Fume and odour extraction scheme

57 Kenyon Lane Manchester M40 9JG

Project information	Details
Planning application	144649/FO/2025
Local planning authority	Manchester City Council
Applicant	JB Property Rent and Maintenance
Prepared by	Intellect Civil & Construction Ltd
Document reference	57KL C7 01
Date and revision	5 October 2026 | Rev 00
Status	Technical coordination and Acceptance

1 Purpose and planning requirement

This document sets out the proposed arrangements for capturing and treating fumes, vapours and cooking odours from the ground-floor restaurant. It supports the scheme required by Condition 7 of the planning permission dated 19 August 2026. It is based on the supplied drawings, equipment literature and Murray Acoustics noise impact assessment.

Condition 7 requires an extraction scheme to be submitted to and approved in writing by the Council within three months of the permission date. This corresponds to 19 November 2026. The approved scheme must then be implemented to an agreed timescale and remain operational thereafter.

The supplied information establishes a proposed fan, carbon filter product family and flue arrangement, but does not establish a complete ventilation duty or odour treatment design. The technical confirmations on page 5 are required before this draft is issued as a complete discharge submission. This document does not certify installation, commissioning or compliance.

2 Premises and scope

The permission covers a ground-floor restaurant in Use Class E(b) and one self-contained two-bedroom, three-person apartment in Use Class C3. The proposed kitchen is at the rear of the ground floor. The first-floor apartment and nearby homes are sensitive to cooking odours and plant noise.

The commercial kitchen extract is separate from the apartment cooker extract. The acoustic report identifies the second rear flue as the domestic cooker hood outlet. Neither system is to discharge into the other or use the apartment as a source of replacement air. Waste storage is outside the scope of this document.

3 Capture and treatment of cooking emissions

The proposed commercial system comprises a canopy over the cooking appliances, grease separation, fine particulate pre-filtration, activated carbon treatment, an extract fan and acoustic attenuation before discharge through the approved rear flue. These are scheme requirements; their installation has not been verified.

Stage	Proposed requirement
Capture canopy	A cleanable commercial canopy sized to the actual appliance layout, with sufficient overhang and capture airflow to contain fumes during the busiest cooking period.
Grease separation	Removable, washable grease filters suitable for the grease load, with accessible grease collection and drainage arrangements.
Fine pre-filtration	A dedicated particulate filtration stage upstream of the carbon, selected for the actual smoke and grease aerosol load. The carbon must be protected from fouling.
Odour treatment	CK Direct Type 8 activated carbon filter assembly, with exact configuration, size and media quantity confirmed by the supplier. All extracted cooking air must pass through the media without bypass.
Fan and attenuation	Helios GBD 630/4 T120 as assessed by Murray Acoustics, subject to duty confirmation. An approved silencer is required on the fan discharge side before the duct leaves the building.
External discharge	Treated air discharged at the rear flue position shown on the approved drawings, subject to confirmation that the arrangement provides acceptable dispersion.

This table describes the treatment functions. The installer must issue a coordinated schematic showing the actual order of the filter assembly and fan, access panels, transitions, silencer, airflow direction and discharge position. The silencer remains downstream of the fan as required by the acoustic report.

4 Carbon filter selection and odour risk

The supplied CK Direct leaflet describes Type 8 carbon panels, modular units and cylindrical filters. It also states that carbon filters are not suitable for removing dust and fine particles and require pre-filtration. Its description of 25 mm panels is a product construction detail, not evidence that the selected assembly will provide sufficient treatment at this site.

The exact cooking processes, fuel, appliance schedule, covers and busiest operating period have not been supplied. A numerical odour risk rating or removal efficiency therefore cannot be substantiated. Close residential receptors and a constrained rear discharge make supplier confirmation of treatment performance particularly important.

The supplier must state the selected assembly dimensions, number of panels or cartridges, carbon type and mass, effective contact time at the design airflow, pressure drop, temperature and humidity limits, and replacement criteria. If this selection cannot adequately treat the intended cooking emissions, the treatment arrangement must be revised before submission. Solid-fuel cooking is not covered by this draft.

5 Airflow and discharge arrangement

Murray Acoustics assessed an approximately 5 m long, 250 mm diameter unlined duct with one bend and a termination flush with the rear building face. These dimensions are acoustic model assumptions derived from the drawings and must be checked on site. The same assessment places the first-floor Bedroom 1 window approximately 2 m from the commercial discharge.

The supplied Helios catalogue gives the GBD 630/4 T120 a 630 mm connection and a maximum free-delivery airflow of 14,200 m3/h. Free-delivery capacity is not the operating duty. The difference between the fan connection and the assessed duct diameter must be resolved through a calculated airflow and pressure-loss design, including transitions, all filters and the silencer.

The installer must calculate the capture airflow from the cooking equipment and canopy, provide replacement air, and select the fan duty against the complete system resistance. Confirm performance with both clean and loaded filters. Do not adopt the catalogue maximum airflow as the design airflow or assume that the illustrated duct is sufficient.

The approved elevation note requires the outlet to remain in the indicated location and not project above the main roof ridge. The proposed scheme follows that constraint. A flush discharge close to an opening must nevertheless be assessed for recirculation and odour entry. No adequate dispersion performance is established by the supplied material. Any required change to outlet position, height or configuration must be coordinated with the Council and the acoustic consultant before implementation.

6 Noise and vibration requirements

The Murray Acoustics report predicts a rating level of 66 dB at the nearest assessed residential window without attenuation, compared with its adopted 43 dB limit. Its predicted level with the specified silencer is 42 dB, leaving only a 1 dB margin. These are calculated predictions, not test results or an approval.

Octave band Hz	63	125	250	500	1000	2000	4000	8000
Minimum silencer insertion loss dB	7	15	28	45	50	45	35	22

The acoustic report describes a 2100 mm long rectangular splitter silencer with 40 percent free area as the basis for these losses. The supplier must confirm independently tested insertion loss data to BS EN ISO 7235 at the design airflow, together with regenerated noise and pressure drop. A catalogue statement of overall noise reduction alone is insufficient.

Mount the fan on anti-vibration supports with suitable flexible duct connections and resilient external duct brackets. Do not fix the fan to the separating floor ceiling joists. Confirm support capacity and provide access for cleaning and replacement.

Condition 6 requires a separate approved plant noise scheme and post-completion verification. It includes an octave-band requirement as well as an overall rating-level requirement. The consultant must confirm the final design against the full condition wording; the predicted 42 dB overall level does not by itself demonstrate every requirement. Changes to fan duty, ductwork, outlet or attenuation require acoustic review.

7 Operating arrangements and ventilation safety

Condition 11 permits restaurant opening from 4 pm to 10 pm Monday to Friday, 2 pm to 10 pm Saturday, and 4 pm to 9 pm Sunday. Cooking must be planned within those opening hours, with extraction running whenever fumes or vapours are generated and during an appropriate clearance period afterwards.

The acoustic report requires the commercial fan to stop by 11 pm at the latest through a timer or interlock. The clearance period must fit within this limit. The scheme must not rely on overnight extraction. If an appliance continues to release combustion products after shutdown, its safe ventilation requirements must be resolved before it is selected or used.

Provide a designed clean replacement-air supply without drawing air from the apartment or allowing fumes to escape to the dining area. The design must consider combustion air where gas appliances are used. A competent installer must address ventilation and any gas safety interlocks in accordance with HSE Catering Information Sheet 10. Protect penetrations and coordinate duct fire precautions with the building design.

8 Maintenance and management

The restaurant operator is responsible for keeping the extraction system working throughout cooking, arranging servicing and maintaining a written record. The following frequencies are proposed starting requirements. The installer and suppliers must confirm them against the actual cooking load; increase the frequency where fouling or odour breakthrough occurs.

Frequency	Action and record
Each operating day	Check extraction before cooking. Check for failed airflow, unusual noise, leaks or odour breakthrough. Clean accessible canopy surfaces and grease collection points. Record defects and action.
Weekly initially	Check and clean washable grease filters, sooner if loaded. Inspect accessible pre-filters and seals. Record cleaning and differential pressure where gauges are fitted.
Monthly initially	Check filter loading and carbon condition against supplier criteria. Inspect fan mounts, flexible connections, brackets and accessible duct joints. Record condition and any changes in airflow.
Supplier specified interval	Replace disposable pre-filters and spent carbon using the supplier limits and commissioning baseline. Replacement must also occur earlier if odour breakthrough develops. Record media type and replacement date.
Specialist interval based on grease loading	Inspect and clean the full duct, fan and cleanable silencer components. Set the interval after reviewing the cooking load and actual deposits. Retain service reports and cleaning evidence.

Keep equipment instructions, duty settings, commissioning results, filter and carbon replacement records, duct cleaning reports and any complaints on site. If extraction or odour treatment fails, stop the affected cooking until the defect is corrected. Investigate complaints promptly and record the cause and corrective action. Do not operate with filters removed or bypassed.

9 Technical information required for final submission

The following information is required to turn this draft into a complete site-specific scheme. It must describe the equipment actually proposed, rather than leaving its selection to a later installation stage.

Required information	Responsible party
Cooking schedule including cuisine, appliances, fuels, covers and peak use	Restaurant operator
Canopy dimensions, capture duty, make-up air route and airflow balance	Ventilation designer
Coordinated layout and schematic with verified duct dimensions, fan, filters, silencer and maintenance access	Ventilation designer and installer
Fan operating point, speed control compatibility, system resistance and loaded-filter allowance	Ventilation designer and fan supplier
Exact Type 8 assembly, carbon mass, contact time, temperature limits, pressure losses and maintenance criteria	Carbon filter supplier
Site-specific odour risk and dispersion appraisal including nearby opening windows and air intakes	Competent extraction or odour specialist
Selected silencer test data, pressure drop and regenerated noise at the design duty	Silencer supplier
Final review against Condition 6 including its octave-band requirements	Acoustic consultant
Confirmed programme for implementation and commissioning	Applicant and installer

10 Commissioning and implementation

Submit the completed scheme, coordinated drawings and supplier schedules to Manchester City Council for written approval under Condition 7. Agree the implementation timescale with the Council and install the approved arrangement. Obtain the separate approvals required under Condition 6 for commercial plant noise.

Commissioning must record measured extract and replacement airflow, fan duty, filter pressure drops, capture during representative cooking, sealed filter housings, safe controls and access for maintenance. Check for discharge recirculation and odour entry at nearby receptors during representative cooking. Provide the operator with maintenance instructions and a fault procedure.

The acoustic verification report must address the installed plant under representative worst-case operation and be submitted under Condition 6. This scheme does not replace that report or the separate Condition 5 requirements for the apartment. Retain the approved equipment and operating settings thereafter; review changes with the relevant designer and Council.

11 Source documents

1. Manchester City Council decision notice 144649/FO/2025, dated 19 August 2026, particularly Conditions 2, 6, 7 and 11.
2. Intellect drawing package supplied as 57 Kenyon Lane Manchester M40 9JG RV-7. The decision notice identifies approved drawings S06 Rev A, S07, S08 Rev A and S09 received on 14 August 2026. Confirm that the issue submitted with the scheme matches those approved references.
3. Murray Acoustics Ltd Noise Impact Assessment 21229-RP-NIA-01, dated 25 September 2026, Sections 5.3 to 5.6 and Tables 5.3 to 5.5.
4. CK Direct Type 8 Activated Carbon Filters leaflet supplied by the client.
5. Helios GigaBox 630 mm fan catalogue extract, pages 260 and 261.
6. HSE Catering Information Sheet 10, Ventilation in catering kitchens, Rev 3, 2017: https://www.hse.gov.uk/pubns/cais10.htm