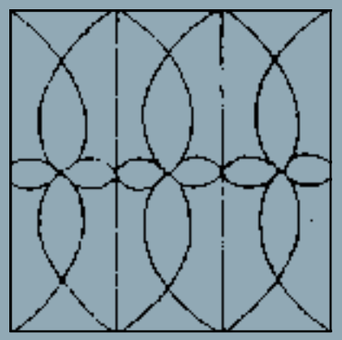

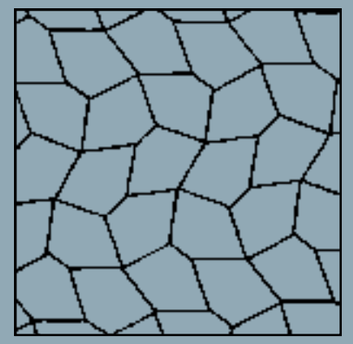

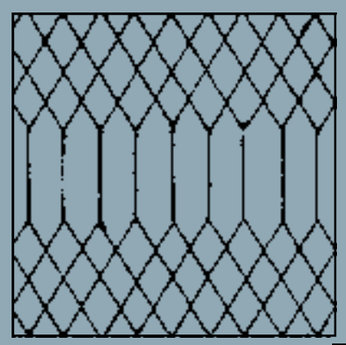

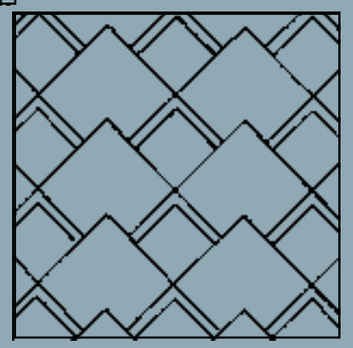

project

84 Fitzjohn's Avenue

Design and Access Statement

April 2021 - Rev 00

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Content

1.0

Introduction and Context

Introduction

This Design and Access Statement has been prepared for the purpose of supporting a planning application for the installation of an acoustic enclosure for condensing units at 84 Fitzjohn's Avenue.

This document should be read in conjunction with the planning drawings and other reports prepared by the design team.

1.1 Project Brief

The owners of 84 Fitzjohn's Avenue have asked Charlton Brown Architects to assist with works of improvement to Flat no.4, the maisonette located at 2nd and 3rd floor level of the property.

The owners brief was to refurbish the existing accommodation and future-proof it by means of:

1. Improvement to the building fabric water and air tightness;
2. Improvement to the building fabric insulation;
3. Improvement to the mechanicals, electrical ad plumbing systems.
4. Internal fit-out.

Despite the extent of the works and the implementation of all measures to improve the energy performance of the property the building still results at risk of overheating during the summer months.

The owners have therefore asked Charlton Brown Architect to assists with the works of installation of an air cooling system.

1.0

Introduction and Context

1.2 Site Location & Surrounding Area

84 Fitzjohn's Avenue is situated in the Conservation area of Fitzjohn's / Netherhall.

Fitzjohn's Avenue was laid out in 1876 and the area developed in the following decade. This wide boulevard once described in Harpers magazine as "one of the noblest streets in the world"[1] was planted with alternating red and white chestnut trees and the houses set well back from the road.

The Avenue itself runs north from Swiss Cottage. It initially stretched only to Arkwright Road but was extended to connect to Heath Street circa the 1880's. This created a small turning of the axis north west up towards Hampstead village. The entrance to the plot of no. 84 is on the crook of this turning.

The architectural vernacular of Fitzjohns Avenue is a mixture of the Victorian styles particularly: Gothic, Tudor Revival, Italianate, Queen Anne Revival and Arts and Crafts.

Each house on the avenue was set out on large singular plots with both front and rear gardens. The plots were originally sold with a condition attached that any house built would cost no less than £3000 resulting in homes commissioned in grand style and scale.

Photograph of Fitzjohn's Avenue from 1926 looking North

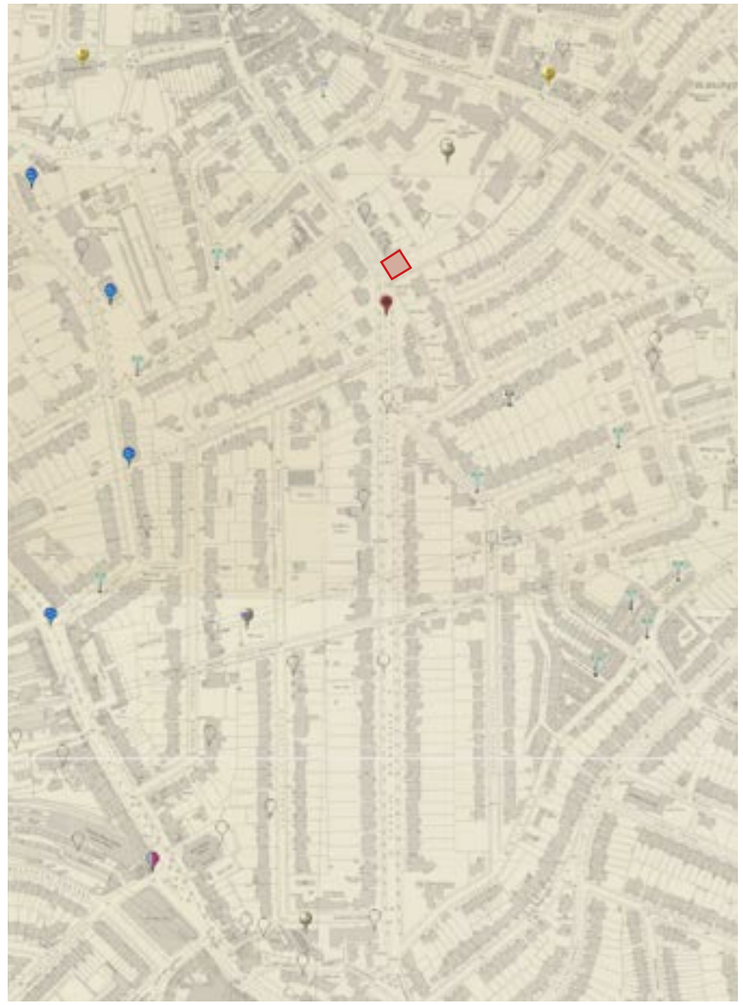
1 Camden Conservation Area Statement: Fitzjohns / Netherhall

Introduction and Context

1.3 History of the Site

Area map - circa 1860

Area map - circa 1900



Area map - circa 1950

Site Boundary indication

2 Maps referenced from National Library of Scotland & The Underground Map - www.theundergroundmap.com

1.0

Introduction and Context

1.4 Character of the Conservation Area

The Camden Conservation Area of Fitzjohn's/Netherhall was designated in 1984. Fitzjohn's Avenue traverses the area with a rhythm of large plots along its axis. Smaller plots characterize the narrower streets running east west off this axis. The site is identified within Sub Area 1, 'Fitzjohn's', of the Conservation Area Appraisal.

No.84-90 are 1880s red brick two/three storey buildings. Features include gables to the front and side, elaborate stone porch with parapet and balustrade as well as features common to the entire area such the stained glass windows.

No.84 well preserves most of its features, however the north side of the property has been affected by the erection of a non original annex structure which is currently used as storage space.

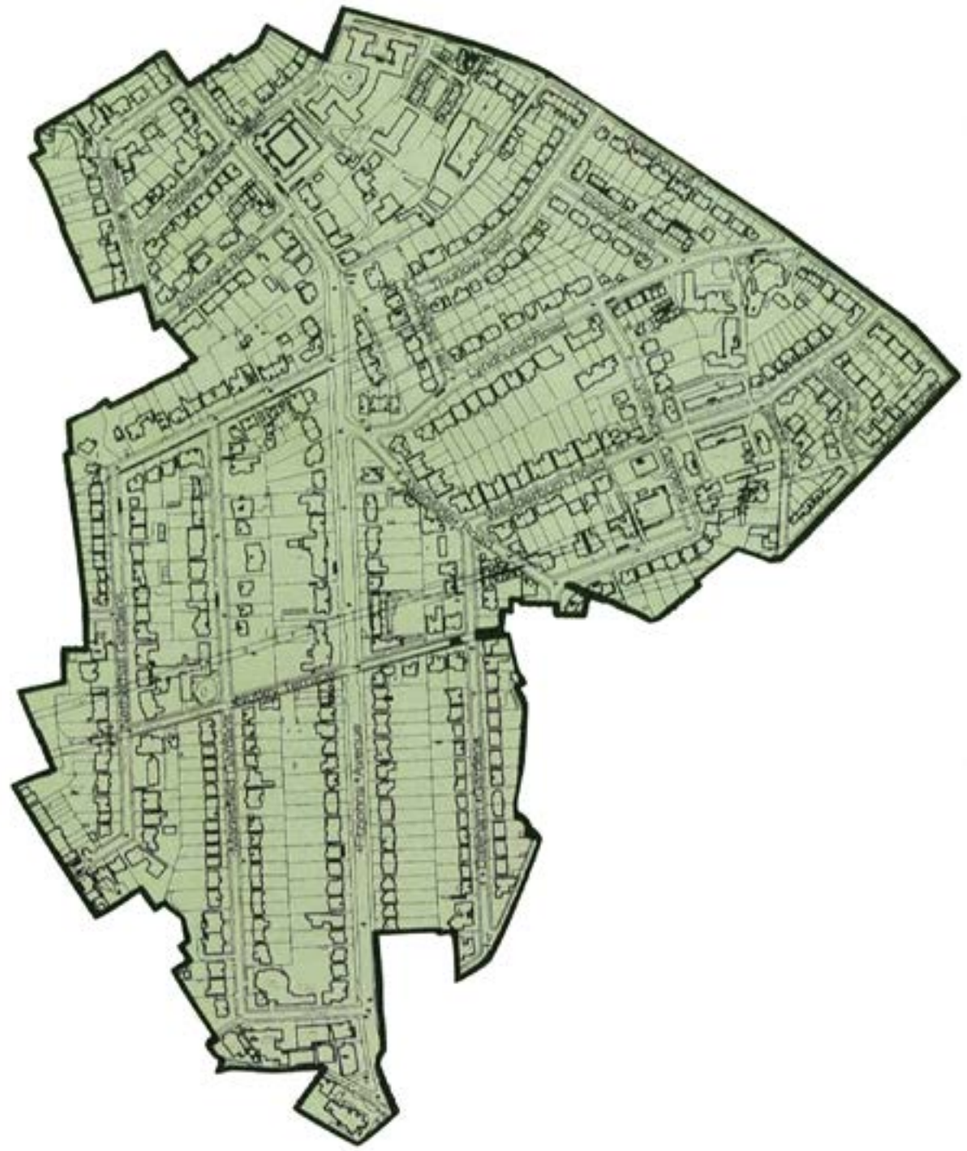


Figure Ground map of the Fitzjohns Netherhall Conservation Area

4 Map from Camden Conservation Area Appraisal

2.0

Site Analysis

2.1 The Site

The site forms part of the street scape of Fitzjohn's Avenue.

On the north side No. 84 faces No.86 Fitzjohn's Avenue, the access to Fitzjohn's Avenue Primary School divides the two properties.

On the south and east sides, several large trees block the site from view of no. 82 and No.19 Lyndhurst Terrace.

'Spring walk', a public footpath that runs along the southern boundary of the site, separates the property from No.19 Lyndhurst Terrace.

2.0

Site Analysis

2.2 Site Photos

1.

2.

3.

1. Front and north facade of the house.

2. Front and south facade of the house

3. Front facade of the house.

3.0 The Existing Building

3.1 The Building

Existing plans are included as part of this application and should be read in conjunction with this document.

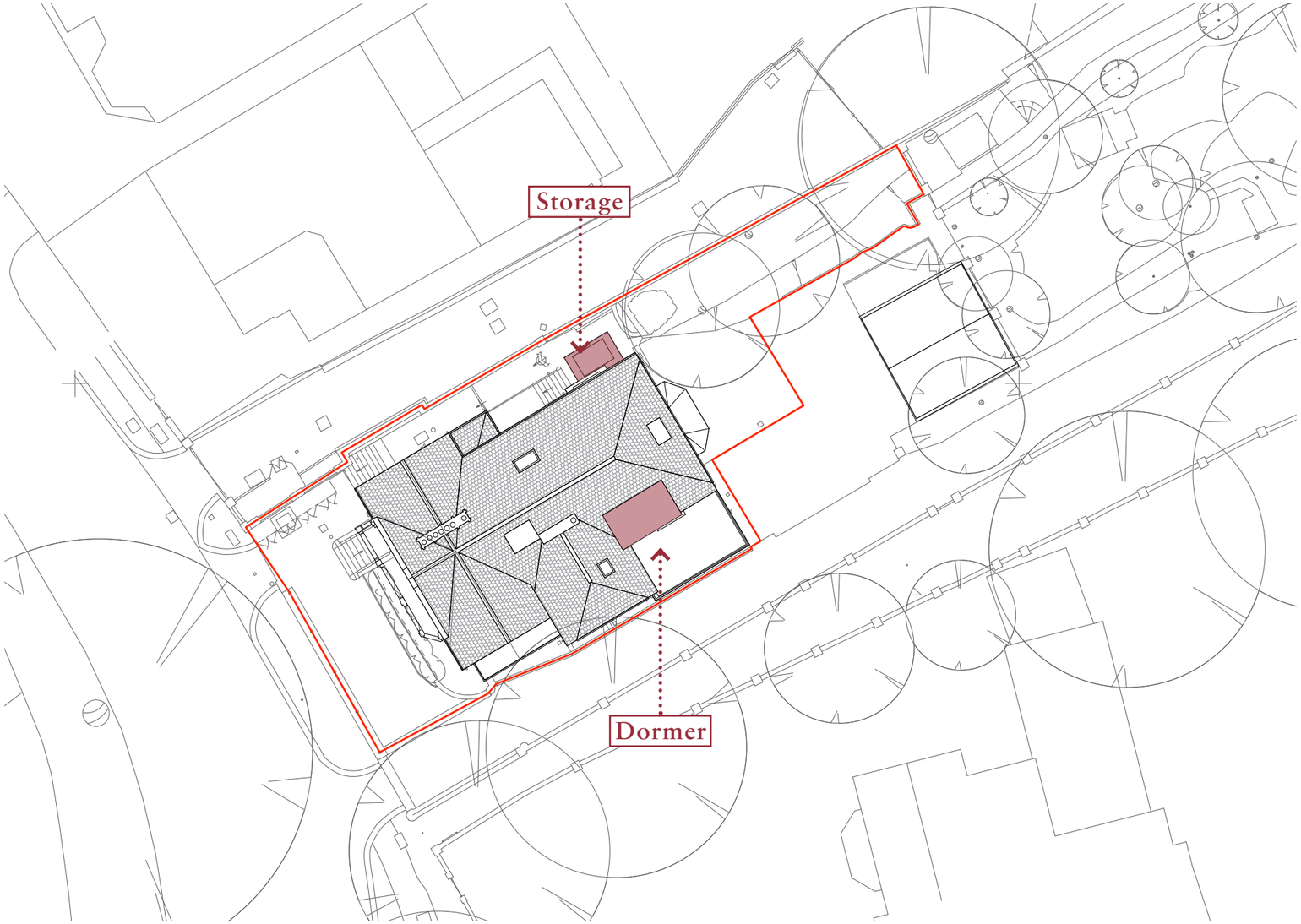
The existing dwelling is a five storey building, including Lower Ground Floor and Attic. It is completely detached and distanced from the neighbouring properties.

The front facade faces south-east and it presents the most relevant features, such the stone treatments, the porch and the oriel window.

The south-west facade presents some of the original stained glass windows and the later addition of a large dormer to the roof.

The fact that a large portion of the south facing elevations are glazed constitutes a high risk of overheating during the summer months.

The north-east facade was preserved practically intact, whilst the north-west facade has suffered from the addition of a low level annex structure with independent access.
The structure is currently used as storage space and an obsolete gas tank is located on its roof.



Existing site plan

Past Extensions

3.0

The Existing Building

3.2 Energy Assessment

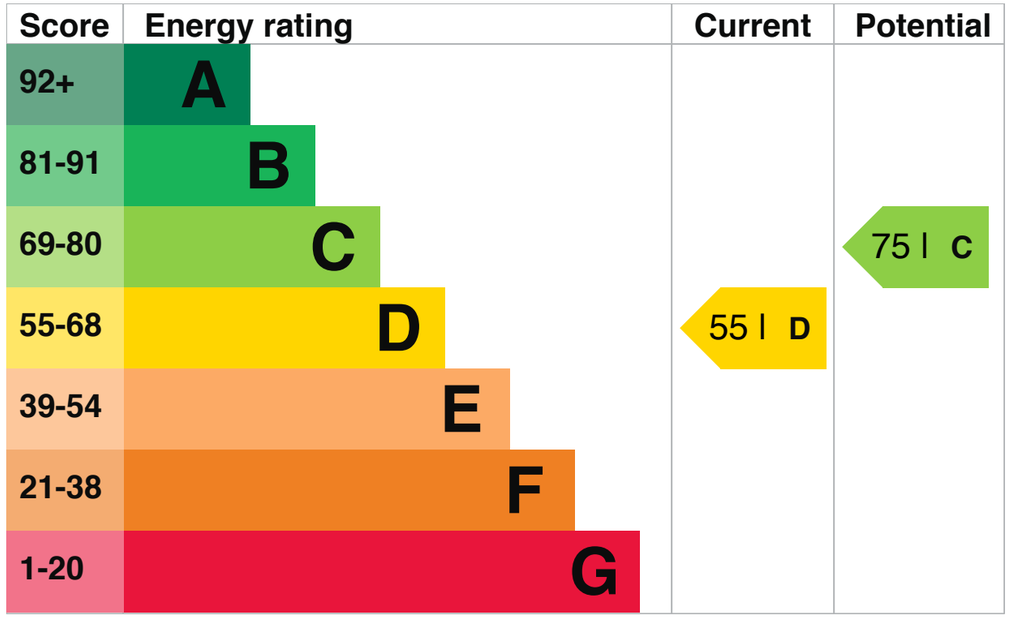
In March 2018 an energy performance assessment was carried out for the entire property (see Appendix 0).

The report demonstrates the dwelling's very poor energy performances.

The current Energy Performance Certificate shows a current rating of 55, which is only marginally within band D (scores between 39-54). This is lower than the average energy efficiency for a dwelling in England and Wales (60).

The assessment suggests that there is a significant potential for improvement and advises that the following measures should be implemented:

- Room-in-roof insulation
- Internal or external wall insulation
- Draughts proofing
- Low Energy Lighting
- Double Glazed Windows



Extract from Energy Performance Certificate - Appendix 0 of Planning Application

4.0

Retrofit to Flat No.4

4.1 Improvement Measures

As part of an overall refurbishment of Flat No.4 of the property, Charlton Brown Architects have instructed the following measures to improve the energy performance of the building as recommended in Appendix 1 of the latest Home Improvements CPG and in the property EPC:

1) Pipes, boiler tank insulation:
New energy efficient boiler installation, including insulated tank and insulated pipes.

2) Draught proofing:
Application of lime plaster to all internally insulated walls; refurbishment and drought proof of all existing windows including new seals.

3) Lighting & Appliances:
Replacement of all light fittings and appliances with new LED lighting and energy efficient appliances.

4) Room in Roof Insulation:
Thermal insulation in between and below rafters ensuring all areas are carefully covered, avoiding thermal bridges and ensuring adequate ventilation below roof tiles.
U-Value target: 0.13 W/m²K

5) Internal Walls Insulation:
Internal thermal insulation installation to all external wall, ensuring all areas are carefully covered, avoiding thermal bridges applying moisture open material only, sympathetic to the existing building fabric.
U-Value target: 0.47-0.60 W/m²K

6) Floor Insulation:
Floor insulation installation to the party structure that divides Flat No.4 from Flat No.3

7) Upgrading Windows:
Refurbishment and drought proof of all existing windows.
Installation of internal secondary glazing and internal shading.

MEASURE	COST/PAYBACK	IMPROVEMENT	DISRUPTION
Loft insulation	£	✎✎✎✎	▲
Pipes/boiler tank insulation	£	✎✎✎	▲
Draught proofing	£	✎✎	▲
LED lighting	£	✎✎	▲
Cavity wall insulation	£ £	✎✎✎✎	▲
Room in roof insulation	£ £	✎✎✎✎	▲▲▲
Internal wall insulation	£ £ £	✎✎✎✎	▲▲▲▲
Floor insulation	£ £ £	✎✎✎✎	▲▲▲
Solar PV (electric)	£ £ £	✎✎✎	▲
Upgrading windows / new windows (single to double glazing)	£ £ £	✎✎	▲▲
Ground source heat pump	£ £ £ £	✎✎✎✎	▲▲▲▲
Air source heat pump	£ £ £	✎✎✎	▲▲▲
External wall insulation	£ £ £ £	✎✎✎✎	▲▲▲

Appendix 1 of the Home Improvements CPG January 2021

4.0

Retrofit to Flat No.4

4.2 Conservation matters

Although all measures have been taken into consideration, some could not be implemented due to the nature of the site and its location within the Fitzjohn's/Netherhall Conservation Area.

The original building has clearly been designed with particular attention to site and views.

The front facade and the south west present the most important features, such as the stone treatments and the coloured glass. These two elevations though, are also largely glazed to allow the warm afternoon light to come into the building.

Large deciduous trees have been planted in front of the building. This is very helpful, as it allows the sun radiation to warm the house during the winter months and provide shade during the summer ones.

Unfortunately, given the rise in temperature that we have witnessed in the past century, passive cooling measures such as tree shading and internal shading are unlikely sufficient measures to avoid overheating beyond comfort level.

As a precautionary measure, Charlton Brown Architects instructed an overheating analysis to assess the level of overheating during the summer months.

5.0

Post-Retrofit Assessment

5.1 Overheating Assessment

In January 2021 Charlton Brown Architect commissioned an Overheating Assessment (see Appendix 1).

As can be seen in the table to the right, despite the number of measures taken to insulate the building, the report shows that three rooms out of six habitable ones are still at risk of overheating.

The assessment proofs that active cooling is required to ensure thermal comfort level to the building occupants.

Room	Criteria 1	Criteria 2	CIBSE Criteria Met?
Requirement	=<3.0	=<32	
2F-03 Sitting Room	4.0		✗
2F-05 Bedroom	1.3	34	✗
2F-10 Bedroom 04	1.3	32	✓
2F-11 Kitchen Dinning	1.4		✓
3F-03 Master Bedroom	0.3	35	✗
3F-08 Bedroom 02	0.5	21	✓

Extract from Overheating Assessment - Appendix 1 of Planning Application

6.0 The Proposal

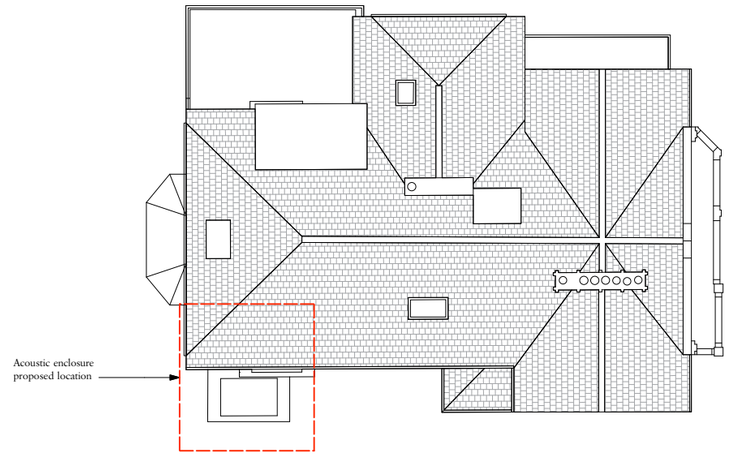
6.1 The Location

In collaboration with SWP Ltd. Consulting Engineers, Charlton Brown Architects have developed a proposal for the installation of an air conditioning system that should serve the building only when, as shown in the Overheating Assessment, the internal temperature shall rise beyond comfort level.

The proposal involves the installation of two condensing units within an acoustic enclosure at Lower Ground Floor Level on the north side of the property as illustrated in the planning drawings.

The location that has been identified, will allow for the installation of an acoustic enclosure which is not visible from the street front and will not affect any of the features that are characteristic of the conservation area.

The installation of the acoustic enclosure will involve the demolition of a non-original one storey annex structure and the removal of an obsolete gas tank that is located above its roof.



6.0 The Proposal

6.2 Existing Annex Structure

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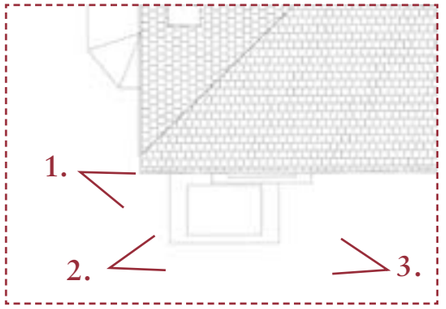


The proposal suggests the demolition of the non-original annex structure shown in the pictures above.

6.0

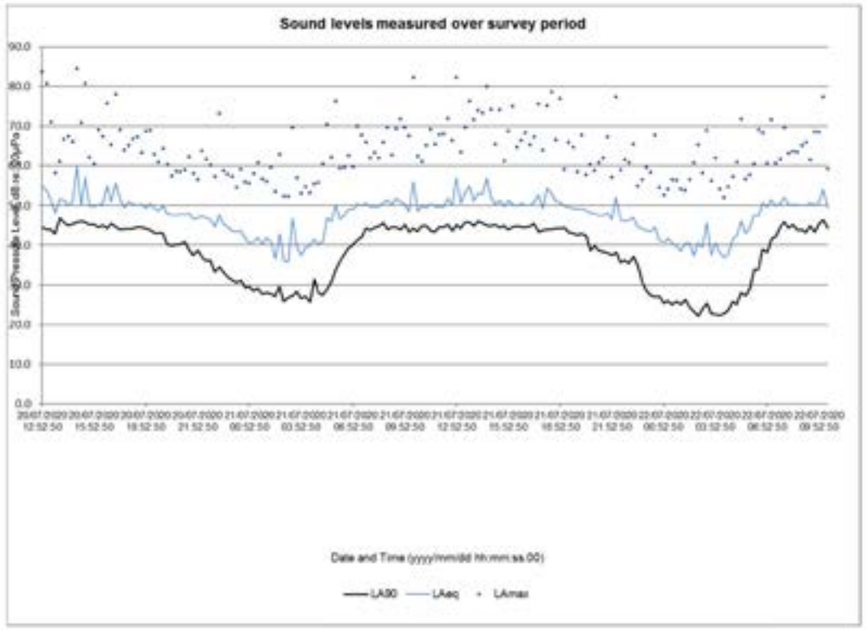
The Proposal

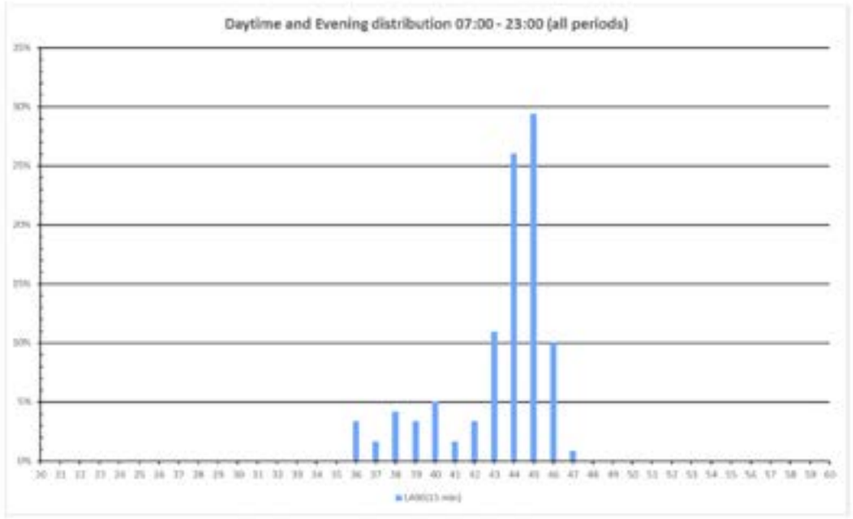
6.3 Environmental Noise Survey

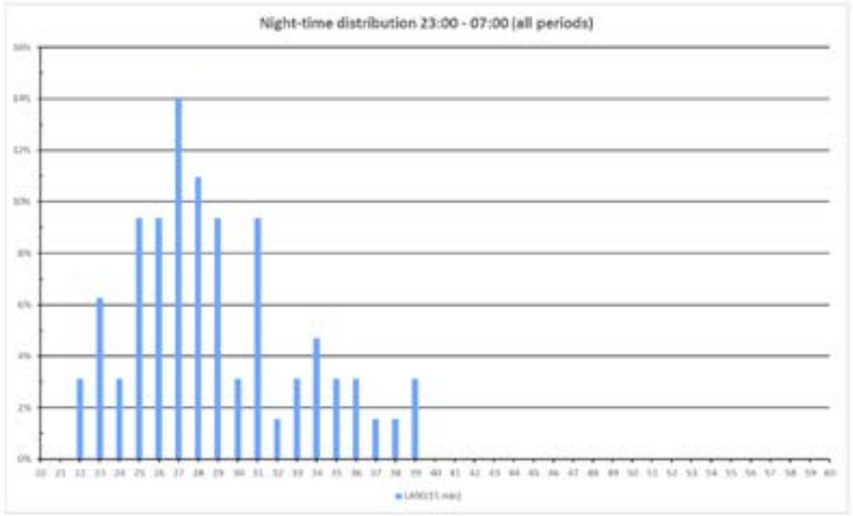
In July 2020, Charlton Brown Architects have commissioned an Environmental Noise Survey to Paragon Acoustic Consultants (see Appendix 3)

The noise survey has reported the following limits:

Plant Location	Receptor	Daytime / Evening 07:00-23:00 $L_{Art,(15\ min)}$	Night-time 23:00-07:00 $L_{Art,(15\ min)}$
Plant associated with 84 Fitzjohn's Avenue	Day – Gardens used for main amenity, outside living and dining and bedroom windows (façade). Night-time – Outside bedroom windows (façade). [3] Nearest residential receptor will be other apartments within 84 Fitzjohn's Avenue	34 dB [1] [2]	17 dB [1] [2]
	School premises	40 dB $L_{Aeq\ 30\ min}$ [2]	







Extracts from Environmental Noise Survey - Appendix 3 of Planning Application

6.0

The Proposal

6.4 The Design

In order to meet the required noise levels as reported in the Environmental Noise Survey, Charlton Brown Architects is proposing that the two condensing units should be enclosed into two bespoke acoustic enclosures as recommended by EEC Ltd in their proposal that forms part of this planning application (see Appendix 4).

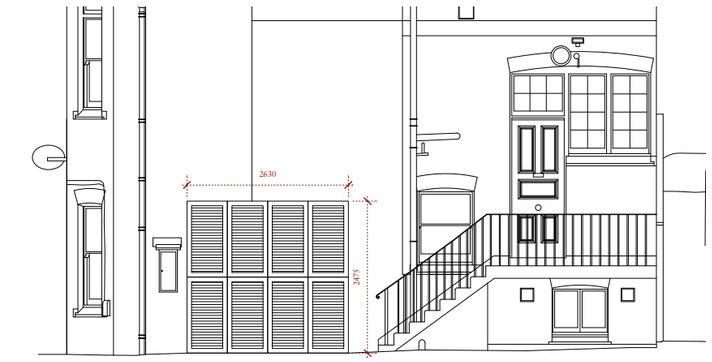
The specifications of the acoustic enclosure are as follows:

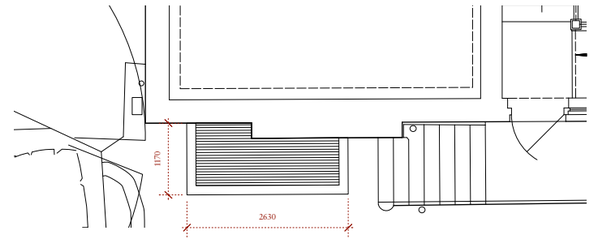
Casings: not less than 0.8 mm galvanised mild steel sheet with mastic sealed, lock-formed joints.

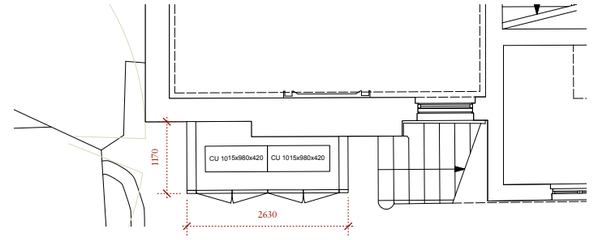
Splitters: fabricated from not less than 0.8 mm expanded galvanised mild steel with plain, aerodynamically profiled leading and trailing edges.

Acoustic infill will be inorganic, non-hygroscopic, flame moisture and vermin proof mineral fibre of minimum density 45 kg/m3.

The acoustic enclosure will be powder coated in RAL colour Anthracite Grey 7016.







6.0

The Proposal

6.5 Conclusions

This DAS demonstrates the overarching need for active comfort cooling to the property during the warmer months.

This DAS shows how all measures that were compatible with the Fitzjohn's and Netherhall Conservation Area Appraisal have been implemented following the London Plan Cooling Hierarchy of Be Lean, Be Clean, Be Green as recommended in the policies:

- Home Improvements CPG January 2021
- Energy Efficiency and Adaptation CPG January 2021
- Camden Local Policy 2017 CC1 and CC2

Nevertheless, the Overheating Assessment, calculated including all the energy efficiency measures, has proven that Flat no.4 will overheat beyond comfort level during the summer months.

We therefore would like to apply for permission for the installation of two condenser units within acoustic enclosure as illustrated in this DAS and the planning drawings.