



UPDATED KITCHEN EXTRACTION SYSTEM SPECIFICATION

4 Kingsway Buildings, Manchester, M19 1PH — Chandni Restaurant

APPLICATION NO.	CLIENT
141890/FO/2025	Humayun (Chandni Restaurants)
PREPARED BY	PURPOSE
Arch Designs (Reuben Ramelize, B.A. Hons Architecture)	Response to LPA request, 30 July 2026

1. PURPOSE

This specification updates the previously submitted kitchen extraction system design (Proposed Hood Calculations, May 2025) to incorporate the odour and noise mitigation measures recommended in the site's own Odour Impact Assessment and Noise Impact Assessment (Noise Assessments Ltd, project ref NALPRO270324.01a/.01b, April 2024), and to address the extraction terminal design point raised by Manchester City Council on 30 July 2026 (ref 141890/FO/2025).

The original hood sizing, duct sizing and fan static pressure calculations (Proposed Hood Calculations, Fan Static Pressure Calculations) remain valid and are not superseded by this document - they establish the required air volume (1700 CFM total, 450mm duct). This specification adds the mitigation stages that were recommended by the site's own consultants but not carried through into the equipment schedule submitted for planning.

2. ODOUR CONTROL — ELECTROSTATIC PRECIPITATOR AND CARBON FILTRATION

The Odour Impact Assessment (NALPRO270324.01a) assessed this proposal as High odour risk (significance score 28), driven by close receptor proximity (<20m), moderate dispersion, and high odour/grease loading typical of Indian-style cooking. High level odour control is required.

The extraction system is to include, in addition to the coarse baffle grease filter at the canopy:

- An Electrostatic Precipitator (ESP), sited downstream of the canopy grease filter, sized to suit the 1700 CFM system duty.
- Carbon filtration downstream of the ESP, using enhanced-grade activated carbon filters (e.g. Purifiedair Sitesafe or equivalent) with a minimum 0.4-0.6 second residence time, appropriate to the 'High Odour' cooking category (Indian/spiced food) identified in the assessment.
- A maintenance regime as set out in the Odour Management Plan within the Odour Impact Assessment: daily cleaning of grease filters, carbon filter replacement every 4-6 months, and periodic deep hygiene cleaning of ductwork by a specialist contractor.

3. NOISE CONTROL — ATTENUATION

The Noise Impact Assessment (NALPRO270324.01b, BS 4142:2014+A1:2019) identified an Adverse Impact at the nearest sensitive receptor (rating level 48 dB L_{Ar}, +8 dB above the representative background of 41 dB), and recommended a silencer providing a reduction of at least 13 dB to bring the system to a Low Impact rating.

The extraction system is to include an in-line attenuator sized to achieve a minimum 13 dB(A) insertion loss, positioned within the vertical duct run at high level as shown on the proposed elevations. A 2D-length flanged silencer (or equivalent) is specified, which achieves in excess of 13 dB insertion loss across the 500 Hz - 4 kHz octave bands most relevant to fan/motor noise, per manufacturer performance data referenced in the Noise Impact Assessment (Appendix H).

4. DISCHARGE TERMINAL

Following the Council's comments of 30 July 2026, the flue terminal is amended from the previously shown cowl to a high-velocity, rain-resistant discharge terminal. This ensures effective vertical dispersion of the exhaust air clear of the building and reduces the potential for discharge to fall back toward ground level or neighbouring windows, in accordance with EMAQ (2018) guidance on kitchen exhaust discharge design.

A revised elevation drawing showing the amended terminal is to be issued alongside this specification.

5. SUMMARY OF AMENDMENTS TO THE MAY 2025 HOOD CALCULATIONS

Component	May 2025 Design	Updated Specification	Driven By
Grease filtration	Baffle filter	Baffle filter (unchanged)	-
Odour control	None specified	ESP + carbon filtration	Odour Impact Assessment
Noise attenuation	Generic silencer, no rating	≥13 dB(A) rated silencer	Noise Impact Assessment
Discharge terminal	Cowl	High-velocity, rain-resistant terminal	LPA comments, 30/07/2026

6. SUPPORTING DOCUMENTS

- Odour Impact Assessment, Noise Assessments Ltd, ref NALPRO270324.01a, April 2024

- Noise Impact Assessment, Noise Assessments Ltd, ref NALPRO270324.01b, April 2024
 - Proposed Hood Calculations and Fan Static Pressure Calculations, May 2025 (sizing basis, unchanged)
- Both the Odour Impact Assessment and Noise Impact Assessment are now over a year old. It is recommended that Noise Assessments Ltd be asked to confirm these remain valid for the as-proposed system, or issue updated versions, before final submission.*



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