Odour Assessment

Thaikhun, Spinningfields, Manchester

Client: Thai Leisure Group

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Report Issue

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Executive Summary

Redmore Environmental Ltd was commissioned by Thai Leisure Group to undertake an Odour Assessment in support of a planning application for the extension of the existing Thaikhun restaurant, The Avenue, Spinningfields, Manchester, M3 3HF, which will include a new quick serve restaurant for takeaway orders and other associated works.

Odour emissions from the proposed new quick serve restaurant, have the potential to cause impacts at sensitive locations in the vicinity of the site. As such, an Odour Assessment was undertaken in order to evaluate potential effects and identify the requirement for any additional mitigation measures to prevent adverse impacts.

An assessment using the standard industry methodology was undertaken to identify the odour risk associated with the proposals. This was based on a number of site-specific inputs.

The results of the assessment indicated the odour risk was classified as **low**. This is as a result of there being no food preparation or cooking being undertaken within the new Quick Service Restaurant as the kitchen area will be used solely for take-away order finishing.

It is recommended that the order/ collection hatch be closed when not in use to minimise odour emission from this potential source. It is considered that the existing restaurant kitchen mitigation is acceptable and that proposals would not increase odour risk.

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1.0 INTRODUCTION

1.1 Background

1.1.1 Redmore Environmental Ltd was commissioned by Thai Leisure Group to undertake an Odour Assessment in support of the extension of the existing Thaikhun restaurant on land off The Avenue, Spinningfields, Manchester, M3 3HF, which will include a new small commercial finishing kitchen for takeaway orders and other associated works.

1.2 Site Location and Context

1.2.1 The proposed development is located on The Avenue, Spinningfields, Manchester, M3 3HF, at approximate National Grid Reference (NGR): 383445, 398175. Reference should be made to Figure 1 for a map of the site and surrounding area.

1.2.2 The proposed refurbishment is to allow an increase in footfall. This will include:

- New small commercial finishing kitchen for takeaway orders (known as a Quick Service Restaurant (QSR)). This is a finishing kitchen, and no cooking will be undertaken in this area;
- New hatch installed between existing kitchen and new QSR kitchen; and,
- The existing main front door will be removed and a new primary front door.

1.2.3 The new QSR kitchen will be located to the north of the development boundary. The menu, which is cooked solely in the existing restaurant kitchen, comprises authentic Bangkok-style street food. Cooking methods include the use of cooking ranges. No solid fuel is used on the premises.

1.2.4 The new QSR includes a small commercial finishing kitchen. This area will be used to serve take-away orders only. No food will be cooked in this area and there is no new kitchen extraction or cooking equipment proposed.

1.2.5 Emissions from the QSR have the potential to cause odour impacts at sensitive locations in the vicinity of the site. An Odour Assessment has therefore been undertaken in order to evaluate potential effects and identify the requirement for any additional mitigation to control impacts to an acceptable level. The findings are detailed in the following report.

1.2.6 It should be noted that emissions associated with food preparation and cooking activities linked with the existing restaurant are already present and the relevant mitigation is in place within this existing kitchen. As such, these emissions have not been considered further within this assessment.

2.0 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 impact 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[2] as follows:

- **F**requency - how often an individual is exposed to odour;
- **I**ntensity - the individual's perception of the strength of the 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.

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

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

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 in relation to the following and the potential for an odour emission to cause loss of amenity, annoyance or nuisance:

- The rate of emission of the compound(s);
- The duration and frequency of emissions;
- 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 an impact, 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, such as restaurants, is that 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

2.4.1 The revised National Planning Policy Framework[3] (NPPF) was published in December 2024 and amended in February 2025. The document sets out the Government's planning policies for England and how these are expected to be applied.

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 including 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] NPPF, Ministry of Housing, Communities and Local Government, 2024.

2.5 Regional Planning Policy

2.5.1 The Greater Manchester Combined Authority (GMCA) 'Places for Everyone (PfE) Joint Development Plan Document'[4] was adopted by MCC and became part of the development plan on 21st March 2024. Review of the PfE Joint Development Plan Document was undertaken and no policies of relevance to the assessment were identified.

2.6 Local Planning Policy

2.6.1 The Manchester Local Plan consists of a series of planning documents of which the Core Strategy Development Plan Document (DPD)[5] is central. This was adopted by MCC on 11th July 2012.

2.6.2 Review of the Core Strategy DPD indicated the following policies of relevance to the assessment:

> "Pollution DM1 - Development Management
>
> All development should have regard to the following specific issues for which more detailed guidance may be given within a supplementary planning document:
>
> […]
>
> - Effects on amenity, including privacy, light, noise, vibration, air quality, odours, litter, vermin, birds, road safety and traffic generation […]"

2.6.3 The above policy was taken into consideration throughout the undertaking of the assessment.

4 Places for Everyone Joint Development Plan Document, GMCA, 2024.

5 Core Strategy DPD, MCC, 2012.

3.0 METHODOLOGY

3.1 Introduction

3.1.1 The proposals have the potential to cause odour impacts as a result of emissions from cooking processes. An assessment has therefore been undertaken in accordance with guidance document 'Control of Odour and Noise from Commercial Kitchen Exhaust Systems' prepared by EMAQ+ for the Department for Environmental, Food and Rural Affairs (DEFRA)[6]. This document provides an update to the 2005 guidance[7] produced by DEFRA.

3.1.2 The relevant process is summarised in the following Sections.

3.2 EMAQ+ and DEFRA 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 proposed 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

6 Control of Odour and Noise from Commercial Kitchen Exhaust Systems, EMAQ+, 2022.

7 Guidance on the Control of Odour and Noise from Commercial Kitchen Exhaust Systems, DEFRA, 2005.

Criteria	Score	Score	Details
	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
	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[8].

[8] Control of Odour and Noise from Commercial Kitchen Exhaust Systems, EMAQ+, 2022.

4.0 ASSESSMENT

4.1 EMAQ+ and DEFRA Risk Assessment

4.1.1 The odour risk associated with the proposals was rated in accordance with the EMAQ+ and DEFRA methodology[9]. The results are summarised in Table 3.

Table 3 Odour Risk

Criteria	Score	Score	Notes
Dispersion	-	-	The QSR will be used solely as a finishing kitchen and will not include any new kitchen extract or cooking equipment. All food preparation and cooking will continue to be undertaken in the existing kitchen The only potential odour emission source would be via the ordering/ collection hatch at the front of the restaurant
Proximity of receptors	Close	10	The closest sensitive receptors are located within 20m of the proposed QSR. These include commercial units and residential receptors on The Avenue
Size of kitchen	Medium	3	The number of additional covers proposed is 46, including the additional seating at the bar
Cooking type (odour and grease loading)	Low	1	The cuisine type for the restaurant is authentic Bangkok-style street food. However, the QSR will not be used for food preparation or cooking and is to serve take-away orders only

4.1.2 As shown in Table 3, the odour risk for the proposed development was scored as 14. The risk was therefore classified as **low**, in accordance with the EMAQ+ and DEFRA criteria.

4.2 Odour Control

4.2.1 Based on the assessment results, the development requires mitigation suitable for a **low** level of odour risk. However, the QSR will not include a new kitchen extract or cooking equipment and will be used for finishing take-away orders, via the new ordering/

[9] Control of Odour and Noise from Commercial Kitchen Exhaust Systems, EMAQ+, 2022.

collection hatch. As such, it is recommended that the ordering/ collection hatch at the front of the proposed QSR be closed when not in use to minimise odour dispersion.

4.2.2 The existing kitchen operates with suitable odour mitigation in place, including grease and odour filters. This is regularly maintained[10]. It is considered that this existing arrangement is acceptable and that the addition of the QSR would not increase odour risk.

10 Post Cleaning & Access Report of Kitchen Extraction Ductwork System, Bay Cleaning Solutions, 2025.

5.0 CONCLUSION

5.1.1 Redmore Environmental Ltd was commissioned by Thai Leisure Group to undertake an Odour Assessment in support of the new QSR at the existing Thaikhun restaurant on land off The Avenue, Spinningfields, Manchester, M3 3HF, which will include a new small commercial finishing kitchen for takeaway orders and other associated works.

5.1.2 Odour emissions from the proposed QSR have the potential to cause impacts at sensitive locations in the vicinity of the site. As such, an Odour Assessment was undertaken in order to evaluate potential effects and identify the requirement for any additional mitigation to control emissions to an acceptable level.

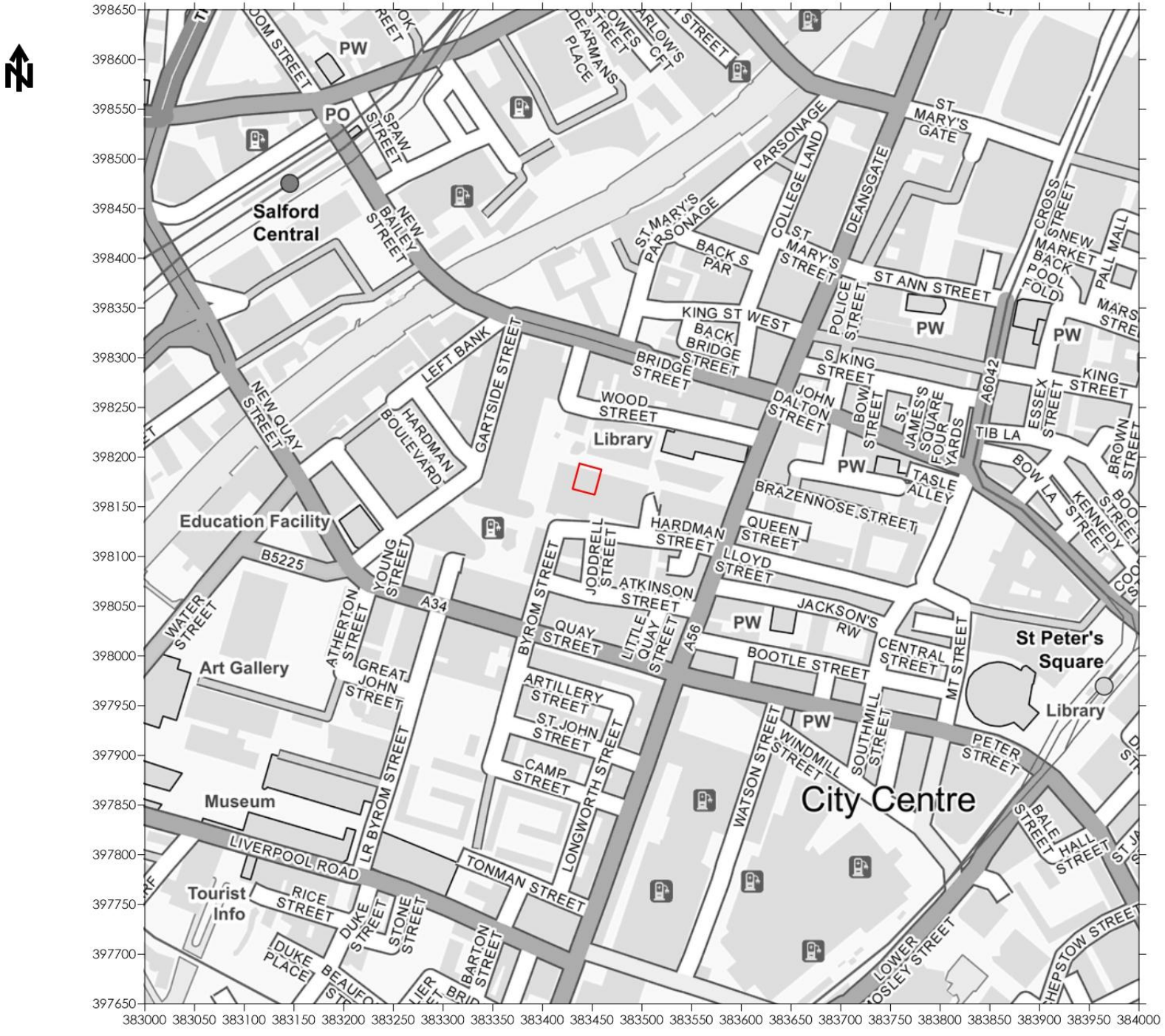
5.1.3 The results of the assessment indicated the odour risk was classified as **low**. This is as a result of there being no food preparation or cooking within the new QSR. The kitchen area will be used solely for take-away orders.

5.1.4 It is recommended that the new order/ collection hatch be closed when not in use to minimise odour from this potential source. It is considered that the existing restaurant kitchen odour mitigation is acceptable and that the addition of the QSR would not increase odour risk.

6.0 ABBREVIATIONS

DEFRA	Department for Environment, Food and Rural Affairs
DPD	Development Plan Document
GMCA	Greater Manchester Combined Authority
IAQM	Institute of Air Quality Management
MCC	Manchester City Council
NGR	National Grid Reference
NPPF	National Planning Policy Framework
PfE	Places for Everyone
QSr	Quick Service Restaurant

Figures



Legend

Site Boundary

Title
Figure 1 - Site Location

Project
Odour Assessment
Thaikhun, Spinningfields, Manchester

Project Reference
10771

Client
Thai Leisure Group

Contains Ordnance Survey Data
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