



Technical Note

Southbourne Gardens, Ruislip

Prepared for Manor Close Developments Limited

By YES Engineering Group Limited

May 2017



Revision History

Revision N°	Prepared By	Description	Date

Document Acceptance

Action	Name	Signed	Date
Prepared by	Kathryn Backhouse		May 2017
Reviewed by	Paul Willis		May 2017
Approved by	Brian Edgecombe		May 2017
on behalf of	YES Engineering Group Ltd		

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1 Introduction

YES Engineering Group Ltd was appointed by Manor Close Developments Limited to produce a Technical Note (TN) to accompany a planning application for the redevelopment of the site off Southbourne Gardens, Ruislip, London, E17 3NA to provide a residential development.

As shown in **Appendix A** it can be seen that the site is situated on the northern side of Southbourne Gardens.

The site lies within the administrative area of the London Borough of Hillingdon (LBH) and the Greater London Authority (GLA).

1.1 Development Proposals

The development proposals are for the demolition of 17 domestic garages and the construction of 6 two-bedroom flats. The proposed layout (ground floor) is shown on the architects' plan attached at **Appendix B**.

The existing vehicular access to the site will be widened to 4.2m in width (wide enough for two vehicles to pass) and provided with 2.4m by 43m visibility splays as shown in **Figure 1.1**. A mirror is to be installed on the outside of the bend near the bin store to ensure all drivers using the access road can see approaching vehicles.

It is the intention to provide six car parking spaces on-site (1 per unit). Further details relating to car parking is set out in Section 3 of this Technical Note.

There is sufficient capacity (6 spaces) within the cycle stores to be in line with the Local Authority standards. The cycle parking is in a secure and convenient location for future residents.

Servicing and refuse collection for the residential use will be from the carriageway of Southbourne Gardens in accordance with the existing arrangement for residential properties in the vicinity. A bin store is being provided at the southern end of the new building for refuse collection purposes.

1.2 Previous Applications

The London Borough of Hillingdon website was interrogated to establish whether previous applications had been considered for the development site and surrounding area.

There have been no planning applications submitted for the Southbourne Gardens site or in the immediate vicinity in the last 5 years.

1.3 Policy

The London Plan, Spatial Development Strategy for Greater London – March 2016

Further Alterations to the London Plan were adopted on 10th March 2015 within the latest version of the London Plan. The Mayor of London is responsible for producing a planning strategy for London and relevant policies relating to transport are set out below.

Policy 6.1 – Strategic Approach

- A The Mayor will work with all relevant partners to encourage the closer integration of transport and development through the schemes and proposals shown in Table 6.1 and by:

- a encouraging patterns and nodes of development that reduce the need to travel, especially by car – boroughs should use the standards set out in Table 6.2 in the Parking Addendum to this chapter to set maximum car parking standards in DPDs
- b seeking to improve the capacity and accessibility of public transport, walking and cycling, particularly in areas of greatest demand – boroughs should use the standards set out in Table 6.3 in the Parking Addendum to set minimum cycle parking standards in DPDs
- c supporting development that generates high levels of trips at locations with high public transport accessibility and/or capacity, either currently or via committed, funded improvements including, where appropriate, those provided by developers through the use of planning obligations (see Policy 8.2).
- d improving interchange between different forms of transport, particularly around major rail and Underground stations, especially where this will enhance connectivity in outer London (see Policy 2.3)
- e seeking to increase the use of the Blue Ribbon Network, especially the Thames, for passenger and freight use
- f facilitating the efficient distribution of freight whilst minimising its impacts on the transport network
- g supporting measures that encourage shifts to more sustainable modes and appropriate demand management
- h promoting greater use of low carbon technology so that carbon dioxide and other contributors to global warming are reduced
- i promoting walking by ensuring an improved urban realm
- j seeking to ensure that all parts of the public transport network can be used safely, easily and with dignity by all Londoners, including by securing step-free access where this is appropriate and practicable.
- B The Mayor will, and boroughs should, take an approach to the management of streetspace that takes into account of the different roles of roads for neighbourhoods and road users in ways that support the Policies in this Plan promoting public transport and other sustainable means of transport (including policies 6.2, 6.7, 6.9 and 6.10) and a high quality public realm. Where appropriate, a corridor-based approach should be taken to ensure the needs of street users and improvements to the public realm are co-ordinated.

It is considered that given the proposed level of car parking within the development and access to public transport that the development application is in line with London Plan Policy 6.1.

Policy 6.9 – Cycling

Developments should:

- a. provide secure, integrated and accessible cycle parking facilities in line with the minimum standards set out in Table 6.3 and the guidance set out in the London Cycle Design Standards (or subsequent revisions)
- b. provide on-site changing facilities and showers for cyclists
- c. contribute positively to an integrated cycling network for London by providing infrastructure that is safe, comfortable, attractive, coherent, direct and adaptable and in line with the guidance set out in the London Cycle Design Standards (or subsequent revisions)

- d. provide links to existing and planned cycle infrastructure projects including Cycle Superhighways, Quietways, the Central London Grid and the 'mini-Hollands'
- e. facilitate the Mayor's cycle hire scheme through provision of land and/or planning obligations where relevant, to ensure the provision of sufficient capacity.

Policy 6.10 – Walking

Development proposals should ensure high quality pedestrian environments and emphasise the quality of the pedestrian and street space by referring to Transport for London's Pedestrian Design Guidance.

6.12 – Road Network Capacity

In assessing proposals for increasing road capacity, including new roads, the following criteria should be taken into account:

- a. the contribution to London's sustainable development and regeneration including improved connectivity
- b. the extent of any additional traffic and any effects it may have on the locality, and the extent to which congestion is reduced
- c. how net benefit to London's environment can be provided
- d. how conditions for pedestrians, cyclists, public transport users, freight and local residents can be improved
- e. how safety for all is improved.

Proposals should show, overall, a net benefit across these criteria when taken as a whole. All proposals must show how any dis-benefits will be mitigated.

Policy 6.13 – Parking

The maximum standards set out in Table 6.2 in the Parking Addendum to this chapter should be the basis for considering planning applications (also see policy 2.8).

In addition, developments must:

- a. ensure that 1 in 5 spaces (both active and passive) provide an electrical charging point to encourage the uptake of electric vehicles
- b. provide parking for disabled people in line with Table 6.2
- c. meet minimum cycle parking standards set out in Table 6.3
- d. provide for the needs of businesses for delivery and servicing.

It should be noted that a Parking Standards Minor Alteration to the London Plan was published in March 2016. These parking standards are taken into consideration in this report.

LOCAL POLICY

Hillingdon Local Plan

London Borough of Hillingdon adopted the Local Plan Part 1 setting out strategic policies in November 2012. Part 2 of the Local Plan went through a public consultation process during the latter part of

2015 and is yet to be adopted. Relevant policies relating to transport (Chapter 8) from the emerging Local Plan Part 2 are set out below.

Policy DMT 1 – Managing Transport Impacts

A) Development proposals will be required to meet the transport needs of the development and address its transport impacts in a sustainable manner. In order for developments to be acceptable they are required to:

- i) be accessible by public transport, walking and cycling either from the catchment area that it is likely to draw its employees, customers or visitors from and/or the services and facilities necessary to support the development;
- ii) maximise safe, convenient and inclusive accessibility to, and from within developments for pedestrians, cyclists and public transport users;
- iii) provide equal access for all people, including inclusive access for disabled people;
- iv) adequately address delivery, servicing and drop-off requirements; and
- v) have no significant adverse transport or associated air quality and noise impacts on the local and wider environment, particularly on the strategic road network.

B) Development proposals will be required to undertake a satisfactory Transport Assessment and Travel Plan if they meet or exceed the thresholds set out in Table 8.1 and any subsequent update to these thresholds. All major developments that fall below these thresholds will be required to produce a satisfactory Transport Statement and Local Level Travel Plan. All these plans should demonstrate how any potential impacts will be mitigated and how such measures will be implemented.

Policy DMT 2 – Highways Impacts

Development proposals must ensure that:

- i) safe and efficient vehicular access to the highway network is provided to the Council's standards;
- ii) they do not contribute to the deterioration of air quality, noise or local amenity or safety of all road users and residents;
- iii) safe, secure and convenient access and facilities for cyclists and pedestrian are satisfactorily accommodated in the design of highway and traffic management schemes;
- iv) impacts on local amenity and congestion are minimised by routing through traffic by the most direct means to the strategic road network, avoiding local distributor and access roads; and
- v) there are suitable mitigation measures to address any traffic impacts in terms of capacity and functions of existing and committed roads, including along roads or through junctions which are at capacity.

Policy DMT 4 – Public Transport

A) The Council will support and promote the enhancement of public transport facilities, including at key interchanges that address the needs of the Borough. The Council may require developers to mitigate transport impacts from development proposals by improving local public transport facilities and services, which may include:

- i) improvements to address inclusive access;

- ii) ensuring that bus stops are conveniently located for passengers;
- iii) implementation of bus priority and bus stop accessibility measures;
- iv) providing for bus route requirements and associated road layouts;
- v) improvements to the network of services; and
- vi) improvements to infrastructure to support cycling.

B) Public transport measures may be required to be included in the highways layout design where they are identified in a transport assessment, travel plan or integral to the acceptability of the proposal.

Policy DMT 5 – Pedestrians and Cyclists

A) Development proposals will be required to ensure that safe, direct and inclusive access for pedestrians and cyclists is provided on the site connecting it to the wider network, including:

- i) the retention and, where appropriate, enhancement of any existing pedestrian and cycle routes;
- ii) the provision of a high quality and safe public realm or interface with the public realm, which facilitates convenient and direct access to the site for pedestrian and cyclists;
- iii) the provision of well signposted, attractive pedestrian and cycle routes separated from vehicular traffic where possible; and
- iv) the provision of cycle parking and changing facilities in accordance with Appendix A C, Table 1 or, in agreement with Council.

B) Development proposals located next to or along the Blue Ribbon network will be required to enhance and facilitate inclusive, safe and secure pedestrian and cycle access to the network. Development proposals, by virtue of their design, will be required to complement and enhance local amenity and include passive surveillance to the network.

Policy DMT 6 – Vehicle Parking

A) Development proposals must comply with the parking standards outlined in Appendix C Table 1 in order to facilitate sustainable development and address issues relating to congestion and amenity.

The Council may agree to vary these requirements when:

- i) the variance would not lead to a deleterious impact on street parking provision, congestion or local amenity; and/or
- ii) a transport appraisal and travel plan has been approved and parking provision is in accordance with its recommendations.

B) All car parks provided for new development will be required to contain conveniently located reserved spaces for wheelchair users and those with restricted mobility in accordance with the Council's Accessible Hillingdon SPD.

1.4 Scope of the Technical Note

Pre-application advice was obtained from LBH on Thursday 20th October 2016 and has been taken into consideration in this Technical Note. The transport and parking comments provided by the Council are as follows, Highways Officer (Peter Loveday) contributed with the following:

- Garage blocks are no longer fit for modern standards and are thus no longer required;
- Concerns over the access visibility splays and run over on banks suggests improvements should be sought;
- Access track should have a minimum 4.2m width for vehicles without pedestrians. The access will therefore need to be a shared space to allow both pedestrians and vehicles to use the access;
- Bin stores over 20m away from flats. This should be addressed with the Council's waste collection team;
- PTAL 2 or 3. The Council would expect 1:1 car parking and 1:1 cycle parking;
- The site should remain accessible to fire tenders and a box vans as per the tracking shown on the submitted plan;
- There is a potential blind spot on the sites access, which may need to be addressed to provide safe access and egress of vehicles;
- Street parking is currently an issue due to high car ownership levels. Lambeth Methodology parking survey covering a 200m radius would be necessary to justify any overspill of parking on the street parking network; and
- The Council does not remove parking permit rights.

Following this introduction, the Technical Note is structured in the following manner:

Section 2.0, Baseline Conditions: Describes the parking situation in the vicinity of the site, and sets out the public transport accessibility level.

Section 3.0, Impacts: Considers the level of parking to be generated at the development site and the impact on the local highway network.

Section 4.0, Summary and Conclusions: Provides a summary of the report and draws together its conclusions.

2 Baseline Conditions

2.1 Existing Land Use

As mentioned in Section 1.1 above, the development site consists of 17 domestic garages, which are no longer fit for modern use. These garages are to be demolished.

2.2 Local Highway Network

Southbourne Gardens is a predominantly residential road linking Field End Road to the east with Chelston Road to the west. There are footways on both side of the carriageway and the area is subject to a 30mph speed limit.

Southbourne Gardens in the vicinity of the site is within Controlled Parking Zone E restricting parking to permit holders only Monday to Saturday between 9am and 5pm.

The nearest set of bus to the site are situated at the eastern end of Southbourne Gardens 195m away.

2.3 Existing On-Street Parking

Parking surveys were undertaken at 3am on Wednesday 23rd November and at 3.30am Monday 28th November 2016 in accordance with the Lambeth Methodology (standard across London) to establish on-street parking stress within a 200m walking distance of the site. The results are attached at **Appendix C**.

The results indicate that from the 86 on-street parking spaces within a 200m walk distance of the site, just 10 spaces were available during the first survey and only 7 during the second survey, leading to a parking stress of 88% and 92% respectively. It is clear that there is limited spare capacity for on-street parking in the vicinity.

The 2011 Census data for the lower output area surrounding the site reveals that there are 516 vehicles owned by 611 households. This equates to less than one car per household (**Appendix D**). This is taken into consideration for the development of this site.

2.4 Public Transport

For sites in London PTALs (Public Transport Accessibility Levels) are the most widely recognised form of measuring accessibility to the public transport network. The assessment combines data regarding the frequency of public transport services and walking distance between the site and the service to establish a measure of the relative density of the public transport network. PTALs range from 1 to 6 where 6 represents a high level of accessibility and 1 a low level of accessibility. Levels 1 and 6 have been further subdivided into two sub-levels to provide greater clarity.

The address of the site put in TfL's Planning Information Database in order to establish the PTAL. An accessibility index of 10.12 is calculated giving a corresponding PTAL of 3 representing a good level of public transport accessibility. The summary report obtained from this website is attached at **Appendix E**.

There are two bus routes (282 and 398) operating within a comfortable walking distance and Eastcote London Underground Station is 475m to the north-east (a 6-minute walk). It is clear that the site is highly accessible to numerous locations on public transport.

2.5 Access to Local Facilities

Guidance from the Institution of Highways and Transportation (IHT) 'Providing Journeys on Foot' suggests 'desirable', 'acceptable' and 'preferred maximum' walking distances for different types of journeys as shown in **Table 2.1** below.

Table 2.1 - Maximum Walking Distance

Criteria	Community/School	Elsewhere (other than town centre)
Desirable	500m	400m
Acceptable	1000m	500m
Preferred Maximum	2000m	1200m

Field End Road to the north and south of Eastcote London Underground Station has a variety of commercial uses fronting the carriageway on both sides of the road. As a consequence, there are a wide variety of retail units, including a Sainsburys Local within 500m from the site on Southbourne Gardens. There are pedestrian crossing points at various locations on Field End Road, including a pelican crossing at Eastcote Underground Station to provide safe passage of pedestrians.

Cannon Lane Primary school is 1,400m away, Newnham Junior School is only 320m distant, and Pinner High School is 1,600m from the site. It is clear that educational facilities are within a comfortable walking distance. Once Upon a Time day nursery, and leisure facilities at Cavendish Recreation Ground are located within a 320m walk.

It is clear that the proposed development site is in a highly sustainable location

3 Impacts

3.1 Parking Standards

The London Borough of Hillingdon parking standards are set out in Appendix C of the Local Plan Part 2. The London Plan (March 2016) parking standards are included at Chapter 6. **Table 3.1** sets out car parking and cycle parking standards from both LBH and the London Plan.

Table 3.1 – Maximum LBH and London Plan Parking Standards

LBH Car Parking Standards	London Plan Car Parking Standards
1.5 to 1 space per unit (1-2 bed units)	Up to 1.0 per unit (1-2 bed units)
2 spaces per unit (3-4 bed units)	Up to 1.5 per unit (3 bed units)
	Up to 2 (4+ bed units)
LBH Cycle Parking Standards	London Plan Cycle Parking Standards
1 space per studio, 1 and 2-bedroom unit	1 space per studio and 1-bedroom unit
2 spaces per all other dwellings	2 spaces per all other dwellings

Policy 6.13 of the London Plan states “ *The Mayor wishes to see an appropriate balance being struck between promoting new development and preventing excessive car parking provision that can undermine cycling, walking and public transport use*”.

3.2 Car Parking

Using the London Plan standards set out in **Table 3.1** above, a maximum of between 0 and 6 car parking spaces can be provided for the proposed 6 residential units at Southbourne Gardens. The London Borough Hillingdon parking standards specify that a maximum provision of between 6 and 9 car parking spaces should be provided for the residential development.

It should be taken into consideration that the site is in a sustainable location being within a short walk of 2 bus routes, Eastcote London Underground Station, and numerous shops and local facilities. The 2011 Census data for the lower output area shows that residents in the area own less than one car per household. It is therefore appropriate for the development has a maximum 6 parking spaces in this instance. London Borough of Hillingdon during pre-application discussions consider that this level of car parking is suitable in this location.

3.3 Cycle Parking

The LBH requires 6 cycle parking spaces (one per each of the two-bedroom flats) and London Plan Cycle Parking Standards sets out that a minimum provision of one cycle space for studio/1 bedroom and two cycle spaces per 2+ bedroom residential units. This means 12 cycle spaces are required for the 6 residential units when considering the London Plan.

As a consequence, space for 6 cycles for the proposed uses are shown in **Appendix B**, which meets both LBH standards.

3.4 Servicing

The majority of the servicing for the site will occur on-site with the vehicles up to a 7.5 tonne box van using the turning area at the north-eastern corner of the site (**Figure 3.1**). This area is also of sufficient size for a fire tender to turn (**Figure 3.1**).

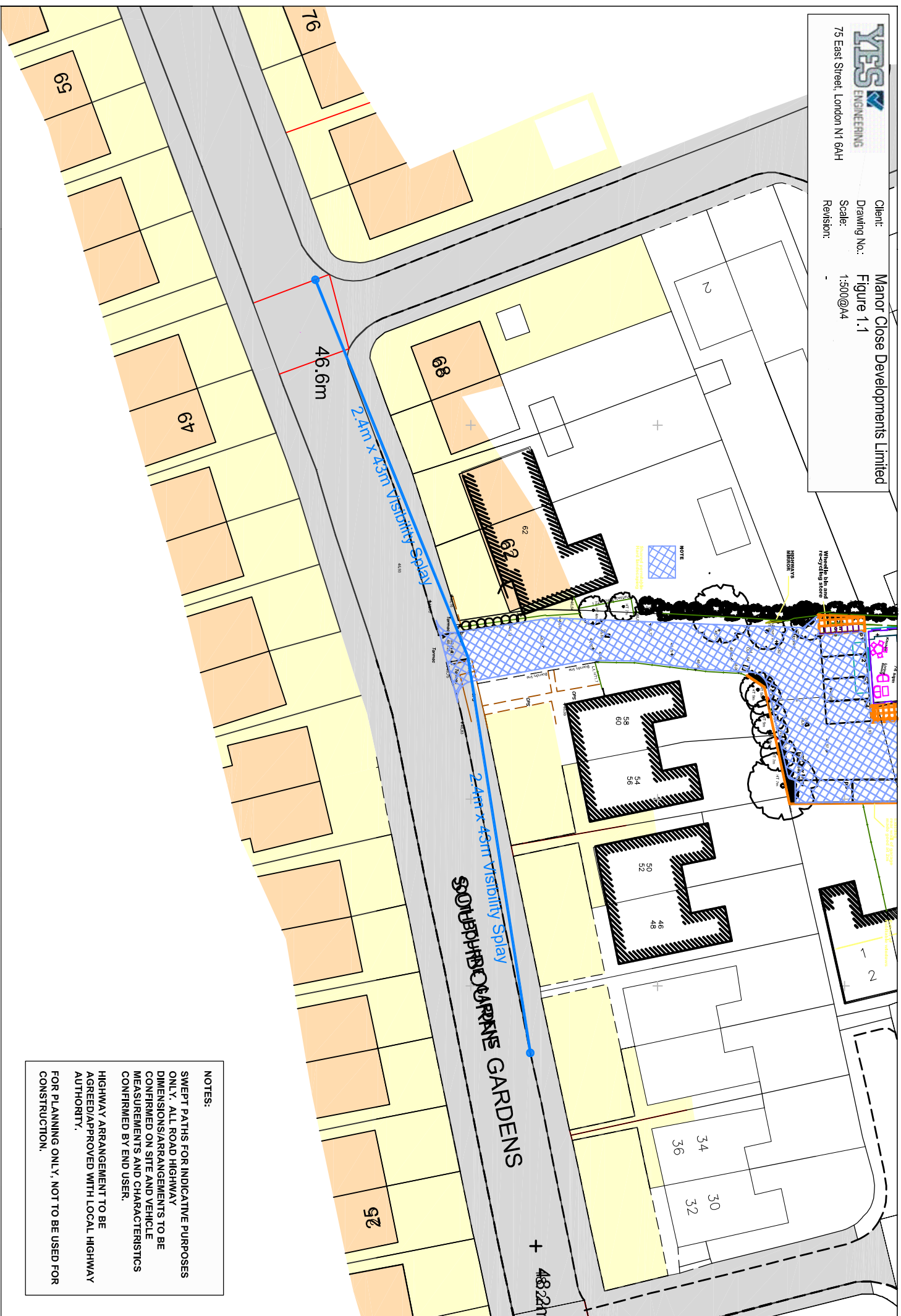
Refuse collection for the residential use will be from the carriageway of Southbourne Gardens with the bin stores located at the southern end of the building. This is in accordance with the existing arrangement for development in the vicinity and will have a minimal impact on the operation of the carriageway.

4 Summary and Conclusions

- a. YES Engineering Group Ltd was appointed by Manor Close Developments Limited to produce a Technical Note (TN) to accompany a planning application for the redevelopment of the site containing 17 domestic garages to the north of Southbourne Gardens. It is the intention to provide 6 two-bedroom residential units.
- b. It has been demonstrated in this report that the site is in a highly sustainable location being within a short walking distance to local facilities, 2 bus routes and Eastcote London Underground Station.
- c. A car parking provision of 6 parking spaces is to be provided on-site, which suitable to accommodate the proposed use on-site bearing in mind the location. This provision is in accordance with both LBH and London Plan standards.
- d. Cycle parking provision meets the standards set out in LBH guidance.
- e. The majority of servicing will occur on-site and refuse collection will take place on-street in accordance with the existing arrangement for residential development in the area.
- f. Overall, it is concluded that there is no highway or transportation reasons to object to the proposed development on Southbourne Gardens.

Figures and Appendices

Figure 1.1 – Vehicular Access with Visibility Splays



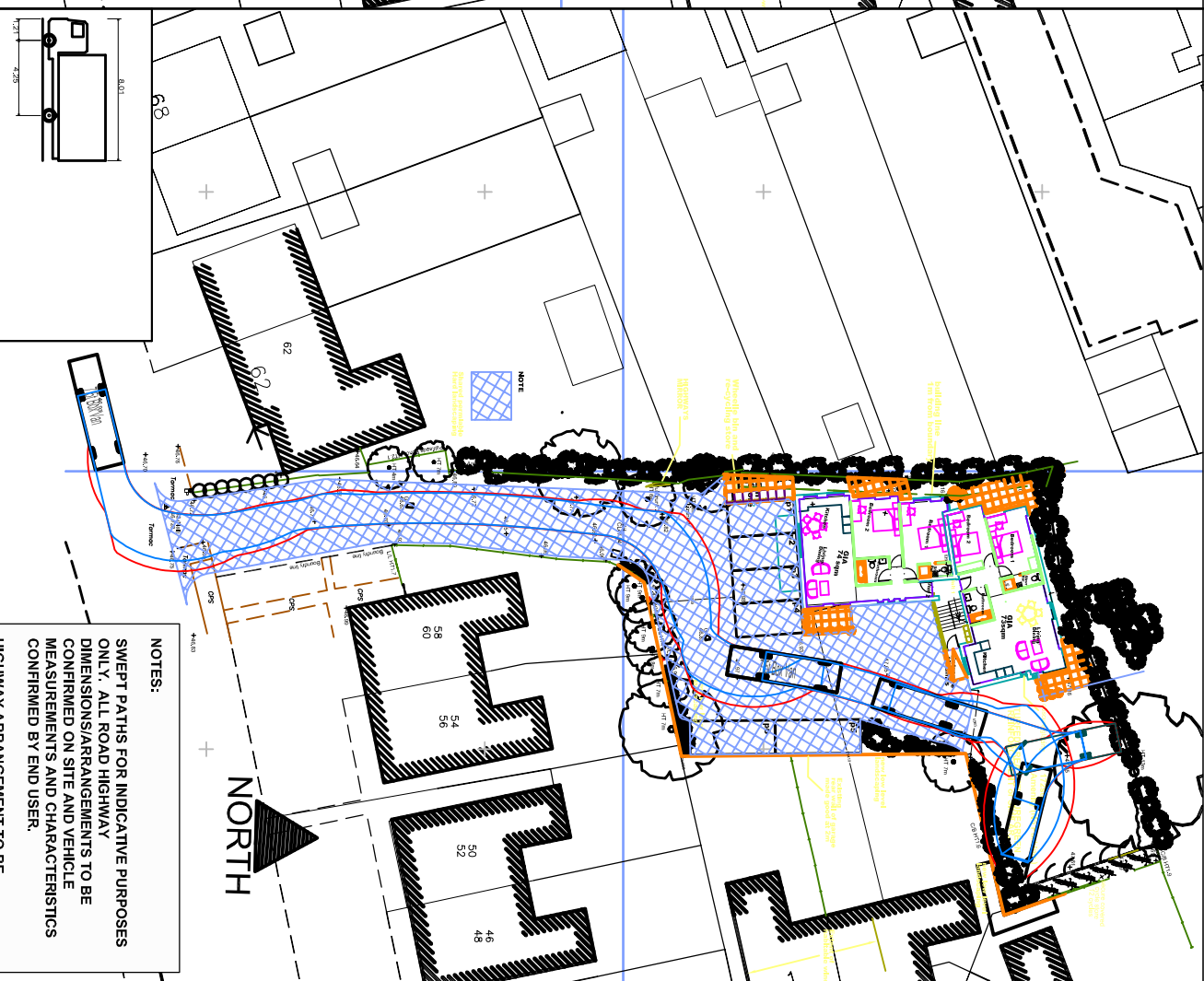
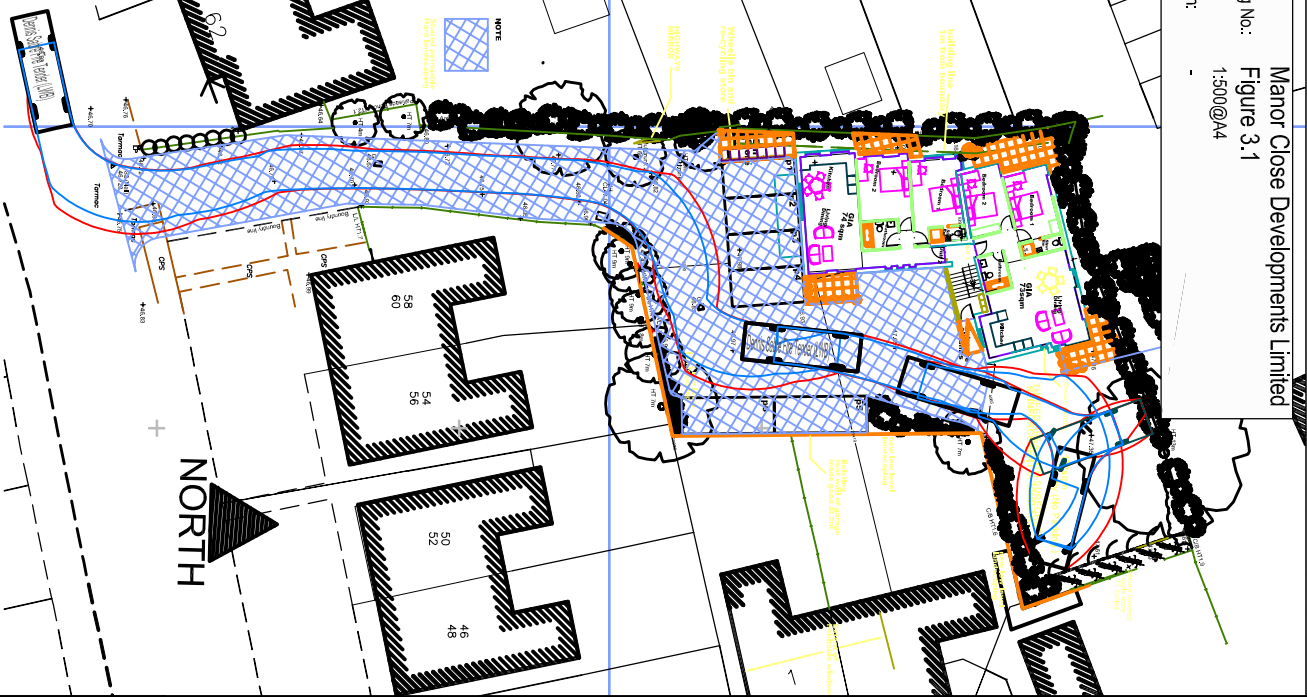
NOTES:

SWEPT PATHS FOR INDICATIVE PURPOSES ONLY. ALL ROAD HIGHWAY DIMENSIONS/ARRANGEMENTS TO BE CONFIRMED ON SITE AND VEHICLE MEASUREMENTS AND CHARACTERISTICS CONFIRMED BY END USER.

HIGHWAY ARRANGEMENT TO BE
 AGREED/APPROVED WITH LOCAL HIGHWAY
 AUTHORITY.

FOR PLANNING ONLY, NOT TO BE USED FOR
 CONSTRUCTION.

Figure 3.1 – Swept Path of Service and Emergency Vehicles



Dennis Sabre Fire Tender (LWB)

7.700m
2.430m
3.512m
0.397m
2.380m
5.00 sec
7.400m

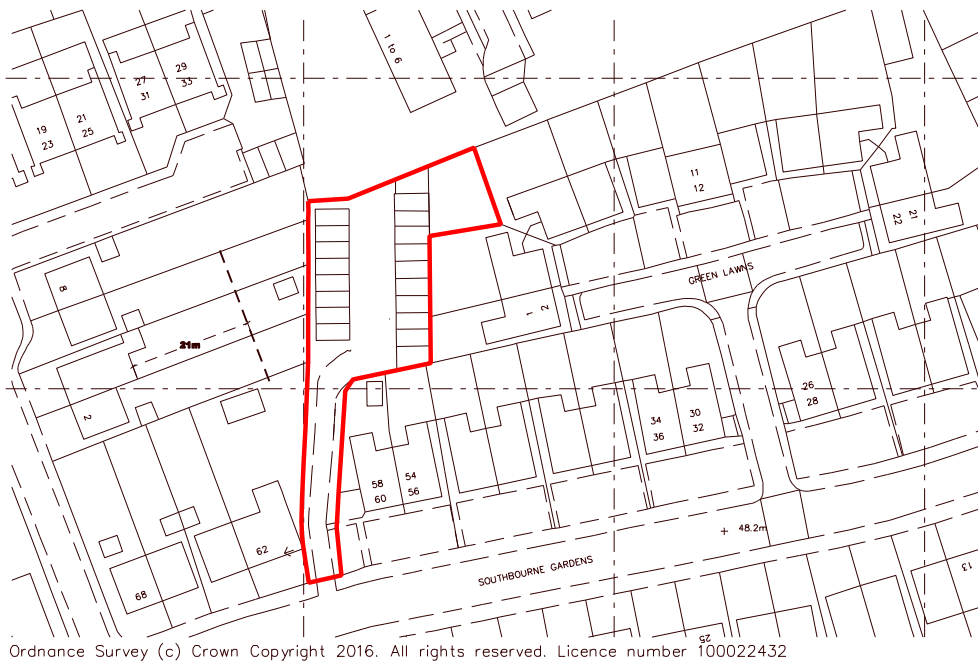
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HIGHWAY ARRANGEMENT TO BE AGREED/APPROVED WITH LOCAL HIGHWAY AUTHORITY.

FOR PLANNING ONLY. NOT TO BE USED FOR CONSTRUCTION.

Appendix A – Location Plan



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REV NOTES

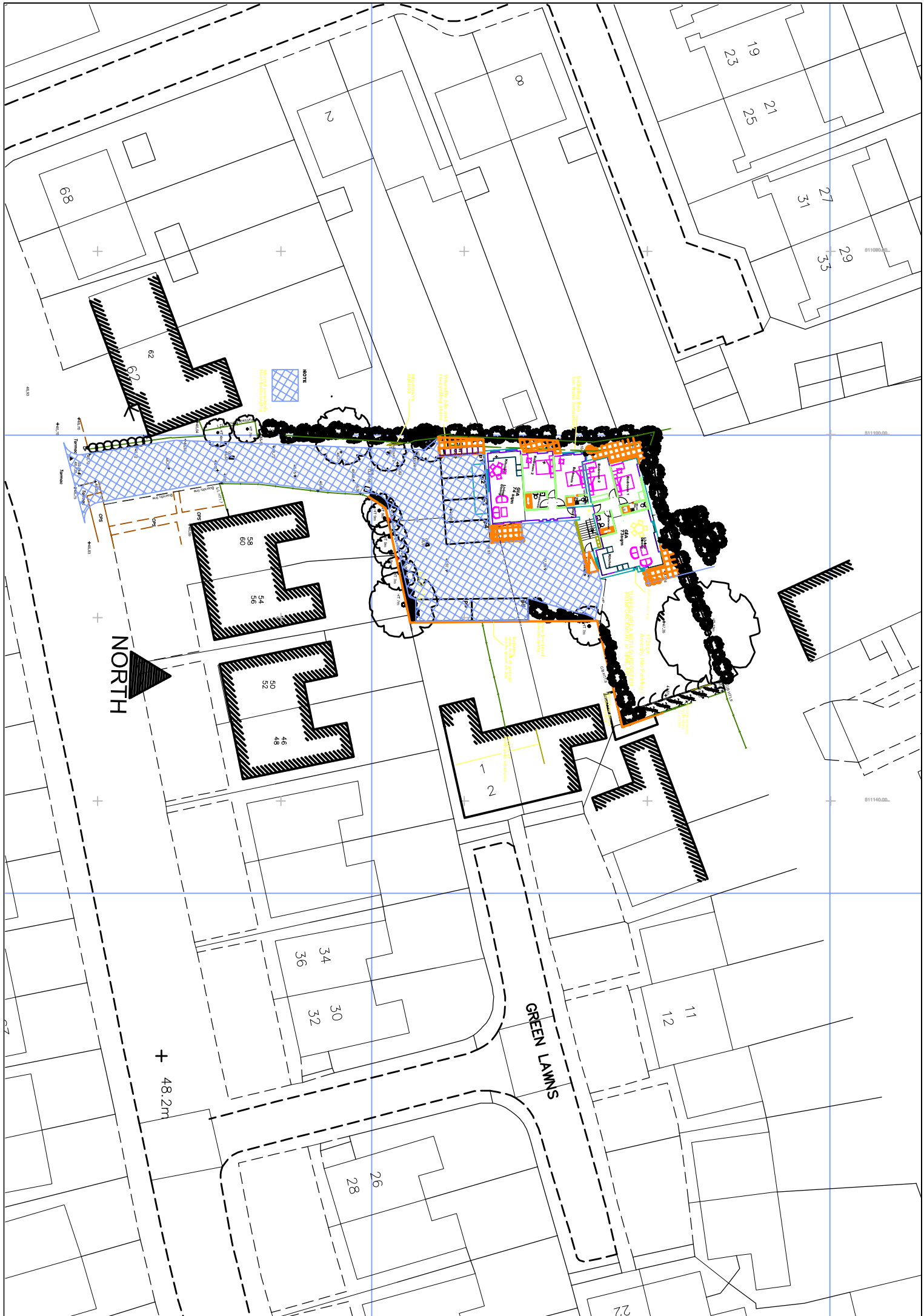
DATE

JOB: Manor Close
CLIENT: Manor Close Developments Ltd
DRAWING: Site Location Plan
DATE: 24/07/2016
DWG NO: 637 006
STATUS:
REVISION:
SCALE: 1:1250 @ A4

STUDIO 303 LTD Unit 1 Granby House, 1 Harrington Street, London, NW1 3FA. t +44 (0)20 7253 2587



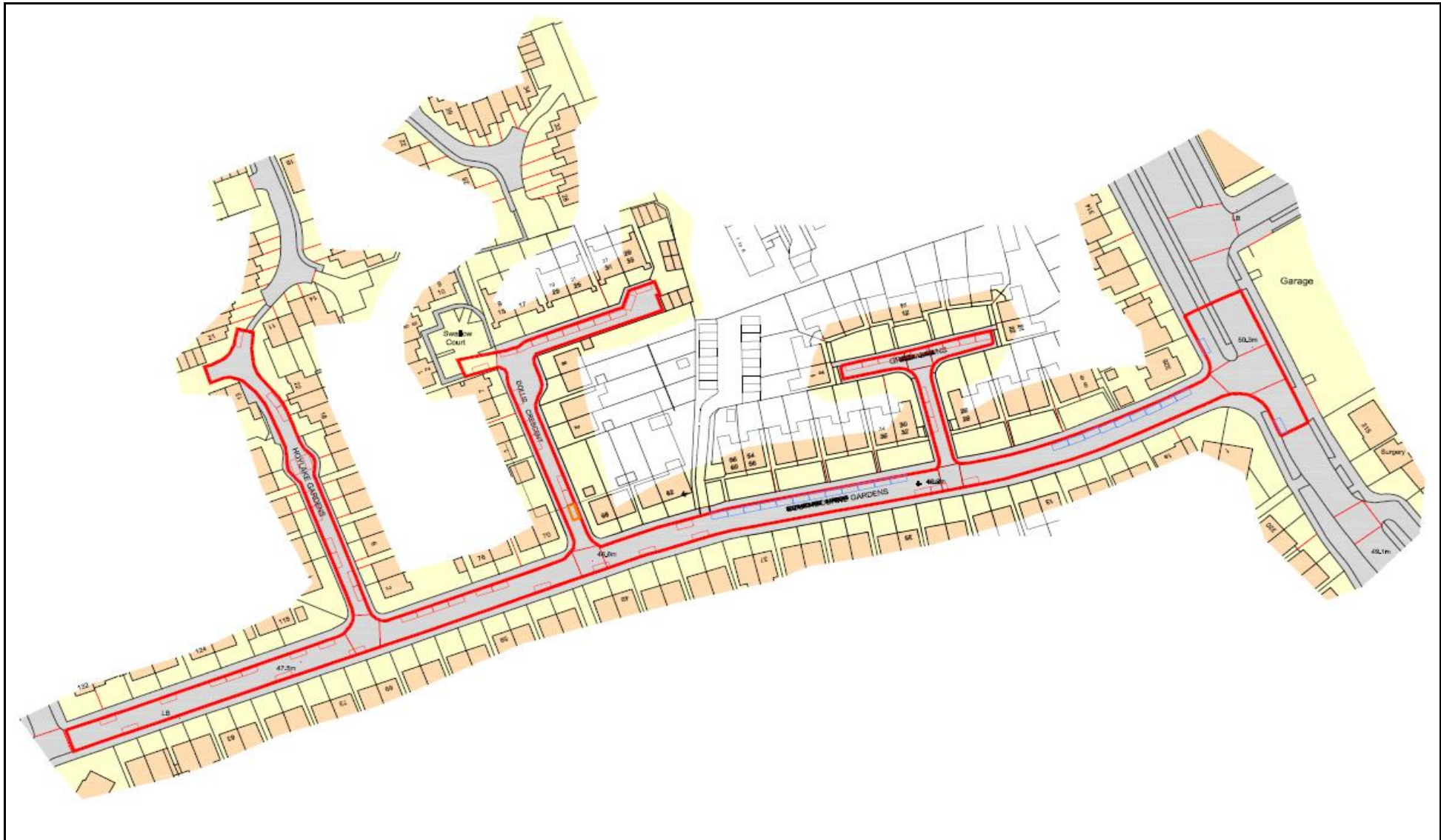
Appendix B – Proposed Ground Floor Layout Plan



Appendix C – Parking Survey

DATE : Wednesday 23rd November 2016/Monday 28th November 2016

LOCATION : Southbourne Gardens



DATE : Wednesday 23rd November 2016/Monday 28th November 2016

LOCATION : Southbourne Gardens

Wed: 03:00																						
		RESIDENT PARKING PERMITS MON-SAT 9:00am - 5:00pm			PAY AND DISPLAY PARKING BAYS 08:00 - 18:30			UN RESTRICTED			DOUBLE YELLOW LINES AT ANY TIME			SINGLE YELLOW LINES			DISABLED			LOADING BAY		
LOCATION	SIDE OF RD	TOTAL	PARKED	SPACE	TOTAL	PARKED	SPACE	TOTAL	PARKED	SPACE	TOTAL	PARKED	SPACE	TOTAL	PARKED	SPACE	TOTAL	PARKED	SPACE	TOTAL	PARKED	SPACE
Field End Road	E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	W	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southbourne Gardens	N	21	19	2	0	0	0	14	12	2	0	0	0	1	1	0	0	0	0	0	0	0
	S	0	0	0	0	0	0	10	8	2	0	0	0	0	0	0	0	0	0	0	0	0
Green Lawns	W	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	N	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dollis Crescent	E	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	1	1	0	0	0	0
	W/N	0	0	0	0	0	0	13	12	1	0	0	0	0	0	0	0	0	0	0	0	0
Hoylake Gardens	E	0	0	0	0	0	0	5	3	2	0	0	0	1	1	0	0	0	0	0	0	0
	W	0	0	0	0	0	0	5	5	0	0	0	0	1	1	0	0	0	0	0	0	0
TOTALS		36	33	3	0	0	0	49	42	7	0	0	0	3	3	0	1	1	0	0	0	0

TOTAL SPACES	86
AVAILABLE SPACES	10
PARKING STRESS (%)	88.4

TOTAL UNRESTRICTED SPACES	49
AVAILABLE SPACES	7
PARKING STRESS (%)	85.7

Mon: 03:30																									
		RESIDENT PARKING PERMITS MON-SAT 9:00am - 5:00pm			PAY AND DISPLAY PARKING BAYS 08:00 - 18:30			UN RESTRICTED			DOUBLE YELLOW LINES AT ANY TIME			SINGLE YELLOW LINES			DISABLED			LOADING BAY					
LOCATION	SIDE OF RD	TOTAL	PARKED	SPACE	TOTAL	PARKED	SPACE	TOTAL	PARKED	SPACE	TOTAL	PARKED	SPACE	TOTAL	PARKED	SPACE	TOTAL	PARKED	SPACE	TOTAL	PARKED	SPACE			
Field End Road	E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	W	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Southbourne Gardens	N	21	19	2	0	0	0	14	12	2	0	0	0	1	1	0	0	0	0	0	0	0			
	S	0	0	0	0	0	0	10	9	1	0	0	0	0	0	0	0	0	0	0	0	0			
Green Lawns	W	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	N	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Dollis Crescent	E	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	1	1	0	0	0	0			
	W/N	0	0	0	0	0	0	13	13	0	0	0	0	0	0	0	0	0	0	0	0	0			
Hoylake Gardens	E	0	0	0	0	0	0	5	4	1	0	0	0	1	1	0	0	0	0	0	0	0			
	W	0	0	0	0	0	0	5	5	0	0	0	0	2	2	0	0	0	0	0	0	0			
TOTALS		36	33	3	0	0	0	49	45	4	0	0	0	4	4	0	1	1	0	0	0	0			

TOTAL SPACES	86
AVAILABLE SPACES	7
PARKING STRESS (%)	91.9

TOTAL UNRESTRICTED SPACES	49
AVAILABLE SPACES	4
PARKING STRESS (%)	91.8

Appendix D – 2011 Census Data – Car Availability

QS416EW - Car or van availability

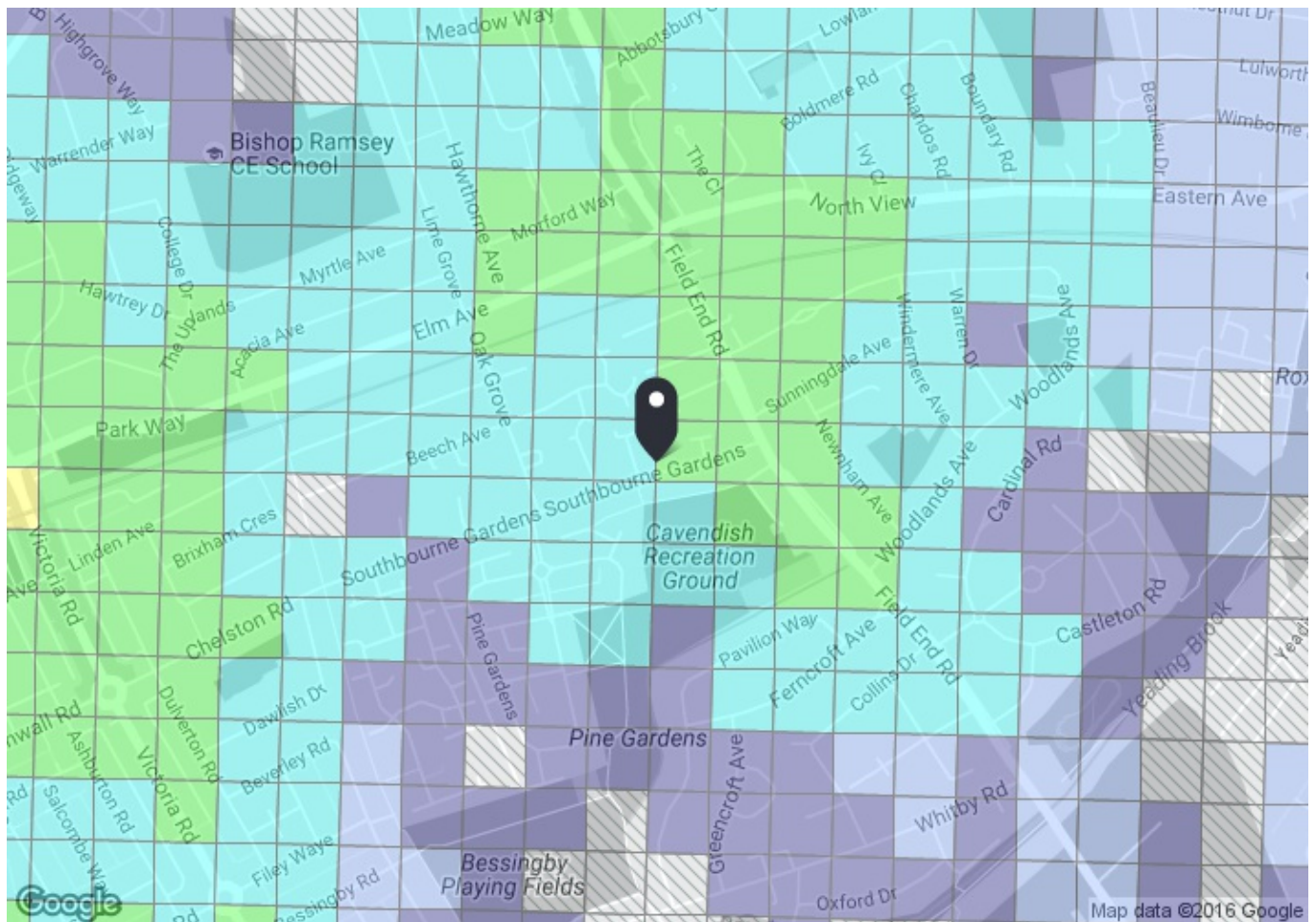
ONS Crown Copyright Reserved [from Nomis on 15 May 2017]

population	All households; All cars or vans
units	Households
area type	2011 super output areas - lower layer
area name	E01002419 : Hillingdon 006B
rural urban	Total

Cars	2011
All categories: Car or van availability	611
No cars or vans in household	95
1 car or van in household	288
2 cars or vans in household	175
3 cars or vans in household	41
4 or more cars or vans in household	12

In order to protect against disclosure of personal information, records have been swapped between different geographic areas. Some counts will be affected, particularly small counts at the lowest geographies.

Appendix E - PTAL



PTAL output for 2011 (Base year)

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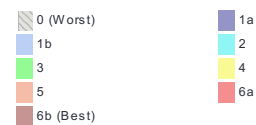
58 Southbourne Gardens
58 Southbourne Gardens, Ruislip HA4 9SW, UK

Easting: 511099, Northing: 187320

Grid Cell: 116888

Report generated: 27/07/2016

Map key - PTAL



Map layers

PTAL (cell size: 100m)

Calculation Parameters

Day of Week	M-F
Time Period	AM Peak
Walk Speed	4.8 kph
Bus Node Max. Walk Access Time (mins)	8
Bus Reliability Factor	2.0
LU Station Max. Walk Access Time (mins)	12
LU Reliability Factor	0.75
National Rail Station Max. Walk Access Time (mins)	12
National Rail Reliability Factor	0.75

Calculation data

Mode	Stop	Route	Distance (metres)	Frequency(vph)	Walk Time (mins)	SWT (mins)	TAT (mins)	EDF	Weight	AI
Bus	EASTCOTE STATION	282	380.48	5	4.76	8	12.76	2.35	1	2.35
Bus	Southbourne Gds east end	398	194.67	2	2.43	17	19.43	1.54	0.5	0.77
LUL	Eastcote	'Uxbridge-AldSlow'	474.61	5.33	5.93	6.38	12.31	2.44	1	2.44
LUL	Eastcote	'BkStr-UxbridgeSFast'	474.61	2.33	5.93	13.63	19.56	1.53	0.5	0.77
LUL	Eastcote	'Uxbridge-BStreetSl'	474.61	3.67	5.93	8.92	14.86	2.02	0.5	1.01
LUL	Eastcote	'HarrowHill-Uxbridge'	474.61	0.67	5.93	45.53	51.46	0.58	0.5	0.29
LUL	Eastcote	'Uxbridge-Cockfosters'	474.61	3.67	5.93	8.92	14.86	2.02	0.5	1.01
LUL	Eastcote	'Ruislip-Cockfosters'	474.61	2.33	5.93	13.63	19.56	1.53	0.5	0.77
LUL	Eastcote	'ArnosGrove-Uxbridge'	474.61	1	5.93	30.75	36.68	0.82	0.5	0.41
LUL	Eastcote	'Oakwood-Uxbridge'	474.61	0.33	5.93	91.66	97.59	0.31	0.5	0.15
LUL	Eastcote	'Oakwood-Ruislip'	474.61	0.33	5.93	91.66	97.59	0.31	0.5	0.15
Total Grid Cell AI:										10.12