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B&S FAMILY FOOD LTD

KITCHEN ODOUR ASSESSMENT

1A SPINNERS WAY, MANCHESTER, M15 4UY

Client: B&S Family Food Ltd

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1 INTRODUCTION

1.1 Introduction to Assessment

1.1.1 NoiseAir Limited was commissioned to undertake a Kitchen Odour Assessment (KOA) in support of a planning application for a Proposed Development at 1A Spinners Way, M15 4UY, herein referred to as 'the Site'.

1.1.2 It is understood that planning permission has been granted by Manchester City Council (MCC) for the Proposed Development under application reference 144245/FO/2025, subject to a number of planning conditions. In addition, the Site benefits from an extant planning permission under reference 120724/JO/2018, which also contains conditions relating to odour control.

1.1.3 Condition 4 of permission 144245/FO/2025 and Condition 15 of permission 120724/JO/2018 require the submission and approval of a scheme for the extraction and control of fumes, vapours, and odours prior to the commencement of the approved A3/A4 use.

1.1.4 Condition 15 of permission 120724/JO/2018 states:

> *"Before any A3 or A4 use hereby approved commences, a scheme for the extraction of any fumes, vapours and odours from the A3 or A4 premises hereby approved shall be submitted to, and approved in writing by, the City Council as local planning authority. The approved scheme shall be implemented prior to occupancy and shall remain operational thereafter.*
>
> *Reason - In the interests of the amenities of the occupiers nearby properties in order to comply with Policy DM1 of the Core Strategy for the City of Manchester."*

1.1.5 Condition 4 of permission 144245/FO/2025 states:

> *"4) a) Prior to first use of the development hereby approved, a scheme for the extraction of any fumes, vapours and odours from the premises shall be submitted to and approved in writing by the Local Planning Authority. The approved scheme shall be implemented before the use commences and shall remain operational thereafter.*
>
> *b) Prior to use of the extraction system hereby approved, confirmation shall be submitted for the approval of the local planning authority that the approved scheme has been implemented.*

c) In the event of non-conformity with the approved scheme, any required measures/changes and verification shall continue until conformity has been achieved and agreed in writing by the Local Planning Authority, before the use can commence.

Reason - In order to ensure the efficient dispersal of cooking odours from the premises in the interests of the amenity of neighbouring occupiers and to ensure that any ventilation flues/ducting can be accommodated without detriment to character and appearance of the host building and the surrounding area in accordance with policies SP1 and DM1 of the Core Strategy and the National Planning Policy Framework."

1.1.6 The Proposed Development has the potential to cause odour impacts because of emissions from cooking processes occurring within the kitchen. As such, a KOA was undertaken in order to evaluate potential effects as a result of the proposals and identify the necessary mitigation measures to prevent adverse impacts.

1.1.7 General limitations of this report are outlined in **Appendix A**.

1.2 Site Location and Context

1.2.1 The Site is located at approximate National Grid Reference: 382846, 397249. **Figure 1** shows the location of the Site.

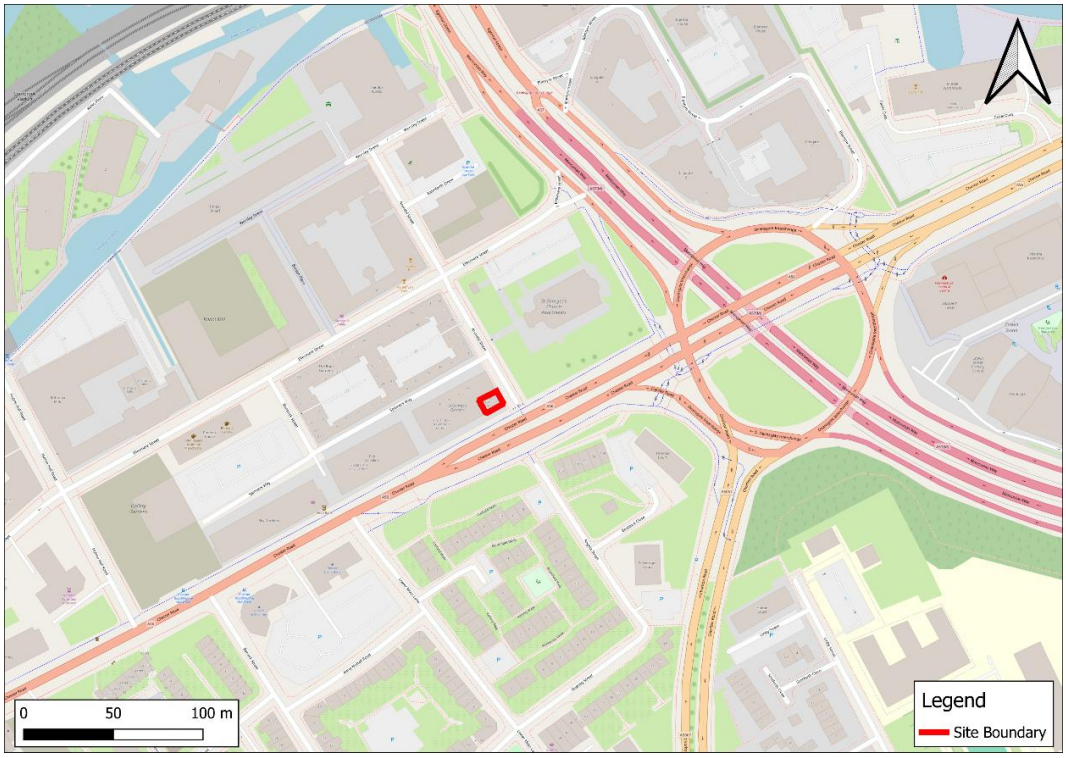


Figure 1: Site Location

1.2.2 The Site is situated in a well populated area on the edge of Manchester city centre. As such, sensitive receptors are present within 20 m of the Site.

1.2.3 The Client has confirmed that that the restaurant/café will primarily serve Chinese breakfast and fast food, including noodles, steamed bao buns, rice porridge, and coffee.

1.2.4 The kitchen will have a maximum food service capacity of 100 covers per day.

1.2.5 The Client proposes to install LONGAR Type 2 HE75 High Performance 75% Grease Efficiency Baffle Filters on the extract system. In addition, an OC Innovations OC3 unit is proposed, which uses ozone-based oxidation to treat kitchen exhaust air by chemically converting odorous compounds into carbon dioxide and water vapour, with ozone decomposing back into oxygen.

1.2.6 Kitchen exhaust air will be terminated at grilles located on the eastern façade of the building. The exit velocity of the discharged air has not been confirmed at this stage; therefore, for the purposes of this assessment, a conservative exit velocity of less than 10 m/s has been assumed.

1.2.7 Based on the findings of the KOA, additional odour abatement measures specific to the Proposed Development may be required and will be recommended within the report.

2 ODOUR BACKGROUND

2.1 Odour Definition

2.1.1 The Institute of Air Quality Management (IAQM) guidance[1] defines odour as:

> *"[…] the human olfactory response (perception followed by psychological appraisal) to one, or more often a complex mixture of, chemical species in the air."*

2.1.2 The stated definition is considered to be relevant in the context of this assessment.

2.2 Odour Impacts

2.2.1 The magnitude of odour impacts depends on a number of factors and the potential for complaints varies due to the subjective nature of odour perception. The **FIDOL** acronym is a useful reminder of the factors that will determine the degree of odour pollution. These are described by the IAQM as follows:

- **F**requency - how often an individual is exposed to odour;
- **I**ntensity - the individual's perception of the strength of odour;
- **D**uration - The overall duration that individuals are exposed to an odour over time;
- **O**dour unpleasantness - Odour unpleasantness describes the character of an odour as it relates to the 'hedonic tone' (which may be pleasant, neutral or unpleasant) at a given odour concentration/intensity. This can be measured in the laboratory as the hedonic tone, and when measured by the standard method and expressed on a standard nine-point scale it is termed the hedonic score; and,
- **L**ocation - the type of land use and nature of human activities in the vicinity of an odour source. Tolerance and expectation of the receptor. The 'Location' factor can be considered to encompass the receptor characteristics, receptor sensitivity, and socio-economic factors.

2.2.2 It is important to note that even infrequent emissions may cause loss of amenity if odours are perceived to be particularly intense or offensive.

2.2.3 The **FIDOL** factors can be further considered to provide the following issues in regard to the potential for an odour emission to cause a nuisance:

- The rate of emission of the compound(s);
- The duration and frequency of emissions;

[1] Guidance on the Assessment of Odour for Planning v1.1, IAQM, 2018.

- The time of the day that this emission occurs;
- The prevailing meteorology;
- The sensitivity of receptors to the emission i.e. whether the odorous compound is more likely to cause nuisance, such as the sick or elderly, who may be more sensitive;
- The odour detection capacity of individuals to the various compound(s); and
- The individual perception of the odour (i.e. whether the odour is regarded as unpleasant). This is greatly subjective and may vary significantly from individual to individual. For example, some individuals may consider some odours as pleasant, such as petrol, paint and creosote.

2.3 Legislative Control

2.3.1 The main requirement with respect to odour control from premises not controlled under the Environmental Permitting (England and Wales) Regulations (2016) and subsequent amendments are provided in Section 79 of Part III of the Environmental Protection Act (1990). The Act defines nuisance as:

> *"Any dust, steam, smell or other effluvia arising on industrial, trade or business premises and being prejudicial to health or a nuisance."*

2.3.2 Enforcement of the Act, in regard to nuisance, is currently under the jurisdiction of the local Environmental Health Department, whose officers are deemed to provide an independent evaluation of nuisance. If the Local Authority is satisfied that a statutory nuisance exists, or is likely to occur or happen again, it must serve an Abatement Notice under Part III of the Environmental Protection Act (1990). The only defence is to show that the process to which the nuisance has been attributed and its operation are being controlled according to best practicable means.

2.3.3 The legislative controls described above were considered as necessary throughout the undertaking of the assessment.

2.4 National Planning Policy Framework

2.4.1 The revised National Planning Policy Framework[2] was published in December 2024 (amended on 7 February 2025) and sets out the Government's Planning policies for England and how these are expected to be applied.

[2] Ministry of Housing, Communities and Local Government. 2024.

2.4.2 The purpose of the planning system is to contribute to the achievement of sustainable development. In order to ensure this, the NPPF recognises three overarching objectives included the following of relevance to odour:

> *" c) An environmental objective - to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy."*

2.4.3 Chapter 12 of the NPPF details objectives in relation to achieving well-designed place. It states that:

> *"Planning policies and decisions should ensure that developments:[…]*
>
> *f) create places that are safe, inclusive and accessible and which promote health and well-being, with a high standard of amenity for existing and future users; and where crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesions and resilience […]"*

2.4.4 The implications of the NPPF have been considered throughout this assessment.

3 METHODOLOGY

3.1 Introduction

3.1.1 The Proposed Development has the potential to cause odour impacts as a result of emissions from cooking processes. An assessment has therefore been undertaken in accordance with the guidance document 'Control of Odour and Noise from Commercial Kitchen Exhaust Systems' prepared by EMAQ+ for Department for Environment, Food and Rural Affairs (DEFRA)[3]. This document provides an update to the 2005 guidance[4] produced by DEFRA.

3.2 Assessment Methodology

3.2.1 The EMAQ+ and DEFRA methodology provides an approach for identifying the risk of odour impact associated with food preparation premises and defining an appropriate level of mitigation to control potential effects to an acceptable level.

3.2.2 The first stage in the process is to score the premises in accordance with the criteria outlined in **Table 1**.

Table 1: Risk Scoring Criteria

Criteria	Score	Score	Details
Dispersion	Very poor	20	Low level discharge, discharge into courtyard or restriction on stack.
	Poor	15	Not low level but below eaves, or discharge at below 10m/s.
	Moderate	10	Discharging 1m above eaves at 10 - 15m/s.
	Good	5	Discharging 1m above ridge at 15m/s.
Proximity of receptors	Close	10	Closest sensitive receptor less than 20m from kitchen discharge.
	Medium	5	Closest sensitive receptor between 20 and 100m from kitchen discharge.
	Far	1	Closest sensitive receptor more than 100m from kitchen discharge.
Size of kitchen	Large	5	More than 100 covers or large sized takeaway.
	Medium	3	Between 30 and 100 covers or medium sized takeaway.
	Small	1	Less than 30 covers or small take away.
Cooking type (odour and grease loading)	Very High	10	Pub (high level of fried food), fried chicken, burgers or fish & chips, Turkish, Middle Eastern or any premises cooking with solid fuel.
	High	7	Vietnamese, Thai, Indian, Japanese, Chinese or steakhouse.

[3] Control of Odour and Noise from Commercial Kitchen Exhaust Systems, EMAQ+, 2018.
[4] Guidance on the Control of Odour and Noise from Commercial Kitchen Exhaust Systems, DEFRA, 2005.

Table 1: Risk Scoring Criteria			
Criteria	**Score**	**Score**	**Details**
	Medium	4	Cantonese, Italian, French, Pizza (gas fired).
	Low	1	Most pubs (no fried food, mainly reheating and sandwiches etc) or Tea rooms.

3.2.3 The score obtained using the values shown in **Table 1** is subsequently used to define the associated risk and odour control requirement. The relevant criteria are summarised in **Table 2**.

Table 2: Odour Control Requirement		
Significance Score	**Impact Risk**	**Odour Control Requirement**
Less than 20	Low to Medium	Low level odour control
20 to 35	High	High level odour control
More than 35	Very high	Very high level odour control

3.2.4 A suitable odour control system can then be identified from the techniques summarised in the EMAQ+ and DEFRA guidance.

4 ASSESSMENT

4.1 Odour Risk

4.1.1 The odour risk associated with the Proposed Development was rated in accordance with the EMAQ+ and DEFRA methodology.

Dispersion;

4.1.2 Emissions will be discharged from grilles located on the eastern façade, at low level (as the Proposed Development is situated on the ground floor of a high-rise apartment building). The exit velocity has not been confirmed at this stage, however, is predicted to be <10 m/s for the purposes of the KOA. Therefore, based on the information in **Table 1**, the risk rating for dispersion would be described as **Very Poor**.

Proximity of receptors;

4.1.3 The Site is on the edge of Manchester city centre, at the bottom of a block of apartments, with sensitive receptors located within 20 m of the Site/kitchen discharge locations. Therefore, based on the information in **Table 1**, the risk rating for proximity of receptors would be described as **Close**.

Size of kitchen;

4.1.4 The kitchen will have a maximum food service of 100 covers per day, on a typical day. Based on the information in **Table 1**, the risk rating for the size of the kitchen would be described as **Medium**.

Cooking type (odour-grease loading);

4.1.5 It has been confirmed that the restaurant/café will primarily serve Chinese breakfast and fast food, including noodles, steamed bao buns, rice porridge, and coffee. As the café focuses on breakfast dishes, minimal oil is expected to be used in food preparation. Based on the information in **Table 1**, the risk rating for the cooking type would be described as **Medium**.

4.1.6 The results are summarised in **Table 3**.

Table 3: Odour Risk

Criteria	Score	Score	Notes
Dispersion	Very Poor	20	Low level discharge, discharge into courtyard or restriction on stack.
Proximity of receptors	Close	10	Closest sensitive receptor within 20m of kitchen discharge.

Table 3: Odour Risk			
Criteria	**Score**	**Score**	**Notes**
Size of kitchen	Medium	5	Up to 100 covers per day.
Cooking type (odour and grease loading)	Medium	4	Cantonese, Italian, French, Pizza (gas fired)*.
**Due to the primary use as a breakfast café, this classification is deemed the most appropriate*			

4.1.7 As shown in **Table 3**, the odour risk from the kitchen is scored as **39**. The risk is therefore classified as **Very High**, in accordance with the EMAQ+ and DEFRA criteria.

4.2 Odour Control

4.2.1 The Client proposes to install LONGAR Type 2 HE75 High Performance 75% Grease Efficiency Baffle Filters on the extract system. In addition, an OC Innovations OC3 unit is proposed, which uses ozone-based oxidation to treat kitchen exhaust air by chemically converting odorous compounds into carbon dioxide and water vapour, with ozone decomposing back into oxygen.

4.2.2 Based on the assessment results, the proposed kitchen requires mitigation suitable for a **Very High** level of odour control.

4.2.3 In accordance with the EMAQ+ and DEFRA guidance, a **Very High** level of odour control may include:

1. Fine filtration or ESP followed by carbon filtration (carbon filters rated with 0.4 – 0.8 second residence time);
2. Fine filtration or ESP followed by carbon filtration and by counteractant/neutralising system to system to achieve the same level of control as 1; or
3. Fine filtration or ESP followed by UV ozone system to achieve the same level of control as 1.

4.2.4 In line with the guidance, odour control measures such as those proposed above, or alternative measures providing an equivalent level of odour control, should be employed to reduce any odour impact to an acceptable level at the nearest sensitive receptor locations.

4.2.5 It is recommended to routinely maintain and clean the extraction system in order to minimise the potential for any odour related complaints. If fitted, it is also recommended to regularly replace the carbon filters.

4.2.6 If the OC Innovations OC3 unit is implemented, fine filtration or ESP should be undertaken first, in line with the EMAQ+ and DEFRA guidance.

4.2.7 Based on the findings of the assessment, it is considered that potential odour impacts at nearby sensitive receptors would be at an acceptable level, provided that the installed system delivers the level of performance equivalent to the recommended **Very High** level of odour control within the guidance.

5 CONCLUSION

5.1.1 NoiseAir Limited was commissioned to undertake a KOA in support of a Proposed Development at 1A Spinners Way, M15 4UY.

5.1.2 The Proposed Development has the potential to cause odour impacts due to emissions from cooking processes within the kitchen. Planning conditions from both the 2025 permission (Ref: 144245/FO/2025, Condition 4) and the extant 2018 permission (Ref: 120724/JO/2018, Condition 15) specifically address this issue. To discharge these conditions, a KOA was undertaken to evaluate the potential effects of the proposals and to identify appropriate mitigation measures to prevent adverse impacts.

5.1.3 The results of the assessment indicated the odour risk was classified as Very High. This prediction outlines that the Proposed Development could result in significant odour impact at nearby sensitive receptors or affect local amenity levels in the absence of mitigation. It also suggests that appropriate mitigation options are required to reduce potential effects to an acceptable level.

5.1.4 The specified and recommended odour abatement strategy for the Site, described in paragraph 4.2.2, is considered appropriate for the nature of the Proposed Development and is consistent with the requirements of the EMAQ+ and DEFRA guidance for kitchens with a **Very High** risk of impact.

5.1.5 Based on the findings of the assessment, it is considered that odour emissions should not represent a constraint to planning consent for the Proposed Development, as long as **Very High** level odour control as outlined in the EMAQ+ and DEFRA guidance is employed at the Site.

APPENDIX A – REPORT LIMITATIONS

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