighted suffer from poor tactile information, the majority of assessed crossings benefit from appropriate crossing provision, well maintained tactile dropped kerb facilities along the desire line and a good level of legibility for all users. The score achieved by the zebra crossing situated on the junction of Station Road / Clayton Road (C5) was a low average, which needs improvements in regards to legibility for all user types, particularly tactile information. These improvements are anticipated to raise their scores.

7.0 PUBLIC TRANSPORT WAITING AREAS

7.1 This section describes the local public transport waiting areas that have been audited by virtue of being located within the agreed audit area.

7.2 **Table 7.1** below summarises the PERS audit scores for each bus stop location.

Table 7.1 – PERS Scores for Public Transport Waiting Areas

ID	PT Waiting Area	Total RAG Score	RAG
PT1	Station Road - North eastern side - Sheltered Bus Stop	25	Amber
PT2	Station Road - North western side - Sheltered Bus Stop	27	Amber
PT3	Hayes and Harlington Station - Station Road	55	Green
PT4	Station Road - eastern side opposite Hayes and Harlington Station - Sheltered Bus Stop	38	Green
PT5	North Hyde Road - north eastern side - Sheltered Bus Stop	29	Amber
PT6	North Hyde Road - north eastern side - Flag Bus Stop	18	Amber
PT7	North Hyde Road- north eastern side near North Hyde Gardens - Flag Bus Stop	25	Green
PT8	North Hyde Road – south eastern side - Sheltered Bus Stop	44	Green
PT9	North Hyde Road – southern side near Newhaven - Sheltered Bus Stop	38	Green
PT10	Station Road – western side - near Keith Road	51	Green
PT11	Station Road - western side opposite Hayes and Harlington Station - Sheltered Bus Stop	32	Amber
PT12	Station Road – south eastern side - Sheltered Bus Stop	45	Green
PT13	Station Road – south western side - Sheltered Bus Stop	42	Green

7.3 The majority of the public transport waiting areas identified in this audit achieved a ‘Good’ (Green) overall score owing to the overall good condition of the considered bus stops/

shelters. There were five 'Average' (Amber) ratings for the public transport and no 'Poor' (Red) along the assessed routes.

- 7.4 There are no existing bus stops along Nestle Avenue, with the closest bus stops to the site being situated along North Hyde Road and Station Road. A bus stop situated close to the site is the sheltered bus stop located to the north of the Station Road / North Hyde Road Junction. This bus stop is shown in **Photo 15**, and is typical of the Public Transport Waiting Area's identified within this audit and scored a 'Good' (Green) rating (PT10). This bus stop waiting area score highly for public transport information, raised kerbs and gaps minimised, infrastructure at waiting area including real time information, and area waiting comfort due to the shelters capacity and seating being easy to reach. The bus stop did score negatively for drainage and evidence of neglect, due to heavy ponding in close proximity to the bus stop, which is identified in **Photo 15**.

Photo 15 - Sheltered bus stop located to the north of the Station Road / North Hyde Road Junction



- 7.5 **Photo 16**, identifies the flag bus stop situated on North Hyde Road (PT6). This bus stop was scored an 'Average' (Amber) rating due to the lack of waiting area comfort, lack of security measures and poor lighting facilities. The bus stop scored highly for sightlines and cleanliness which is clear from **Photo 16** below.

Photo 16 – Flag Bus Stop situated on the north-western side of North Hyde Road



- 7.6 **Photo 17** shows the two sheltered bus stops located on Station Road and close to the Hayes and Harlington Station. The eastern side bus stop (PT4) which is directly adjacent to the station access scored a 'Good' (Green) rating, and is presented in **Photo 17**. The station scored very highly in regards to public transport information and real time information. The bus stop also scored highly for security measures including formal surveillance, informal surveillance and publicised surveillance. The western bus stop (PT11) on Station Road, which is opposite the Hayes and Harlington Station but on the opposite side of the road. The bus stop was scored an 'Average' (Amber) rating, due to lack of pedestrian crossing at pedestrian desire

lines. Pedestrians were witnessed leaving the bus and crossing Station Road dangerously, not using the northern zebra crossing to enter the station. The bus stop also scored negatively for capacity, but scored highly for the information provided at the waiting area which included real time information, well-lit and adequate drainage.

Photo 17 – Sheltered Bus Stop on the Eastern side of Station Road, adjacent to Hayes and Harlington Station (PT4)

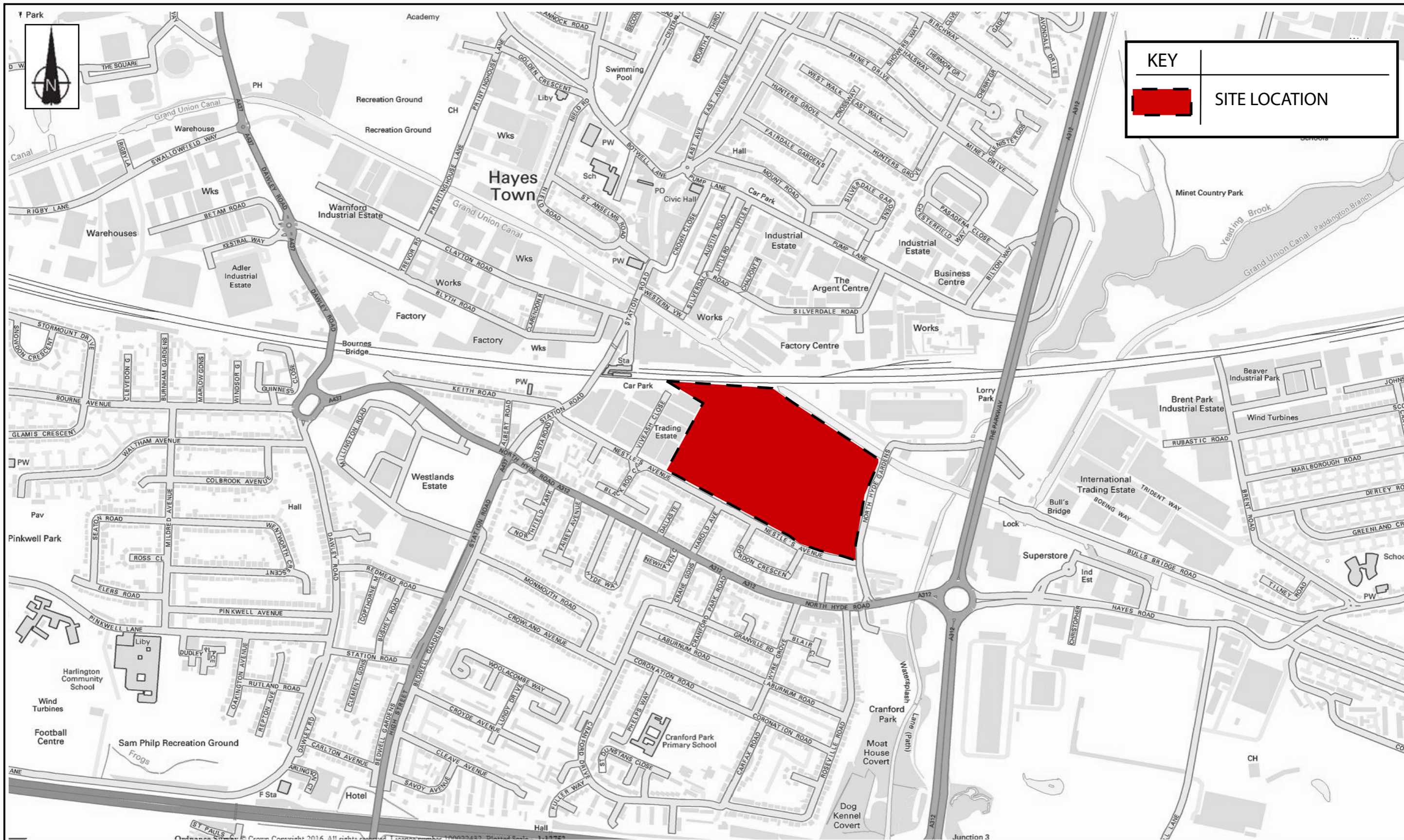


7.7 In summary, and as indicated in **Table 7.1**, the majority of the assessed public transport waiting areas benefit from average to excellent information services, easy boarding, are well-lit with well-maintained infrastructure and are located in areas of acceptable security and comfort.

8.0 CONCLUSIONS

- 8.1 This document has been produced following a PERS audit of pedestrian routes / facilities in the vicinity of the site. The scope of this study was agreed with Hillingdon Council and TfL prior to commencement and forms part of the Transport Assessment accompanying the planning application for the proposed developments.
- 8.2 The results of the PERS audit indicate that the existing pedestrian environment is generally of a good quality with the majority of the selected routes achieving 'Average' (Amber) and 'Good' (Green) scorings for links, crossings and public transport waiting areas.
- 8.3 Whilst the majority of the routes, crossings and public waiting areas achieved an 'Average' and 'Good' overall score, some sections of footway such as those along North Hyde Road, as described in **Section 5.9**, were given a low 'Average' score (Amber) on the basis of footpath quality, lack of tactile information at junctions and trip hazards such as ponding which resulted in unfavourable environments for pedestrians. The Station Road / Clayton Road crossing scored a low 'Average' score (Amber) due to lack of tactile information, and ponding on the crossing, outlined in **Section 6.7**, which would require improvements as it is a dangerous crossing for partially sighted and blind pedestrians. The only improvements needed in regards to links are along Nestle Avenue. Improvements are needed to ensure that footpath surfaces are flat and free of trip hazards / obstacles such as the uneven footpaths adjacent to trees, as discussed in **Section 5.4**.
- 8.4 Overall, it was noted that during the day of the site visit / audit, there were a high level of HGV movements along North Hyde Road and the Bulls Bridge Roundabout, but very few in the town centre, Station Road and Nestle Avenue. Nor were there any observed incidents of serious user conflicts on any of the assessed routes.

APPENDIX A – SITE LOCATION PLAN



KEY	
	SITE LOCATION

Reproduced from Ordnance Survey with the permission of the Controller of Her Majesty's Stationery Office, Crown Copyright Reserved

Copyright © 2016 Crown Copyright. Ordnance Survey.



9th Floor, The Tower Building,
York Road,
London,
SE1 7NX

Telephone: 0207 442 2225
E: enquiries@markidesassociates.com
W: www.markidesassociates.com

Job Title
FORMER NESTLE SITE, HAYES

Drawing Title
SITE LOCATION PLAN

Client
**SEGRO PLC
AND BARRATT LONDON**

Rev	Amendments	Drn	Chk	App	Date	
Scale	NTS	Date	FEB '17	Designed	GE	
Drawn	SEC	Checked	JB	Approved	JB	
Job No	16-018-01	APPENDIX A			Rev	A