



ttp consulting
transport planning specialists

Keys Lodge Nursery

**16 Murray Road, Northwood,
London Borough of Hillingdon**

Transport Statement

May 2019

TTP Consulting Ltd
111-113 Great Portland Street
London W1W 6QQ
Tel: 020 7100 0753

www.ttp-consulting.co.uk

Registered in England: 09931399

Contents

1	INTRODUCTION	1
2	EXISTING SITUATION	2
	Site & Surrounding Area	2
	Accessibility by Non-car Modes.....	3
	Walking	3
	Cycling.....	4
	Bus Services	5
	Underground Services.....	5
	PTAL	5
	Highway Network & Parking Review	6
	Personal Injury Accident Data	7
3	POLICY CONTEXT	8
	National Policy Guidance	8
	National Planning Policy Framework (July 2018).....	8
	Regional Policy Guidance	9
	The London Plan (March 2016).....	9
	The Draft New London Plan (August 2018)	10
	Local Policy Guidance.....	10
	London Borough of Hillingdon Development Plan	10
4	PROPOSED DEVELOPMENT	11
5	EFFECT OF DEVELOPMENT	12
	Trip Generation	12
	Nursery Use.....	12
	Residential Use.....	12
	Accessibility.....	13
	Access.....	13
	Parking	13
	Car Parking.....	13
	Cycle Parking	14
	Pick-up / Drop-off Activity	14
	Travel Plan	15
6	SUMMARY AND CONCLUSION	17
	Summary	17
	Conclusion	18

Figures

- Figure 1 - Site Location
- Figure 2 - 1km and 2km Walking Distances
- Figure 3 - 5km and 8km Cycling Distances

Appendices

- Appendix A - TfL Bus Map
- Appendix B - TfL PTAL Calculation
- Appendix C - Site Layout Plans
- Appendix D - TRICS Output

1 INTRODUCTION

- 1.1 TTP Consulting has been appointed to provide traffic and transport advice in relation to the proposed nursery and residential development at 16 Murray Road, Northwood, in the London Borough of Hillingdon.
- 1.2 The site comprises a single residential dwelling which is served via a vehicle crossover on Murray Road and an area of hardstanding in front of the dwelling for informal parking.
- 1.3 The proposals seek to provide a nursery that can accommodate 74 children and 21 members of staff at full occupancy, however, a maximum of 60 children would be on-site at any one time. There will also be 2 x 1-bedroom flats provided. The site will retain the existing vehicle crossover in order to provide 4 parking spaces. In addition, cycle parking and buggy storage will be provided on-site.
- 1.4 This report considers the effects of the proposed development in traffic/transport terms.
- 1.5 A Travel Plan has been incorporated within this Transport Statement and sets out measures that seek to encourage sustainable travel and promote a shift away from single occupancy car journeys for both parents and staff.
- 1.6 The remainder of the report is structured as follows:
- Section 2 - sets out the existing situation;
 - Section 3 - sets out relevant national, regional and local policy;
 - Section 4 - provides a description of the proposed development;
 - Section 5 - assesses the effect of development; and
 - Section 6 - provides a summary and conclusion.

2 EXISTING SITUATION

Site & Surrounding Area

- 2.1 The existing site comprises a single residential dwelling which is served via a vehicle crossover on Murray Road and an area of hardstanding in front of the dwelling for informal parking for circa 4 vehicles.
- 2.2 The site is located on the western side of Murray Road within a predominantly residential area which typically accommodates large dwellings and associated parking. It is approximately 400m walking distance from Northwood Underground Station and bus routes on Maxwell Road and Green Lane to the north of the site. A site location plan is shown at **Figure 1**.

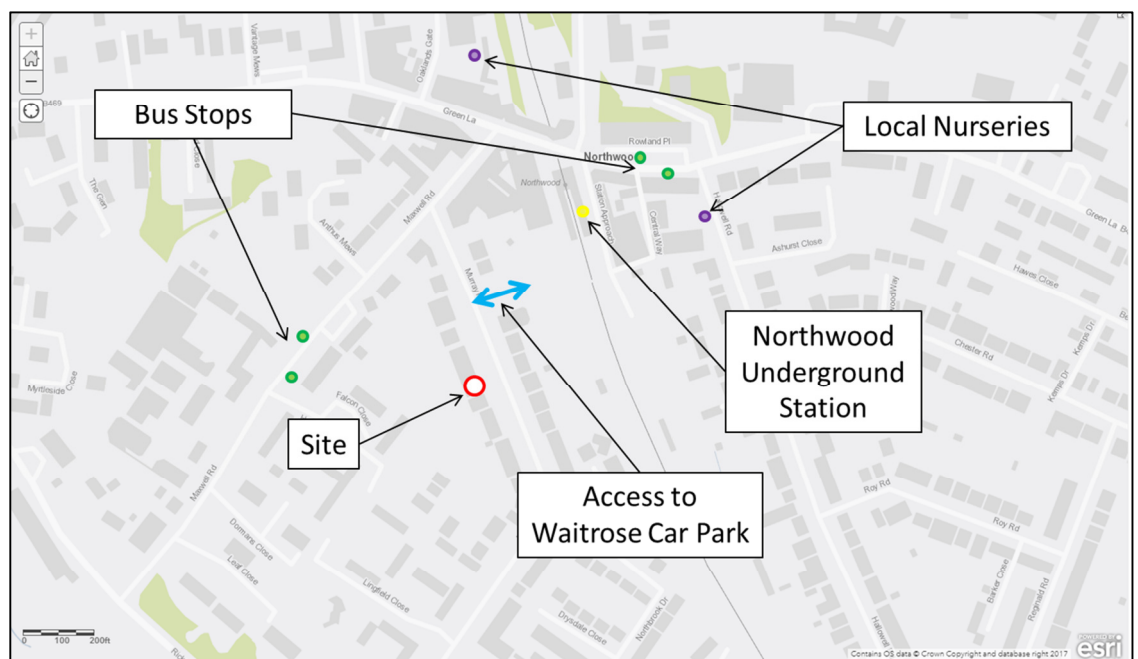


Figure 1 – Site Location Plan

- 2.3 A Waitrose supermarket is located to the northeast with access to the car park served from Murray Road. This is located circa 70m from the site. This provides free parking for customers for a maximum stay of 2 hours, Monday to Friday between 07:30 and 21:30. The car park provides 180 spaces in total. Additional car parks are located on Oaklands Gate and Green Lane providing access to circa 162 spaces.
- 2.4 There are 2 nurseries located in the local area including Chickywicks Day Nursery, approximately 450m to the east and The Little Learners Montessori, approximately 250m to the north.

Accessibility by Non-car Modes

Walking

- 2.5 A person's willingness to walk is dependent on many factors including access to a car, safety, road congestion, weather, gradients, parking, health, direction of route and purpose of journey.
- 2.6 The local area provides suitable accessibility for pedestrians with footways provided on both sides of carriageways in the vicinity of the site. In addition, dropped kerbs with tactile paving are provided at the junction of Murray Road and Maxwell Road. Furthermore, a zebra crossing is located across Maxwell Road, west of the junction with Green Lane.
- 2.7 A number of residential properties as well as bus stops and Northwood Underground Station are located within walking distance of the site encouraging the potential for trips to be made on foot. **Figure 2** illustrates the extent of the 1km and 2km walking distances from the site which includes Northwood town centre and a large residential catchment.

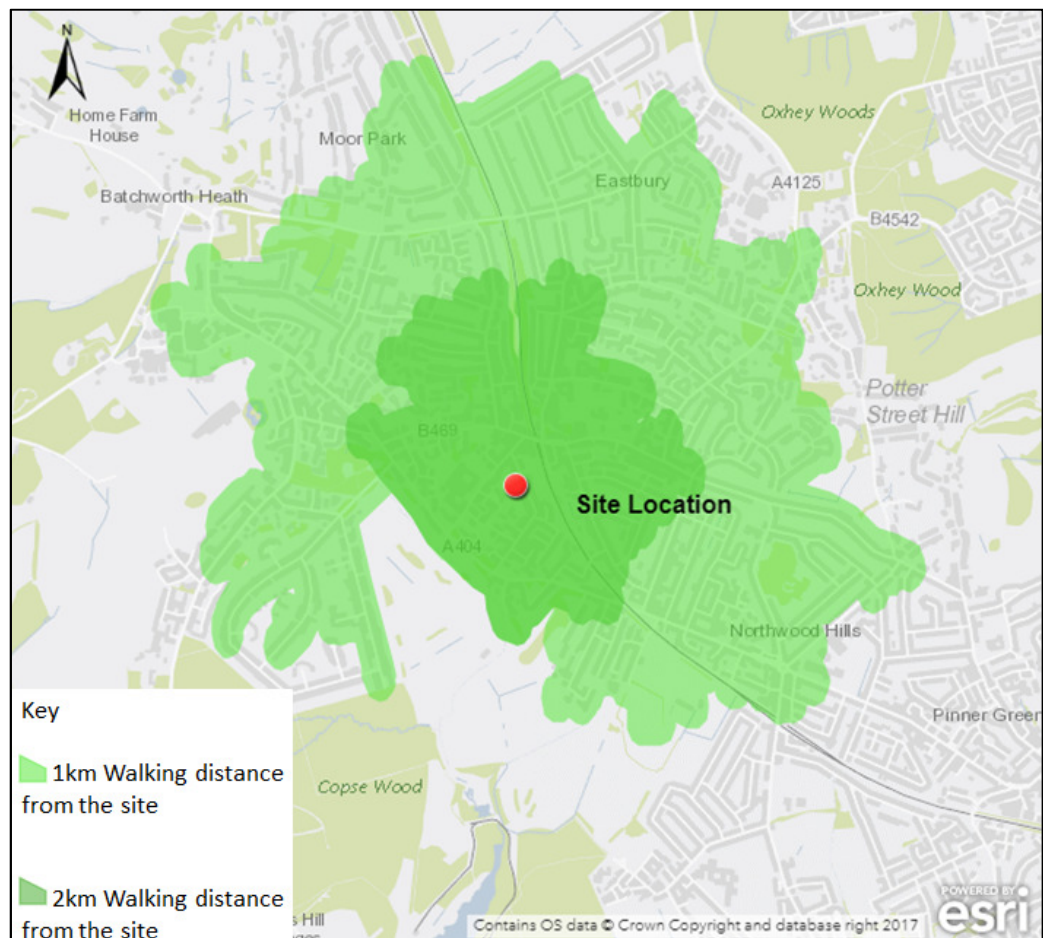


Figure 2 – 1km and 2km Walk Distances

Cycling

- 2.8 Guidance on cycling can be found in 'Cycle Friendly Infrastructure' guidelines published by the Chartered Institution of Highways and Transportation. This guidance highlights previous research by the DfT that three quarters of all journeys are less than 8 kilometres of which 60% are by car. The guidelines highlight that there is a 'substantial potential for substituting cycling for driving' for distances up to 8 kilometres
- 2.9 A number of roads including parts of Green Lane, Hallowell Road and Way Dene Road are located within proximity to the site and have been highlighted as "Other roads that have been recommended by cyclists" within the Transport for London Local Cycling Guide 3. These roads link to further cycling routes towards Northwood Hills and Pinner. As such, there is potential for a number of trips (primarily associated with staff) to be undertaken on bicycles. **Figure 3** illustrates the 5km and 8km cycle distances from the site.

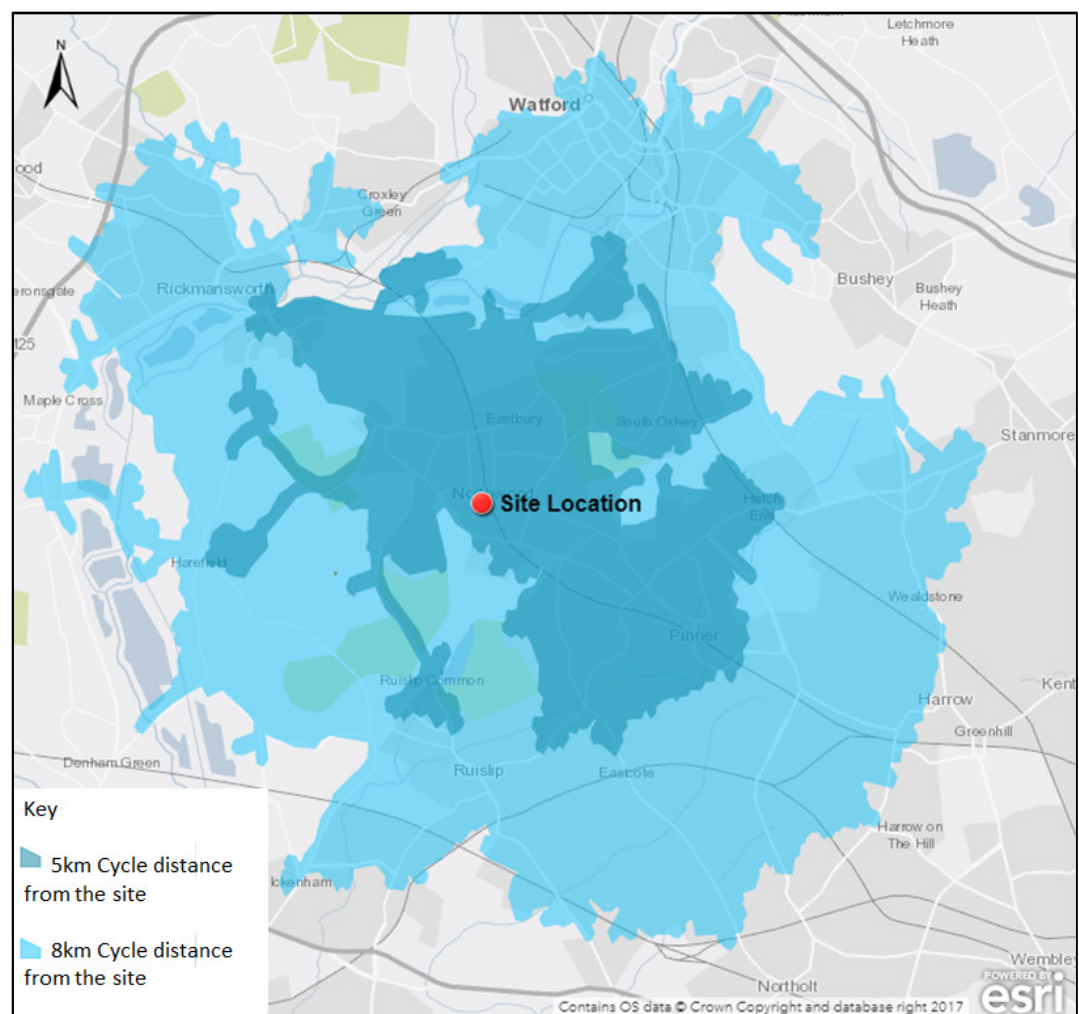


Figure 3 – 5km and 8km Cycle Distances

Bus Services

2.10 The closest bus stops are located on Maxwell Road and Green Lane, within a 5-minute walking distance from site. There are 4 bus routes that operate within the close proximity of the site on a regular basis. Transport for London's bus spider diagram showing available services is shown at **Appendix A**.

2.11 **Table 2.1** provides a summary of bus services found within the vicinity of the site.

Table 2.1 – Local Bus Services		
Route Number	Route	Frequency (every x minutes)
		Mon-Fri
8	Abbots Langley to Mount Vernon Hospital	30
282	Ealing Hospital to Mount Vernon Hospital	10-15
331	Ruislip to Uxbridge	15-20
H11	Harrow to Mount Vernon Hospital	15-20

2.12 The site is well situated for access to a variety of bus services which provide links to other parts of the Borough and a number of residential catchments.

Underground Services

2.13 Northwood Underground Station is located approximately 400m walking distance from the site. The station provides regular services on the Metropolitan Line between Aldgate and Amersham, Chesham and Watford.

PTAL

2.14 Public Transport Accessibility Levels (PTALs) are a theoretical measure of the accessibility of a given point to the public transport network, taking into account walk access time and service availability. The method is essentially a way of measuring the density of the public transport network at a particular point.

2.15 The PTAL is categorised in six levels, 1 to 6 where 6 represents a high level of accessibility and 1 a low level of accessibility. The PTAL levels 1 and 6 are further subdivided into A and B levels, with level A indicating the location is rated towards the lower end of the PTAL category and B towards the higher end.

2.16 The site has a PTAL rating of 2. **Appendix B** contains the TfL PTAL summary.

Highway Network & Parking Review

- 2.17 Murray Road is a two-way residential road that connects with Maxwell Road to the north and Rickmansworth Road in a southeast direction. It accommodates on-street parking on both sides of the carriageway with yellow line restrictions in place to protect accesses to residential properties.
- 2.18 Murray Road is located within Controlled Parking Zone (CPZ) 'N' which is in operation Monday to Friday between 13:00 and 14:00. The zone ends at the western end of Murray Road and Maxwell Road at Rickmansworth Road which are 450m and 600m from the site respectively. This provides unrestricted parking opportunities.
- 2.19 A Waitrose supermarket is located to the northeast with access to the car park served from Murray Road. This provides free parking for customers for a maximum stay of 2 hours, Monday to Friday between 07:30 and 21:30. The car park provides 180 spaces in total. Additional car parks are located on Oaklands Gate and Green Lane providing access to circa 162 additional spaces.
- 2.20 A site visit was undertaken on Tuesday 22nd May 2018 between 08:00 and 09:00 and Wednesday 23rd May 2018 between 17:00 and 18:00 to record the number of vehicles parked and the number of observed spaces within an approximate 200m walking distance of the site. This included Pay and Display spaces on Maxwell Road between the junctions of Green Lane and Anthus Mews, as well as the Permit spaces on Murray Road between Maxwell Road and Lingfield Close. A summary of the results are provided at **Table 2.2**.

Table 2.2 – Parking Demand Survey							
Tuesday 22nd May (08:00-09:00)				Wednesday 23rd May (17:00-18:00)			
Time	Parked Cars	Observed Spaces	Occupancy	Time	Parked Cars	Observed Spaces	Occupancy
<i>Permit Bays on Murray Road (Unrestricted at time of survey)</i>							
08:00	26	30	46%	17:00	34	22	61%
08:30	25	31	45%	17:30	33	23	59%
09:00	29	27	52%	18:00	33	23	59%
<i>Pay and Display Bays on Maxwell Road</i>							
08:00	10	10	50%	17:00	14	6	70%
08:30	8	12	40%	17:30	10	10	50%
09:00	14	6	70%	18:00	10	10	50%
<i>Total</i>							
08:00	36	40	47%	17:00	48	28	63%
08:30	33	43	43%	17:30	43	33	57%
09:00	43	33	57%	18:00	43	33	57%

- 2.21 The survey demonstrates that the local area does not suffer from high levels of parking demand during the morning and evening periods. Furthermore, the Waitrose car park and Rickmansworth Road were observed to be underutilised.

Personal Injury Accident Data

- 2.22 Information obtained from the website 'Crashmap' indicates that no recorded road collisions have taken place along Murray Road during the latest five year period available.
- 2.23 A review of this data concludes that there are no accident clusters or identifiable trends within the vicinity of the application site that require further investigation or mitigation.

3 POLICY CONTEXT

- 3.1 This section summarises the key transport planning policies at a national, regional and local level.

National Policy Guidance

National Planning Policy Framework (July 2018)

- 3.2 The National Planning Policy Framework (NPPF) was published on the 24th July 2018 setting out the Government's planning policies for England and how these are expected to be applied.

- 3.3 When considering the transport effects of a development, NPPF states that:

"All developments that will generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment so that the likely impacts of the proposal can be assessed."

- 3.4 Plans and decisions should take account of whether:

- appropriate opportunities to promote sustainable transport modes can be - or have been taken up, depending on the type of development and its location;
- safe and suitable access to the site can be achieved for all users; and
- any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree."

- 3.5 Paragraph 109 advises that:

"Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe."

- 3.6 The NPPF states that a key tool to facilitate the use of sustainable transport modes is a Travel Plan and at paragraph 111 states *"all developments which generate significant amounts of movement should be required to provide a Travel Plan"*.

Regional Policy Guidance

The London Plan (March 2016)

3.7 The London Plan sets out the framework for the development of London over the next 20-25 years. The policies in the London Plan are consistent with the National Planning Policy Framework. The transport aspects of the London Plan, relevant to the proposed development are as follows.

3.8 Paragraph 1.53 sets out the Mayor's objectives and vision. Point 6 states the following with regards to transport:

"A city where it is easy, safe and convenient for everyone to access jobs, opportunities and facilities with an efficient and effective transport system which actively encourages more walking and cycling, makes better use of the Thames and supports delivery of all the objectives of this Plan."

3.9 Chapter 6 (Transport) states that:

"The Mayor recognises that transport plays a fundamental role in addressing the whole range of his spatial planning, environmental, economic and social policy priorities. It is critical to the efficient functioning and quality of life of London and its inhabitants. It also has major effects – positive and negative – on places, especially around interchanges and in town centres and on the environment, both within the city itself and more widely. Conversely, poor or reduced accessibility can be a major constraint on the success and quality of places, and their neighbourhoods and communities. He is particularly committed to improving the environment by encouraging more sustainable means of transport, through a cycling revolution, improving conditions for walking, and enhancement of public transport."

3.10 Policy 6.1 sets out a number of strategic aims, with those relevant to the proposals as follows:

- a) *"encouraging patterns and nodes of development that reduce the need to travel, especially by car;*
- b) *seeking to improve the capacity and accessibility of public transport, walking and cycling, particularly in areas of greatest demand;*
- c) *supporting measures that encourage shifts to more sustainable modes and appropriate demand management; and*
- i) *promoting walking by ensuring an improved urban realm."*

The Draft New London Plan (August 2018)

- 3.11 A version of the Draft New London Plan was issued in August 2018 which sets out new and amended policies which will be the blueprint for future development. The document strives for a healthier and more active London with improving air quality and reducing car parking provision at the forefront of the plan.

Local Policy Guidance

London Borough of Hillingdon Development Plan

- 3.12 The Development Plan consists of the Local Plan: Part 1, which was adopted in November 2012, and the Saved Unitary Development Plan policies which were adopted in 2007.
- 3.13 The Local Plan sets out the following relevant to transport:
- Policy T1: Accessible Local Destinations – *"The Council will steer development to the most appropriate locations in order to reduce their impact on the transport network. All development should encourage access by sustainable modes and include good cycling and walking provision."*
- 3.14 The Saved Unitary Development Plan policies include reference to car and cycle parking standards.
- 3.15 There are no specific Hillingdon car parking standards for nursery use within the saved UDP, however, the level required is to be considered on an individual basis. Cycle parking standards for nursery use require 1 space per 2 staff.
- 3.16 For the residential use, a maximum of 1.5 spaces per dwelling can be provided and 1 cycle parking space per unit.

4 PROPOSED DEVELOPMENT

- 4.1 The proposed site layout plans are included at **Appendix C**.
- 4.2 The proposals seek to provide a nursery facility that can accommodate 74 children and 21 members of staff at full occupancy, however, a maximum of 60 children would be on-site at any one time. There will be 4 classrooms, a baby room and a baby quiet area as well as a reception, hall and ancillary staff, office and storage space. The breakdown of pupils and staff is provided below:
- Babies (3 months to 1 year) = 8 Pupils & 3 Staff;
 - Toddlers (1 year to 2 year) = 24 Pupils & 8 Staff;
 - Pre-School (2 year to 3 year) = 34 Pupils & 9 Staff;
 - Nursery (3 year to 5 year) = 8 Pupils & 1 Staff; and
 - Total = 74 Pupils & 21 Staff.
- 4.3 The nursery is proposed to be open Monday to Friday from 07:30 till 18:00 with arrivals and departures staggered during peak periods and half day/shorter care periods available. Only 20% of pupils are expected to attend school from start to finish. Capacity during the morning is expected to be 75% whilst during the afternoon capacity would be at 50%.
- 4.4 The development will also provide 2 x 1-bedroom residential units on the top floor of the building.
- 4.5 Pedestrian and vehicular access will be provided via the existing crossover on Murray Road. Pedestrians will enter the building via the existing main entrance.
- 4.6 The proposals will provide 4 car parking spaces on the area of hardstanding in front of the building. There will be 2 spaces for residents and 2 for staff. Cycle parking for 14 cycles and additional space for scooters and buggies will be provided for residents, staff and parents.
- 4.7 Pick-up and drop-off activity would be undertaken on-street in line with existing restrictions.
- 4.8 Any servicing requirements associated with the site will be undertaken on-street in line with existing restrictions.

5 EFFECT OF DEVELOPMENT

- 5.1 This section considers the transport and highways matters associated with the proposals including vehicle trip generation, accessibility, parking matters and pick-up/drop-off activity in order to understand the effects of the development on the surrounding transport network.

Trip Generation

Nursery Use

- 5.2 A trip generation assessment has been undertaken to establish the potential number of vehicle trips associated with the proposed nursery.
- 5.3 The TRICS database has been utilised to obtain relevant trip rates. The database is limited and only includes 2 London sites, 1 of which only operates until 15:30, the remaining Redbridge site is therefore only considered suitable for comparison as it has the same PTAL rating as the proposed nursery, similar opening times and a low number of on-site parking spaces. **Table 5.1** provides a summary of vehicle trips associated with the proposed nursery use whilst the TRICS output files are included at **Appendix D**.

Table 5.1 Proposed Nursery Use Trip Generation Summary (60 Children)				
Survey Time	Vehicle Trip Rate (per child)		Total Number of Vehicle Trips	
	Arrivals	Departures	Arrivals	Departures
07:00 – 08:00	0.179	0.077	11	5
08:00 – 09:00	0.333	0.385	20	23
09:00 – 10:00	0.077	0.051	5	3
16:00 – 17:00	0.103	0.051	6	3
17:00 – 18:00	0.179	0.308	11	19
18:00 – 19:00	0.077	0.103	5	6

- 5.4 Using the figures provided in Table 5.1, the proposed nursery would be expected to generate 20 arrivals and 23 departures during the morning peak hour (08:00-09:00) and 11 arrivals and 19 departures during the evening peak hour (17:00-18:00). This level of traffic is not expected to have a material impact on the surrounding highway network.

Residential Use

- 5.5 The proposed residential use will provide 2 x 1-bedroom units with each served by a parking space. This is unlikely to generate more than 2 vehicle movements during the peak periods and is not expected to have an impact on the local road network.

Accessibility

- 5.6 The site is located within an established residential area in close proximity to local bus stops and public transport facilities. As such, residents, parents and children associated with the proposals could travel to and from the site by sustainable transport modes. Furthermore, the location of the site offers convenient onward travel for parents dropping off their children as part of their journey to work or as part of a linked trip to the nearby Waitrose or town centre.

Access

- 5.7 The proposed development would not alter the existing access arrangement at the site. As such there is no change in this regard. Furthermore, vehicles will be able to enter and exit in forward gear.

Parking

Car Parking

- 5.8 The proposed development provides 4 on-site car parking spaces. There will be 2 spaces allocated for residents and 2 spaces for staff. In addition, to avoid staff parking on-street the applicant will apply for a lease to use part of the Green Lane car park.
- 5.9 Vehicle activity associated with the nursery would be accommodated locally, on-street, subject to the prevailing restrictions, and/or within local car parks such as the Waitrose. It is pertinent to note that the local area is subject to CPZ parking restrictions for a 1 hour period between 13:00 and 14:00 which prevents commuter and all day parking. The Waitrose car park also has a maximum stay of 2 hours.
- 5.10 Whilst the nursery is expected to cater for a local residential demand, the trip rate assessment indicates that there is potential for 20 vehicle arrivals during the morning peak period and 11 arrivals during the evening peak period. Dwell times for each pick-up and drop-off vehicle are expected to range from 5-15 minutes at a time. Furthermore, pick-up and drop-off activity will be staggered over 15 minute periods to reduce any potential impact. As such, it is reasonable to assume that approximately 5 vehicles would be parked within the local area during peak periods ("20 peak hour arrivals" divided by "4 x 15 minute dwell time periods over the hour")..
- 5.11 An assessment on parking levels has been undertaken should all 5 vehicles park on-street. **Table 5.2** sets out the revised occupancy levels in the local area should 5 vehicles be added to the local area. The assessment demonstrates that occupancy levels would be at or below 70% during peak periods and that residential parking availability will not be affected.

Table 5.2 – Parking Demand Assessment			
Time	Parked Cars	Observed Spaces	Occupancy
<i>Morning Period</i>			
08:00	41	35	54%
08:30	38	38	50%
09:00	48	28	63%
<i>Evening Period</i>			
17:00	53	23	70%
17:30	48	28	63%
18:00	48	28	63%

- 5.12 The parking assessment indicates that local occupancy levels will not be materially affected by the proposals, however, in addition to this, the nursery will encourage staff and parents to travel by non-car modes by implementing a number of measures and initiatives to ensure that car use is reduced, sustainable travel is promoted and considerate behaviour towards residents is observed. These are set out later in this report.
- 5.13 The residential units will each be served by 1 on-site car parking space. A review of car ownership levels for 1-bed flats in the Northwood ward, in which the site is located, suggests that there are approximately 0.94 cars per unit. As such, the anticipated parking demand associated with 2 x 1-bed flats would be accommodated on-site and is not expected to lead to an impact on-street.
- 5.14 Based on the above, the anticipated level of vehicle activity is unlikely to have a material impact on parking levels within the local area.

Cycle Parking

- 5.15 Cycle parking will be provided for 14 cycles based on local policy cycle parking standards which require 1 space per 2 staff and 1 space per residential unit. The provision for staff is expected to encourage cycling as a main mode of travel to and from the site as part of the planned development.
- 5.16 In addition, a buggy/pram store will be provided so that parents and carers can walk their children to the site, leave their prams/push chairs, and continue their journey on foot thus encouraging this mode of transportation as a main mode of travel or as part of a linked trip with nearby public transport options.

Pick-up / Drop-off Activity

- 5.17 Pick-up and drop-off activity will take place on-street in line with existing restrictions. There is also further flexibility for this activity to take place within the Waitrose Car Park.

- 5.18 Parent arrivals will be staggered over 15 minute periods during the morning and evening peak periods. As such, arrivals and departures will not take place all at the same time. The nursery will also implement measures to reduce the impact of pick-up and drop-off activity through active management of the arrival and departure process as well as promotion of good practice.

Travel Plan

- 5.19 A Travel Plan will be adopted at the site. This will include a number of travel plan measures to promote sustainable travel and to reduce the number of single occupancy journeys. These include:

- recruitment of staff from the local community;
- flexible work shift patterns;
- discounted fees to parents who use sustainable travel modes;
- provision of cycle parking and buggy storage;
- sustainable travel promotions to encourage travel by walking, cycling or public transport;
- sustainable education to teach children about the benefits of an active lifestyle and the impact of their carbon footprint on the environment;
- participation in TfL's STARS accreditation scheme; and
- appointment of a Travel Plan Coordinator.

- 5.20 The Travel Plan Coordinator will be responsible for the following:

- preparation of a Welcome Pack to promote sustainable travel;
- promotion of the use of public transport and cycling and walking routes through the dissemination of information to parents and staff;
- developing the potential for car sharing and matching of car sharers;
- monitoring of parking behaviour;

- monitoring of the effectiveness of the Travel Plan in meeting the needs of the staff, parents and visitors and in reaching the aspirational targets for travel to work;
- adoption of a warning system to parents if observed to be putting other road users at risk with bad practice; and
- walk to and cycle/scoot to nursery weeks.

5.21 In addition, the nursery will:

- publicise travel plan measures to staff and visitors;
- conduct a travel survey with staff when the new staff start work as regards mode of travel to and from work;
- conduct a travel survey with staff and parents 6 months after the nursery is Occupied. The method of collecting information will be agreed with the Council; and
- thereafter carry out an annual staff survey and visitors (including parents) survey as regards method of travel and to include questions on what would encourage parties to cycle, walk and use public transport.

5.22 An annual monitoring plan will be submitted for each of the 5 years following occupation.

6 SUMMARY AND CONCLUSION

Summary

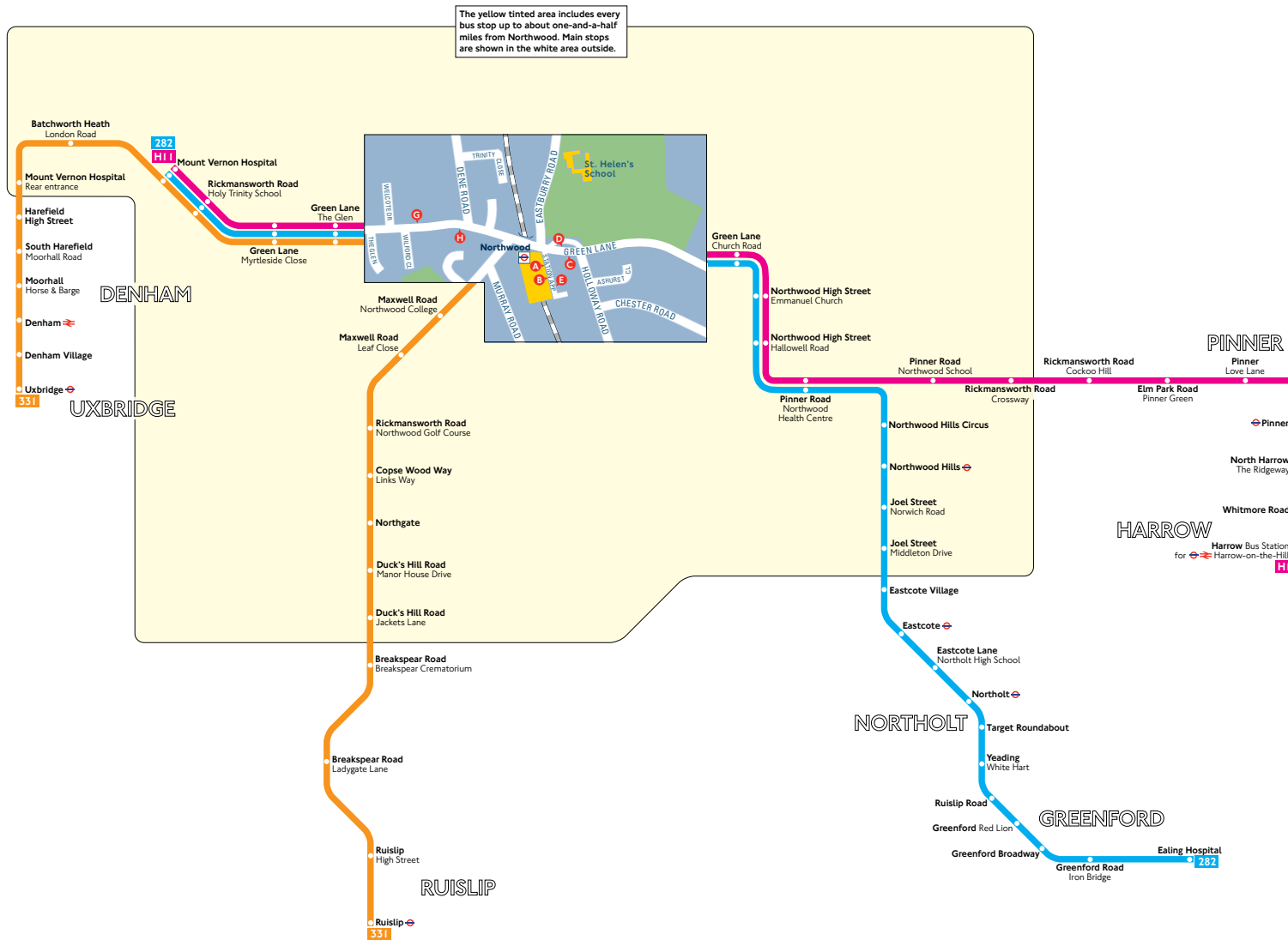
- 6.1 TTP Consulting has been appointed to provide traffic and transport advice in relation to the proposals for a nursery and 2 residential units on Murray Road, Northwood, in the London Borough of Hillingdon.
- 6.2 In summary, the nursery will cater for approximately 74 children and 21 members of staff. There would be a maximum of 60 pupils on-site at any one time.
- 6.3 The proposal has been assessed and is summarised as follows:
- The site is located within a largely residential area. It achieves a PTAL rating of 2 and is within walking distance of bus routes and Northwood Underground station. The location of the site suggests that a number of dedicated trips to/from the site could be made by sustainable modes.
 - Car parking for 4 vehicles will be provided on-site. These will be used for staff and residential parking. In addition, cycle parking and buggy storage will be provided.
 - Residential parking demand is anticipated to be accommodated on-site and therefore is not expected to lead to any overspill impact.
 - Pick-up and drop-off activity would be staggered in 15 minute intervals. A trip generation assessment highlights that the arrivals and departures associated with the nursery would not result in a material impact on the local highway in traffic terms.
 - Pick-up and drop-off activity would take place on-street and within local car parks. Parking beat surveys indicate that the surrounding highway network has potential to accommodate the expected levels of demand associated with attending/departing parents.
 - A Travel Plan has been incorporated within this Transport Statement to encourage staff and the parents of children at the nursery to travel by sustainable modes of transport and in particular by walking and cycling.

Conclusion

- 6.4 In light of the above, we conclude that the proposal for a nursery and 2 residential units will not result in a material impact in highways and transportation terms. Furthermore, in accordance with NPPF paragraph 109, the residual cumulative impacts of the development are not considered severe, and, as such, the development is considered acceptable on transport grounds.

Appendix A

Buses from Northwood



Route finder

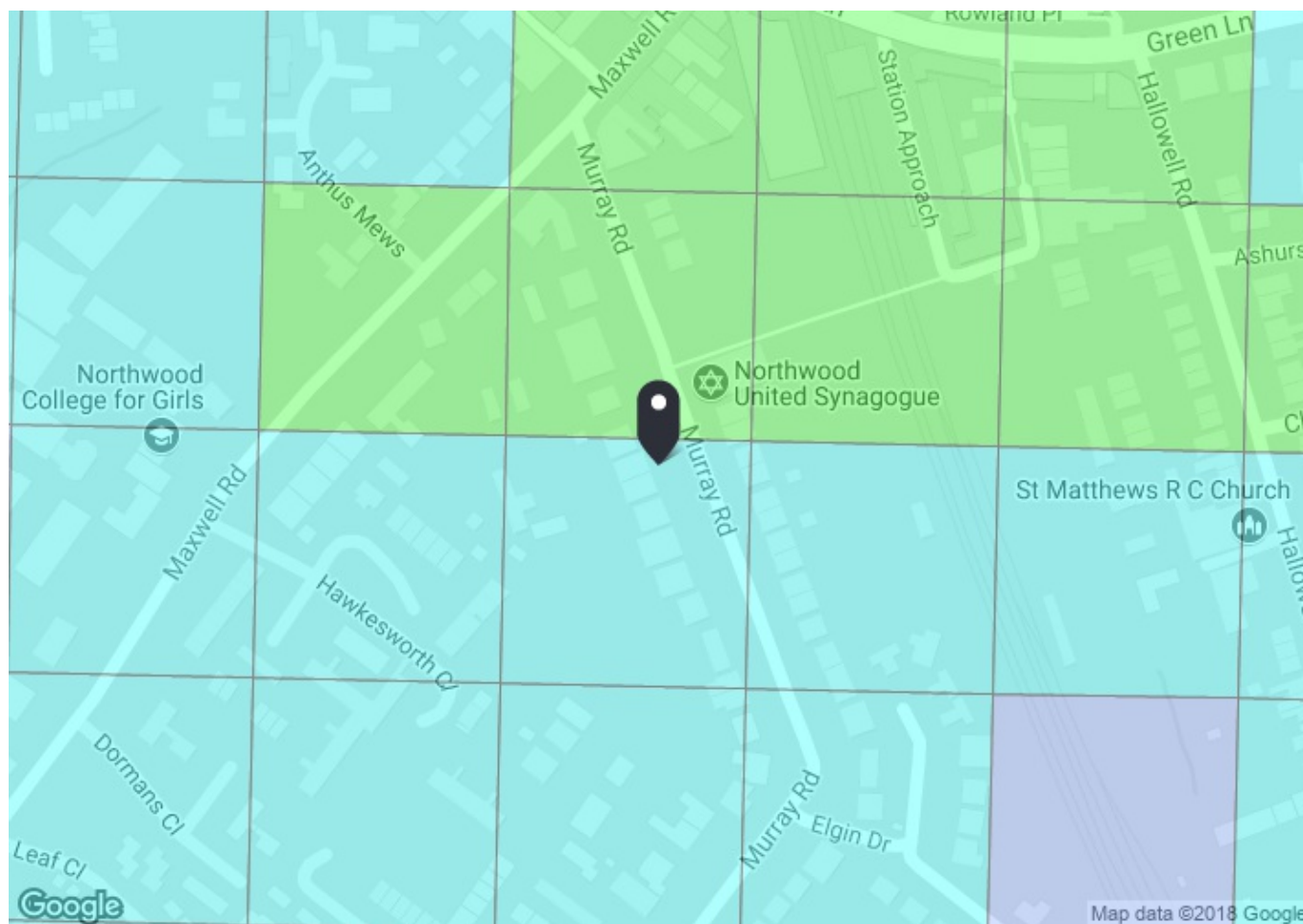
Day buses

Bus route	Towards	Bus stops
282	Ealing Hospital	D G
	Mount Vernon Hospital	C H
331	Ruislip	B G
	Uxbridge	A H
H11	Harrow	D G
	Mount Vernon Hospital	C H

Other buses

Bus route	Towards	Bus stops
8	Abbots Langley	D G
	Mount Vernon Hospital	C H

Appendix B



PTAL output for Base Year 2

14 Murray Rd, Northwood HA6 2YJ, UK
Easting: 509159, Northing: 191283

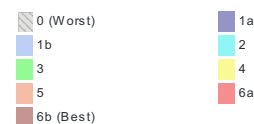
Grid Cell: 137902

Report generated: 05/03/2018

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

Map key - PTAL



Map layers

 PTAL (cell size: 100m)

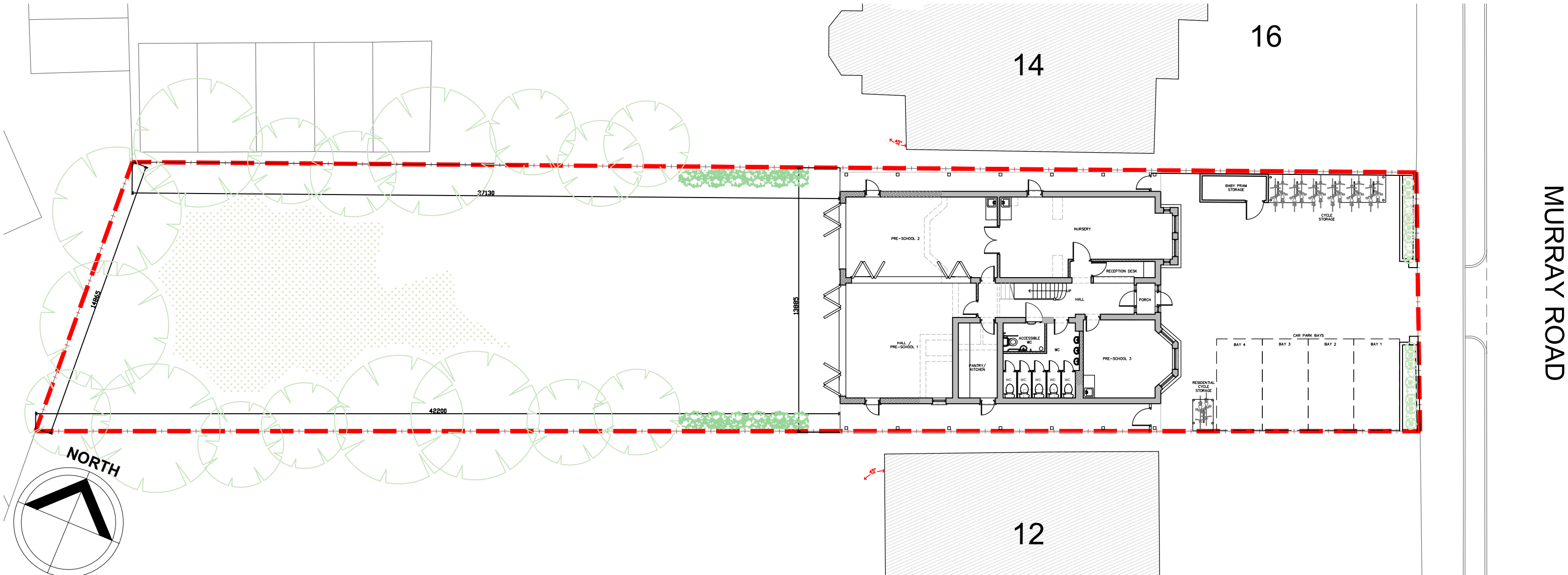
Calculation data

Mode	Stop	Route	Distance (metres)	Frequency(vph)	Walk Time (mins)	SWT (mins)	TAT (mins)	EDF	Weight	AI
Bus	GREEN LANE DENE ROAD	282	393.21	5	4.92	8	12.92	2.32	1	2.32
Bus	GREEN LANE DENE ROAD	H11	393.21	4	4.92	9.5	14.42	2.08	0.5	1.04
Bus	Maxwell R Hawkesworth Cl	331	357.13	3	4.46	12	16.46	1.82	0.5	0.91
LUL	Northwood	'Watford-BStreetSF '	406.31	2.33	5.08	13.63	18.7	1.6	0.5	0.8
LUL	Northwood	'Watford-AldSfast '	406.31	3.67	5.08	8.92	14	2.14	1	2.14
LUL	Northwood	'Aldg-WatfordSlow'	406.31	3.67	5.08	8.92	14	2.14	0.5	1.07
LUL	Northwood	'BakStr-WatfordSlow'	406.31	1.67	5.08	18.71	23.79	1.26	0.5	0.63
LUL	Northwood	'Wembley-WatfordSL '	406.31	0.67	5.08	45.53	50.6	0.59	0.5	0.3
Total Grid Cell AI:										9.21

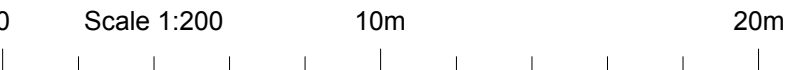
Appendix C



SITE LOCATION PLAN
1:1250



BLOCK PLAN LAYOUT
1:200



Amendments/Notes

Rev.	Detail	By	Date
A	add. of residential cycle store	lvp	8-5-19

PLANNING

All dimensions and levels to be checked on site by contractor prior to preparation of shop drawings and commencement of work on site.
This drawing and the copyrights and patents therein are the property of the Architect and may not be used or reproduced without consent.
This drawing is to be read in conjunction with all relevant consultants and/or specialist's drawings/documents and any discrepancies or variations are to be notified to the Architect before the affected work commences.
All works on site are to be carried out fully in accordance with current CDM regulations and recommendations, current Building Regulations, British Standards and Codes of Practice as appropriate.

Project

16 MURRAY ROAD
NORTHWOOD
HA6 2YJ

Drawing

SITE LOCATION PLAN &
BLOCK PLAN LAYOUT

SEABROOK
ARCHITECTS
CHARTERED ARCHITECTS
The Studio Barn, Bury Farm Courtyard, Pednor Road, Chesham,
Bucks HP5 2JU Tel: 01494 778918 Fax: 01494 770620
e-mail: gsp@gsparchitects.co.uk

Drawn By	NHQ	Date	Feb 2019
Checked By	-	Date	-
Approved By	-	Scale	1:1250/200@A2
Drawing No.	5618-PL100	Rev.	A

Appendix D

Calculation Reference: AUDIT-752101-180523-0506

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 04 - EDUCATION

Category : D - NURSERY

VEHICLES

Selected regions and areas:

01 GREATER LONDON

RB REDBRIDGE

1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Secondary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Number of pupils

Actual Range: 39 to 39 (units:)

Range Selected by User: 39 to 55 (units:)

Public Transport Provision:

Selection by:

Include all surveys

Date Range: 01/01/00 to 22/06/16

*This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.*Selected survey days:

Tuesday

1 days

*This data displays the number of selected surveys by day of the week.*Selected survey types:

Manual count

1 days

Directional ATC Count

0 days

*This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.*Selected Locations:

Suburban Area (PPS6 Out of Centre)

1

*This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.*Selected Location Sub Categories:

Residential Zone

1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

D1

1 days

*This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.*Population within 1 mile:

50,001 to 100,000

1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Secondary Filtering selection (Cont.):

Population within 5 miles:

500,001 or More 1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

1.1 to 1.5 1 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No 1 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

2 Poor 1 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1RB-04-D-01NURSERYREDBRIDGE

CASTLETON ROAD

CHADWELL HEATH

ILFORD

Suburban Area (PPS6 Out of Centre)

Residential Zone

Total Number of pupils:39

Survey date: TUESDAY07/10/14

Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
KI-04-D-01	opening times

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY
VEHICLES

Calculation factor: 1

Estimated TRIP rate value per 95 shown in shaded columns

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS				DEPARTURES				TOTALS			
	No. Days	Ave. PUPILS	Trip Rate	Estimated Trip Rate	No. Days	Ave. PUPILS	Trip Rate	Estimated Trip Rate	No. Days	Ave. PUPILS	Trip Rate	Estimated Trip Rate
00:00 - 01:00												
01:00 - 02:00												
02:00 - 03:00												
03:00 - 04:00												
04:00 - 05:00												
05:00 - 06:00												
06:00 - 07:00	1	39	0.000	0.000	1	39	0.000	0.000	1	39	0.000	0.000
07:00 - 08:00	1	39	0.179	17.051	1	39	0.077	7.308	1	39	0.256	24.359
08:00 - 09:00	1	39	0.333	31.667	1	39	0.385	36.538	1	39	0.718	68.205
09:00 - 10:00	1	39	0.077	7.308	1	39	0.051	4.872	1	39	0.128	12.180
10:00 - 11:00	1	39	0.026	2.436	1	39	0.026	2.436	1	39	0.052	4.872
11:00 - 12:00	1	39	0.000	0.000	1	39	0.026	2.436	1	39	0.026	2.436
12:00 - 13:00	1	39	0.103	9.744	1	39	0.051	4.872	1	39	0.154	14.616
13:00 - 14:00	1	39	0.077	7.308	1	39	0.077	7.308	1	39	0.154	14.616
14:00 - 15:00	1	39	0.000	0.000	1	39	0.026	2.436	1	39	0.026	2.436
15:00 - 16:00	1	39	0.051	4.872	1	39	0.026	2.436	1	39	0.077	7.308
16:00 - 17:00	1	39	0.103	9.744	1	39	0.051	4.872	1	39	0.154	14.616
17:00 - 18:00	1	39	0.179	17.051	1	39	0.308	29.231	1	39	0.487	46.282
18:00 - 19:00	1	39	0.077	7.308	1	39	0.103	9.744	1	39	0.180	17.052
19:00 - 20:00	1	39	0.000	0.000	1	39	0.000	0.000	1	39	0.000	0.000
20:00 - 21:00												
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			1.205	114.489			1.207	114.489			2.412	228.978

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

The survey data, graphs and all associated supporting information, contained within the TRICS Database are published by TRICS Consortium Limited ("the Company") and the Company claims copyright and database rights in this published work. The Company authorises those who possess a current TRICS licence to access the TRICS Database and copy the data contained within the TRICS Database for the licence holders' use only. Any resulting copy must retain all copyrights and other proprietary notices, and any disclaimer contained thereon.

The Company accepts no responsibility for loss which may arise from reliance on data contained in the TRICS Database. [No warranty of any kind, express or implied, is made as to the data contained in the TRICS Database.]

Parameter summary

Trip rate parameter range selected:	39 - 39 (units:)
Survey date date range:	01/01/00 - 22/06/16
Number of weekdays (Monday-Friday):	1
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	1

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.