



Odour Assessment for Proposed Hot Food Takeaway at The Village Chippy, 37 Bloom Street, Manchester, M1 3LY.

Prepared for:

The Village Chippy Manchester Ltd
37 Bloom Street
Manchester
M1 3LY.

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1. Introduction

- 1.1. Martin Environmental Solutions has been commissioned to undertake an odour assessment to support a planning application for the change of use of 37 Bloom Street, Manchester, M1 3LY, into a hot-food takeaway (Fish and Chip shop).

Site Location and Context

- 1.2. The development site is a mid-terrace two storey property with additional basement level situated in the centre of Manchester. The proposed development is located on the ground floor. Additional commercial properties are located above and below the site and along the full terrace block. To the west is an open-air car park and the east a mixture of residential and commercial uses. A new residential block has been constructed immediately behind the site.
- 1.3. An aerial Photograph is enclosed in Figure 1.
- 1.4. Concerns have been raised over the potential impact from odour associated with the extraction system to be fitted as part of the development and its impact on existing and future residential receptors.



2. Policy and Guidance

- 2.1. The Government sets out its policy in relation to planning in the National Planning Policy Framework (NPPF). The NPPF states that planning policies and decisions should “preventing new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability”; and “In preparing plans to meet development needs, the aim should be to minimise pollution and other adverse effects on the local and natural environment”.
- 2.2. While Odour is not specifically mentioned in is implied by the above and the Planning Practice Guidance (PPG) note issued by the government on Air Quality states “odour and dust can also be a planning concern, for example, because of the effects on local amenity” it continues to state, “mitigation options where necessary, will depend on the proposed development and should be proportionate to the likely impact”.
- 2.3. Before an odour can be present an adverse effect, there must be exposure to the odour and therefore a source, a pathway, and a receptor without these three links no exposure can occur. In the case of this application the source is the take-away. The pathway is the air, and the receptor are the occupants of the nearby existing dwellings.
- 2.4. In assessing the impact of odour on or from a development the scale of the exposure and therefore impact is determined by the parameters collectively known as the FIDO factors (Frequency, Intensity, Duration and Offensiveness) In addition the sensitivity of the receptor (location) will determine the magnitude of the exposure. Factors that influence the magnitude of a commercial odour problem include the size/volume of the cooking facility, the type of food being prepared, and the type of cooking appliances being used.
- 2.5. Furthermore, updated guidance on assessing the impact of extraction systems from commercial kitchens has been published by EMAQ ‘*Control of Odour and Nose from Commercial Kitchen Extraction Systems*’. This is a revision of the 2005 guidance document ‘*Control of Odour and Nose from Commercial Kitchen Extraction Systems*’ produced by NETCEN and DEFRA which has been withdrawn.



- 2.6. This document details a methodology which should be followed to assess the potential impact from commercial kitchen extraction systems on nearby land uses and how to identify suitable control and mitigation measures as required.

3. The Assessment

Site Context

- 3.1 The proposed extraction system is located toward the rear of the development and will terminate above the eaves of the building. The nearest residential property being to the rear 3m away.
- 3.2 Several existing extraction systems are located along the terrace row, each emitting cooking odours. The development is small in size, serving low numbers of guests each day.
- 3.3 Prevailing wind direction for the area, obtained from Manchester Airport, weather stations, Appendix A, is westerly, south-westerly. This would carry any odours away from the nearest residential properties.
- 3.4 It should be noted that the new residential development to the rear has been designed with closed windows and an alternative ventilation system. This system detailed within the planning application, consists of a Mechanic ventilation System drawing fresh air in and emitting stale air at a ground floor level. Odour release at a higher level appropriately controlled to prevent downdraught will therefore not significantly impact on this site.
- 3.5 The EMAQ document identifies a number of control measures to avoid odour emissions from commercial kitchens becoming a problem. The document lists the various control measures available and identifies minimum standards to ensure odour emissions will not create a problem to neighbouring land uses. 'Appendix 3' of the document identifies a risk assessment to assess the impact and control measures required, and this will be used as the basis of this assessment.



3.6 The following are included within the extraction design:

- The extraction system will terminate 1m above the eaves of the building. The system will be fitted with a jet cowl, with a velocity above 10m/s, in line with the guidance a score of 10 is applied.
- The nearest residential receptor is located within 20m away, as such a score of 10 is applied.
- The business has identified as "small", and therefore score 1 has been applied.
- The odour characteristics from the venue are considered to be very high, in line with the guidance document a scoring of 10 is applied.

3.7 Based on the above parameters the risk assessment has been conducted, see Appendix B, and has identified a score of 31 a very high potential odour impact risk exists.

3.8 In order to mitigate against this potential impact and to ensure no adverse impact, in line with the guidance, the following measures are recommended as part of the extraction system.

- Prefilters (baffle filters) attached to the extraction hood, reducing grease loading by 65-80%
- Secondary grease filter in the extraction hood to remove additional grease from the air.
- To remove odour from the extracted air an ozone system is recommended to remove odour. The ozone system can be installed outside the extraction unit with a piped connection into the flue at an appropriate concentration to ensure sufficient residence time.

3.9 The system will need to be maintained and cleaned in line with the manufacturer's instructions and a separate cleaning schedule will be produced and maintained once the chosen unit has been installed.

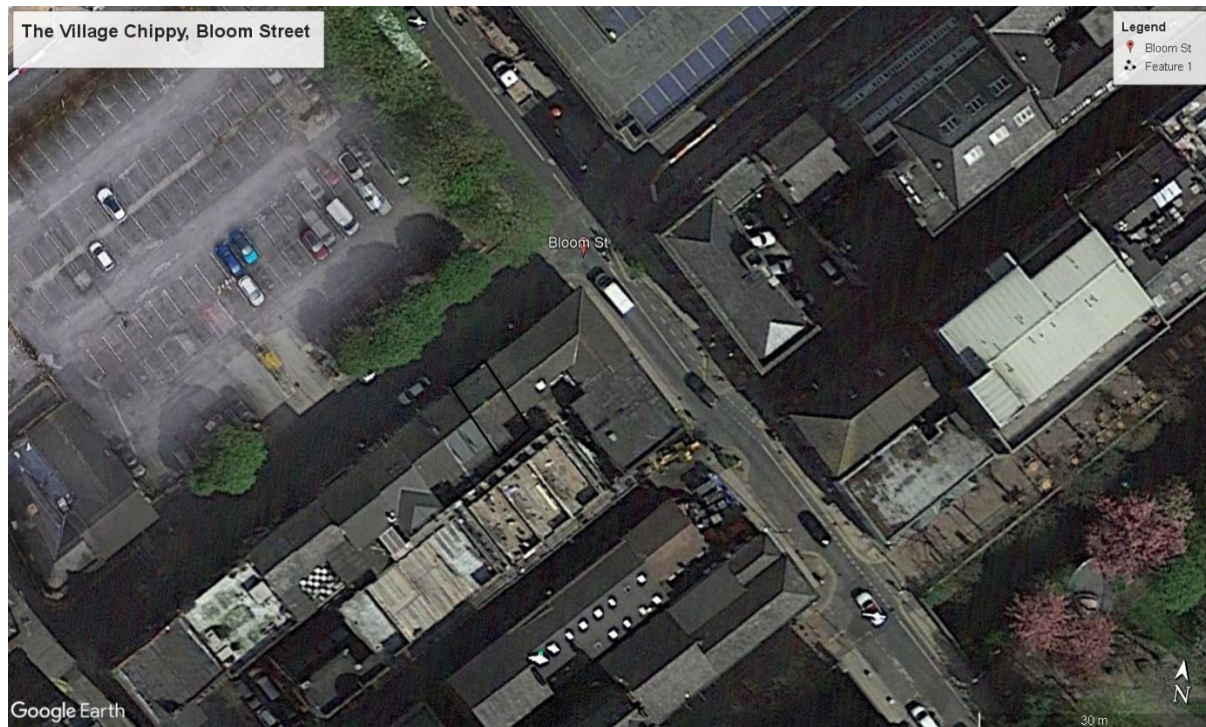
The installation of the above mitigation measures will ensure suitable removal of grease and odour from the extraction system. The height of the flue and use of an accelerator jet cowl will further



4 Conclusion

- 4.1 An odour assessment has been undertaken in line with the EMAQ/CIEH “Control of Odour and Noise from Commercial Kitchen Exhaust Systems”. This has identified a high potential for odour to impact on nearby residents and as such mitigation measures have been identified in the form of grease removal and odour treatment within the extraction system in addition to a suitably design extraction flue to ensure emissions are directed away from surrounding properties (i.e. vertical)
- 4.2 The inclusion of the above mitigation measures will ensure that the development will not result in any adverse impact on surrounding properties and as such will meet the objectives of the National Planning Policy Framework in ensuring that no significant adverse impact is experienced by the future residents. The development is therefore considered to be acceptable in terms of odour.

Figure 1 – Aerial Photograph

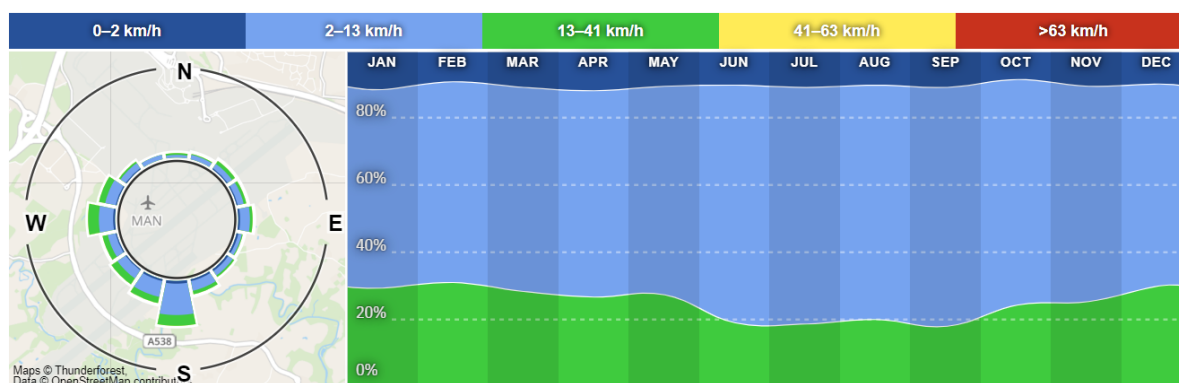


Appendix A – Prevailing Wind Direction

Monthly wind speed statistics and directions for Manchester Airport

Dominant wind direction	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	SW	SW	SW	W	WSW	WSW	WSW	WSW	SW	SSW	SSW	SSW

Monthly wind direction and strength distribution





Appendix B – Odour Assessment

Impact Risk	Odour Control Requirement	Significance Score*
Low to Medium	Low level odour control	Less than 20
High	High level odour control	20 to 35
Very high	Very high level odour control	more than 35

Criteria	Score	Score	Details
Dispersion	Moderate	10	Discharging 1m above the eaves
Proximity to Receptors	Medium	10	Closest sensitive receptor 3m from kitchen discharge
Size of Kitchen	Small	1	
Cooking type	V.High	10	Fast food
Total		31	