

Kitchen extraction noise and odour mitigation

Flame Grill at 3 and 5 West Street

Storrington, Pulborough RH20 4DY

Planning application DC/25/1478

Document 266-EX-ST01 | Revision D01 | 14 September 2026

Prepared by Merve Tay Architecture and Design

Status: Draft for technical review

1 Purpose and planning context

This statement sets out the proposed kitchen extraction works and rear enclosure, responds to the Environmental Health Officer's five points, and identifies the evidence needed to complete the technical submission. The existing DAA Group Noise Impact Assessment is the acoustic starting point. Its predictions require review against the revised installation, selected equipment and enclosure construction. [E1, N1]

The outstanding technical confirmations are recorded in Appendix B. This revision records proposed measures and verified document information; it does not certify the completed installation or confirm that the revised system achieves the acoustic predictions in the existing assessment.

Planning scope

The planning officer has accepted inclusion of the rear external enclosure within the current application and proposed the following revised description. [P1]

"Shopfront alterations to Nos. 3 and 5 West Street, installation/retention of replacement kitchen extraction duct and associated extract equipment to the rear of No. 3 West Street, fenestration alterations to the rear of the building and external enclosure, and change of use of No. 5 to a waiting and food preparation area (part retrospective)."

Cooking and the associated kitchen extraction serve No. 3. The proposed layout identifies No. 5 as customer waiting and circulation space and a food preparation area with no cooking or kitchen extraction equipment proposed within No. 5. The rear door and window removal and infilling are proposed works, subject to confirmation of the latest site condition. Signage is the subject of separate advertisement consent application DC/25/1653. [D1, P1]

How the documents fit together

The revised drawings should establish positions, dimensions, roof construction and discharge geometry. This statement should accompany the confirmed equipment schedule, manufacturer data and the DAA acoustic update. Appendix A sets out the drawing revisions; Appendix C identifies the supporting documents to accompany the final submission.

2 Response to the Environmental Health Officer

The five stages below follow the EHO correspondence. Additional acoustic attenuation and vibration isolation are addressed separately in Section 4. The EHO's acceptance of the fan position at the visit is not confirmation of its noise performance. [E1]

EHO stage	Existing condition and proposed response	Confirmation needed
1 Source filtration	Retain the baffle-type grease filters within the cooking canopy. The EHO identified these as fitted and suitable for the source filtration role.	Canopy and filter details, condition and cleaning arrangements. EX-01.
2 Particulate prefiltration	Replace the mesh filter used at the prefilter stage with disposable pleated panel filters upstream of the carbon. The Airclean data identifies Grade G4 to EN779; any ISO 16890 classification must be stated separately from verified product data.	Panel size, depth, quantity, housing position, rated airflow and clean/final resistance. EX-02. [M3]
3 Active odour control	Install activated carbon cells after particulate filtration and before the extract fan. The EHO reported that active carbon was not installed at the inspection.	Selected carbon grade, cell quantity, carbon mass, contact time and pressure loss at the actual duty. Confirm installation status. EX-03.
4 Motor plant	Retain the existing fan position identified as satisfactory by the EHO at the visit, subject to confirming the final surveyed arrangement. The visible EQ511467 label matches the supplied MaxFan documents.	Identify the two-stage axial fan correctly and confirm its operating duty, speed/control setting and acoustic data. EX-04. [M1, W1]
5 Discharge	Extend the duct to a coordinated high-level outlet with unobstructed vertical discharge. Provide a rain-management detail that preserves the upward discharge; exclude a cap that turns the airflow downwards.	Surveyed outlet level, duct diameter, exit velocity, receptor distances, eaves offset and terminal detail. EX-07. No numerical height was specified in the supplied EHO email.

Airflow sequence

Canopy baffle filtration is followed by pleated particulate prefiltration, activated carbon treatment and the extract fan. The discharge-side attenuator and extended duct then lead to the vertical outlet. The exact positions and any existing attenuator must be verified and shown on the coordinated drawings.

The EHO mentioned electrostatic precipitation as an alternative particulate treatment. It is not included in the current proposal; the stated proposal uses disposable pleated filters. The external filter cabinet is visible in the photographs, but the contents and the locations of individual filter stages require installer confirmation. [E1, PH1]

3 Equipment schedule

Use the references below consistently on the revised plans, sections and equipment schedule. Catalogue information records a candidate product or selection; it does not establish the final installed quantity or operating condition.

Ref	Component and evidence	Selection or information to complete
EX-01	Existing canopy baffle grease filters. Retention proposed. [E1]	Canopy dimensions and filter make/type, number, condition and maintenance access.
EX-02	Proposed disposable pleated panels. Airclean Grade G4 to EN779 data supplied. [M3]	Exact panel dimensions, depth and number; cabinet location; duty and resistance.
EX-03	Proposed activated carbon treatment. Purified Air Sitesafe PA240824 data supplied. [M4]	Selected grade and number of modules/banks, carbon mass, rated duty, contact time and housing layout.
EX-04	Existing EQ511467 MaxFan. Manufacturer identifies the 500 MaXfan 2 as a two-stage axial fan. [M1, W1, PH1]	Verify full model/nameplate and final location. Confirm duty, speed and controller. M1 selection: 2.51 m ³ /s at 378 Pa static; this is not a site measurement.
EX-05	Existing attenuator shown generically on the supplied drawings. [D1]	Confirm actual make, dimensions, position, lining, insertion loss and whether retained.
EX-06	Additional discharge-side attenuator. NIA specifies performance comparable to Acoustica R02-5-1800. CP03-C-0500 catalogue also supplied. [N1, M5]	DAA to confirm selected model or equivalent combined attenuation, pressure loss and cleanable protected acoustic media.
EX-07	Proposed extended discharge duct and vertical terminal. [E1, D1]	Duct diameter, material/finish, final level, offsets, terminal/rain detail and support locations.
EX-08	Vibration isolators and flexible connections. Generic mounting catalogue supplied. [M2, N1]	Select mounts by supported load and isolation duty. Detail fan/duct supports and flexible connections.

Fan control

The Woods ME electronic controller leaflet lists a product range rather than a selected controller. The fan selection sheet also notes possible additional motor noise with electronic control at reduced speed. The installer and DAA should confirm a compatible control method and assess the intended operating settings. No controller model is selected by this statement. [M1, M6]

4 Noise and vibration mitigation

DAA Group's Noise Impact Assessment dated 6 January 2026, Issue 01, assesses application DC/25/1478 using monitoring undertaken on 22 and 23 December 2025. Its assessment assumes operation between 07:00 and 23:00. These operating hours and the current installation arrangement require confirmation for the update. [N1]

The report calculates a rating level of 27 dB against a representative background of 38 dB, subject to the specified mitigation. This is a prediction for the assessed arrangement, not a post-installation measurement of the revised system. The latest roof/enclosure and altered plant or outlet geometry need to be considered by DAA.

Attenuator performance

Section 5.5 of the NIA requires a discharge-side attenuator similar to Acoustica R02-5-1800 with the insertion losses below. The supplied CP03 catalogue has lower listed insertion losses. Its highest listed option is included for comparison only; it has not been selected or accepted as an equivalent. [N1 p15, M5 p1]

Insertion loss dB	63 Hz	125	250	500	1k	2k	4k	8k
NIA R02-5-1800	8	13	25	44	50	50	37	24
CP03 C*P 0500 2D	4	10	16	26	29	29	29	20

DAA should assess the actual retained and additional attenuators together at the confirmed duty. The NIA also specifies Melinex protection to the attenuator acoustic media for cleaning. The selected supplier should confirm the construction and cleaning method.

Fan breakout and enclosure

The NIA requires an acoustic jacket around the externally located fan. The applicant now proposes a lined enclosure around the extraction equipment. Its walls, roof, access door, joints and duct penetrations require a defined construction and acoustic assessment before it can replace or supplement the jacket in the noise strategy. [N1 p15, C1]

Vibration and calculation review

The NIA requires isolation of the duct from the building structure using suitable vibration isolators, including rubber or neoprene isolation pads, and flexible fan connections. Mount selection and support details should be coordinated with the installation loads. [N1 p15]

The NIA states that manufacturer octave-band data was unavailable, although its calculation appendix contains an octave spectrum. The supplied fan selection includes separate inlet, outlet and casing-breakout spectra. DAA should confirm the source, weighting and operating condition of the calculation inputs, and reassess all relevant sound paths at the final receptor positions. [N1 pp12, 20; M1 p1]

5 Odour control and operation

The odour proposal comprises grease capture at the canopy, particulate prefiltration, activated carbon treatment and upward discharge at the coordinated outlet. The installer should establish the design airflow from the actual cookline, fuel, canopy and operating pattern, and select the filter bank and fan against the complete system resistance. [E1]

Carbon capacity and pressure losses

The supplied fan selection records 2.51 m³/s, equivalent to 9,036 m³/h. The Sitesafe sheet gives a rated airflow of 1,200 m³/h for one PA240824 module and 3,600 m³/h for a three-module bank. These are document values, not a confirmed project selection. The required bank arrangement and carbon contact time must be calculated at the actual design duty. [M1, M4]

The carbon supplier's contact-time guidance varies with cooking type and odour loading. Confirm the menu, cooking method, fuel and maximum operating load before selecting the carbon grade, mass and number of cells. Do not infer sufficient odour control from the presence of a cabinet or a product name alone.

The fan duty should include the resistance of the selected prefilters, carbon cells, attenuators, ductwork and terminal. Check clean and service conditions. The pressure-loss table supplied for the podded CP03 attenuators does not extend to 2.51 m³/s; if that duty is required, obtain project-specific data rather than extrapolating the table. [M5 p2]

Inspection and maintenance

The operator should hold a maintenance schedule for the selected products, nominate the person responsible and retain inspection, cleaning and replacement records. The schedule should cover the following items; product-specific intervals and thresholds remain to be confirmed.

Item	Maintenance provision to record
Canopy and grease filters	Inspection and grease removal to the canopy/filter manufacturer's instructions.
Disposable prefilters	Replacement interval and final pressure-drop threshold; access to change the full panel set.
Activated carbon	Supplier-defined replacement plan based on odour loading, condition and service life. A pressure reading alone does not establish remaining adsorption capacity.
Fan and attenuators	Inspection, cleaning and servicing appropriate to the selected fan and protected acoustic lining.
Duct, supports and outlet	Cleaning access, flexible connection and mount checks, and inspection of the unobstructed discharge and rain-management arrangement.

Commissioning

Obtain the completed equipment schedule, installation photographs and measured airflow/control settings from the installer. DAA should advise on acoustic verification of the completed arrangement and whether further measurements are required. The photographs provided to date do not verify that the carbon cells, pleated panels and extended outlet have been completed.

6 Rear enclosure and roof construction

The applicant's message of 8 September 2026 describes two distinct areas. The drawings should identify their boundaries and show the completed arrangement in plan, roof plan and section. [C1]

Area	Applicant's proposed construction
ENC-01 Equipment enclosure	Partitioning around the extraction equipment and ductwork with a maintenance access door. Plywood roof deck with felt covering and internal acoustic plasterboard lining.
RF-01 Remaining rear yard	Polycarbonate roof covering. The message does not confirm whether the sides of this part of the yard will also be fully enclosed.

Confirm the outside wall finish, board products and layer thicknesses, any cavity insulation, access-door construction, roof falls, drainage, junctions and equipment penetrations. Show the roof levels relative to the upper-floor windows and other openings. The acoustic performance of the enclosure remains subject to DAA's review.

Equipment enclosure area	Remaining yard roof
	

Photographs supplied with the applicant's 8 September 2026 correspondence. They show construction in progress and do not establish the latest completion status. [PH1]

Appendix A Drawing revision notes

Coordinate the following revisions with the installer and the DAA update before issuing the next drawing set. Give every revised sheet a clear revision identifier and issue date, and reference this statement by document number and revision.

Drawing	Revision to complete
P-C01 Ground floor plans	Verify the locations of the prefilter and carbon stages within the external cabinet; do not retain schematic internal positions without confirmation. Label the fan and both attenuators with the EX references. Show enclosure boundaries, maintenance access and roof extents. Preserve the distinction between existing and proposed No. 5 rear openings.
P-C02 Existing elevations	Define and date the baseline shown. Separate historical fish-and-chip-shop arrangements from the current installation where these differ. Coordinate existing doors, windows and plant positions with the surveyed plan.
P-C03 Proposed elevations	Resolve the mismatch between the drawn outlet and the note stating 1,500 mm above the ridge. Establish and dimension the actual proposal; the EHO email did not specify that numerical height. Use “two-stage axial extract fan” for the confirmed MaxFan model. Show the enclosure and distinguish hidden equipment from visible external features.
Additional detail sheet Suggested P-C04	Provide the section requested in the council markup, with further sections where needed to explain both roof areas. Dimension the enclosure and show its wall/roof layers, door, upper-floor openings, roof junctions, duct penetration and vertical terminal. Add a separate airflow schematic and equipment key.

Draft drawing annotations

EX-04 Existing Woods MaXfan 2 two-stage axial extract fan, product code EQ511467. Final surveyed position and operating duty to be coordinated with the updated acoustic assessment.

EX-06 Proposed additional discharge-side attenuator. Model, insertion losses, pressure loss and acoustic-media protection to comply with the updated DAA assessment and confirmed supplier selection.

ENC-01 Proposed enclosure around external extraction equipment and associated ductwork, with maintenance access door, plywood roof deck and felt covering, and internal acoustic plasterboard lining. Refer to the confirmed construction schedule and acoustic assessment.

RF-01 Proposed polycarbonate roof covering over the remaining rear yard. Refer to roof plan and section for extent, falls and junctions.

Cross-reference Read with Kitchen extraction noise and odour mitigation, document 266-EX-ST01, using the revision issued with the drawings. Final construction and equipment selections are to be entered before technical submission is completed.

Appendix B Information required to complete the submission

These items identify the information to be incorporated into the next revision. They are technical coordination requests, not evidence that the proposed installation has already been accepted by the local authority.

Ref	Information required	Required from
C01	Dated confirmation of completed and outstanding works; current photographs; full fan nameplate; cabinet internals; equipment dimensions and surveyed positions.	Applicant and extraction installer
C02	Cookline, fuels, operating pattern and design airflow; fan duty and controls; complete pressure-loss schedule; selected prefilter and carbon arrangement, contact time and maintenance access.	Extraction designer and equipment suppliers
C03	NIA addendum or revised assessment covering final geometry, source-data reconciliation, retained/new attenuators, jacket/enclosure strategy, vibration isolation and any required verification measurements.	DAA Group
C04	Enclosure dimensions and final construction: external wall finish, internal board type and layers, cavity treatment, plywood/felt roof build-up, access door and seals, service penetrations and any required ventilation. Confirm whether the polycarbonate-roofed yard sides are open or enclosed.	Applicant and installer, coordinated with DAA and architectural drawings
C05	Final duct diameter, route and outlet level; distance to windows and boundaries; eaves offset; unobstructed vertical discharge and rain-management detail; outlet velocity at design duty.	Extraction designer and measured survey, coordinated with planning/EHO
C06	Product-specific inspection and replacement intervals, responsible operator, maintenance log format and commissioning records. Confirm the acoustic verification approach.	Installer and operator, with DAA
C07	Revised plans, elevations, roof plan and sections; clear existing/proposed status; corrected equipment references; consistent dimensions; dated revision schedule and final document list.	Merve Tay Architecture and Design

Acoustic update brief

Ask DAA to retain and review the existing survey basis where appropriate, confirm whether additional measurements are necessary, and issue an addendum or revised report that addresses the selected installation. The request should include the latest drawings and photographs, the applicant's enclosure description and all six equipment documents.

The updated assessment should resolve the difference between the NIA attenuator specification and the supplied CP03 options, state whether the enclosure replaces or supplements the required fan jacket, and verify the fan sound inputs against the manufacturer selection and actual operating duty. The drawing and statement revisions should then incorporate the confirmed requirements.

Appendix C Supporting document register

The references below identify the evidence used for this revision. Original reports and product sheets should accompany the final technical submission as separate documents, with the selected models and revisions clearly identified. They are not reproduced within this statement.

Ref	Document or correspondence
P1	Planning officer correspondence supplied by the applicant's agent, including acceptance of the rear external enclosure and the revised development description.
E1	John Griffiths / Environmental Health correspondence on the five extraction stages, additional silencer and vertical discharge; referenced in the planning markup as the email of 25 August 2026.
N1	DAA Group, Noise Impact Assessment, Flame Grill 3-5 West Street, 6 January 2026, Issue 01, 21 pages. Application DC/25/1478. Relevant sections: 5.1-5.5 and Appendix B.
D1	Supplied drawings P-C01, P-C02 and P-C03, project 266. The supplied title blocks carry the date 12 August 2025 and require clear updated revision/issue information.
C1	Yasar Koksai, WhatsApp messages dated 8 September 2026 at 15:28: equipment enclosure with access door, plywood/felt roof and internal acoustic plasterboard; polycarbonate roof over remaining yard.
PH1	Rear-area photographs supplied in this correspondence, including the two WhatsApp images named 8 September 2026 at 15.16.37 and 15.16.44. Latest completion status requires confirmation.
M1	EQ511467 500 MaxFan, EIV 2009 Ltd / Flakt Woods selection, printed 22 March 2023, 5 pages. Full code 50-1 MaXfan2/16/4/5/42/36.
M2	av mounts.pdf, Flakt Woods spring and rubber mounting options, 1 page. No individual mounting selection identified.
M3	pleated prefilter.pdf, Airclean pleated panel filter data, 2 pages. Grade G4 to EN779.
M4	Sitesafe Carbon Filters.pdf, Purified Air Sitesafe PA240824 and bank data, 1 page.
M5	CP03-C-0500-Data.pdf, Acoustica 500 mm circular attenuator range, 2 pages. Multiple lengths, mounting patterns and pod options.
M6	ME - Electronic Single Phase - Woods UK.pdf, Woods ME electronic controller range, 3 pages.

Manufacturer and council references

W1 Woods Air Movement, MaXfan 2 product page. Identifies EQ511467 as the 500 MaXfan 2 two-stage axial fan.
<https://www.woodsairmovement.com/en-gb/products/product-overview/axial-fans/maxfan-2/>

W2 Airclean, Pleated Panel Filter product page. Distinguishes G4 to EN779 from the ISO 16890 classification.
<https://www.airclean.co.uk/panel-filters/pleated-panel-filters/>

W3 Planning Noise Advisory Document Sussex 2021, published by Horsham District Council, section 4.3.10. Addresses kitchen extraction noise assessment and attenuation details.
https://www.horsham.gov.uk/__data/assets/pdf_file/0004/67684/PNADS-FINAL-2021_09_01.pdf