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# Odour Assessment for proposed open air market space at Former Police Station, Market Place, Poulton-le-Fylde, FY6 7AS.

Prepared for:

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# Contents

# 1. Introduction

1.1. Martin Environmental Solutions has been commissioned to undertake an odour assessment to support a planning application for an open air market place with food and drink sales at the Fromer Police Station, Market Place, Poulton-le-Fylde.

## Site Location and Context

1.2. The site is located in the centre of Poulton-le-Fylde fronting onto the centre square. Commercial units are located to the north, west and south of the site, with some residential to the south and north at a first-floor level. To the east a public car park and beyond more industrial units.

1.3. A number of food establishment are present to the north, east and south of the site all with their own extraction systems, many historic and without modern odour abatement.

1.4. An aerial Photograph is enclosed in Figure 1.

## 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, new and 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

3.1. In line with the EMAQ document an assessment of the likely impact from odour has been undertaken.

3.2. The development will have a number of small kitchens located around the central court yard all providing different styles of food. Figure 2 provides an indicative plan of the site. To limit the number of extraction systems required it is proposed to link all permanent food units together into one extraction system with suitable odour abatement.

3.3. Due to constraints on site, it is not possible to lift the extraction termination potin to above the eaves level of the surrounding buildings without extensive engineering works, and this has been taken into account when specifying the level of abatement required.

3.4. While limited numbers of patrons will be served at the venue given the number of 'food outlets' the size of the venue has been considered as large for the purposes of the assessment.

3.5. The extraction system is to be located to the rear of the site with the final extract point fitted with a jet cowl to assist with the discharge of any emissions. However, the height of the extraction system will be low in comparison to the surrounding buildings being approx. 1m higher than the rear boundary wall overlooking the car park. The need for a good standard of odour abatement is therefore paramount to reduce any adverse impact from the system.

3.6. For the benefit of the assessment the odour and grease loading has therefore been identified as very high, with all food is be prepared on site.

3.7. Prevailing wind direction for the area, obtained from the Blackpool Airport and Fleetwood weather stations, is westerly as shown in Appendix A.

3.8. 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.

3.9. The following assumptions have been used within the assessment:

- The extraction system is to terminate at a low level to the rear of the site. The system will not be fitted with any restrictive cowl, but instead a jet cowl to aid distribution, in line with the guidance a score of 5 is applied.
- The nearest receptor are the residential properties to the south and north as such a score of 10 has been applied.
- The business has identified as 'large' as detailed above, and therefore score 5 has been applied.
- The odour and grease characteristics from the venue are considered to be high, in line with the guidance document a scoring of 10 is applied.

3.10. Based on the above parameters the risk assessment has been conducted, see Appendix B, and as such a very high level of odour control is required.

3.11. As such mitigation measures in the form of odour and grease control would be required.

3.12. The extraction system should be fitted with

- Stainless steel grease baffle filters fitted to the extraction hood of each food unit
- Fine mesh pre-filter fitted before
- An Electrostatic Precipitator, 3000EA or similar system to be fitted behind the above to remove any residual grease, followed by
- An ozone filtration system, Fusion Air, FUSION-OZ10 or similar. This unit will generate ozone which will be released into the extracted air stream neutralising the odour. The resistance time from the ozone system to the final extraction point should be as long as possible, thus the ozone system fitted shortly after the EPC.
- The flue will then terminate at sufficient velocity to force emissions vertically up via a jet cowl.

3.13. It should be noted that in order to ensure the system does not adversely affect the nearby residents a silencer will also need to be installed and should be located after the ESP and ozone system.

3.14. This above mitigation has been designed specifically for commercial kitchen extraction systems and has been used across the country in take-aways and restaurants to control and eliminate odour emissions.

3.15. The exact size of the EPC/ozone system will need to be calculated based on the final extraction design.

3.16. The system is maintained and cleaned in line with the manufacturer's instructions and a separate cleaning schedule will be produced and maintained.

3.17. The installation of the above mitigation measures ensures suitable removal of grease and odour from the extraction system.

# 4 Conclusion

4.1 An assessment of the potential impact of odour from the development has been undertaken in line with the EMAQ guidance document.

4.2 This has identified that odour may pose an adverse impact on adjacent properties and as such additional mitigation measures have been identified in the form of a high level of grease and odour control.

4.3 The proposed mitigation measures when installed and maintained will ensure no adverse impact on adjacent land uses in line with the National Planning Policy Framework.

## Figure 1 – Aerial Photograph

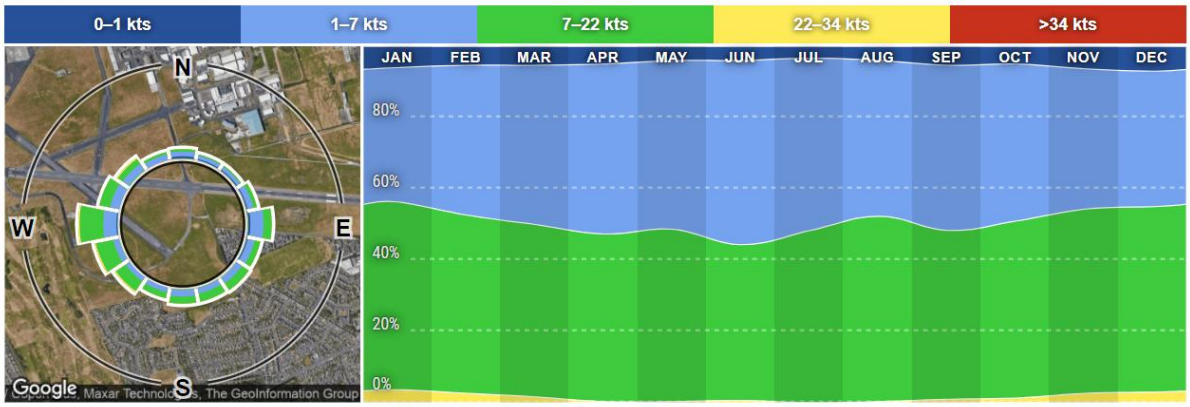
# Appendix A– Weather Data

Blackpool Airport

DOMINANT WIND DIRECTION

| JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SW | SW | SW | WSW | WSW | WSW | WSW | WSW | WSW | SW | SW | SW |

## Monthly wind direction and strength distribution

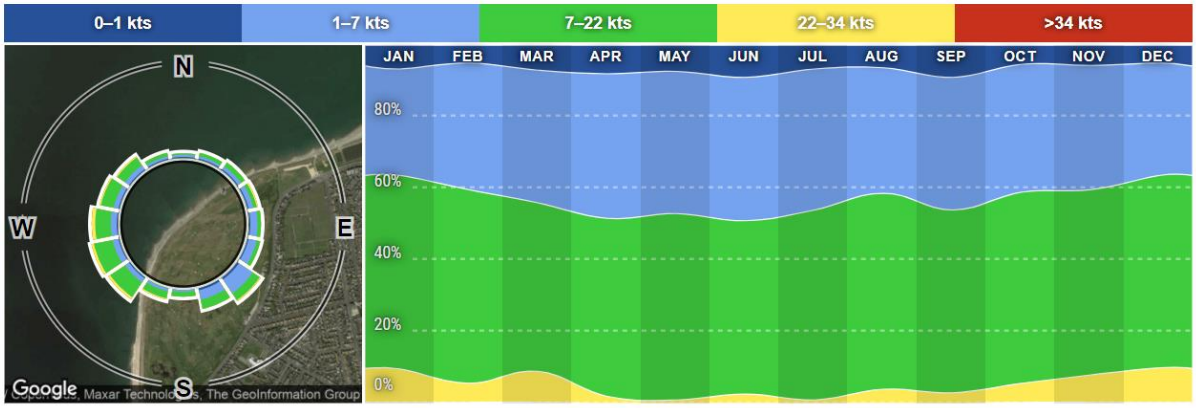



Fleetwood /Rossall Point

DOMINANT WIND DIRECTION

| JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WSW | SSW | WSW | W | W | WSW | WSW | WSW | WSW | SW | WSW | SW |

## 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 | 15 | Discharging 1m above the eaves |
| **Proximity to Receptors** | Close | 10 | Closest sensitive receptor 5m |
| **Size of Kitchen** | Small | 5 | Small take-away |
| **Cooking type** | High | 10 | Take-away – burrito, pizza, fried food |
| **Total** | | **40** | |