Odour Impact Assessment

Denmark Street, Camden

Client: Chapeau Bermondsey Ltd

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Report Issue

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Executive Summary

Redmore Environmental Ltd was commissioned by Chapeau Bermondsey Ltd to undertake an Odour Impact Assessment in support of the installation of a new kitchen extract flue at 1-3 Denmark Street, Camden.

The development has the potential to cause odour impacts as a result of emissions from hot food preparation. As such, an Odour Impact Assessment was undertaken in order to assess potential effects as a result of the scheme.

An assessment using the standard industry methodology was undertaken in order 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 to medium**. This prediction does not infer that the proposed development would result in significant odour impact or affect local amenity levels. However, it does suggest that appropriate mitigation options are required to reduce potential effects to an acceptable level.

The recommended abatement option has been specified in line with the relevant guidance for kitchens with a **low to medium** risk of impact. It therefore follows that with this mitigation in place, potential odour impact at nearby sensitive receptors would be reduced to an acceptable level.

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1.0 INTRODUCTION

1.1 Background

1.1.1 Redmore Environmental Ltd was commissioned by Chapeau Bermondsey Ltd to undertake an Odour Impact Assessment in support of the installation of a new kitchen extract flue at the existing Fernandez and Wells restaurant, 1-3 Denmark Street, Camden.

1.1.2 The development has the potential to cause odour impacts as a result of emissions from hot food preparation. As such, an Odour Impact Assessment was undertaken in order to assess potential effects as a result of the scheme and identify the necessary mitigation measures to prevent adverse impacts.

1.2 Site Location and Context

1.2.1 The Fernandez and Wells restaurant is located at 1-3 Denmark Street, Camden, at approximate National Grid Reference (NGR): 529919, 181259. Reference should be made to Figure 1 for a map of the site and surrounding area.

1.2.2 The site is located in an urban setting adjacent to Denmark Street within a row of commercial properties. The closest residential receptors are located approximately 35m north-east of the site along St Giles High Street.

1.2.3 The proposals comprise the installation of a new kitchen extract flue at the existing Fernandez and Wells restaurant. The kitchen and food preparation stations are located to the rear of the building and include a rational oven for prime cooking and reheating, a Merrychef oven, halogen hob, grill and dry Bain-Marie. Hot food items to be cooked and prepared on the premises include brunch and breakfast dishes, hot and cold sandwiches, salads and soup. The restaurant has the capacity to serve between 50 and 150 covers during the following operational hours: 08:00 to 17:00 from Monday to Saturday and 09:00 to 17:00 on Sunday.

1.2.4 Emissions from the cooking processes will be removed via an L4 - Lincat Electric Built-in Fume Filtration Unit. The aluminium mesh and carbon filters will treat emissions prior to extract and discharge to the atmosphere through a new dedicated flue. The release point will be positioned at roof level above the ridge of the building to the rear of the

property. Reference should be made to Figure 2 for a layout plan of the restaurant and Figure 3 for the proposed extract flue location.

1.2.5 The preparation of hot food within the restaurant may result in odour emissions. These have the potential to cause impacts at sensitive locations within the vicinity of the site and have therefore been assessed within this report.

2.0 ODOUR BACKGROUND

2.1 Odour Definition

2.1.1 Department for Environment, Food and Rural Affairs (DEFRA) guidance[1] defines odour as:

> "An odour is the organoleptic attribute perceptible by the olfactory organ on sniffing certain volatile substances. It is a property of odorous substances that make them perceptible to our sense of smell. The term odour refers to the stimuli from a chemical compound that is volatilised in air. Odour is our perception of that sensation and we interpret what the odour means. Odours may be perceived as pleasant or unpleasant. The main concern with odour is its ability to cause a response in individuals that is considered to be objectionable or offensive.
>
> Odours have the potential to trigger strong reactions for good reason. Pleasant odours can provide enjoyment and prompt responses such as those associated with appetite. Equally, unpleasant odours can be useful indicators to protect us from harm such as the ingestion of rotten food. These protective mechanisms are learnt throughout our lives. Whilst there is often agreement about what constitutes pleasant and unpleasant odours, there is a wide variation between individuals as to what is deemed unacceptable and what affects our quality of life."

2.1.2 Although it is recognised that the DEFRA guidance[2] has been formally withdrawn, the definition of odour provided within the document is still considered to be relevant in the context of the 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 **FIDOR** acronym, as outlined below, is a useful reminder of the factors that will determine the degree of odour pollution:

[1] Odour Guidance for Local Authorities, DEFRA, 2010.

[2] Odour Guidance for Local Authorities, DEFRA, 2010.

- **F**requency of detection - frequent odour incidents are more likely to result in complaints;
- **I**ntensity as perceived - intense odour incidents are more likely to result in complaints;
- **D**uration of exposure - prolonged exposure is more likely to result in complaints;
- **O**ffensiveness - more offensive odours have a higher risk of resulting in complaints; and,
- **R**eceptor sensitivity - sensitive areas are more likely to have a lower odour tolerance.

2.2.2 The FIDOR factors can be further considered to provide the following issues in regards 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;
- 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, such as hot food restaurants and takeaways, 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 Environmental Protection Act (1990), 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 or activity 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 February 2019 and 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 contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adaption 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."

[3] NPPF, Ministry of Housing, Communities and Local Government, 2019.

2.5 Local Planning Policy

2.5.1 The London Borough of Camden (LBoC) adopted the Local Plan[4] on 3rd July 2017. This document provides the basis for planning decisions and future development in the borough, covering the period 2016 - 2031. A review of the Local Plan indicated the following policy of relevance to this assessment:

> "Policy A1 - Managing the Impact of Development
>
> The Council will seek to protect the quality of life of occupiers and neighbours. We will grant permission for development unless this causes unacceptable harm to amenity.
>
> We will:
> a. Seek to ensure that the amenity of communities, occupiers and neighbours is protected;
>
> […]
>
> d. require mitigation measures where necessary.
> The factors we will consider include:
>
> […]
>
> k. odour, fumes and dust;
>
> […]."

2.5.2 Consideration was made to the above policy throughout the assessment.

[4] Local Plan, LBoC, 2017.

3.0 METHODOLOGY

3.1 Introduction

3.1.1 The proposed development has the potential to cause odour impacts as a result of emissions from food serving activities within the restaurant. An assessment has therefore been undertaken in accordance with the 'Control of Odour and Noise from Commercial Kitchen Exhaust Systems' guidance document prepared by EMAQ+ for DEFRA[5]. This document provides an update to the 2005 guidance[6] produced by DEFRA.

3.1.2 The relevant process is summarised in the following Sections.

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 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 or 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

[5] Control of Odour and Noise from Commercial Kitchen Exhaust Systems, EMAQ+, 2018.

[6] 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 20m 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, fast food or any premises cooking with solid fuel
	High	7	Vietnamese, Thai, Indian, Turkish, Kebab houses, Pizza (wood-fired), casual dining (burgers/chicken)
	Medium	4	Cantonese, Chinese, Japanese Italian, French, Pizza (gas fired), Steakhouses
	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[7].

[7] Control of Odour and Noise from Commercial Kitchen Exhaust Systems, EMAQ+, 2018.

4.0 ASSESSMENT

4.1 Odour Risk

4.1.1 The odour risk associated with the proposals was rated in accordance with the EMAQ+ and DEFRA methodology[8]. The results are provided in the following Sections.

Table 3 Odour Risk

Criteria	Score	Score	Notes
Dispersion	Good	5	The kitchen is located to the rear of the restaurant. Emissions from the cooking processes will be extracted and discharged vertically to the atmosphere through a dedicated flue. The release point will be positioned at roof level
Proximity of receptors	Medium	5	There are residential receptors located between 20m and 100m from the kitchen discharge
Size of kitchen	Large	5	The restaurant has the capacity to serve between 50 and 150 covers at any one time. As such, the size of kitchen is classified as large
Cooking type (odour and grease loading)	Low	1	Food items to be cooked and prepared on the premises include brunch and breakfast dishes, hot and cold sandwiches, salads and soup. This would indicate a low level risk for odour and grease loading

4.1.2 As shown in Table 3, the odour risk from the proposed development was scored as 16. The risk was therefore classified as **low to medium**, 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 **low to medium** level of odour risk. The odour control requirement is therefore **low**, in accordance with Table 2.

[8] Control of Odour and Noise from Commercial Kitchen Exhaust Systems, EMAQ+, 2018.

4.2.2 The proposed restaurant extraction arrangements include the following emission control measures within the L4 - Lincat Electric Built-in Fume Filtration Unit:

- Preliminary treatment of air using mesh filters to facilitate grease and particulate removal;
- Carbon filtration of air to minimise residual odour emissions; and,
- Vertical discharge at high level.

4.2.3 These measures are consistent with abatement options suggested within the EMAQ+ and DEFRA guidance[9] for activities with a **low to medium** risk of impact. As such, the proposed mitigation is considered to be suitable for a development of this nature.

[9] Control of Odour and Noise from Commercial Kitchen Exhaust Systems, EMAQ+, 2018.

5.0 CONCLUSION

5.1.1 Redmore Environmental Ltd was commissioned by Chapeau Bermondsey Ltd to undertake an Odour Impact Assessment in support of the installation of a new kitchen extract flue at the existing Fernandez and Wells restaurant, 1-3 Denmark Street, Camden.

5.1.2 The development has the potential to cause odour impacts as a result of emissions from hot food preparation. As such, an Odour Impact Assessment was undertaken in accordance with relevant guidance in order to assess potential effects as a result of the scheme and identify any necessary mitigation measures to prevent adverse impacts.

5.1.3 An assessment using the EMAQ+ and DEFRA methodology was undertaken in order to identify the odour risk associated with the proposals. This was based on a number of site-specific inputs.

5.1.4 The results of the assessment indicated the odour risk was classified as **low to medium**. This prediction does not infer that the proposed development would result in significant odour impact or affect local amenity levels. However, it does suggest that appropriate mitigation options are required to reduce potential effects to an acceptable level.

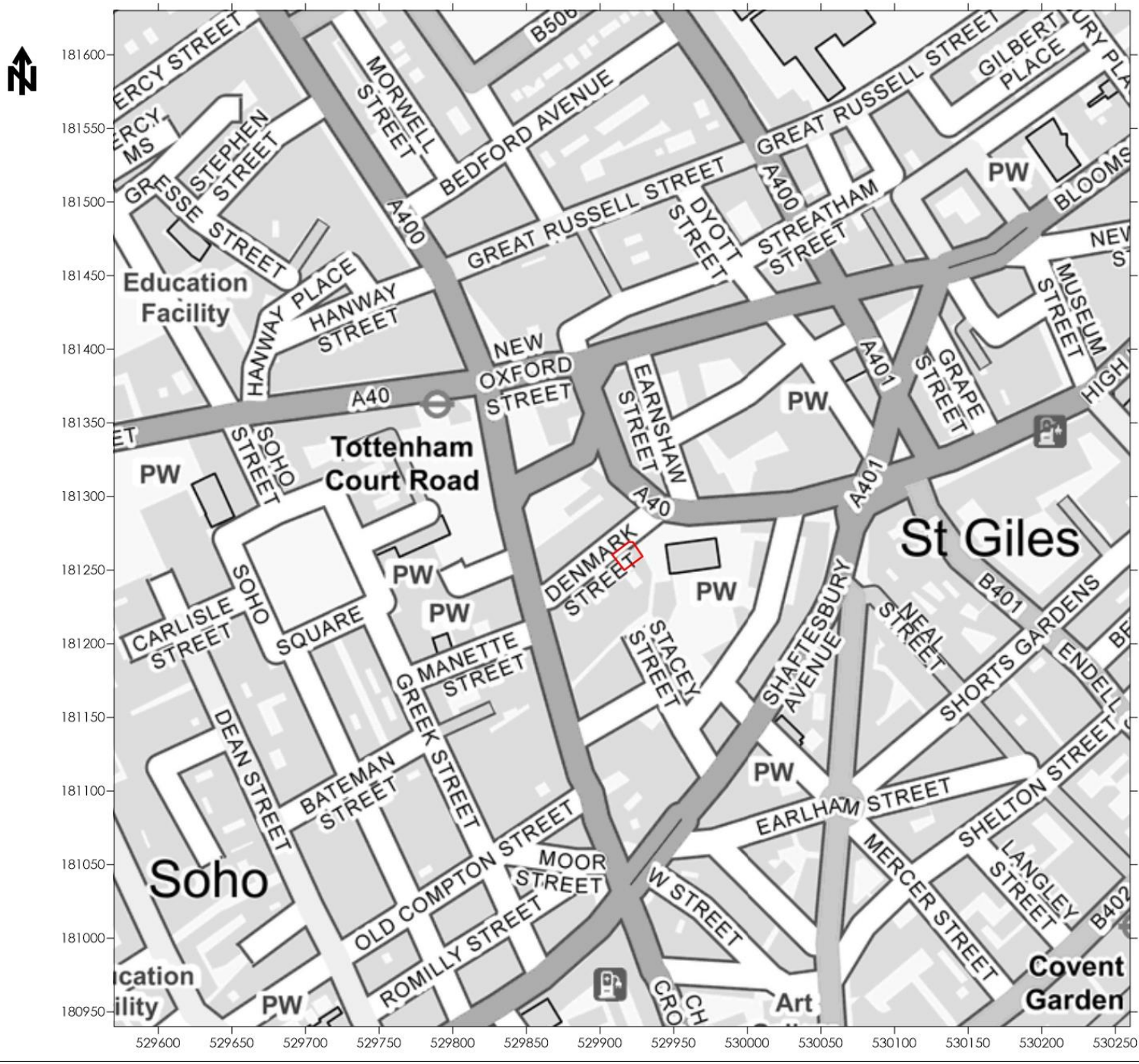
5.1.5 The recommended abatement option has been specified in line with DEFRA guidance for kitchens with a **low to medium** risk of impact. It therefore follows that with this mitigation in place, potential odour impact at nearby sensitive receptors would be reduced to an acceptable level. As such, the proposed mitigation is considered to be suitable for a development of this nature.

5.1.6 It is considered that the proposal complies with the NPPF and Policy A1. As such, odour impacts are not considered a constraint to planning consent for the development.

6.0 ABBREVIATIONS

DEFRA	Department for Environment, Food and Rural Affairs
LBoC	London Borough of Camden
NGR	National Grid Reference
NPPF	National Planning Policy Framework

Figures



Legend

Site Boundary

Title
Figure 1 - Site Location Plan

Project
Odour Impact Assessment
Denmark Street, Camden

Project Reference
3890

Client
Chapeau Bermondsey Ltd

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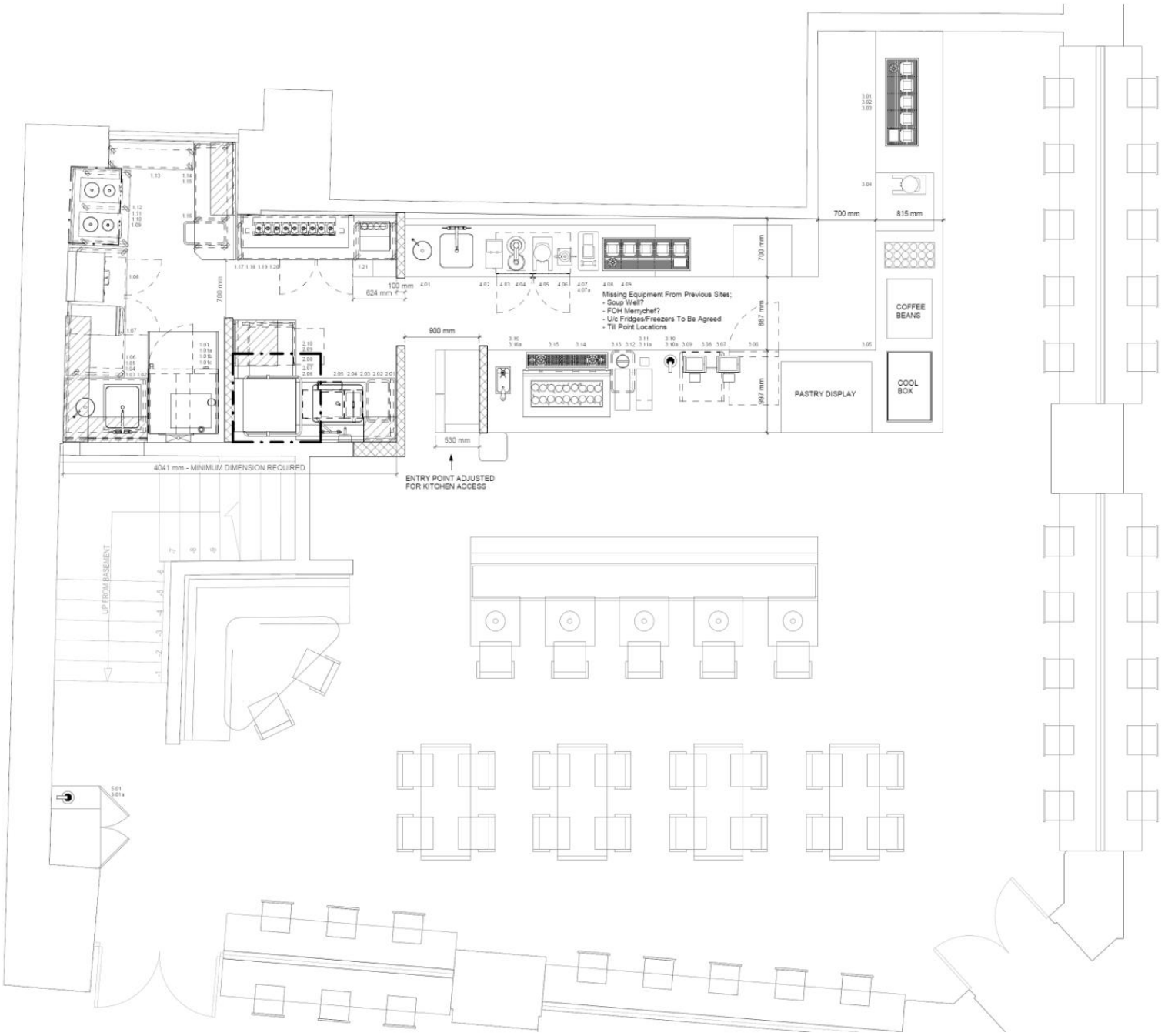

Legend

Title
Figure 2 - Site Layout Plan

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Odour Impact Assessment
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Project Reference
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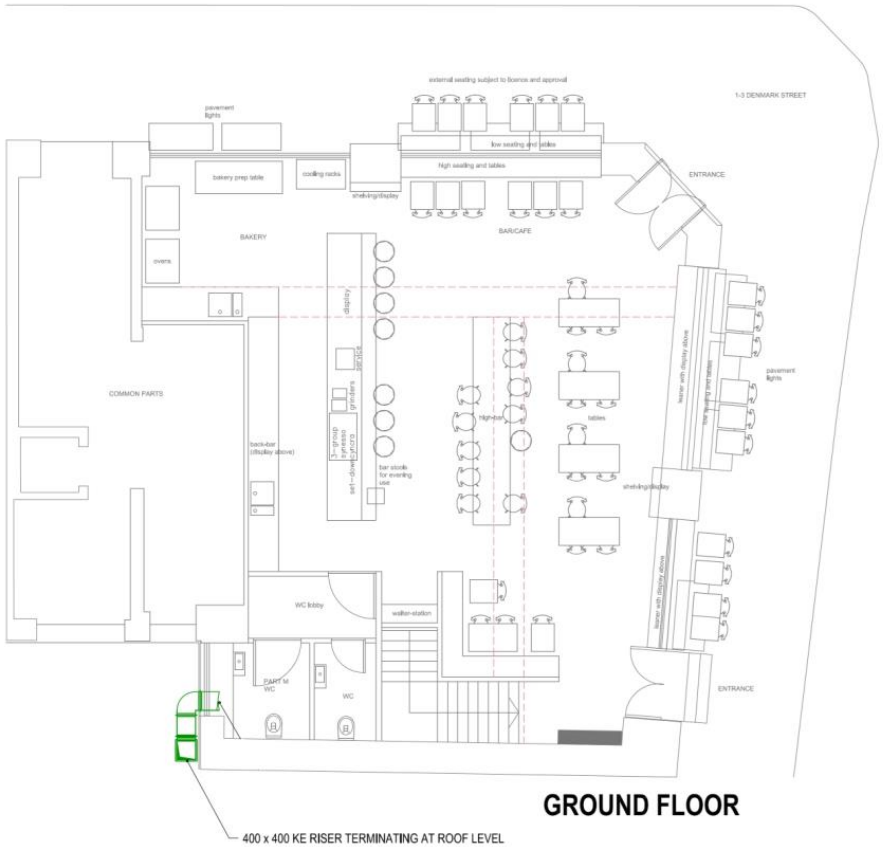

GROUND FLOOR

Legend

Title
Figure 3 - Proposed Extract Flue Location

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