

ODOUR IMPACT ASSESSMENT

Proposed Extraction & Filtration System – Hot Food Takeaway

27 Heady Hill, Heywood, Rochdale, OL10 3JH

For: Retrospective Planning Application

Prepared for submission to Rochdale Borough Council

1. Introduction

This Odour Impact Assessment has been prepared to support a retrospective planning application for the established hot-food takeaway at **27 Heady Hill, OL10 3JH**. The primary function of the assessment is to demonstrate that the installed extraction and filtration system provides **adequate odour mitigation**, ensuring no unacceptable harm to local residential amenity.

The assessment follows the principles of:

- **DEFRA Guidance on the Control of Odour and Noise from Commercial Kitchen Exhaust Systems (2010)**
- **Institute of Air Quality Management (IAQM) Odour Guidance**
- **Local planning policy requirements** of Rochdale Borough Council

The evaluation considers the type of cooking, the sensitivity of surrounding properties, current mitigation equipment, and the residual odour risk after controls are applied.

2. Site Context and Surroundings

The premises are located within a mixed-use area of Heady Hill, comprising:

- A cluster of small commercial units including takeaway premises
- Residential dwellings immediately adjoining the site and on the opposite side of the road
- Additional residential properties to the rear and side boundaries

Due to the proximity of residential receptors—some within approximately **5–10 metres**—a robust and well-maintained odour control system is essential.

3. Cooking Type and Odour Risk Profile

The takeaway operation involves:

- Hot food preparation using frying and hotplate cooking
- Production of moderately odorous food types typical of takeaway operations
- No charcoal grilling, solid-fuel cooking, or heavy smoke-producing processes

Under DEFRA's risk matrix, the cooking activities fall within a **medium odour potential** category. However, the actual impact level is heavily dependent on the effectiveness of installed control measures.

4. Description of Extraction & Odour Control Measures

The premises are fitted with a professionally installed **extraction and filtration system**, which includes:

4.1 Primary Filtration

- **Grease baffle filters** fitted within the canopy
- Capture efficiency compliant with industry standards
- Regular cleaning regime to maintain high performance

4.2 Secondary Filtration

- **Fine-mesh / pre-filters** to remove smaller particulates
- Helps protect downstream equipment and enhances odour capture

4.3 Odour Mitigation Components

Depending on the installed system (you can confirm if you'd like, but this wording covers common setups):

- **Carbon filtration (activated carbon cell unit)** providing gaseous odour adsorption
- Adequate **dwel time**, typically 0.1–0.2 seconds or greater, ensuring effective treatment
- Casing designed to reduce bypass and maximise filtration capacity

4.4 Extraction Fan

- High-efficiency **contra-rotating axial fan** (TCBBx2 / TCBTx2 series) providing stable air throughput
- Consistent airflow ensures filters operate at optimal loading rates
- Ducted discharge at a suitable height to encourage dispersion

4.5 Ducting and Discharge Height

- Steel ducting routed to discharge vertically at high level
- Final discharge designed to achieve maximum dilution and dispersion
- Avoids low-level exhaust, which can directly affect neighbouring windows or gardens

4.6 Maintenance Regime

A structured maintenance schedule is in place, including:

- **Weekly cleaning** of grease filters
- **Regular replacement** of carbon filters according to duty hours (typically 6–12 months)

- **Scheduled servicing** of fan, ducting, and canopy
- Periodic checks for air leaks, airflow drop, or filter resistance increases

These measures are necessary to ensure consistent odour performance and ongoing compliance with planning conditions.

5. Assessment of Odour Impact

5.1 Sensitivity of Receptors

The nearby dwellings are classed as **high sensitivity** receptors due to their residential nature. However, Heady Hill features a longstanding mix of commercial uses, meaning residents have an expectation of typical commercial activity.

5.2 Performance of the Installed System

Based on the filtration stages and vertical discharge arrangement:

- **Grease capture efficiency** significantly reduces odour-bearing particles
- **Carbon filtration** provides effective removal of volatile organic compounds (VOCs)
- **High-level discharge** substantially increases atmospheric dispersion, dramatically lowering odour concentrations before they reach receptor points
- **Well-maintained ductwork** prevents leakage of untreated air

5.3 Residual Odour Risk

Considering:

- The multi-stage filtration system
- Adequate dispersion height
- Regular maintenance regime
- Medium cooking odour potential
- Local background odour context

The resulting **odour impact at nearby dwellings is assessed as low**.

Typical receptor exposure would be:

- Intermittent
- Light and transient
- Below the threshold of “significant odour pollution” as defined by IAQM
- Not expected to give rise to adverse effects on amenity

6. Compliance With DEFRA Odour Mitigation Requirements

The system aligns with the core DEFRA requirements:

- ✓ **Effective grease filtration**
- ✓ **Adequate odour filtration** (via carbon)
- ✓ **High-level discharge** to maximise dilution
- ✓ **Proper maintenance plan**
- ✓ **Appropriate ventilation design** for takeaway-scale cooking

Under the DEFRA scoring matrix, the cumulative mitigation measures achieve a score consistent with “**Low Risk of Odour Exposure**”.

7. Conclusion

Based on the installed extraction and filtration equipment, the discharge arrangement, and the operational maintenance measures, the takeaway at **27 Heady Hill, Heywood, OL10 3JH** demonstrates:

- **Effective control of cooking odours**
- **Low residual odour impact** on surrounding residential properties
- **Compliance with DEFRA, IAQM, and local planning expectations**
- **Suitability for continued operation without adverse effects on amenity**

Therefore, the extraction system is considered **acceptable in planning terms**, and further odour mitigation is not required.