## 41 Fortess Road, London NW5 1AD

**Design and Access Statement** 

Oct 2013 Rev A

#### Prepared for

Client

Leycam Ltd 41 Fortess Road London NW5 1AD

By:

#### Ko and Partners Architects

Unit 6 1-3 Upper Richmond Road London SW15 2RF Tel: 020 8874 0758

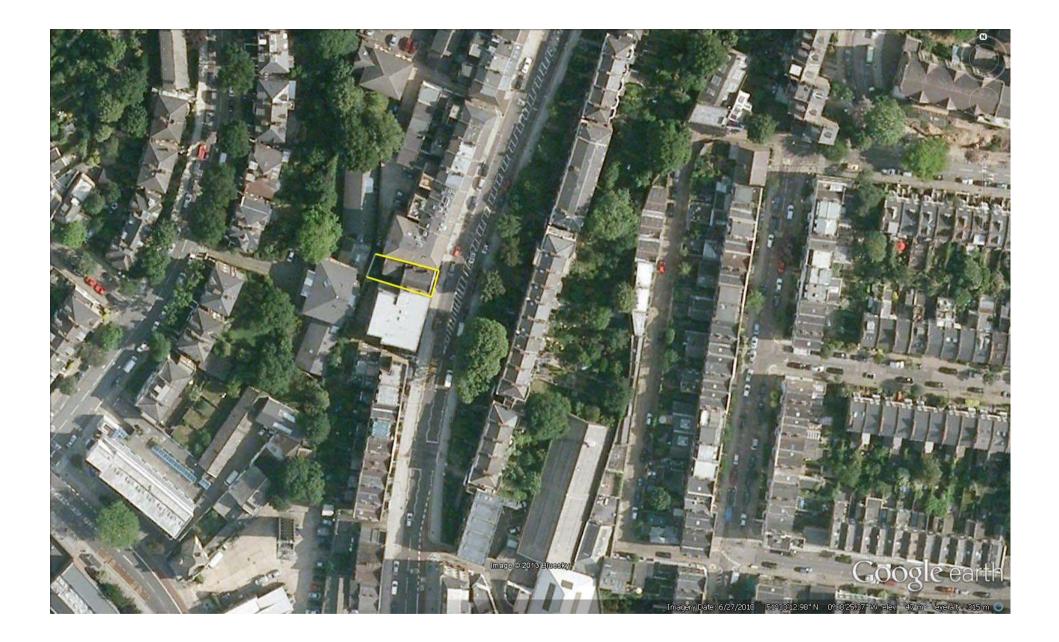
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#### 1 Introduction

- 1.1. This statement has been written in order to support the planning application to Camden Council for 41 Fortess Road, London NW5 1AD. The application is made on behalf of Leycam Ltd.
- 1.2. Leycam Ltd purchased this property at the end of 2012; subsequently instruct our practice to carry out the feasibility study to make more efficient use of the site and the building.
- 1.3. The proposal is to restore the existing gable facade and re-develop into a part four & part five storey residential building including using roof space and creation of new basement at the rear; for one x 3-bed self-contained flats, three x 2-bed self-contained flats, three x 1-bed self-contained flats and two studio flats; followings demolish the existing 3-storey rear extension (built in 1930s).
- 1.4. The statement will demonstrate the key design concepts of this development. The proposed works will provide high quality residential units to ease the high demand for residential properties in this area.
- 1.5. Although the building of 41 Fortess Road is neither a listed building nor within Conservation Area, a **Heritage Statement** has been prepared by Heritage Collective LLP to understand the history of the site; and assess the impact of the proposal to its surrounding areas.
- 1.6. The following reports are also submitted to support this application
  - Daylight, Sunlight and Overshadowing Assessment by Herrington Consulting Ltd
  - Site investigation report by Soil Investigation (Eastern) Ltd
  - Structural report by W G Hall Associates



### 2 Site and Surroundings

#### The Building and Site

- 2.1 41 Fortess Road is a two-storey building with a gable wall frontage and a lower ground floor which can be seen from Fortess Road.
- 2.2 This gable wall facade building was part of the complex of Kentish Town Methodist Church. The church was demolished in 2000 and replaced with a modern 4-storey plus lower ground floor residential block, known as No.39 Fortess Road. The application building has a 1930s flat roof 3-storey rear extension.
- 2.3 The building of 41 Fortess Road is neither a listed building nor within a conservation area.
- 2.4 The main entrance to the building is through the link which bridge over from Fortess Road to its ground floor; and a separate entrance with metal stair at the northeast corner of the site for entering the lower ground floor level. There is no internal stair between lower ground floor and to the other levels
- 2.5 The width of site frontage on to Fortess Road is 9.4m. The depth of site is around 20.4 m. The height of the existing building from the Fortess Road, up to the top of ridge, is around 11m. The total area of the application site is 209.5 sq m.
- 2.6 The front gable of the building is suffering considerable structural failure, the bowing of the brickwork above the first floor windows are bowing and leaned into the building evident. Structure engineer from W G Hall Associates has assessed the building and recommends that the bowing in the front gable requires action. This application is accompanied by the relevant report.



View from Fortess Road

Jun 2013

Bowing Gable Wall

- 2.7 The building is currently use as residential with flat to each floor. However, notices of hazards have been severed since 2010 to improve the living condition of the building. The new owner Leycam Ltd has been carried out part of the improvement works since they took over the building from the previous owner.
- 2.8 The internal layouts have been altered and modified over the years, for details please refer to the Heritage Statement.
- 2.9 The recently approval of the site is 'Extensions including a rear lower ground to first floor level infill extension; and ground and first floor side extension, insertion of a window at second floor level in rear gable and conversion of roof space with insertion of 4 new rooflights to provide additional living accommodation including provision of a new self contained 1-bedroom flat at second floor level



Existing side extension

View to rear elevations

View to rear garden of No.39



View to rear elevation from One Support Centre

View from Elsfield Housing

- 2.10 The site is well served by public transport with two bus stops nearby the site on Fortess Road. Kentish Town Station is a 2 minute walk away. The site is within controlled parking zone.
- 2.11 The Public Transport Accessibility Level (PTAL) rating generated from *TfL Planning Information database is 6a*.

#### 3 Planning History

- 3.1 PEX0000331 Granted 12/03/2001 Change of use and conversion of building to provide 4 self contained flats together with first floor side extension and alterations to existing fenestration.
- 3.2 2005/3723/P Refused 13/12/2005 Addition of second floor and new roof; rear extension at ground, first and second floor levels; addition of steel stairs to north flank wall; all in conjunction with addition of one 3-bedroom flat at second floor level and one 1-bedroom flat at roof level.

#### Reasons

- Bulky gabled design of roof extension
- Loss of light and outlook to windows in 43-45 Fortess Road and overlooking
- Noise and disturbance from external staircase
- Parking stress in absence of S106 for car-free.
- 3.3 2006/5708/P Refused 24/7/2007 Erection of a roof extension and a two storey side extension in association with a change of use from 3 flats to 6 flats

#### Reasons

- Incongruous design
- Absence of S106 for car-free
- Lack of cycle parking

#### Appeal dismissed 01/07/2008

3.4 2011/1978/P – Refused 03/11/2011 – Erection of a 4-storey residential building with 1 x 1-bed and 1 x 3 bed units at lower ground floor, 2 x 2 bed units at ground floor, 2 x 2 bed at first floor and 2 x 1 bed and 1 x studio at second floor level, followings demolition of existing 3-storey residential building.

#### Reasons

- Loss of the existing building which is considered to be a non-designated heritage asset
- Deficient design of the replacement building
- Substandard accommodation due to smallness of some of the units
- Lack of a level access approach
- Sunlight and daylight impact to the adjoining residential premises
- Various S106 related reasons
- 3.5 Simultaneously with the refusal of the above application an Article 4 was served removing permitted development rights for demolition of the existing building at 41 Fortess Road. This was subsequently confirmed on 26/04/2012
- 3.6 2012/0304/P Granted 15/08/2012 Extensions including a rear lower ground to first floor level infill extension; and ground and first floor side extension, insertion of a window at second floor level in rear gable and conversion of roof space with insertion of 4 new rooflights to provide additional living accommodation including provision of a new self contained 1-bedroom flat at second floor level

#### 4 The Proposal

The proposal is to restore the existing gable facade and re-develop into a part four & part five storey residential building including using roof space and creation of new basement at the rear; for one x 3-bed self-contained flats, three x 2-bed self-contained flats, three x 1-bed self-contained flats and two studio flats; followings demolish the existing 3-storey rear extension (built in 1930s).

- 4.1 The site has a long history of planning application over last ten years. This new application is taking all reasons of refusal into account for designing into more efficient use of the site and the existing building.
- 4.2 As the site has easy access to all public transportations (PTAL rated 6a), the proposed scheme will be a **car-free development**. 9 covered cycle storage spaces will be provided to encourage residents to use bicycles and further reduce their carbon footprint.
- 4.3 **The existing gable facade will be retained and restored**, however the front top gable section of the building is suffering considerable structural failure, the bowing of the brickwork above the first floor windows are bowing and leaned into the building evident. Structure engineer from W G Hall Associates has assessed the building and recommends that the bowing in the front gable requires action reconstruction. This application is accompanied by the relevant report. All the existing bricks and mouldings at the section above first floor windows of the gable facade will be carefully removed from the bowing area. The bricks and mouldings will be examined, cleaned up and re-used for the re-construction. The bonding and mortar will be matching the existing, if necessary, the re-constructed new gable wall will be stained or colour washed to match existing main facade condition.

#### 4.4 **Existing main facades**

- All the existing timber windows will be replaced with double glazed painted box sash timber windows.
- Existing timber main doors will be stripped, cleaned up, repaired and re-installed for the re-development
- Existing metal railing will be retained and repaired.
- A new metal gate will be installed to the missing gate at the northeast corner, which the new gate will match with the existing design.

#### 4.5 **New side extension**

- The existing first floor side extension will be replaced with new side extension from lower ground to first floor levels. (Lower ground floor infill below the already consented infill extension);

- The new side extension will be set back 1m from the existing main facade.
- It will be constructed with matching brickwork, windows, windows head and new front door.
- The ground floor of the new side extension will be used as the main entrance for accessing the rear of this re-development.
- Traditional pavement lights will link from the northeast corner forecourt of the site to the new main entrance.

- This new flat roof side extension will stay approx 1.1m below the windows at the party wall of No.43 Second floor; see the Section B for details. This side extension will have **no** impact to those windows in term of outlook and daylighting.

#### 4.6 **The main building will be retained.** The internal layout will be re-arranged for forming new residential units.

#### 4.7 New Rear Extension

- The existing rear extension (built in 1930s) will be demolished and rebuilt with new rear extension including the creation of new basement.
- The rear extension contained in two sections:
  - A pitched roof section which extends from the main roof with a smaller pitched roof replicating the larger original pitched roof form.
  - A small flat roof section will replicate as the front side extension which will infill the pitched roof section and No.43. This section will have a 0.6m set back for creating a visual separation; the height of this flat roof will be slightly lower than the front side extension and will be approx 2.0m below the nearest party wall window at the second floor of No.43; see the Section B for details.
- Excavation of a new basement to the rear of building in line with the levels on the adjacent site at No.39



Existing View from One Support Centre

Proposed Rear Building



#### 4.8 **Ground Floor**

- The new traditional pavement lights will be installed to replace the existing metal staircase landing at the forecourt of the site; which will link to the new side extension to form the new entrance.
- The new main ground floor entrance will also be used for cycle store, which is designed for encouraging the end-user to use bicycle regularly.
- The existing internal staircase will be removed and replaced with new staircase at the rear section of the existing main building. The new staircase will be able to access to all levels of this re-development.
- A new spine structure wall will be introduced to reinforce the existing building envelop and to ensure the existing building to be retained, details refer to the structural report.
- Flat 1 (studio) Through the existing main door, a self-contained studio flat is located at the front section of the main building. As the flat is facing on to Fortess Road, the existing timber sash windows will be upgraded and replaced with acoustics-rated double glazed windows. The new layout will make the front windows appear to be used by habitable rooms as the original intention; *not like the latest approved scheme that a new stair will run across behind the existing front windows*.
- Flat 2 (2-bed flat) By extending the rear extension to line up with the rear of No.43 and infill the gap between existing extension and No.43, a new 2-bed / 4-person self-contained flat will be formed to comply the London Plan requirements.

#### 4.9 First Floor

- Flat 3 (1-bed flat) As the flat is facing on to Fortess Road, similar to ground floor, the existing timber sash windows will be upgraded and replaced with acoustics-rated double glazed windows. Although the overall area of the flat is 1 sq m less than the London Plan required, both area of bedroom and living room are slightly over the minimum requirements 12.5 sq m (require 12 sq m) and 24.5 sq m (require 23 sq m) respectively.
- Flat 4 (2-bed Flat) Together the existing rear main building and new footprint of rear extension, A new 2-bed / 3-person flat will be formed. Each of the habitable rooms will have its own direct access to sunlight and daylight.

#### 4.10 Second Floor

- Flat 5 (2-bed flat) is using the existing pitch roof space and new pitch roof of the new rear extension. All the proposed rooflights will be installed at the south side of pitch roof where facing No.39. As a result, there is no overlooking issue with the existing No.39 party wall windows at the second floor level.

#### 4.11 Lower Ground Floor

- Flat 6 (1-bed flat) – The flat will be accessed through the existing metal stair and main door. A new lobby will be created; one side of the lobby is bedroom and on the other side is an open plan living / kitchen room. According to the daylight and sunlight study report, the proposed kitchen area

is below the BRE Guidelines and the other areas are complying with the requirements. As this flat is below street level with constraint of the site, the ADF of both main habitable areas – bedroom & living area achieved good standard.

- Flat 7 (3-bed 4-person) locates at the rear of the building. Each of habitable rooms has its own window facing to the rear. All the rooms has been tested and to comply with the BRE standard.

#### 4.12 New Basement

- Flat 8 (Studio flat) According to the daylight and sunlight study report, the ADF of the overall studio is 1.5% which is higher than the BRE standard for bedroom or for living room use only. The ADF for the kitchen only is at 3.0%, it is also above the BRE kitchen use standard. As explained on the Daylight Assessment Report, the combined the kitchen and living area of Flat 8, achieving an ADF value of 2.0% is very onerous given that the flat is below ground level. Despite the combined value is below the standard, each individual area could achieve far better than the required standards. The flat will have a direct access to its rear courtyard.
- Flat 9 (1-bed flat) The flat will be accessed through open lobby. The habitable room of the flat achieved above the BRE standard. The flat also benefit with direct access to its own rear courtyard.

#### 4.13 Lifetime Homes Standard

- 1. Car Parking This is a <u>car-free</u> development, no parking will be provided.
- 2. Access from Car Parking N/A.
- 3. **Approach to main entrance** The top and bottom level landings are not less than 1.2 metres. The width of communal path is 1800mm.

#### 4. Main Entrance

- a) Low-level lighting will be provided for the entrance and approach; in addition, there is a street light nearby the building.
- b) Have level access over the threshold
- c) Have effective clear opening widths (not less than 800mm) and more than 300mm nibs.
- d) Weather protection new frameless glass canopy over the new main entrance
- e) Have a level external landing not less than 1200mm.

#### 5. Communal Stairs

- a) Uniform rise not exceeding 170mm.
- b) Uniform going not less than 250mm.
- c) Handrails that extend 300mm beyond the top and bottom.
- d) Handrails height 900mm from each nosing.
- e) Step nosings distinguishable through contrasting brightness.
- f) Risers which are not open.
- 6. **Internal Doorways and Hallways** All doors and corridors, both in the public area and within each proposed flat, are designed to comply with the standard.

#### Doorway widths within dwellings

Internal dwelling doors should be in accordance with the table below:

Internal dwelling doors	
Direction and width of approach	Minimum clear opening width (mm)
Straight-on (without a turn or oblique approach)	750
At right angles to a hallway / landing at least 1200mm wide	750
At right angles to a corridor / landing at least 1050mm wide	775
At right angles to a corridor / landing less than 1050mm wide (min. width 900mm)	900

These clear width requirements apply to any doorway where movement through the doorway is intended. They do not apply to storage/cupboard doors unless the storage/cupboard is 'walk in'.

#### Communal doors

Communal doors should be in accordance with the table below:

Communal doors	
Direction and width of approach	Minimum clear opening width (mm)
Straight-on (without a turn or oblique approach)	800
At right angles to a corridor / landing at least 1500mm wide	800
At right angles to a corridor / landing at least 1200mm wide	825

#### Provision of nibs

All communal doorways should have a 300mm nib (or clear space in the same plane as the wall in which the door is situated) to the leading edge of the door, on the pull side.

#### 7. Circulation Space

The minimum basic circulation spaces required, as detailed below, are not intended to match the equivalent space requirements within dwellings to wheelchair housing, or wheelchair adaptable standards.

#### WC compartments and bathrooms

Functional spaces requirements for WC compartments and bathrooms are detailed in Criteria 10 and 14.

#### Hallways and landings within dwellings

Circulation widths and spaces for hallways and landings within dwellings are detailed in Criterion 6.

#### Living rooms/areas and dining rooms/areas

Living rooms/areas and dining rooms/areas should be capable of having either a clear turning circle of 1500mm diameter, or a turning ellipse of 1700mm x 1400mm. Where dwelling layout plans include furniture layouts, occasional items of furniture (typically coffee tables & side tables) can be within or overlap these turning zones.

Where movement between furniture is necessary for essential circulation (e.g. to approach other rooms, or the window) a clear width of 750mm between items should be possible.

#### **Kitchens**

Kitchens should have a clear width of 1200mm between kitchen unit fronts / appliance fronts and any fixed obstruction opposite (such as other kitchen fittings or walls). This clear 1200mm should be maintained for the entire run of the unit, worktop and/or appliance. An additional good practice recommendation in respect of kitchen planning and layout is given below.

#### **Bedrooms**

The main bedroom in a dwelling should be capable of having a clear space, 750mm wide to both sides and the foot of a standard sized double bed. Other bedrooms should be capable of having a clear space, 750mm wide, to one side of the bed. In addition, in these bedrooms, where it is necessary to pass the foot of the bed (e.g. to approach the window as required by Criterion 15), a clear width of 750mm should also be provided at the foot of the bed.

- 8. Entrance level living space All proposed flats have a living room at the entrance level.
- 9. Entrance level Bedspace All proposed flats have entrance level bedspace.
- 10. Entrance Level WC & Shower Drainage All bathroom of each flats have been designed to comply with the below:-

#### A WC with:

- A centre line between 400mm 500mm from an adjacent wall.
- A flush control located between the centre-line of the WC and the side of the cistern furthest away from the adjacent wall.
- An approach zone extending at least 350mm from the WC's centre-line towards the adjacent wall, and at least 1000mm from the WC's centre-line on the other side. This zone should extend forward from the front rim of the WC by at least 1100mm. The zone should also extend back at least 500mm from the front rim of the WC for a width of 1000mm from the WC's centre-line.
- A basin which may be located either on the adjacent wall, or adjacent to the cistern, should not project into this approach zone by more than 200mm.

#### A basin with:

A clear frontal approach zone extending back for a distance of 1100mm from any obstruction under the basin – whether that be a pedestal, trap, duct or housing. This zone will normally overlap with the WC's approach zone as detailed.

#### Floor drainage for an accessible floor level shower with:

A floor construction that provides either shallow falls to the floor drainage, or (where the drainage is initially capped for use later following installation of a shower) that allows simple and easy installation of a laid-to-fall floor surface in the future.

Whether provided from the outset, or by subsequent adaptation, fall gradients in the floor should be the minimum required for efficient drainage of the floor area. Crossfalls should be minimised.

The floor drain should be located as far away from the doorway as practicable.

- 11. Bathroom and WC Walls All walls in all bathrooms and WCs will be capable of taking adaptations such as handrails. Wall reinforcements will be (where required) located between 300mm and 1500mm from the floor.
- 12. Stairs and potential through-floor lift in dwelling N.A.

- 13. Potential for future fitting of hoists and bedroom/bathroom relationship All flats have been designed to allow a reasonable and simple route for a potential hoist from a main bedroom to the bathroom.
- 14. Bathroom Layout All bathrooms have been designed to incorporate ease of access to the bath, WC and wash basin.

#### A WC with:

- As stated in criterion 10

#### A basin with:

- As stated in criterion 10

#### A bath with:

- There should be a clear zone alongside the bath, at least 1100mm long and 700mm wide. This zone will normally overlap with the approach zone to the WC and/or the approach zone to the basin
- Where a bath is provided with capped drainage for an accessible floor level shower beneath it, potential for a clear 1500mm diameter circular
- 15. Glazing and window handle heights Windows in the principal living space, should allow people to see out when seated. In addition, at least one opening light in each habitable room should be approachable and usable by a wide range of people including those with restricted movement and reach.
- 16. Location of service controls Switches, sockets, ventilation and service controls will be installed to comply with the latest building regulations, at a height usable by all (between 450mm and 1200mm from the floor), and at least 300mm away from any internal room corner.

#### 4.14 Accommodation Schedule

Existing Area		Proposed Residential flat	t		London Plan
		Flat	Flat Type	GIA	Essential GIA
Ground Floor	92.9 sq m	<b>Ground Floor</b> 5 Cycle Store Flat 1 Flat 2	Studio 2-bed 4-person	42.0 sq m 70.0 sq m	37 sq m 70 sq m
First Floor	91.3 sq m	<b>First Floor</b> Flat 3 Flat 4	1-bed 2-person 2-bed 3-person	49.0 sq m 64.0 sq m	50 sq m 61 sq m
		<b>Second Floor (Loft)</b> Flat 5	2-bed 3-person	61.0 sq m	61 sq m
Lower Ground Floor	93.9 sq m	<b>Lower Ground Floor</b> Flat 6 Flat 7 4 Cycle Store	1-bed 2-person 3-bed 4-person	50.9 sq m 75.5 sq m	50 sq m 74 sq m
		<b>New Basement</b> Flat 8 Flat 9	Studio 1-bed 2-person	37.0 sq m 55.0 sq m	37 sq m 50 sq m
Total number of flat	3 units	Total of new flats	Studio 1-bed 2-person 2-bed 3-person 2-bed 4-person 3-bed 4-person	2 units 3 units 2 unit 1 units 1 units	
			Total	9 units	

#### 4.15 London Plan Density Matrix

Refer to the London Plan Density Matrix and according to the local UDP, this is a Central setting site with very dense development; and according to the Public Transport Accessibility Level; this site is at the **level 6a** (appendix 1). Therefore the site will fall into **650-1100 hr/ha** at Central setting.

The total site area is 209.5 sq m / 0.02095 ha. For 650-1100 hr/ha, the site should be at **13.6 – 23hr for 0.02095 ha**.

The total of the habitable rooms on site is 21 (2 x studio  $-2 \times 1 = 2$ ,  $3 \times 1$ -bed  $-3 \times 2 = 6$ ,  $3 \times 2$ -bed  $-3 \times 3 = 9 \& 1 \times 3$ -bed  $-1 \times 4 = 4$ ).

The average hr/unit is 2.33 (21hr / 9 units). Therefore, it will fall into the nearest 2.7-3.0 hr/unit and the result is the site should be limited between 215-405 u/ha (at 4 to 6 PTAL), and it means that it should be in between **4.5 to 9 units for 0.02095 ha**.

The current proposed scheme is to provide **9 units** with mixed of studios, 1-bed, 2-bed and 3-bed units. Therefore, the proposed development scheme is well position into both London Plan - space standards and London Plan – Appropriate Density requirements.

### 5 Conclusion

The existing rear building at 41 Fortess Road has no architectural value and makes no contribution to the local area; the proposed of this re-development will provide a great improvement to this under-used site.

The proposed scheme demonstrates a high quality design and sensitive response to its well-developed residential surroundings. The proposed front facade has minimum changes to the approved scheme and has no impact to the existing gable facade. The changing of rear facade will certainly provide an improvement of the existing unattractive rear setting. The nine proposed residential units will make a positive contribution to the need for new housing in the area. The particularly high demand for family homes has been taken into account in the proposed scheme, which provides three 2-bed units and one 3-bed unit.

The proposed design has been developed in close with the council concerns; to maximise the potential of this site. Local residents are in favour of sensitive redevelopment of the site, which has become untidy and neglected after many years. The proposal will provide high-quality new housing for families and professionals in this residential area with a design that both compliments and enhances its surroundings.

Internally, the layout of each flat is designed to maximise the use of space, natural ventilation and daylight. The proposal has been carefully developed to maintain the privacy of existing local residents while providing usable space for the new occupants.

The proposed development will blend with its surroundings and will not have a significant adverse effect on the amenities of neighbouring occupiers. The design of scheme meets both London Plan and council policies.

Appendix 1

# **PTAI Study Report File Details**

Date16/01/2013 00:26Day of weekM-FTime periodAM peakWalk speed4.8 kphWalk filePLSQLTest

POI Name: 528974, 185484

### **Bus Services**

Reliability factor for this mode is 2 Maximum walk time for this mode is 8 minutes Maximum walk distance for this mode is 640.0 metres

Stop CAVERSHAM ROAD Walk time to stop from POI is 7.06 minutes Walk distance to stop from POI is 565.05 metres Route 393 Direction BACK Frequency 5.0 giving AWT of 6.0 minutes Route 393 Direction OUT Frequency 5.0 giving AWT of 6.0 minutes Route 214 Direction OUT Frequency 8.0 giving AWT of 3.75 minutes Route 214 Direction BACK Frequency 8.0 giving AWT of 3.75 minutes Route 134 Direction BACK Frequency 12.0 giving AWT of 2.5 minutes Route 134 Direction OUT Frequency 12.0 giving AWT of 2.5 minutes Route C2 Direction OUT Frequency 8.0 giving AWT of 3.75 minutes Route C2 Direction BACK Frequency 8.0 giving AWT of 3.75 minutes Stop KENTISH TOWN STATION Walk time to stop from POI is 4.0 minutes Walk distance to stop from POI is 319.76 metres Route 393 Direction BACK Frequency 5.0 giving AWT of 6.0 minutes Route 393 Direction OUT Frequency 5.0 giving AWT of 6.0 minutes Route 214 Direction OUT Frequency 8.0 giving AWT of 3.75 minutes Route 214 Direction BACK Frequency 8.0 giving AWT of 3.75 minutes Route 134 Direction BACK Frequency 12.0 giving AWT of 2.5 minutes Route 134 Direction OUT Frequency 12.0 giving AWT of 2.5 minutes Route C2 Direction OUT Frequency 8.0 giving AWT of 3.75 minutes Route C2 Direction BACK Frequency 8.0 giving AWT of 3.75 minutes Stop KENTISH TOWN HIGHGATE RD

Walk time to stop from POI is 2.65 minutes Walk distance to stop from POI is 212.01 metres Route 214 Direction OUT Frequency 8.0 giving AWT of 3.75 minutes Route 214 Direction BACK Frequency 8.0 giving AWT of 3.75 minutes Route C2 Direction OUT Frequency 8.0 giving AWT of 3.75 minutes Route C2 Direction BACK Frequency 8.0 giving AWT of 3.75 minutes Stop HIGHGATE RD SANDERSON CL Walk time to stop from POI is 4.27 minutes Walk distance to stop from POI is 341.28 metres Route 214 Direction OUT Frequency 8.0 giving AWT of 3.75 minutes Route 214 Direction BACK Frequency 8.0 giving AWT of 3.75 minutes Route C2 Direction OUT Frequency 8.0 giving AWT of 3.75 minutes Route C2 Direction BACK Frequency 8.0 giving AWT of 3.75 minutes Stop HIGHGATE RD L SOMERSET R Walk time to stop from POI is 6.9 minutes Walk distance to stop from POI is 552.09 metres Route 214 Direction OUT Frequency 8.0 giving AWT of 3.75 minutes Route C2 Direction OUT Frequency 8.0 giving AWT of 3.75 minutes Stop FORTESS R JUNCTION TAVRN Walk time to stop from POI is 2.24 minutes Walk distance to stop from POI is 179 metres Route 134 Direction BACK Frequency 12.0 giving AWT of 2.5 minutes Route 134 Direction OUT Frequency 12.0 giving AWT of 2.5 minutes Stop KENTISH TN FORTESS WALK Walk time to stop from POI is 0.55 minutes Walk distance to stop from POI is 43.83 metres Route 134 Direction BACK Frequency 12.0 giving AWT of 2.5 minutes Route 134 Direction OUT Frequency 12.0 giving AWT of 2.5 minutes Stop KENTISH TOWN LEIGHTON ROAD Walk time to stop from POI is 6.41 minutes Walk distance to stop from POI is 512.63 metres Route 393 Direction BACK Frequency 5.0 giving AWT of 6.0 minutes Route 393 Direction OUT Frequency 5.0 giving AWT of 6.0 minutes Stop TUFNELL PARK STATION Walk time to stop from POI is 5.0 minutes Walk distance to stop from POI is 400.14 metres Route 390 Direction OUT Frequency 8.0 giving AWT of 3.75 minutes Route 134 Direction OUT Frequency 12.0 giving AWT of 2.5 minutes Route 134 Direction BACK Frequency 12.0 giving AWT of 2.5 minutes Stop TUFNELL PK BRECKNOCK RD Walk time to stop from POI is 5.9 minutes Walk distance to stop from POI is 471.65 metres Route 390 Direction BACK Frequency 8.0 giving AWT of 3.75 minutes Route 390 Direction OUT Frequency 8.0 giving AWT of 3.75 minutes Stop TUFNELL PK STN T'LL PK R Walk time to stop from POI is 6.26 minutes Walk distance to stop from POI is 500.85 metres Route 4 Direction BACK Frequency 6.0 giving AWT of 5.0 minutes Route 4 Direction OUT Frequency 6.0 giving AWT of 5.0 minutes

Stop TUFNELL P STN D'MTH PK H
Walk time to stop from POI is 6.13 minutes
Walk distance to stop from POI is 490.67 metres
Route 4 Direction BACK Frequency 6.0 giving AWT of 5.0 minutes
Stop TUFNELL PK JUNCTION ROAD
Walk time to stop from POI is 6.7 minutes
Walk distance to stop from POI is 535.9 metres
Route 390 Direction BACK Frequency 8.0 giving AWT of 3.75 minutes
Route 134 Direction BACK Frequency 12.0 giving AWT of 2.5 minutes

TATs for this mode

Route 393 Stop KENTISH TOWN STATION TAT 12.0 minutes EDF 2.5 Route 214 Stop KENTISH TOWN HIGHGATE RD TAT 8.4 minutes EDF 3.57 Route 134 Stop KENTISH TN FORTESS WALK TAT 5.05 minutes EDF 5.94 Route C2 Stop KENTISH TOWN HIGHGATE RD TAT 8.4 minutes EDF 3.57 Route 390 Stop TUFNELL PARK STATION TAT 10.75 minutes EDF 2.79 Route 4 Stop TUFNELL P STN D'MTH PK H TAT 13.13 minutes EDF 2.28

Best EDF is 5.94 Half of all other EDFs is 7.36

AI for this mode is 13.3

## **Underground Services**

Reliability factor for this mode is .75 Maximum walk time for this mode is 12 minutes Maximum walk distance for this mode is 960.0 metres

Stop Kentish Town
Walk time to stop from POI is 3.92 minutes
Walk distance to stop from POI is 313.5 metres
Route Northern Line Mill Hill East to Morden Direction S/B Frequency 0.3 giving AWT of 100.0 minutes
Route Northern Line Morden to High Barnet Direction N/B Frequency 6.3 giving AWT of 4.76 minutes
Route Northern Line Morden to High Barnet Direction N/B Frequency 0.3 giving AWT of 8.11 minutes
Route Northern Line Kennington to Mill Hill East Direction N/B Frequency 0.3 giving AWT of 100.0 minutes
Route Northern Line Kennington to High Barnet Direction N/B Frequency 0.3 giving AWT of 100.0 minutes
Route Northern Line Kennington to High Barnet Direction N/B Frequency 4.7 giving AWT of 6.38 minutes
Route Northern Line High Barnet to Morden Direction S/B Frequency 5.4 giving AWT of 5.56 minutes
Route Northern Line Morden to Mill Hill East Direction N/B Frequency 2.7 giving AWT of 11.11 minutes
Route Northern Line Morden to Mill Hill East Direction N/B Frequency 4.3 giving AWT of 30.0 minutes

Stop Tufnell Park

Walk time to stop from POI is 5.52 minutes Walk distance to stop from POI is 441.56 metres

Route Northern Line Kennington to High Barnet Direction N/B Frequency 4.7 giving AWT of 6.38 minutes Route Northern Line High Barnet to Kennington Direction S/B Frequency 5.4 giving AWT of 5.56 minutes Route Northern Line Kennington to Mill Hill East Direction N/B Frequency 0.3 giving AWT of 100.0 minutes Route Northern Line High Barnet to Morden Direction S/B Frequency 9.0 giving AWT of 3.33 minutes Route Northern Line Morden to High Barnet Direction N/B Frequency 3.7 giving AWT of 8.11 minutes Route Northern Line Morden to High Barnet Direction N/B Frequency 2.7 giving AWT of 8.11 minutes Route Northern Line Morden to Mill Hill East Direction N/B Frequency 2.7 giving AWT of 11.11 minutes Route Northern Line Mill Hill East to Kennington Direction S/B Frequency 4.3 giving AWT of 6.98 minutes Route Northern Line Morden to Mill Hill East Direction N/B Frequency 1.0 giving AWT of 30.0 minutes Route Northern Line Morden to High Barnet Direction N/B Frequency 6.3 giving AWT of 4.76 minutes Route Northern Line Morden to High Barnet Direction S/B Frequency 6.3 giving AWT of 4.00 minutes

TATs for this mode

Route Northern Line Morden to Mill Hill East Stop Kentish Town TAT 15.78 minutes EDF 1.9 Route Northern Line High Barnet to Morden Stop Kentish Town TAT 8.0 minutes EDF 3.75 Route Northern Line Morden to High Barnet Stop Kentish Town TAT 12.78 minutes EDF 2.35 Route Northern Line Mill Hill East to Kennington Stop Kentish Town TAT 11.65 minutes EDF 2.58 Route Northern Line High Barnet to Kennington Stop Kentish Town TAT 10.22 minutes EDF 2.93 Route Northern Line Morden to Mill Hill East Stop Kentish Town TAT 34.67 minutes EDF 0.87

Best EDF is 3.75 Half of all other EDFs is 5.31

AI for this mode is 9.06

## **Rail Services**

Reliability factor for this mode is .75 Maximum walk time for this mode is 12 minutes Maximum walk distance for this mode is 960.0 metres

Stop KENTISH TOWN BR
Walk time to stop from POI is 3.92 minutes
Walk distance to stop from POI is 313.5 metres
Route ST ALBANS BR to SUTTON (SURREY) Direction T86-T390 Frequency 0.67 giving AWT of 44.78 minutes
Route LUTON to MOORGATE Direction T82-T621 Frequency 0.67 giving AWT of 44.78 minutes
Route ST ALBANS BR to WEST NORWOOD BR Direction T86-T437 Frequency 0.33 giving AWT of 90.91 minutes
Route WIMBLEDON BR to ST ALBANS BR Direction T86-T621 Frequency 0.67 giving AWT of 44.78 minutes
Route ST ALBANS BR to MOORGATE Direction T86-T621 Frequency 0.67 giving AWT of 44.78 minutes
Route WIMBLEDON BR to LUTON Direction T512-T82 Frequency 0.33 giving AWT of 90.91 minutes
Route MOORGATE to LUTON Direction T621-T82 Frequency 0.67 giving AWT of 44.78 minutes

Route MOORGATE to ST ALBANS BR Direction T621-T86 Frequency 1.0 giving AWT of 30.0 minutes

TATs for this mode

Route ST ALBANS BR to SUTTON (SURREY) Stop KENTISH TOWN BR TAT 49.44 minutes EDF 0.61 Route LUTON to MOORGATE Stop KENTISH TOWN BR TAT 49.44 minutes EDF 0.61 Route ST ALBANS BR to WEST NORWOOD BR Stop KENTISH TOWN BR TAT 95.58 minutes EDF 0.31 Route WIMBLEDON BR to ST ALBANS BR Stop KENTISH TOWN BR TAT 27.23 minutes EDF 1.1 Route ST ALBANS BR to MOORGATE Stop KENTISH TOWN BR TAT 49.44 minutes EDF 0.61 Route WIMBLEDON BR to LUTON Stop KENTISH TOWN BR TAT 95.58 minutes EDF 0.31 Route MOORGATE to LUTON Stop KENTISH TOWN BR TAT 95.58 minutes EDF 0.31 Route MOORGATE to LUTON Stop KENTISH TOWN BR TAT 49.44 minutes EDF 0.61 Route MOORGATE to ST ALBANS BR Stop KENTISH TOWN BR TAT 34.67 minutes EDF 0.87

Best EDF is 1.1 Half of all other EDFs is 1.96

AI for this mode is 3.06

Total AI for this POI is 25.43. X: 528974, Y: 185484.

PTAL Rating is 6a.