DAC/RS/04124/A2.1/003

9 June 2005

(I) 1/6

Hugh Miller Esq
Development Control Planning Services
London Borough of Camden
Town Hall
Argyle Street
London
WC1H 9JE

LONDON BOROUGH OF CAMDEN
ENVIRONMENT DEPT
RECORDS & INFORMATION
SERVICES
RECEIVED 10 JUN 2005

Dear Mr Miller

**TOWN AND COUNTRY PLANNING ACTS 1990 (AS AMENDED)**
**LAND TO THE REAR OF 125/133 CAMDEN HIGH STREET, FACING ARLINGTON ROAD, LONDON NW1 7JR**

I refer to your correspondence to our clients dated 20 May 2005 in respect of additional information required to complete the planning application.

rec'd 10/6.

1 Please find enclosed an acoustic survey and report outlining the impact of the existing supermarket and office plant facilities on the proposed residential units.

As you will note the results of the survey compare satisfactorily with the recommended internal noise levels for residential rooms.

I would also draw to your attention that there is limited fenestration to this frontage and that this generally serves kitchens and circulation space.

I trust this information enables the application to be registered and processed.

Yours sincerely

**DAVID A COLLINS**

Enc

cc B Kitcherside Chart Plan
K Wylde ESA

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Lee Cunningham Partnership

# Acoustic Consultancy Report

*Plant noise impact assessment*

**Report Prepared For**

**ESA limited**

**Arlington Road**

**Date**

7th June 2005

**Report Reference**

52296/E1a1CR

**Prepared By**

**Lee Cunningham Partnership**

| | | |
|---|---|---|
| **Author** | M J Croft | ---------- |
| **Checked** | P Cockram BSc. AMIOA | ---------- |

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## 1.0 Introduction

The London Borough of Camden has requested an environmental survey be conducted to assess the impact of existing plant noise on a proposed new residential development on Arlington Road, Camden. Lee Cunningham Partnership has been commissioned to carry out a survey and advise on the impact of plant noise on the residential dwellings.

The assessment of the survey data will take into consideration the guidance, principles and recommendations contained in the following documents:

- **BS 4142:1997** "Method for rating industrial noise affecting mixed industrial and residential areas"
- **BS 8233:1999** "Sound insulation and noise reduction for buildings"

## 2.0 Site Description

The site for the proposed development is currently a car park. Somerfield Supermarket bounds the northern side of the car park. This façade incorporates a plant room. On the east side of the car park is a listed tram shed which is used an office. On the western boundary there is a modern office building. Arlington Road bounds the site to the south, where a wall approximately 2m high runs for around half the length of the boundary. The other sections of the southern boundary are closed off with wire fencing and a electronic gateway. A layout drawing of the site is shown in Appendix A.

## 3.0 Survey

The survey has been carried out generally in accordance with the guidance set out in BS4142:1997.

### 3.1 Measuring Equipment

Sound pressure level measurements were obtained using the following instrumentation complying with the Type 1 specification of IEC 651(1979) Amend.1 and IEC 804(1985) Amend 2:

- Brüel & Kjær Type 2260 Sound Level Analyser
- Brüel & Kjær Type 4189 ½" microphone

Calibration checks were made prior to and after completion of measurements using a Brüel & Kjær Type 4231 calibrator complying with Class 1 of IEC 942 (1988), calibration level 94.0 dB, ± 0.3 dB, @ 1.0 kHz. All acoustic instrumentation carried current manufacturer's certificates of conformance.

### 3.2 Measurements

The noise monitoring commenced at approximately 00:00 hours and continued until approximately 03:00 hours on 03, June 2005.

The site plan contained in Appendix A identifies the measurement position MP1 which is at the location of the proposed north façade of the development. The measurement position was partially screened from Arlington Road by a wall approximately 2 metres in height. The weather conditions during the survey were calm and dry.

### 3.3 Noise sources

The dominant noise sources at the site were road traffic on Arlington Road, and mechanical plant. Traffic on Arlington Road was generally light at the beginning of the survey and became increasingly sporadic during the course of the survey.

Plant noise remained constant throughout the survey from an extract fan serving the tram shed to the east, and ventilation noise from the Somerfield plant room.

No information is available on the operation times of plant serving Somerfield supermarket or tram shed. It is assumed that the noise levels measured during the survey are representative of noise levels throughout the night.

## 4.0 Results

Typical noise levels measured through the course of the survey are as follows:

**Table 1:** Measured noise levels

| Measurement Position | $L_{A10}$ | $L_{A90}$ | $L_{Aeq}$ | $L_{Amax}$ |
|---|---|---|---|---|
| MP1 | 47 to 60 dB | 42 to 45 dB | 47 to 57 dB | 56 to 74 dB |

The measurement position was partially screened from Arlington road and hence traffic noise will have influenced $L_{Aeq}$ measurements. As plant noise was continuous in nature $L_{A90}$ measurements are taken to provide the best representation of plant noise levels and will be used to assess its impact on the residential development. Hence levels of 42 to 45 dBA are taken as applicable to the operation of the plant. $L_{A10}$ and $L_{Amax}$ measurements are taken to be representative of traffic noise at the site.

## 5.0 Assessment

Noise breaking into residential rooms will be dictated by the level of noise outside the façade and the sound insulation performance of elements making up the façade. Noise levels breaking into rooms should not exceed the recommended internal noise levels set out in BS8233: 1999.

### 5.1 BS 8233:1999: "Sound insulation and noise reduction for buildings – Code of practice"

BS 8233:1999 provides recommended indoor ambient noise levels in occupied spaces, these are as follows:

| Criterion | Typical situations | Design range $L_{Aeq,T}$ dB | |
|---|---|---|---|
| | | Good | Reasonable |
| Reasonable speech or telephone communications | Kitchen<br>Toilet | 50<br>45 | 55<br>55 |
| Reasonable resting/sleeping conditions | Living rooms<br>Bedrooms [a] | 30<br>30 | 40<br>35 |
| [a] For a reasonable standard in bedrooms at night, individual noise events (measured with F time-weighting) should not normally exceed 45 dB $L_{Amax}$ | | | |

### 5.2 Façade construction

It is assumed that the proposed building will have masonry walls and double glazed windows. The typical sound insulation performance of these is as follows:

- 110mm brick – $R_W$ 45 dB
- Double glazing consisting of 6mm glass, 12mm air gap and 6mm glass – $R_W$ 33 dB

Typically glazing will be the weakest element in terms of sound insulation. However it is necessary to consider that windows maybe partially open to provide ventilation. BS8233: 1999 indicates that a partially open window will reduce noise level by around 10 to 15 dB.

## 5.3 Plant noise break in

The north and west façades of the development will be subject to plant noise. As indicated in the survey section of this report levels of 42 to 45 dB are applicable to the operation of plant.

Predicted levels of plant noise breaking into the façades have been predicted with windows closed and open. The façade sound insulation performance is just based on that of the windows as these are the weakest elements in the façade.

**Table 2:** Break in noise to residential rooms

| Façade element | Plant noise level | Attenuation | Resultant internal noise level | Recommended internal level for bedrooms at night |
|---|---|---|---|---|
| Closed windows | 45 dB | -33 | 12 dB | 35 dB |
| Open windows | 45 dB | -10 | 35 dB | 35 dB |

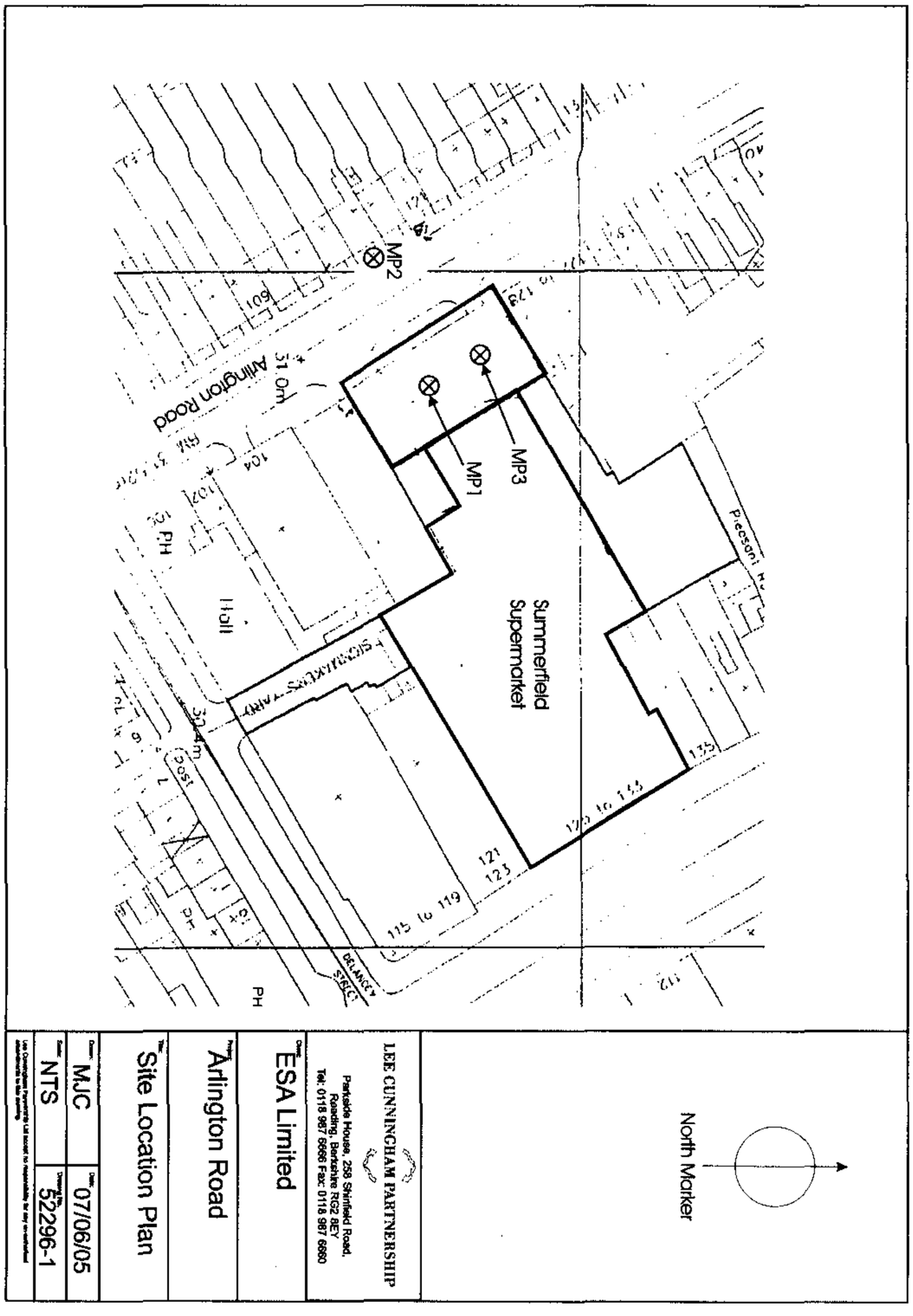
The results summarised in table 2 indicate that plant noise breaking into residential will meet with the recommendations of BS8233: 1999.

## 6.0 Conclusions

An Environmental noise surveys have been undertaken to determine the noise levels resulting from plant at a site on Arlington Road, Camden. A residential development is proposed for the site, plant noise will impinge on it façade. Calculations have been made to determine the level of plant noise breaking in through facades of the development into residential rooms. The results of these have then been compared to the recommended internal noise levels for residential room as set out in BS8233: 1999.

Calculations indicate that with levels of noise breaking into residential rooms at night with windows open and closed with be 12 and 35 dB respectively. These levels meet with the recommendations of BS8233: 1999.

# Appendix A Site Plan



# Appendix B Measurement Data

# Glossary of Terms

Decibel (dB) : A unit of level derived from the logarithm of the ratio between the value of a quantity and a reference value. It is used to describe the level of many different quantities. For sound pressure level the reference quantity is 20μPa, for sound power level the reference is $10^{-12}$ Watts. The threshold of normal hearing is approximately 0 dB and the threshold of pain is in the region of 130 dB.

dB(A) : This is a decibel unit to which an "A" weighting has been applied. The "A" weighting has been derived (from empirical subjective research) to represent the reduced response of the human ear at low frequencies over the audible range.

$L_{10}$ : This statistical value is the noise level in dB that is exceeded for ten percent of the measurement period. (Commonly used to assess road traffic noise)
$L_{90}$ : This statistical value is the noise level in dB that is exceeded for ninety percent of the measurement period. (Commonly used to describe the background noise level).
$L_{eq}$ : Defined as the equivalent continuous noise level. The $L_{eq}$ is the mean average sound energy taken over the sample period and equates the real time fluctuating noise climate over the measurement period to a steady continuous noise level. (Commonly used to describe the ambient noise level).

$L_{max}$ : The maximum sound pressure level for a single event as recorded on the "fast" sound level meter response (unless otherwise stated). The $L_{max}$ is used to assess occasional loud impulsive noises.

Rating Level : The noise level of an industrial noise source which includes an adjustment for the character of noise. Used in BS4142:1997.

# LEE CUNNINGHAM PARTNERSHIP

**Client:** ESA LTD
**Project:** Arlington Road

**File:** 52296
**Date:** 06-Jun-2005

## Environmental Noise Level Measurements

**Survey date:** 03-Jun-2005 from 00:09 to 03:00



| Run 001-01 | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k | A | Position: | position 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $L_{eq}$ | 66 | 60 | 51 | 47 | 47 | 44 | 36 | 28 | **52** | Start Time: | 00:09:30 |
| $L_{10}$ | 68 | 62 | 54 | 50 | 50 | 46 | 37 | 26 | **55** | End Time: | 00:14:30 |
| $L_{90}$ | 59 | 52 | 45 | 41 | 40 | 33 | 23 | 14 | **45** | Comments: | |
| $L_{max}$ | 83 | 77 | 67 | 60 | 65 | 61 | 54 | 49 | **67** | | |

| Run 002-01 | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k | A | Position: | position 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $L_{eq}$ | 64 | 60 | 52 | 49 | 48 | 44 | 37 | 30 | **53** | Start Time: | 00:14:30 |
| $L_{10}$ | 68 | 61 | 55 | 52 | 52 | 46 | 38 | 27 | **56** | End Time: | 00:19:30 |
| $L_{90}$ | 58 | 52 | 45 | 42 | 40 | 35 | 25 | 15 | **45** | Comments: | |
| $L_{max}$ | 77 | 75 | 68 | 63 | 62 | 60 | 55 | 50 | **67** | | |

| Run 003-01 | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k | A | Position: | position 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $L_{eq}$ | 69 | 61 | 56 | 53 | 53 | 49 | 43 | 38 | **57** | Start Time: | 00:20:58 |
| $L_{10}$ | 73 | 66 | 59 | 57 | 56 | 51 | 44 | 35 | **60** | End Time: | 00:25:58 |
| $L_{90}$ | 58 | 49 | 44 | 41 | 40 | 36 | 26 | 15 | **45** | Comments: | |
| $L_{max}$ | 84 | 75 | 74 | 70 | 69 | 67 | 65 | 64 | **74** | | |

| Run 004-01 | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k | A | Position: | position 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $L_{eq}$ | 66 | 64 | 53 | 48 | 46 | 43 | 36 | 30 | **53** | Start Time: | 00:26:55 |
| $L_{10}$ | 66 | 60 | 54 | 51 | 50 | 48 | 40 | 32 | **56** | End Time: | 00:31:55 |
| $L_{90}$ | 57 | 50 | 43 | 41 | 39 | 32 | 21 | 12 | **44** | Comments: | |
| $L_{max}$ | 84 | 84 | 70 | 63 | 58 | 59 | 53 | 48 | **70** | | |

| Run 011-01 | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k | A | Position: | position 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $L_{eq}$ | 61 | 56 | 47 | 44 | 44 | 38 | 29 | 19 | **48** | Start Time: | 01:00:12 |
| $L_{10}$ | 63 | 56 | 50 | 47 | 46 | 41 | 32 | 22 | **50** | End Time: | 01:05:12 |
| $L_{90}$ | 56 | 51 | 43 | 40 | 39 | 32 | 22 | 13 | **44** | Comments: | |
| $L_{max}$ | 72 | 77 | 62 | 54 | 57 | 53 | 46 | 37 | **63** | | |

| Run 012-01 | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k | A | Position: | position 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $L_{eq}$ | 65 | 56 | 50 | 48 | 47 | 43 | 35 | 27 | **51** | Start Time: | 01:05:12 |
| $L_{10}$ | 68 | 58 | 54 | 52 | 51 | 47 | 38 | 30 | **55** | End Time: | 01:10:12 |
| $L_{90}$ | 58 | 52 | 44 | 41 | 40 | 33 | 23 | 13 | **45** | Comments: | |
| $L_{max}$ | 79 | 74 | 63 | 60 | 58 | 56 | 51 | 46 | **62** | | |

| Run 013-01 | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k | A | Position: | position 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $L_{eq}$ | 61 | 54 | 47 | 45 | 45 | 39 | 30 | 18 | **49** | Start Time: | 01:10:12 |
| $L_{10}$ | 64 | 56 | 50 | 48 | 48 | 43 | 33 | 20 | **52** | End Time: | 01:15:12 |
| $L_{90}$ | 57 | 50 | 43 | 40 | 38 | 32 | 21 | 12 | **43** | Comments: | |
| $L_{max}$ | 72 | 66 | 62 | 62 | 62 | 56 | 50 | 39 | **64** | | |

| Run 014-01 | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k | A | Position: | position 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $L_{eq}$ | 63 | 57 | 47 | 44 | 43 | 38 | 29 | 17 | **48** | Start Time: | 01:15:12 |
| $L_{10}$ | 66 | 58 | 49 | 47 | 46 | 41 | 32 | 20 | **51** | End Time: | 01:20:12 |
| $L_{90}$ | 57 | 50 | 43 | 40 | 39 | 32 | 22 | 12 | **44** | Comments: | |
| $L_{max}$ | 79 | 73 | 60 | 61 | 54 | 50 | 44 | 33 | **60** | | |

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# LEE CUNNINGHAM PARTNERSHIP

**Client:** ESA LTD
**Project:** Arlington Road

**File:** 52296
**Date:** 06-Jun-2005

## Environmental Noise Level Measurements

**Survey date:** 03-Jun-2005 from 00:09 to 03:00



| Run 015-01 | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k | A | Position: | position 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $L_{eq}$ | 62 | 55 | 48 | 45 | 45 | 39 | 32 | 24 | **49** | Start Time: | 01:20:12 |
| $L_{10}$ | 65 | 57 | 52 | 49 | 48 | 43 | 34 | 23 | **53** | End Time: | 01:25:12 |
| $L_{90}$ | 57 | 51 | 44 | 40 | 39 | 33 | 22 | 13 | **44** | Comments: | |
| $L_{max}$ | 78 | 69 | 60 | 57 | 58 | 53 | 51 | 49 | **60** | | |

| Run 016-01 | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k | A | Position: | position 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $L_{eq}$ | 61 | 54 | 46 | 44 | 43 | 37 | 29 | 22 | **47** | Start Time: | 01:25:12 |
| $L_{10}$ | 63 | 56 | 48 | 46 | 46 | 40 | 32 | 24 | **50** | End Time: | 01:30:12 |
| $L_{90}$ | 56 | 50 | 43 | 40 | 39 | 32 | 22 | 13 | **43** | Comments: | |
| $L_{max}$ | 75 | 71 | 62 | 56 | 56 | 54 | 49 | 43 | **61** | | |

| Run 022-01 | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k | A | Position: | position 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $L_{eq}$ | 60 | 57 | 50 | 50 | 50 | 45 | 37 | 28 | **53** | Start Time: | 01:59:17 |
| $L_{10}$ | 64 | 59 | 52 | 51 | 51 | 47 | 38 | 27 | **56** | End Time: | 02:04:17 |
| $L_{90}$ | 55 | 50 | 43 | 42 | 38 | 33 | 23 | 14 | **44** | Comments: | |
| $L_{max}$ | 75 | 74 | 67 | 70 | 70 | 64 | 57 | 51 | **71** | | |

| Run 023-01 | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k | A | Position: | position 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $L_{eq}$ | 60 | 53 | 47 | 47 | 44 | 38 | 29 | 21 | **48** | Start Time: | 02:04:17 |
| $L_{10}$ | 63 | 56 | 49 | 48 | 47 | 41 | 31 | 19 | **51** | End Time: | 02:09:17 |
| $L_{90}$ | 55 | 48 | 42 | 41 | 37 | 31 | 20 | 12 | **42** | Comments: | |
| $L_{max}$ | 74 | 68 | 61 | 66 | 57 | 52 | 45 | 42 | **65** | | |

| Run 024-01 | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k | A | Position: | position 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $L_{eq}$ | 67 | 58 | 51 | 49 | 47 | 43 | 37 | 28 | **52** | Start Time: | 01:09:17 |
| $L_{10}$ | 70 | 61 | 54 | 52 | 51 | 47 | 40 | 30 | **56** | End Time: | 02:14:17 |
| $L_{90}$ | 56 | 50 | 43 | 41 | 38 | 32 | 22 | 13 | **43** | Comments: | |
| $L_{max}$ | 83 | 76 | 67 | 65 | 62 | 59 | 54 | 48 | **66** | | |

| Run 025-01 | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k | A | Position: | position 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $L_{eq}$ | 61 | 57 | 46 | 43 | 41 | 37 | 26 | 16 | **47** | Start Time: | 02:14:17 |
| $L_{10}$ | 63 | 56 | 48 | 44 | 43 | 39 | 29 | 19 | **49** | End Time: | 02:19:17 |
| $L_{90}$ | 55 | 49 | 42 | 41 | 37 | 31 | 20 | 12 | **43** | Comments: | |
| $L_{max}$ | 77 | 77 | 60 | 52 | 54 | 54 | 43 | 34 | **62** | | |

| Run 026-01 | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k | A | Position: | position 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $L_{eq}$ | 63 | 57 | 50 | 48 | 46 | 43 | 35 | 27 | **51** | Start Time: | 02:19:17 |
| $L_{10}$ | 65 | 58 | 52 | 49 | 47 | 43 | 35 | 26 | **53** | End Time: | 02:24:17 |
| $L_{90}$ | 55 | 49 | 42 | 41 | 36 | 31 | 21 | 13 | **42** | Comments: | |
| $L_{max}$ | 82 | 77 | 69 | 65 | 65 | 62 | 54 | 47 | **69** | | |

| Run 027-01 | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k | A | Position: | position 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $L_{eq}$ | 59 | 52 | 45 | 43 | 40 | 35 | 26 | 16 | **45** | Start Time: | 02:24:17 |
| $L_{10}$ | 61 | 54 | 47 | 45 | 42 | 38 | 29 | 19 | **47** | End Time: | 02:29:17 |
| $L_{90}$ | 55 | 49 | 42 | 41 | 36 | 31 | 20 | 12 | **43** | Comments: | |
| $L_{max}$ | 69 | 61 | 59 | 52 | 52 | 48 | 42 | 28 | **56** | | |

# LEE CUNNINGHAM PARTNERSHIP

**Client:** ESA LTD
**Project:** Arlington Road

**File:** 52296
**Date:** 06-Jun-2005

## Environmental Noise Level Measurements

**Survey date:** 03-Jun-2005 from 00:09 to 03:00



**For information**

| | |
|---|---|
| Sound level meter | Bruel & Kjaer type 2260 serial number 2217577 compliant with Type 1 specification of IEC 651 (1979) amendment 1 & IEC 804 (1985) amendment 2. |
| Microphone: | Bruel & Kjaer 4189 serial number 21744779. |
| Calibrator: | Bruel & Kjaer 4231 compliant with Class 1 of IEC 942 (1988). |
| Calibration Level: | Level of 93.9 dB +/-0.3dB at 1kHz Sensitivity: -25.3 dB |
| Calibration Time: | 03-Jun-2005 at 00:00 |

**Notes:**

a) The manufacturers calibration and validation certificates are current and are available on request.

b) 63 to 8k are octave band centre frequencies in Hz.

c) All measurements are sound pressure levels in dB (reference $2 \times 10^{-5}$ Pa).

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# schedule of areas

| | | | | | |
|---|---|---|---|---|---|
| project | Arlington Road 04124 | date | 09 May 2005 | schedule no. | 002 Area Schedule |
| client | Picasso Investments (Camden) Ltd | prepared by | TK | authorised by | KW |

Existing/proposed building areas based on drawing numbers:

04124_P_0_A, 04124_P_1_A, 04124_P_2_A, 04124_P_3_A

| Floor | | Internal Gross ($m^2$/$ft^2$) | |
|---|---|---|---|
| **Ground Floor** | | | |
| Flat A | 1 Bedroom Flat | 50.0sqm / 538sqft | |
| Flat B | 1 Bedroom Flat | 54.5sqm / 586sqft | |
| **First Floor** | | | |
| Flat A | 1 Bedroom Flat | 55.0sqm / 592sqft | |
| Flat B | 1 Studio Flat | 37.2sqm / 401sqft | |
| Flat C | 1Bedroom Flat | 54.5sqm / 590sqft | |
| **Second Floor** | | | |
| Flat A | 1 Bedroom Flat | 55.0sqm / 592sqft | |
| Flat B | 1 Studio Flat | 37.2sqm / 401sqft | |
| Flat C | 1 Bedroom Flat | 61.3sqm / 660sqft | |
| **Third Floor** | | | |
| Flat A | 1 Bedroom Flat | 47.9sqm / 515sqft | |
| Flat B | 2 Bedroom Flat | 81.7sqm / 880sqft | |
| **Total** | 10 Flats | 534.3sqm / 575sqft | |
| **Cycle spaces** | 6 | | |

| Notes | |
|---|---|
| 1 | Areas subject to Quantity Surveyor's confirmation. |
| 2 | These areas are measured at 1500 mm above finished floor level to face to finish. |
| 3 | These areas are approximate, calculated from scaled drawings. |

esa

# design statement

## ARLINGTON ROAD.
## PICASSO INVESTMENTS (CAMDEN) LTD

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Appendix 1 Site Analysis

Appendix 2 Photographs of site and surroundings

## 1.0 INTRODUCTION AND TERMS OF REFERENCE

1.1 ESA Architects and Urban Designers have been instructed by Picasso Investments (Camden) Ltd to prepare architectural designs for the application site, currently occupied by surface car parking, hard standing and service bay facilities to the retail unit fronting Camden High Street.

1.2 The clients design brief is for a high quality urban residential scheme.

1.3 The development will provide modern and highly accessible residential units of a size and mix suitable to this location. The scheme provides an appropriate urban response to this key site within the conservation area and will enhance both the site and surroundings, with particular reference to the neighbouring listed buildings.

1.4 This design statement should be considered in conjunction with all other material comprising the planning application, with particular regard to the access statement, submission drawings, schedules and illustrative material.

1.5 This statement describes the rational behind the design, its detailed development and why it is considered entirely appropriate for this key town centre site.

## 2.0 BACKGROUND TO THE APPLICATION

2.1 The scheme proposals have been developed and refined through pre application meetings and consultation with Officers.

2.2 Discussions have covered:-

- The poor visual quality of the existing site.
- The poor environmental quality associated with the servicing and plant facilities (reference made to complaints from neighbours).
- The suitability of residential use and the desire for a mix of flat sizes.
- Density.
- Urban design, with particular reference to the streetscape and relationship to the adjoining Grade II listed building.

2.3 It is considered the submission proposals follow the guidance given and make a positive contribution to the appearance, environment and vitality of the street.

## 3.0 SCHEME PROPOSALS

### 3.1 Proposed Urban Design Strategy

3.1.1 The proposals represent an opportunity to replace the existing surface car parking and screen the unsightly back of house retail service yard, stock and plant facilities; infilling and repairing the fabric of the streetscape where the quality of the buildings and external areas are of poor quality detracting from the conservation area and the setting of the listed buildings, both adjoining and opposite.

3.1.2 Our design approach comprises:-

- Analysis and appraisal of the site and its context (see appendix 1 and 2).
- Incorporation of survey information.
- Incorporation of advice from specialist consultants in respect of accessibility and highways.
- Incorporation of input from Officers.
- Incorporation of our client's objectives and brief to provide a high quality and attractive development with accommodation to meet market requirements ensuring a viable and successful future for the site.

### 3.2 Uses

3.2.1 The scheme comprises a high density urban residential development with a mix of studio, one bedroom and two bedroom flats.

In accordance with the accessibility study car parking has not been provided, however secure facilities for residents cycle parking are provided.

## 3.3 Layout

3.3.1 The layout of the scheme has evolved through analysis of site and adjoining context, resulting in a form which continues the adjoining terrace with residential accommodation addressing the street frontage, whilst maintaining the existing retail service facilities and access to surface car parking.

At ground floor level the cycles and refuse store are positioned to act as a buffer between the flats and retail service bay.

The plan form is articulated at both ground and upper floors to address massing/urban design issues, provides limited private amenity areas and a buffer strip to the back edge of pavement.

## 3.4 Design and Massing

3.4.1 Integral with the uses and layout, the massing of the scheme and its external envelope respond to both the context of the site and Officers views/observations with regard to the setting of the adjoining listed building.

Architectural diagram is both dramatic and rational, comprising four key and interrelated elements:-

1 The set back ground floor 'plinth' which aligns with the adjoining tram shed, provides separation between ground floor residential units and back edge of pavement, creates interest at street level and the opportunity to introduce a landscape element to the street. The banding and materiality of the building at this level replicates that of the terrace opposite.

2 The main body of the development (the first and second floors) follow the building line of, and is flush with, the adjoining terrace, respecting and reinforcing the existing building line and parapet height. The façade is expressed as an applied element as it is with its neighbours, most notably the listed tramshed. The rhythm

3 The third floor, set back from the building line, and is a modern interpretation of the gables of its neighbours. It peels back from the façade in plan and projects slightly above the service access to the south. There is a clear and distinct visual break between the listed building and the new proposal, in accordance with the recommendations of the design officer. The form of this element is such that it ensures the building relates to both adjoining properties, achieves an appropriate visual scale in the streetscape and addresses the restrictions imposed by the service access.

4 The three horizontal elements above are linked and sub divided by the recessed entrance and circulation bay, the scale of which again relates to the massing of its neighbours. This device, together with the vertical aspect to the fenestration, maintains a scale and rhythm appropriate to the streetscape.

## 3.5 Materials

3.5.1 The selection of materials to both the overall scheme and individual elements within the building enclosure respects and enhances those of existing properties within the streetscape, being directly derived from them. Whilst responding to the constraints of the context and surroundings, the integration and contemporary interpretation of the materials within the design avoids 'pastiche', maintaining a clear and modern approach.

## 4.0 SUMMARY AND CONCLUSION

4.1 In summary the development will provide modern, high quality and centrally located residential units regenerating this site; enhancing the streetscape of the conservation area and setting of adjoining listed building. The computer generated views demonstrate clearly the contribution of the form, scale, materials and massing to Arlington Road and the adjoining tram shed, in particular:-

- The relationship between key parapet and roof heights with the neighbouring buildings.

- The enclosure and screening of the unsightly properties behind, repairing the streetscape.

- The care and consideration given to enhancing the setting of the listed tram shed.

The scheme uses, layout, design and materials will substantially enhance Arlington Road and the conservation area.

## APPENDIX 1 – SITE ANALYSIS

This site analysis should be read in conjunction with the attached plan and site photographs.

### Site Location and Context

The site forms the rear surface car parking and service yard to a mixed used retail and office development fronting the High Street.

The site is located in the Camden Town Conservation Area, which contains a mix of building types and uses, including a substantial number of Grade II listed buildings.

The following section provides an appraisal of the site and its immediate context.

### Site

The site frontage to Arlington Road comprises the unsightly open surface car parking and service yard bay to the retail accommodation. This is contained within a substantial brick boundary wall with two service access positions. Only the southern of these is in use.

To the rear of the car parking area is the loading bay, rear façade and roof plant enclosure of the retail property. The materials, design and overall appearance distract from the streetscape and its is understood from Officers that neighbours have expressed concern with regard to nuisance from the plant and service yard.

Overall the site represents an unsightly gap in the streetscape detracting from the setting and conservation area.

Arlington Road

The residential properties on the opposite side of Arlington Road form a substantial terrace of Grade II listed buildings creating a strong and cohesive streetscape.

The neighbouring properties to the site vary substantially. To the north of the site is a purpose built office building of three storeys in height (four domestic storeys). Whilst substantially greater in plot width than the adjoining residential properties and of questionable design merit the building responds in scale, form and massing to the general streetscape, however the blank flank wall adjoining the site and the properties to the rear are unsightly and detract from the setting. Further to the north are traditional brick terraced properties of three/four storeys in height with their individual plot widths articulated by two storey projecting bays.

The Grade II listed tram shed to the south comprises two principle elements.

- A single storey ancillary shed adjoining the site with a strong gable and roof profile. The façade is primarily brickwork with stone copings and incorporates a single opening to the street frontage.

- The main building is substantially larger in scale, responding to the mass and bulk of its neighbours; however the design, profile and scale of the limited openings to the frontage contrast with neighbouring properties and give this building a strong and individual identity.

As with the lower element the roofscape of the building and roof lights are clearly visible from the north, provide interest and variety to the skyline and relief to the streetscape.

To the south of the tram shed the three storey terraced traditional properties continue, re-establishing the general form, materials and height of the general streetscape.

## Summary

In summary the site detracts from the streetscape within the conservation area and the setting of listed buildings.

MILESTONE
TRANSPORT PLANNING

# PROPOSED RESIDENTIAL DEVELOPMENT, ARLINGTON ROAD, CAMDEN

**Accessibility Study prepared on behalf of Cube**

**April 2005**

**05/022**

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## PLANS


022/01 Site Location
022/02 Site Accessibility Plan
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# 1 INTRODUCTION & SCOPE OF ASSESSMENT

1.1 This brief study has been prepared on behalf of Cube to consider the accessibility of the proposed residential development on land at Arlington Road, Camden, NW1.

1.2 The proposed development will comprise the construction of 6 no. residential dwellings on land that currently forms an area of private car parking, servicing and access to the rear of an existing Somerfield store that fronts onto Camden High Street.

1.3 As part of the development scheme, it is proposed to retain the existing access to the car parking / servicing areas associated with the Somerfield store albeit the total number of car parking spaces would be reduced as a consequence of the proposed new building to serve the residential development.

1.4 The existing servicing arrangements for the Somerfield store and constrained to the extent that delivery vehicles are required to reverse into the site, up to the dock loader, from Arlington Road. The existing servicing arrangements would remain once the rear of the site is developed for residential purposes.

1.5 There are no operational car parking spaces associated with the proposed residential development.

1.6 Specifically, this study will consider the following:

- The accessibility of the site in terms of proximity to public transport and key local amenities by foot and cycle;
- Public transport, pedestrian and cycle infrastructure in the vicinity of the site and any measures proposed by the Local Authority and other transport providers to enhance existing infrastructure;
- The range of journey destinations within easy reach of the site by non-car modes of transport;
- The predicted modal split of person trips generated by the development proposals;

- The streetscape in the vicinity of the site and the extent of parking provision and controls in operation, including an appraisal of transport strategies and highway improvements to be implemented by the Highway Authority and other transport operators that are of direct relevance to the development proposals; and

- Site access and servicing arrangements.

1.7 The study will demonstrate that the development proposals accord with Planning Policy Guidance as contained within the Mayor's London Plan and the London Borough of Camden Unitary Development Plan (UDP) in that it is highly accessible by a choice of means of travel.

## 2 POLICY IMPLICATIONS OF PROPOSED DEVELOPMENT

2.1 Within this study, the transport aspects of policy are considered and include PPG3 Housing and PPG13 Transport at national level, the Mayor's (draft?) Local Plan at regional level and the London Borough of Camden UDP at local level.

2.2 The key aim of planning guidance at national, regional and local level is to integrate traffic and transport with land use planning such that it is sustainable. The two key tests that are common to the current guidance in respect of assessing a development in light of these policies can be summarised as follows:

i. Reducing the growth in the length and number of motorised journeys; and

ii. Encouraging alternative means of travel other than the thereby reducing the reliance on the private car.

### National Policy: PPG3 Housing & PPG13 Transport

2.3 In considering housing, PPG13 published in March 2001 draws out the implications related to transport from the previously published PPG3 Housing dated March 2000. PPG13 is primarily aimed at promoting better integration between planning and transport and reducing the need to travel, especially by car.

2.4 Both PPG3 and PPG13 advocate that housing development should be able to "exploit and deliver accessibility by public transport to jobs, education and health facilities, shopping, leisure and local services".

2.5 In addition the guidance in PPG3 and PPG13 places a requirement on Local Authorities to apply a sequential approach to identifying potential housing sites. Paragraph 14 and 41 of PPG13 indicate that this sequential approach should begin with "the re-use of previously developed land, then urban extensions". This is clearly applicable to the proposed development.

2.6 PPG3 Housing dated March 2000 provides advice on planning to meet the housing needs of the whole community. It suggests that at local level, authorities should encourage housing development in locations with good access to public transport.

2.7 Within paragraph 47 of PPG3, it states that housing developments should be located "around major nodes along good quality public transport corridors and seek to ensure that all housing developments are accessible by a range of non-car modes."

**LB Camden Unitary Development Plan (UDP) & Local Implementation Plan (LIP)**

2.8 The Consultation Draft LIP sets out the context of traffic and transport in Camden, the broad objectives and individual programmes and schemes for the period of investment between 2005/06 and 2010/11.

2.9 Within the LIP, the overarching Transport policies as contained within the UDP are summarised as being:

- To seek to reduce the need to travel, manage and reduce the amount of traffic on LB Camden roads, and encourage forms of travel that cause minimal environmental harm;
- Improve road safety and the quality and safety of routes and facilities for pedestrians and cyclists; and
- To seek to secure access for people with disabilities and ensure an integrated, safe and accessible public transport system.

2.10 The LIP also refers to the Borough's support for car free residential development in areas of good public transport access.

**The London Plan**

2.11 The London Plan was published by the Mayor's office in February 2004 and includes a number of Thematic Policies against which future growth within the capital will be assessed.

2.12 In relation to 'Living in London', the London Plan states that future residential development needs to be located so as to maximise the use of scarce land, to conserve energy and to be within easy access of jobs, schools, shops and public transport.

2.13 In relation to 'Connecting London', the London Plan states that good public transport, the promotion of means of travel such as walking, cycling and the use of buses, and a reduction in dependence on the private car are all necessary conditions for sustainable development.

## 3 THE PROPOSED DEVELOPMENT & ITS SURROUNDINGS

3.1 The development site is located on Arlington Road between Parkway and Delancey Street, immediately west of Camden Town. Its location in relation to the surrounding area is indicated on plan 022/01.

3.2 With reference to the LB Camden Road Hierarchy as set out within the LIP, Camden High Street (to the east of the development site) is classified as a London Distributor Road. Delancey Street and Parkway (to the north and south of the development site) are classified as Borough Distributor Roads.

3.3 The development site has direct access frontage onto Arlington Road, including the provision of two dropped kerb vehicular accesses at the north-western and south-western corners of the site respectively.

3.4 At present, only the existing vehicular accesses to the south-west of the site is in use and it primarily serves as a delivery access for a Somerfield store that fronts onto Camden High Street. The access also serves private car parking for staff associated with the Somerfield store. A sliding automatic gate is provided on access to the site to restrict access to permitted users.

3.5 Arlington Road is a single carriageway two-lane of approximately xx metres in width. Footways of some xx metres are provided on both sides of the carriageway along its entire length between Parkway and Delancey Street.

3.6 The section of Arlington Road past the development site is subject to a 30mph speed limit, however south of Delancey Street, Arlington Road forms part of an area wide 20mph zone. Street lighting is provided on both sides of the carriageway.

3.7 Arlington Road is a mixture of residential and commercial frontage uses, the latter generally provided on the eastern side of the carriageway with premises backing onto those with frontage onto Camden High Street.

3.8 On-street parking bays that include both resident permit only spaces and metered public parking spaces are provided on both sides of Arlington Road between Parkway and Delancey Street.

3.9 Parking controls are enforced on the resident permit only parking bays between 8.30am – 6.30pm, Monday to Friday and 9.30am – 5.30pm, Saturdays and Sundays. The 'pay and display' metered parking bays are also subject to the same enforcement hours as the permit spaces, with the exception that there are no restrictions on Sundays.

3.10 Between Delancey Street and Parkway there are a total of 12 on-street resident permit only parking spaces on the western side of Arlington Road, six of which are located between the development site and the junction with Delancey Street and six are located between the site and Underhill Street.

3.11 In addition there are some 22 metered on-street public parking spaces on Arlington Road between Delancey Street and Parkway of which four are located between the development site and Underhill Street on the eastern side of the carriageway and the remaining eighteen spaces are provided on both side of Arlington Road between Underhill Street and Parkway.

3.12 Arlington Road incorporates a number of traffic calming features along its length between Delancey Street and Parkway including carriageway narrowings at regular intervals incorporating raised tables and pedestrian crossing facilities. In addition a central refuge island is provided in the centre of the carriageway at the junction of Arlington Road with Delancey Street.

3.13 On Arlington Road to the north of the existing site access, a dedicated parking bay is provided on-street for motorcyclists that have capacity for some 8-9 vehicles. Immediately south of the site access, five pedal cycle hoops are provided within the footway on Arlington Road.

3.14 Delancey Street extends east from Camden High Street to the south of the development site and is a two-lane single carriageway road that operates in a westbound only direction. As a consequence, there are 'no left turn' restrictions at the junction of Arlington Road and Delancey Street.

3.15 Delancey Street is primarily residential in nature, particularly to the west of the junction with Arlington Road. There is a mixture of commercial and retail frontage on Delancey Street, east of Arlington Road towards Camden High Street.

3.16 Delancey Street is provided with footways on both sides of the carriageway and is subject to a 30mph speed limit. Resident-only permit parking bays are provided on the northern side of the carriageway as Delancey Street heads westwards from its junction with Arlington Road.

3.17 Similarly Parkway is also a two-lane single carriageway road that operates in an eastbound direction only towards Camden High Street and includes 'no left turn' restrictions at the junction with Arlington Road.

3.18 Parkway is provided with wide footways on both sides of the carriageway and has a mixture of residential, commercial and retail uses with direct frontage access. Parkway is subject to a 30mph speed limit and is provided with on-street metered public parking bays.

## 4 ACCESS TO THE DEVELOPMENT SITE BY MODE OF TRAVEL

4.1 PPG13 at paragraph 19 states:-

> *"A key planning objective is to ensure that jobs, shopping, leisure facilities and services are accessible by public transport, walking and cycling..."*

4.2 PPG13 at paragraph 20 continues at the fourth bullet point to define in more detail what these day to day facilities are. They include primary schools, health centres, convenience shops, branch libraries and local offices of the local authority and other service providers. In addition local planning authorities are encouraged to provide leisure and entertainment facilities serving local catchments and make provision for attractive local play areas, public open space and other recreational facilities in locations likely to be accessible without the use of a car.

4.3 The Housing Corporation and the European Institute for Urban Affairs published in 2001 a report entitled "A toolkit of Sustainability Indicators (Edition 2)" which is used by the staff of Registered Social Landlords, Local Authorities and the Housing Corporation when considering in particular the development, re-investment or refurbishment of social housing.

4.4 This 'Toolkit' includes a detailed set of criteria which are to be employed when considering the availability of local facilities within the immediate area of the proposed affordable housing units. Clearly the toolkit also provides a useful checklist for the accessibility of private housing development as well as social housing.

4.5 Within the Housing Corporation document, there is a list of facilities to be assessed, which include:

- a range of outlets supplying affordable groceries
- affordable child care places
- a primary school (within walking distance in urban areas)
- a secondary school
- play & leisure facilities for all ages (within walking distance in urban areas)
- a post office and banking facility
- a primary health care facility (either a community health clinic of some kind or a GP's surgery)
- a one-stop shop for advice

4.6 It should be noted that the Toolkit definition states that the facilities should be accessible within a 10 minute (800 metres) walk or a 30 minute bus or train ride.

4.7 Plan 022/02 attached sets the context of the development site in terms of access to the range of facilities listed based upon an 800 metre walk (10 minute) isochrone.

4.8 From Plan 022/02 it can be seen that there are a wide range of facilities that are accessible from the development site, as summarised below:

| | |
|---|---|
| 1- Camden High St Post Office (100 metres) | 11- St Michael's Primary School (400 metres) |
| 2- Camden Town Library (500 metres) | 12- Sth. Camden Comm. School (900 metres) |
| 3- Ampthill Sq. Medical Centre (600 metres) | 13- The Open University (50 metres) |
| 4- Crowndale Health Centre (500 metres) | 14- Mecca Social Club (200 metres) |
| 5- Plender St Surgery (450 metres) | 15- The Jewish Museum (200 metres) |
| 6- Parkway Dental Surgery (350 metres) | 16- Etcetera Theatre (400 metres) |
| 7- The Dental Practice (350 metres) | 17- Budgens Express (150 metres) |
| 8- Mornington Sports Centre (50 metres) | 18- Sainsbury's (450 metres) |
| 9- Fitness First (150 metres) | 19- Morrison's (500 metres) |
| 10- St Pancras Comm. Centre (500 metres) | 20- Marks & Spencer (50 metres) |

4.9 The following sections demonstrate that these facilities are also easily and safely accessible by a choice of means of transport.

**Walking and Cycling**

4.10 Walking and cycling are clearly important modes to be considered when encouraging greater use of sustainable transport, especially for short journeys.

4.11 As a guide to the extent of the likely walk-in catchment, the National Travel Survey for 1997/99 indicates that 80% of journeys of up to 1.0 mile (1600 metres) in length are made by foot. Paragraph 75 of PPG13 (March 2001) also states that:

*"Walking is the most important mode of travel at the local level and offers the greatest potential to replace short car trips, particularly under 2 kilometres."*

4.12 With regard to cycling, guidance published by SUSTRANS and the National Travel Survey all indicate that the bicycle is an attractive form of travel for journeys of up to 3-5 miles (5-8 kilometres). Paragraph 78 of PPG13 (March 2001) also indicates that:

*"Cycling also has the potential to substitute for short car trips, particularly those under 5km..."*

4.13 As stated within paragraph 4.6, the Housing Corporation "Toolkit" document considers that local facilities should be available within 800 metres or 10 minutes walk, the isochrone for which has been superimposed on Plan 022/02 attached.

4.14 In general footways are well provided for on both sides of the carriageway along all the majority of the highway links on the network surrounding the application site and are therefore conducive to the provision of safe access by foot to local facilities.

4.15 In addition there are a number of traffic-free routes within close proximity of the application site including a link through to Camden High Street via Underhill Street.

4.16 Where pedestrian routes conflict with more heavily trafficked routes specific dedicated pedestrian crossing facilities are generally provided including traffic signal controlled crossing facilities at regular intervals on Camden High Street.

4.17 In addition there are traffic signal controlled pedestrian crossing facilities at the junction of Arlington Road with Parkway as well as similar facilities on Delancey Street to the south of the site, east of the junction with Arlington Road.

4.18 There is limited provision for on of off-carriageway cycle lane facilities in the vicinity of the site at present. Arlington Road and Delancey Street are both designated as "quieter roads" recommended for cyclists within the London Cycling Campaign Guide.

4.19 In addition there are dedicated signed on-street cycle facilities on Pratt Street, College Street and St Pancras Way in the vicinity of the site and off-street cycle facilities along the Grand Union Canal (eastwards towards Caledonian Road) and between Oval Road and the Chalk Farm Supermarket in the vicinity of the site.

**Public Transport**

4.20 The development site is located within an area that is extremely well served by public transport, under future operating conditions. This includes an extensive bus network with connections across the Borough and neighbouring authorities, Central London and major transport interchanges within the capital.

4.21 In addition, the development site is well connected to the London Underground and rail networks that also provide connections with key onward destinations within the Borough, Central London and throughout the UK and abroad.

4.22 Plan 022/03 indicates the public transport connections from the proposed development.

4.23 The LB Camden LIP identifies a number of schemes that will further enhance public transport access within the Borough that will also have a direct benefit to the proposed development.

4.24 In relation to buses, the Borough is seeking to:

- Actively cooperate with the development and implementation of the London Bus Initiative (LBI) including new and innovative bus priority techniques;
- Establish a programme of investment in improvements to bus infrastructure including better passenger facilities at bus stops, bus boarders and improved security and customer information systems;
- Secure new and improved public transport interchanges; and
- Support increased coverage of the Borough by new or realigned bus routes and extension of night services.

4.25 In addition the Borough will support and participate in the development of the Cross River Tram (CRT); a strategic project being developed by Transport for London in conjunction with the Borough's affected.

4.26 CRT, when completed will provide direct linkages between Camden Town / Kings Cross (to the north of the River Thames) with Peckham / Brixton (to the south of the River Thames) via Euston and Waterloo stations and has the potential to be constructed around year 2011, subject to necessary approvals.

4.27 With regard to the rail network, the Borough in conjunction with TfL, London Rail and Silverlink Metro and to implement improvements to local rail stations within the current financial year to include:

- New platform & ticket hall "next train" information systems;
- Upgraded CCTV; and
- Improved platform and ticket hall lighting and redecoration.

4.28 The following paragraphs consider the existing public transport accessibility of the development site.

***Bus***

4.29 The local area surrounding the application site is well served by buses that serve a wide catchment area to the north and west as well as Central London. Bus stops on both Camden High Street (which is served by all local bus routes) and Delancey Street (which is served by two local bus routes) are within 400 metres walk distance (5 minutes walk time) of the development site.

4.30 Table 4.1 provides a summary of local bus routes in the vicinity of the development site.

4.31 In the consideration of a site's accessibility by public transport, including buses, there are a number of factors including frequency of service and convenience that can influence modal choice.

4.32 In terms of frequency it can be seen from Table 4.1 that there are a significant number of routes that serve a wide range of destinations providing a combined frequency of around 119 buses per hour in each direction during weekday peak periods, within easy walking distance of the development site.

4.33 During daytime hours, Monday to Saturday, there are between 95 and 99 buses per hour. Even during evening hours, the development site is well served within between 67 and 75 buses per hour in both directions and at night time there are between 18 and 22 buses per hour in both directions.

4.34 The proximity of bus stops to the application site dictates the level of convenience. Clearly the location of bus stops on Camden High Street and Delancey Street that are all within 400 metres walk distance of the site is a significant positive aspect of the proposed development.

| Route No. | Frequency (Average no. Buses per hour) | | | | | | | | | | Route |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Mon-Fri | | | Saturday | | | Sunday | | | |
| | Peak | Day | Eves | Night | Day | Eves | Night | Day | Eves | Night | |
| 24 | 16 | 12 | 8 | 4 | 12 | 8 | 4 | 8 | 8 | 4 | **Pimlico – South End** Green via Victoria, Westminster, West End & Hampstead Heath |
| 27 | 6 | 5 | 4 | 2 | 6 | 4 | 2 | 5 | 4 | 2 | **Chiswick – Chalk Farm** via Hammersmith, Kensington, Paddington, Baker St, Warren St |
| 29 | 12 | 8 | 5 | - | 6 | 6 | - | 5 | 5 | - | **Trafalgar Sq – Green Lanes** via Warren St, Holloway, Hornsey, Finsbury Pk, Harringay, Wood Green |
| 31 | 12 | 8 | 8 | - | 8 | 8 | - | 8 | 8 | - | **Camden – Notting Hill Gate** via Chalk Farm, Swiss Cottage, Kilburn, Maida Vale, Westbourne Pk |
| 46 | 7 | 7 | 4 | - | 6 | 4 | - | 5 | 4 | - | **Warwick Avenue – Holborn** via Swiss Cottage, Hampstead, Kentish Town, Kings Cross & St Pancras |
| 88 | 8 | 8 | 5 | 2 | 7 | 5 | 2 | 5 | 5 | 2 | **Camden – Clapham Common** via Warren St, Oxford Circus, Trafalgar Sq, Westminster Abbey, Vauxhall, Stockwell, Clapham North |
| 134 | 13 | 13 | 8 | 8 | 9 | 8 | 5 | 9 | 6 | 4 | **Tottenham Court Road – Tally Ho Corner** via Warren St, Kentish Town, Archway, Highgate, Muswell Hill |
| 168 | 7 | 6 | 5 | - | 8 | 6 | - | 5 | 5 | - | **South End Green – Old Kent Road** via Hampstead Heath, Chalk Farm, Euston, Russell Sq, Holborn, Aldwych, Waterloo, Elephant & Castle |
| 214 | 8 | 8 | 5 | 4 | 8 | 5 | 4 | 5 | 5 | 4 | **Highgate Village – Liverpool Street** via Parliament Hill Fields, Kentish Town, Kings Cross, Angel Islington, Old Street, Moorgate |
| 253 | 10 | 10 | 10 | - | 10 | 10 | - | 8 | 7 | - | **Euston – Hackney** via Holloway, Hornsey, Finsbury Park, Manor House, Stamford Hill, Clapton |
| 274 | 10 | 6 | 5 | 2 | 7 | 5 | 2 | 7 | 5 | 2 | **Angel Islington – Lancaster Gate** via Caledonian Road, Gloucester Place, Marble Arch |
| C2 | 10 | 8 | 6 | - | 8 | 6 | - | 6 | 5 | - | **Kentish Town – Oxford Circus** via Great Portland St |
| **TOTALS** | 119 | 99 | 73 | 22 | 95 | 75 | 19 | 76 | 67 | 18 | |

**Table 4.1: Summary of Local Bus Services**

***London Underground***

4.35 Camden Town LU station is some 280 metres walk distance (3½ minutes) from the development site.

4.36 Camden Town LU station is located on the Northern Line and provides direct services to London Euston, Kings Cross, London Bridge and Waterloo national railway stations, the West End and the City of London, Brixton and Morden to the south. In addition, Camden Town LU station provides direct services to Finchley Central, Mill Hill East, High Barnet, Hendon Central and Edgware to the north.

4.37 Camden Town LU station is served by a minimum of 12 trains per hour between 7am and midnight (Monday to Saturday) 8am – 11pm (Sunday) on both the Edgware and High Barnet / Mill Hill East branch lines to the north and on both the Kennington / Morden via the City and via the West End branch lines to the south.

4.38 Table 4.2 provides details of first and last trains from Camden Town station on the various branch lines and Table 4.3 provides average journey times to key destinations from Camden Town station.

| **Destination** | **First Train** | | | **Last Train** | | |
|---|---|---|---|---|---|---|
| | **Mon - Fri** | **Sat** | **Sun** | **Mon-Fri** | **Sat** | **Sun** |
| Edgware | 0602 | 0602 | 0742 | 0049 | 0049 | 2355 |
| High Barnet / Mill Hill East | 0554 | 0554 | 0742 | 0045 | 0045 | 2355 |
| Kennington / Morden via the City | 0545 | 0545 | 0719 | 0024 | 0024 | 2333 |
| Kennington / Morden via the West End | 0546 | 0546 | 0719 | 0023 | 0023 | 2333 |

**Table 4.2 First & Last Trains from Camden Town (LU Northern Line) Station**

| Destination | Connections | Journey Time from Camden Town (LU) Station |
|---|---|---|
| Hampstead | | 6 mins. |
| Brent Cross | | 13 mins. |
| Hendon | | 15 mins. |
| Central | | |
| Edgware | | 23 mins. |
| Finchley | | 15 mins. |
| Central | | |
| Mill Hill East | | 19 mins. |
| High Barnet | | 26 mins. |
| Euston | National Rail (Silverlink County & Metro services, Virgin West Coast main line to West Midlands, North Wales, North-west England & Scotland) | 3 mins. |
| Tottenham Court Road | Victoria Line<br>Central Line | 8 mins. |
| Leicester Square | Piccadilly Line (towards Earls Court, Heathrow Airport & Uxbridge) | 9 mins. |
| Charing Cross | National Rail (Southern and Connex services to South / South-East London, Kent and East Sussex) | 10 mins. |
| Embankment | Bakerloo Line | 11 mins. |
| | District & Circle Line | |
| Waterloo | National Rail (South-West Train services to South-West London, Surrey, Hampshire and South-West England) | 13 mins. |
| Kings Cross / St Pancras | International Services to Brussels and Paris<br>National Rail (WAGN services to Cambridge, Peterborough, Kings Lynn, GNER services to Leeds, Newcastle & Scotland, Thameslink services to St Albans, Luton (and Airport), Bedford, City Thameslink & Blackfriars) | 5 mins. |
| Bank | Metropolitan, Hammersmith & City, Circle, Piccadilly & Victoria Lines | |
| | Docklands Light Rail to Canary Wharf, Lewisham & Beckton | 14 mins. |
| London Bridge | National Rail (Southern and Connex services to South / South-East London, Kent and East Sussex, Thameslink services to East Croydon, Gatwick Airport & Brighton) | 16 mins. |
| Elephant & Castle | National Rail (Thameslink services to Sutton & Wimbledon, Connex services to South / South-East London) | 19 mins. |
| Stockwell | Victoria Line | 26 mins. |
| Balham | National Rail (Southern services to South London) | 34 mins. |
| Morden | | 45 mins. |

**Table 4.3 Connections from Camden Town (LU) Station**

***Rail***

4.39 The development site is within 680 metres walking distance of Camden Road railway station that is located on the North London Line and is served by trains in the direction of both North Woolwich and Richmond.

4.40 During daytime hours, Monday to Saturday, there are four trains per hour in each direction between Richmond and Stratford (Low Level) railway stations on the North London Line with two services per hour that extend from Stratford to North Woolwich. During peak hours there are additional trains between Camden Road and Stratford (Low Level).

4.41 During evening hours, Monday to Saturday, there are three trains per hour in each direction between Richmond and North Woolwich that reduces to a half-hourly frequency on Sundays.

4.42 The North London Line provides direct connections with other rail and underground services. A list of connections and average journey times from Camden Road station is provided in Table 4.4.

| Interchange | Connections | Journey Time from Camden Road (BR) Station |
|---|---|---|
| Gospel Oak | Silverlink Metro services to Barking via Harringay Green Lanes, Walthamstow Queens Road & Leytonstone High Road | 5 mins. |
| West Hampstead | Thameslink services to St Albans, Luton (inc. Airport), Bedford, City Thameslink, Blackfriars, Sutton, Wimbledon, East Croydon, Gatwick Airport & Brighton | 11 mins. |
| Willesden Junction | Jubilee Line services to Stanmore, Baker Street & Westminster<br>Silverlink Metro services to Wembley Central, Harrow & Wealdstone, Watford, Kensington Olympia & Clapham Junction | 20 mins. |
| Richmond | Bakerloo Line services to Harrow & Wealdstone<br>South West Trains services to Twickenham, Kingston, Staines, Windsor & Eton Riverside, Weybridge, Ascot, Bracknell & Reading | 42 mins. |
| Highbury & Islington | District Line services to Earls Court<br>WAGN rail services to Moorgate, Finsbury Park, Hertford North, Welwyn Garden City & Stevenage | 5 mins. |
| Stratford | Victoria Line services to Walthamstow Central<br>ONE railway services to London Liverpool Street, Romford, Shenfield, Southend, Chelmsford, Colchester & Ipswich<br>Central Line services to Leytonstone, Woodford, Epping, Newbury Park & Hainault | 23 mins. |
| West Ham | Jubilee Line services<br>Docklands Light Railway services to Canary Wharf, Greenwich & Lewisham<br>c2c rail services to London Fenchurch Street, Barking, Upminster, Purfleet, Grays, Tilbury, Basildon, Southend & Shoeburyness<br>Hammersmith & City Line services to Barking<br>District Line services to Barking & Upminster | 25 mins. |
| Canning Town | Jubilee Line services<br>Docklands Light Railway services to Beckton<br>Bus link to London City Airport | 27 mins. |

**Table 4.4 Connections from Camden Road (BR) Station**

## 5 DEVELOPMENT TRIP GENERATION & MODAL SHARE

5.1 In order to assess the likely person trip generation of the proposed development, it is evident that no provision of car parking on-site for the residential uses and reduced provision of car parking for the existing retail/commercial uses will have a significant effect in terms of limiting the likely number of car-driver based trips.

5.2 To determine the extent of generation and modal split of trips to the proposed development an exercise has been undertaken that is based upon information contained within the 2001 national census for the Camden Town with Primrose Hill Ward within which the development site is located and the National Travel Survey 1998-2000.

5.3 The average household size within the Camden Town with Primrose Hill Ward, as sourced from the 2001 Census is 2.1 residents per dwelling and therefore it is predicted that there would be a total of 13 residents, based upon the provision of 6 dwellings.

5.4 The majority of residents of the proposed development would be within the age range of 16-60 and based upon the National Travel Survey, this age group generates some 3.1 trips per person on a daily basis. Therefore the proposed development is likely to generate a total of some 40 person trips, or 80 person trip movements over a typical daily period.

5.5 The 2001 Census provides details of the modal split of journeys to work for the Camden Town with Primrose Hill Ward that, for the purpose of this exercise, is considered to be representative of the modal split of all journeys (including shopping, leisure and escort trips) for the proposed development.

5.6 On this basis, Table 5.1 provides a summary of the predicted daily person trips by mode of travel associated with the proposed development.

| Mode of Travel | Percentage | No. Trips |
|---|---|---|
| Walk | 18.1% | 7 |
| Cycle | 6.0% | 2 |
| London Underground | 33.0% | 13 |
| Bus | 15.2% | 6 |
| Rail | 4.3% | 2 |
| Car Driver | 16.9% | 7 |
| Car Passenger | 1.7% | 1 |
| Motorcycle | 2.1% | 1 |
| Taxi | 1.8% | 1 |
| Other | 0.9% | 0 |
| TOTALS | | 40 |

**Table 5.1: Summary of Predicted Daily Person Trips by Main Mode**

5.7 From Table 5.1 it can be seen that the highest proportion of person trips associated with the proposed development would be made using London Underground services at 33.0%, which equates to 13 person trips (26 person trip movements) over a typical daily period.

5.8 Of the remainder, some 7 person trips (14 person trip movements) would be made by foot or by car (as driver) and 6 person trips (12 person trip movements) would be made by bus over as typical daily period.

5.9 Given the volume of person trips generated by the proposed development and the proportional split by the various modes of travel, it is not anticipated that the proposed development would have any measurable impact on the operation of any of the highway or transport networks.

# 6 SUMMARY & CONCLUSIONS

6.1 This study has been prepared on behalf of Cube to consider the accessibility of the proposed development comprising 6 no. residential properties on land at Arlington Road, Camden, NW1.

6.2 It has been demonstrated that the site is located in an area such that it is easily accessible by a choice of means of travel including walking, cycling and public transport to a wide range of local amenities and key facilities such as shopping, leisure, health and education uses.

6.3 The study has also shown that by virtue of extremely high public transport accessibility, residents of the proposed development can easily reach a wide range of destinations within the Borough, adjoining Boroughs and Central London as well as other destinations throughout the UK and abroad with good connections to key public transport interchanges.

6.4 Furthermore the study also shows that future investment is proposed in the transport network that will further enhance the sites' accessibility such as the Cross River Tram proposals.

6.5 Consideration has also been given to the likely person trip generation and modal split of the proposed development from which it can be concluded that the proposed development would not have any measurable impact on the operation of any of the highway or transport networks.

6.6 Finally, the nature of the proposed development is such that it will result in an overall reduction of car-borne traffic to the site by virtue of the removal of some of the private, non-residential parking that exists within its curtilage and the promotion of 'car free' development for the proposed uses. The existing servicing arrangements associated with the Somerfield store located on the Camden High Street frontage of the site are not affected by the proposed development.