

July 2023 (Revision A)

**RE: 46 Platts Lane NW3 7NT**

**Design statement for the provision of 2 x external mini-ac, low energy units.**

The proposed addition of 2 x external air conditioning units at the above property is to assist in the control of overheating to the existing ground floor rooms generally. The property is located within a conservation area therefore, any 'passive' design measures to reduce the extent of overheating from the façade and window design is limited. It is proposed to use mechanical means to regulate the internal environment and maintain the internal room temperatures within a comfortable range. This approach has been reviewed in conjunction with a full house, dynamic overheating assessment. This review was conducted by Meadows energy consulting who specialise consultants in energy assessments. This report demonstrates that air conditioning must be utilised to bring the dwelling into compliance with CIBSE TM59 and that passive means (i.e. using external shades, awnings or external louvres) will not provide the necessary cooling capacity.



46 Platts Lane – Front elevation (located behind existing lime tree).

**Location and position.**

Given the existing ground floor footprint, we have recommended positioning the units in the most visually un-obtrusive position as possible. These will be located at the rear of the property below the level of the existing boundary fence line and will not be visible from the front elevation or the street scene. The existing side alley allows for access to the external air and general access for maintenance.

**Unit specification.**

The proposed air conditioning unit has been selected and we have commissioned a bespoke acoustic cover to mitigate any noise impact. The level of sound pressure reduction for the bespoke unit is noted on the submitted data sheet. For reference however, we have shown the SPL level in the context of the table below which provides a general guide for the level of sound to be expected once the covers are in place and the unit is operational. It should be noted that the use of the unit will be

intermittent and will not be in constant operation. It is anticipated that summer-time overheating will be the main source of use for the units.

Table showing Sound pressure levels with typical references.

Source	Sound Pressure Level (dB)
<b>Threshold of Hearing</b>	
Quietest audible sound for persons with excellent hearing under laboratory conditions <sup>2)</sup>	0
<b>Quietest audible sound for persons under normal conditions</b>	
Virtual silence, Barely audible Audio-metric test room	10
<b>PROJECTED NOISE RANGE FOR THE UNITS</b>  Rustling leaves Mosquito	<b>20</b>
<b>Noticeably Quiet - Voice, soft whisper</b>	
Quiet whisper (4 ft, 1 m)	30
Home Quiet room Bird call	40

The selected air conditioning unit is a low-energy, Panasonic air conditioner outdoor unit VRF 2-wire ECOi Mini U-4LE2E5 12.1kW 230V Mini. This unit is: 996 mm high x 370mm wide.

The proposed acoustic cover will be finished in white, aluminium with overall dimensions of; 1700mm in length x 1300mm high. This cover will cover both units. Please see a picture of the proposed unit below for reference.



In addition to the above general acoustic information, we have prepared a separate acoustic report to review the installation as proposed. This report includes a background noise survey taken at the site. Please refer to the attached report for full details: NOVA ACOUSTICS Noise Impact assessment.

End of statement.