



J24070 PI Littlehampton

# KITCHEN EXTRACT ODOUR REPORT

10 Apr 2025

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# INTRODUCTION

## Background

Applied Energy have been commissioned by Whitbread Plc to prepare this Kitchen Extract Odour Report to accompany the planning submission for the proposed redevelopment of the site into a hotel. This Kitchen Extract Odour Report provide details of the proposed kitchen extract system and any anticipated odour control measures.

## Site Description

- Demolition of the vacant supermarket building
- Erection of a 130 bedroom, four storey with bedrooms at roof level Premier Inn hotel
- Provision of a restaurant facility available to hotel guests and members of the public.
- Creation of public realm areas to Anchor Springs, East Street and Avon Road and general landscape improvements.
- Retention of associated car park and all associated works

## Site Location

The site comprises the vacant former Waitrose supermarket building to the south of Avon Road. The site also includes the vacant 95-space private car park to the north of Avon Road. It is understood that the retail unit has been vacant for over 8 years following the relocation of Waitrose to Rustington. The car park has also been out of use and inaccessible during this period



Site Location



Site Aerial

# POLICY AND PLANNING CONTEXT

## National Planning Policy Framework (NPPF) December 2024

The NPPF sets out planning policies for England and how these are expected to be applied.

In determining planning applications, local planning authorities should expect new developments to:

- Comply with any development plan policies on local requirements for decentralised energy supply unless it can be demonstrated by the applicant, having regard to the type of development involved and its design, that this is not feasible or viable; and
- Take account of landform, layout, building orientation, massing and landscaping to minimise energy consumption.

## Adoption Arun Local Plan 2011-2031 (July 2018)

### **Policy QE DM1**

#### Noise pollution

##### 1. New noise sensitive development

Residential development likely to experience noise from road, rail or air, in particular development in close proximity to:

- A284/A259 Wick roundabout
- Stretches of the A27 around Arundel and Fontwell
- Sections of the A29 and A259 in Bognor Regis
- A284 in Littlehampton and
- The stretch of railway line that runs through Barnham station

must:

- a. Be supported by a noise exposure category (NEC) assessment and designed to ensure that residents will not be adversely affected by noise.
- b. Consider both the likely level of exposure at the time of application and any increase that might be reasonably expected in the foreseeable future.

To safeguard the continued use of existing industrial and commercial uses and to protect amenity, noise sensitive development should not normally be permitted where:

c. High levels of noise will continue throughout the night, especially during the hours when people are normally sleeping.

d. There is a likelihood of complaints about noise from industrial development. (81)

##### 2. New noise generating development

Developers proposing new noise generating development must seek advice from an early stage to determine the level of noise assessment required. Proposals will need to be supported by:

- a. Evidence to demonstrate that there are no suitable alternative locations for the development
- b. A noise report which provides accurate information about the existing noise environment, and the likely impact of the proposed development upon the noise environment. The report must also demonstrate that the development meets appropriate national and local standards for noise, as set out in Annex 1 of the Planning Noise Advice Document: Sussex, and any mitigation measures required to ensure noise is managed to an acceptable level.
- c. Evidence to demonstrate that the development will not impact upon areas identified and valued for their tranquillity, including Gaps Between Settlements which are important to the enjoyment of Arun's countryside, its habitats and biodiversity.

### **Policy QE DM3**

#### Air pollution

All major development proposals will be required to assess the likely impacts of the development on air quality and mitigate any negative impacts by:

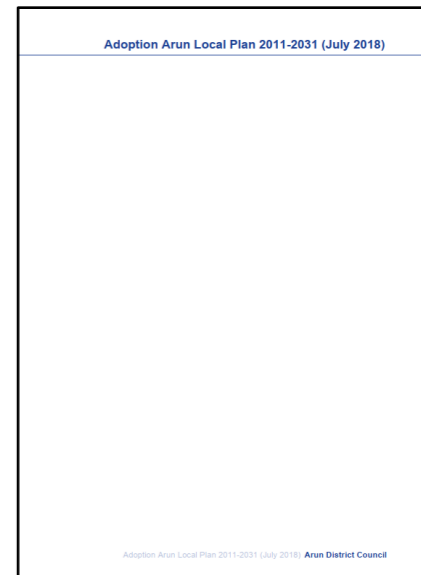
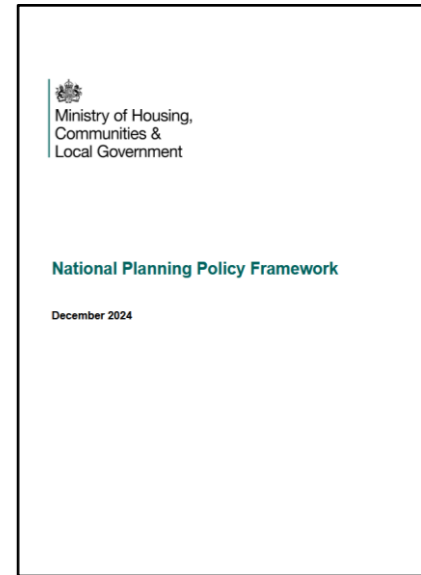
- a. Ensuring the development is located within easy reach of established public transport services;
- b. Maximising provision for cycling and pedestrian facilities;
- c. Encouraging the use of cleaner transport fuels on site, through the inclusion of electric car charging points; and
- d. Contributing towards the improvement of the highway network where the development is predicted to result in

increased congestion on the highway network.

Development proposed nearby any Air Quality Management Area (AQMA) declared within the District within the Plan period, will require an air quality assessment to identify likely impacts of development upon the designated area. Developers will be required to ensure delivery of the actions set out within any Air Quality Action Plan.

Industrial development which is regulated by environmental permits (that creates or results in dust, smell, fumes, smoke, heat, radiation, gases, steam or other forms of pollution) must be located in such a position which ensures that the health, safety and amenity of users of the site or surrounding land is not put at risk and the quality of the environment would not be damaged or put at risk.

Developments shall also be consistent with all other Local Plan policies.



# RISK ASSESSMENT FOR ODOUR - BACKGROUND

## Introduction

In order to determine the level of odour the site will produce, and the necessary mitigation measures needed, a risk assessment has been carried out in line with Appendix C of EMAQ+'s Control of Odour and Noise from Commercial Kitchen Exhaust Systems (2018). The assessment summary is included for information.

The levels of risk are grouped in the table below.

Four areas of risk are assessed to work out the score for the system which can then be correlated to the level of odour control required as detailed below.

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

Odour Risk Levels

Criteria	Score	Score Value	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 10 m/s.
	Moderate	10	Discharging 1m above eaves at 10 -15 m/s.
	Good	5	Discharging 1m above ridge at 15 m/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 take away.
	Medium	3	Between 30 and 100 covers or medium sized take away.
	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, steakhouse
	Medium	4	Cantonese, Italian, French, Pizza (gas fired),
	Low	1	Most pubs (no fried food, mainly reheating and sandwiches etc), Tea rooms

Odour Risk Scoring

# RISK ASSESSMENT FOR ODOUR - SCORING

## Dispersion

It is proposed that the extract system will discharge 1m above the eaves at a rate of between 10-15 m/s.

This results in a score of 10.

## Proximity of Receptors

The size of the kitchen is based on providing facilities to cater for a maximum of 88 covers.

This results in a score of 10.

## Size of Kitchen

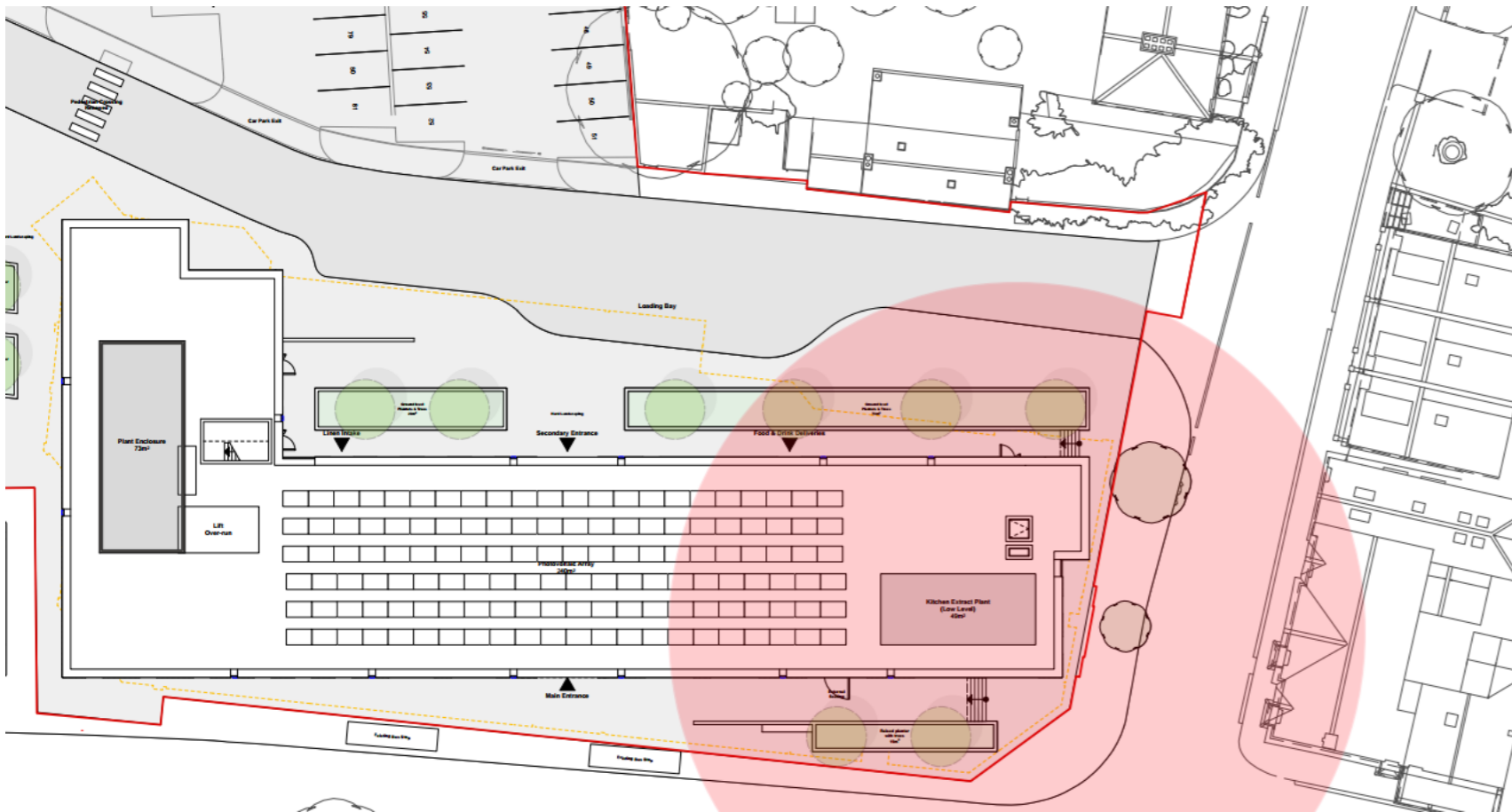
From the below map, it can be shown that there are receptors within a 20m radius of the proposed kitchen extract termination location

This results in a score of 3.

## Cooking Type

The cooking type for the restaurant is deemed as MEDIUM given the type of food being produced. The details for a medium cooking type establishment include Cantonese, Italian, French, Pizza (gas fired). The food provided by the kitchen is a mixture of some of these restaurants and so the cooking type has deemed to be of a medium odour and grease loading.

This results in a score of 4.



Proximity of Receptors Map

Criteria	Score
Dispersion	10
Proximity of receptors	10
Size of kitchen	3
Cooking type (odour and grease loading)	4
Total	27

Odour Risk Assessment

# CONCLUSION & IMPROVEMENTS

## Final Assessment

Taking into account the above scores, the proposed kitchen achieves a score of 27 which equates to a HIGH odour risk. This requires a high level of odour control as defined within the EMAQ+ Guidelines and it is proposed that the following will be provided:

- Fine filtration or ESP followed by carbon filtration (carbon filters rated with a 0.2 - 0.4 second residence time).
- Fine filtration or ESP followed by UV ozone system to achieve the same level of control as 1.

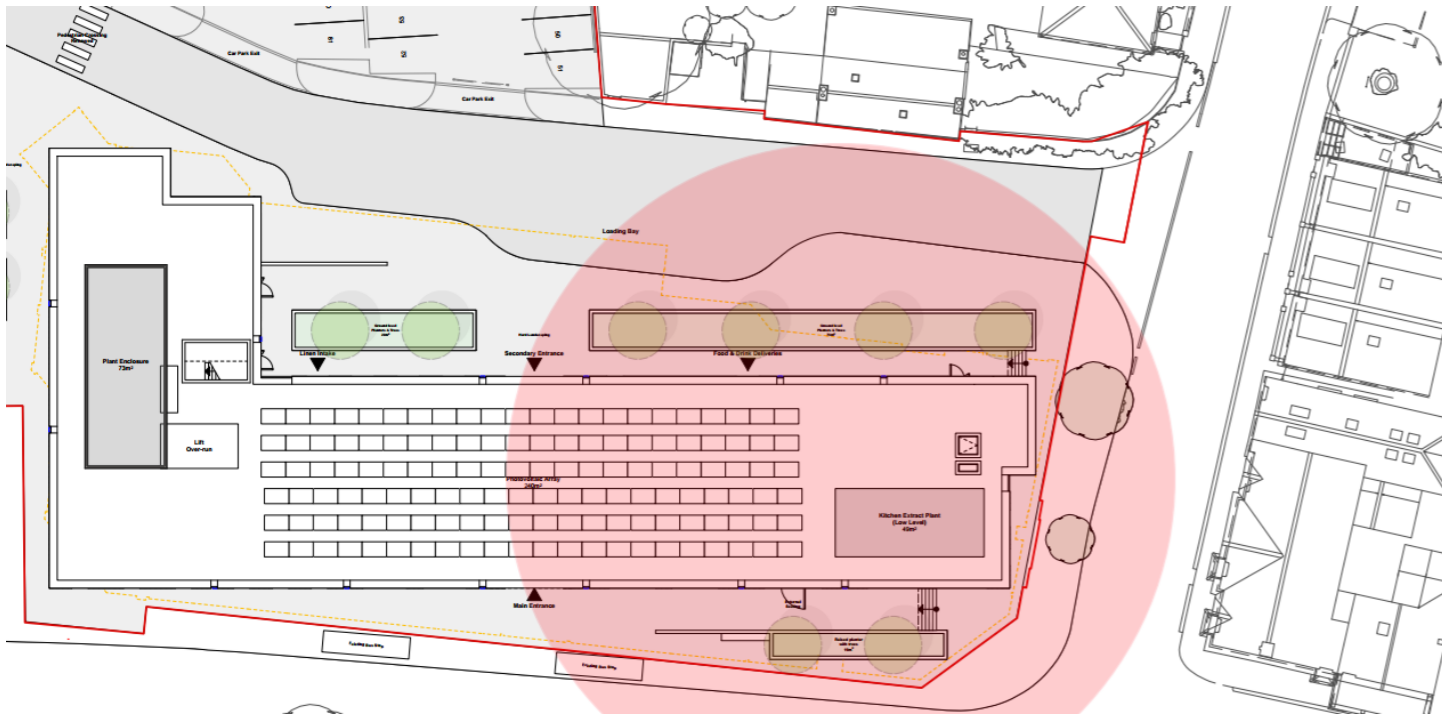
The assessment was conducted with the assumption that the kitchen extract would be discharging in the bottom right corner of the building at roof level.

If the location was repositioned to the other side of the building, then the overall score would be reduced as its proximity to receptors is greater.

As the scheme develops and the kitchen design progresses, odour control measures will be incorporated inline with the recommended guidance at this time based on the updated score.

Criteria	Score
Dispersion	10
Proximity of receptors	10
Size of kitchen	3
Cooking type (odour and grease loading)	4
<b>Total</b>	<b>27</b>

Odour Risk Assessment



Proximity of Receptors Map Improved

## Odour arrestment plant performance

Low to medium level control may include:

1. Fine filtration or ESP followed by carbon filtration (carbon filters rated with a 0.1 second residence time).
2. Fine filtration followed by counteractant/neutralising system to achieve the same level of control as 1.

High level odour control may include:

1. Fine filtration or ESP followed by carbon filtration (carbon filters rated with a 0.2 - 0.4 second residence time).
2. Fine filtration or ESP followed by UV ozone system to achieve the same level of control as 1.

Very high level of odour control may include:

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

Odour Risk Level Controls