

Odour Assessment
SEGRO Park, Tottenham

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Executive Summary

Redmore Environmental Ltd was commissioned by SEGRO PLC to provide an Odour Assessment in support of a planning application for the installation of a coffee roasting facility at Unit 2, SEGRO Park, Tottenham.

Odour emissions associated with the proposed coffee roasting processes may have the potential to cause loss of amenity at sensitive locations in the vicinity of the site. An Odour Assessment was therefore undertaken to evaluate potential effects as a result of the development.

The risk of potential odour impact was assessed using a standard industry method. This involved consideration of a number of factors relating to the coffee roasting process including the scale and nature of the potential emission sources, the location of sensitive receptors, the prevailing meteorological conditions and the proposed control measures.

Following consideration of the relevant factors, overall effects as a result of emissions from the development were predicted to be not significant. As such, potential odour impacts are not considered to represent a constraint to the proposals.

Table of Contents

1.0	INTRODUCTION	1
1.1	Background	1
1.2	Site Location and Context	1
2.0	ODOUR BACKGROUND	2
2.1	Odour Definition	2
2.2	Odour Impacts	2
2.3	Odour Legislative Control	3
2.4	National Planning Policy	4
2.5	The London Plan	5
2.6	Local Planning Policy	5
2.7	Institute of Air Quality Management Guidance	6
3.0	METHODOLOGY	7
3.1	Introduction	7
3.2	Background	7
3.3	Risk Assessment Procedure	8
4.0	BASELINE	13
4.1	Introduction	13
4.2	Site Description	13
4.3	Proposed Coffee Roasting Processes	13
4.4	Odour Sources	14
4.5	Sensitive Receptors	14
4.6	Meteorological Conditions	15
5.0	ASSESSMENT	17
6.0	CONCLUSION	22
7.0	ABBREVIATIONS	23

Appendix

Appendix 1 - Curricula Vitae

1.0 INTRODUCTION

1.1 Background

- 1.1.1 Redmore Environmental Ltd was commissioned by SEGRO PLC to provide an Odour Assessment in support of a planning application for the installation of a coffee roasting facility at Unit 2, SEGRO Park, Tottenham.
- 1.1.2 Odour emissions associated with the proposed coffee roasting processes have the potential to cause loss of amenity at sensitive locations in the vicinity of the site and act as a constraint to planning consent. An Odour Assessment was therefore undertaken to evaluate potential effects as a result of the development.

1.2 Site Location and Context

- 1.2.1 The proposed development is located at 555 White Hart Lane, Unit 2, SEGRO Park, Tottenham, N17 7RP, at approximate National Grid Reference (NGR): 531991, 191375. Reference should be made to Figure 1 for a map of the site and surrounding area.
- 1.2.2 The proposals comprise external alterations to the existing building, including the installation of flues to serve two coffee roasting lines. Each roasting line will be served by two flues, one for the roasting process and one for cooling. An additional flue will also be installed to serve the raw materials loading process which will include a dust filtration system. The facility plans to operate 40-hours per week initially, with the potential for 24/7 operation in the future.
- 1.2.3 Odour emissions associated with the proposed coffee roasting processes may have the potential to cause loss of amenity at sensitive locations in the vicinity of the site. An Odour Assessment has therefore been undertaken to evaluate potential effects as a result of the development. The findings are detailed in the following report.

2.0 ODOUR BACKGROUND

2.1 Odour Definition

2.1.1 The Institute of Air Quality Management (IAQM) guidance¹ 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 (also stated as **FIDOR** in Environment Agency (EA) guidance²) is a useful reminder of the factors that will determine the degree of odour pollution. These are described by the IAQM³ as follows:

- **Frequency** - how often an individual is exposed to odour;
- **Intensity** - the individual's perception of the strength of the odour;
- **Duration** - The overall duration that individuals are exposed to an odour over time;
- **Odour 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,
- **Location** - 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 H4: Odour Management, EA, 2011.

³ 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 considered further 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;
- 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 Odour Legislative Control

2.3.1 The main requirement with respect to odour control from industrial activities is the Environmental Permitting (England and Wales) Regulations (2016) and subsequent amendments. If a process is deemed potentially odorous then the relevant regulator will usually include an appropriate condition in the site's Environmental Permit to restrict impacts beyond the facility boundary.

2.3.2 Enforcement of the condition is by the relevant regulator, either the EA for Part A(1) processes, or the Local Authority for Part A(2) and B processes. If the regulator is satisfied that odour from a facility is causing pollution beyond the site boundary, then they can serve an improvement notice that requires remedial works to be undertaken to reduce impacts to an acceptable level. The measures that are deemed appropriate will depend on the industry sector and site-specific circumstances and will take costs and benefits into account. Should appropriate actions not be taken by the operator then the regulator has a number of available options, culminating in the revocation of the Environmental Permit and cessation of all activities on site.

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

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

2.3.4 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.

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

2.4 National Planning Policy

2.4.1 The revised National Planning Policy Framework⁴ (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."

⁴ NPPF, Ministry of Housing, Communities and Local Government, 2024.

2.4.3 Chapter 12 of the NPPF details objectives in relation to conserving and enhancing the natural environment. 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.

2.5 The London Plan

2.5.1 The London Plan 2021⁵ is the Spatial Development Strategy for Greater London. It sets out a framework for how London will develop over the next 20-25 years and the Mayor's vision for Good Growth. Review of this document did not indicate any policies of relevance to this assessment.

2.6 Local Planning Policy

2.6.1 London Borough of Haringey's (LBoH) development plan comprises a number of documents including the Strategic Policies 2013 - 2026⁶ and the Development Management Development Plan Document (DPD)⁷.

2.6.2 A review of the Strategic Policies 2013 - 2026 did not indicate any policies of relevant to this assessment.

2.6.3 A review of the Development Management DPD indicated the following policy of relevance to this assessment:

⁵ The London Plan March 2021, Greater London Authority, 2021.

⁶ Strategic Policies 2013 - 2026, LBoH, 2017.

⁷ Development Management DPD, LBoH, 2017.

"Policy DM 1: Delivering High Quality Design

Haringey Development Charter

Privacy and amenity

D Development proposals must ensure a high standard of privacy and amenity for the development's users and neighbours. The Council will support proposals that:

[...]

c Address issues of vibration, noise, fumes, odour, light pollution and microclimatic conditions likely to arise from the use and activities of the development."

- 2.6.4 The above policy was taken into consideration throughout the undertaking of this assessment.

2.7 Institute of Air Quality Management Guidance

- 2.7.1 The IAQM published the 'Guidance on the Assessment of Odour for Planning'⁸ document on 20th May 2014. This was updated in 2018⁹ and specifically deals with assessing odour impacts for planning purposes, namely potential effects on amenity. The assessment methodology outlined in the guidance has been utilised in throughout this report where relevant.

⁸ Guidance on the Assessment of Odour for Planning, IAQM, 2014.

⁹ Guidance on the Assessment of Odour for Planning v1.1, IAQM, 2018.

3.0 **METHODOLOGY**

3.1 **Introduction**

3.1.1 Odour emissions associated with the proposals have the potential to cause loss of amenity at sensitive locations in the vicinity of the site. The potential risk of adverse effects has therefore been assessed using the IAQM 'Guidance on the Assessment of Odour for Planning v1.1'¹⁰ document.

3.2 **Background**

3.2.1 The basic concept of risk assessment is that the overall risk depends on the probability of an event occurring together with the likely consequences if it was to occur. For odour assessments the probability can be considered as the likelihood of exposure (impact), and the consequence can be considered to be the effect on the receptor if that exposure (impact) took place. These two facets can be summarised by the source-pathway-receptor concept.

3.2.2 Behind the source-pathway-receptor concept, is the fundamental relationship:

$$\text{Effect} \approx \text{Dose} \times \text{Response}$$

3.2.3 In the specific case of odour assessments, the dose can be considered equivalent to the odour exposure, or impact. This will be determined by **FIDO** of the **FIDOL** factors. The effect is the result of the changes on specific receptors (people in the case of odour) taking into account their sensitivities (i.e. responsiveness to odour), the L (location) in **FIDOL** is to categorise the sensitivity.

3.2.4 The IAQM guidance states that a qualitative risk-based approach is appropriate for:

- Screening of odour impacts;
- Development proposals likely to have a low risk of adverse effects;
- Situations where there is insufficient information to carry out detailed predictive dispersion modelling;

¹⁰ Guidance on the Assessment of Odour for Planning v1.1, IAQM, 2018.

- Situations where the information has wide uncertainties and its use as input to a detailed predictive dispersion model would be at best a waste of time, money and effort or, worse, would lead to an illusory and false impression of accuracy and precision in the numbers generated; and,
- When the model is not able to properly represent the reality of the situation being assessed, e.g. if the odour effects are likely to be significantly influenced by accidental, unexpected, or unknown releases. In such instances a qualitative estimate may be more appropriate, on the basis that it is better to be broadly correct than precisely wrong.

3.2.5 It is considered that all of the stated criteria are met for this project. As such, a qualitative assessment methodology was deemed appropriate.

3.3 **Risk Assessment Procedure**

3.3.1 The first step in the assessment is to estimate the odour generating potential of the site activities. This is termed the Source Odour Potential, which takes into account three factors:

- The scale (magnitude) of the release from the odour source, taking into account the effectiveness of any odour control or mitigation measures that are already in place. This involves judging the relative size of the release rate after mitigation and taking account of any pattern of release (e.g. intermittency);
- How inherently odorous the emission is. In some cases it may be known whether the release has a low, medium or high Odour Detection Threshold (ODT). This is the concentration at which an odour becomes detectable to the human nose. In most instances the odours released by a source will be a complex mixture of compounds and the detectability will not be known. However, for some industrial processes the odour will be due to one or a small number of known compounds and the detection thresholds will be a good indication of whether the release is highly odorous or mildly odorous; and,
- The relative pleasantness/unpleasantness of the odour.

3.3.2 Using the example risk ranking in Table 1, the Source Odour Potential can be categorised as **small**, **medium** or **large**.

Table 1 Source Odour Potential

Source Odour Potential	Comments
Large	Magnitude - Larger Environmentally Permitted processes of odorous nature or large Sewage Treatment Works (STWs); materials usage hundreds of thousands of tonnes/m³ per year; area sources of thousands of m². The compounds involved are very odorous (e.g. mercaptans), having very low ODTs where known Unpleasantness - processes classed as "Most offensive" in EA Guidance H4¹¹; or (where known) compounds/odours having unpleasant (-2) to very unpleasant (-4) hedonic score Mitigation/control - open air operation with no containment, reliance solely on good management techniques and best practice
Medium	Magnitude - Smaller Environmentally Permitted processes or small STWs; materials usage thousands of tonnes/m³ per year; area sources of hundreds of m². The compounds involved are moderately odorous Unpleasantness - processes classed in EA Guidance H4¹² as "Moderately offensive"; or (where known) odours having neutral (0) to unpleasant (-2) hedonic score Mitigation/control - some mitigation measures in place, but significant residual odour remains
Small	Magnitude - Falls below Environmental Permit Part B threshold; materials usage hundreds of tonnes/m³ per year; area sources of tens m². The compounds involved are only mildly odorous, having relatively high ODTs where known Unpleasantness - processes classed as "Less offensive" in EA Guidance H4¹³; or (where known) compounds/odours having neutral (0) to very pleasant (+4) hedonic score Mitigation/control - effective, tangible mitigation measures in place leading to little or no residual odour

3.3.3 The next step is to estimate the effectiveness of the pollutant pathway as the transport mechanism for odour through the air to the receptor, versus the dilution/dispersion in the atmosphere. Any factor that increases dilution and dispersion of the plume as it travels from source to receptor will reduce the concentration at the end point, and hence reduce exposure. Important factors for consideration are:

- The distance between sensitive receptors and the odour source;

¹¹ H4: Odour Management, EA, 2011.

¹² H4: Odour Management, EA, 2011.

¹³ H4: Odour Management, EA, 2011.

- Whether receptors are downwind with respect to the prevailing wind direction. Odour episodes often tend to occur during stable atmospheric conditions with low wind speed, which gives poor dispersion and dilution. Receptors close to the source in all directions can be affected under these conditions. When circumstances are not calm, it will be the downwind receptors that are affected. As such, receptors that are downwind with respect to the prevailing wind direction tend to be at higher risk of odour impact;
- The effectiveness of the point of release in promoting good dispersion e.g. releasing emissions from a high stack will increase the pathway, dilution and dispersion; and,
- The topography and terrain between the source and receptor. The presence of topographical features such as hills and valleys, or urban terrain features such as buildings, can affect air flow and therefore increase, or inhibit, dispersion and dilution.

3.3.4 Using the example risk ranking in Table 2, the pollutant pathway from source to receptor can be categorised as **ineffective**, **moderately effective** or **highly effective**.

Table 2 Pathway Effectiveness

Pathway Effectiveness	Comments
Highly effective	Distance - receptor is adjacent to the source/site; distance well below any official set-back distances Direction - high frequency of winds from source to receptor, or, qualitatively, receptors downwind of source with respect to prevailing wind Effectiveness of dispersion/dilution - open processes with low-level releases, e.g. lagoons, uncovered effluent treatment plant, landfilling of putrescible wastes
Moderately effective	Distance - receptor is local to the source Where mitigation relies on dispersion/dilution - releases are elevated, but compromised by building effects
Ineffective	Distance - receptor is remote from the source; distance exceeds any official set-back distances Direction - low frequency of winds from source to receptor, or, qualitatively, receptors upwind of source with respect to prevailing wind Where mitigation relies on dispersion/dilution - releases are from high level (e.g. stacks, or roof vents greater than 3m above ridge height) and are not compromised by surrounding buildings

3.3.5 The sensitivity of the receiving receptor is defined based on the criteria shown in Table 3.

Table 3 Odour Receptor Sensitivity

Sensitivity	Description
High	Surrounding land where: • Users can reasonably expect enjoyment of a high level of amenity; and, • People would reasonably be expected to be present here continuously, or at least regularly for extended periods, as part of the normal pattern of use of the land Examples may include residential dwellings, hospitals, schools/education and tourist/cultural
Medium	Surrounding land where: • Users would expect to enjoy a reasonable level of amenity, but would not reasonably expect to enjoy the same level of amenity as in their home; or, • People would not reasonably be expected to be present here continuously or regularly for extended periods as part of the normal pattern of use of the land Examples may include places of work, commercial/retail premises and playing/recreation fields
Low	Surrounding land where: • The enjoyment of amenity would not reasonably be expected; or, • There is transient exposure, where the people would reasonably be expected to present only for limited periods of time as part of the normal pattern of use of the land Examples may include industrial use, farms, footpaths and roads

3.3.6 The estimates of Source Odour Potential and Pathway Effectiveness are considered together to predict the risk of odour exposure (impact) at the receptor location, as shown by the matrix in Table 4.

Table 4 Risk of Odour Exposure

Pathway Effectiveness	Source Odour Potential		
	Small	Medium	Large
Highly effective	Low	Medium	High
Moderately effective	Negligible	Low	Medium
Ineffective	Negligible	Negligible	Low

3.3.7 The final step is to determine the significance of odour effect at the specified receptor location through the interaction between sensitivity and risk, as outlined in Table 5.

Table 5 Significance of Odour Effect

Risk of Odour Exposure	Receptor Sensitivity		
	Low	Medium	High
High	Slight	Moderate	Substantial
Medium	Negligible	Slight	Moderate
Low	Negligible	Negligible	Slight
Negligible	Negligible	Negligible	Negligible

- 3.3.8 The IAQM guidance¹⁴ states that an assessment must reach a conclusion on the likely significance of the predicted impact. Where the overall effect is **moderate** or **substantial**, the effect is likely to be considered **significant**, whilst if the effect is **slight** or **negligible**, the impact is likely to be considered **not significant**. It should be noted that this is a binary judgement of either it is **significant** or it is **not significant**. This has been considered to determine the overall significance of potential odour effects associated with the development.
- 3.3.9 The IAQM guidance recognises that assessment of odour requires some degree of professional judgement¹⁵. Qualitative methodologies such as those utilised within this report provide guidance for assessing potential impacts. However, professional judgement should be exercised in order to take account of the specific details which are unique to each development. This has been considered as necessary throughout the assessment. The IAQM also suggest that the assessor's qualifications and experience are detailed within an Odour Assessment. These are provided in Appendix 1.

¹⁴ Guidance on the Assessment of Odour for Planning v1.1, IAQM, 2018.

¹⁵ Guidance on the Assessment of Odour for Planning v1.1, IAQM, 2018.

4.0 BASELINE

4.1 Introduction

- 4.1.1 Existing conditions at the facility were identified in order to provide a baseline for the assessment. These are detailed in the following Sections.

4.2 Site Description

- 4.2.1 The proposed development is located at Unit 2, SEGRO Park Tottenham. There are existing industrial premises immediately to the north and west. To the east are White Hart Lane Allotments and Coles Park Stadium. The closest residential properties are located approximately 85m south of the site off Rivulet Road, beyond white Hart Lane Allotments.

4.3 Proposed Coffee Roasting Processes

- 4.3.1 Coffee roasting comprises a thermal process in which the raw coffee beans are exposed to a controlled heat within a rotating drum where chemical reactions are induced to develop the flavour, colour, and aroma of the beans.
- 4.3.2 Under the proposals, two coffee roasting lines will be installed within the unit. Associated infrastructure will also be provided for the storage and loading of green (unroasted) beans, as well as the storage and packaging of roasted beans prior to dispatch from the site.
- 4.3.3 The roasting lines will each have the capacity to complete up to four cycles per hour, with individual cycles typically lasting between 13 and 18-minutes depending on the desired roast level. Each line will include a roasting stage and a cooling stage, with dedicated exhaust flues serving both stages.
- 4.3.4 Emissions extracted from both stages will be directed through a cyclone separator to remove particulate matter. The cleaned air stream will then be transferred to an afterburner, which operates at 600 °C to 700 °C to achieve thermal destruction of any odorous compounds present with prior to discharge to atmosphere via the stacks.

- 4.3.5 The facility plans to operate 40-hours per week initially, with the potential for 24/7 operation in the future.

4.4 Odour Sources

- 4.4.1 Potential odour sources associated with the proposals were identified based on information provided by the Applicant. These are summarised in Table 6.

Table 6 Potential Odour Sources

Source		Emission Characteristics
1	Line 1 roasting flue	Extract emissions will be pass through a cyclone and an afterburner for thermal treatment prior to release to atmosphere via individual flues. All flues will terminate above the ridge of the building and will include high velocity jet cowls at the point of termination to promote effective dilution and dispersion of any residual odour emissions
2	Line 1 cooling flue	
3	Line 2 roasting flue	
4	Line 2 cooling flue	
5	Raw bean loader flue	Extract emissions will be treated by a dust filter prior to release to atmosphere via a dedicated flue. The flue will terminate above the ridge of the building and will include high a velocity jet cowl at the point of termination to promote effective dilution and dispersion of any odour emissions

- 4.4.2 Reference should be made to Figure 2 for a map of the source locations.

4.5 Sensitive Receptors

- 4.5.1 A desk-top study was undertaken order to identify sensitive locations in the vicinity of the site that required specific consideration during the assessment. The identified receptors and associated sensitivity are summarised in Table 7.

Table 7 Sensitive Receptors

Receptor		NGR (m)		Sensitivity	Distance from Site Boundary (m)
		X	Y		
R1	Residential - Thetford Close	531887	191502	High	130
R2	Residential - Norfolk Avenue	531977	191522	High	110

Receptor		NGR (m)		Sensitivity	Distance from Site Boundary (m)
		X	Y		
R3	Industrial - White Hart Works	532058	191588	Medium	175
R4	Commercial - Rowland Road	532231	191520	Medium	240
R5	Residential - Fenton Road	532255	191472	High	250
R6	Recreational - Coles Park Stadium	532153	191352	Medium	110
R7	Residential - Rivulet Road	532007	191268	High	85
R8	Residential - Perth Road	531879	191262	High	170
R9	Educational - Riverside School	531710	191186	High	355
R10	Recreational - New River Leisure Centre	531706	191260	Medium	320
R11	Residential - Wolves Lane	531399	191426	High	585

4.5.2 Reference should be made to Figure 3 for a map of the identified sensitive receptor locations.

4.6 **Meteorological Conditions**

4.6.1 The potential for atmospheric emissions to impact at sensitive locations depends significantly on the meteorology, particularly wind direction, during release. In order to consider prevailing conditions at the site, review of historical weather data was undertaken. Meteorological data used in the assessment was obtained from London City Airport Meteorological Station at NGR: 542128,180342, which is approximately 15.3km south-east of the site boundary. It is considered that conditions are likely to be reasonably similar over a distance of this magnitude and the information is a suitable source of data for an assessment of this nature.

4.6.2 Meteorological data was obtained from London City Airport Meteorological Station over the period 1st January 2019 to 31st December 2023 (inclusive). This is summarised in Table 8. Reference should be made to Figure 4 for a wind rose of the meteorological data.

Table 8 Wind Frequency Data

Wind Direction (°)	Frequency of Wind (%)
345 - 15	4.37
15 - 45	2.20
45 - 75	9.33
75 - 105	10.96
105 - 135	3.50
135 - 165	3.25
165 - 195	4.02
195 - 225	13.28
225 - 255	26.59
255 - 285	8.55
285 - 315	8.48
315 - 345	4.13
Sub-Total	98.65
Calms	0.80
Missing/Incomplete	0.55

4.6.3 As shown in Table 8, the prevailing wind direction at the site is from the south-west. Winds from the north and east are relatively infrequent, which is indicative of conditions throughout the majority of the UK.

4.6.4 All meteorological data used in the assessment was provided by Atmospheric Dispersion Modelling Ltd, which is an established distributor of meteorological data within the UK.

5.0 **ASSESSMENT**

5.1.1 The development has the potential to cause loss of amenity at sensitive locations in the vicinity of the site. The risk of potential impact was therefore assessed in accordance with the previously stated IAQM methodology¹⁶.

5.1.2 The first step was to classify the Source Odour Potential for the flues serving the facility, as identified in Section 4.4. This was classified based on the following considerations:

- Odours associated with coffee roasting activities are usually considered 'less offensive' in accordance with the EA H4 guidance¹⁷;
- The throughput of the facility is not anticipated exceed 100,000t per annum which corresponds to a maximum source odour potential of 'medium' based on the IAQM criteria;
- All processes will be undertaken inside a completely enclosed building in order to provide containment of materials and any associated emissions; and,
- Emissions extracted from both the roasting and cooling stages will be directed through a cyclone separator to remove particulate matter. The cleaned air stream will then be transferred to an afterburner which operates at 600 °C to 700 °C to achieve thermal destruction of any odorous compounds present with prior to discharge to atmosphere via the stacks.

5.1.3 Based on the above, it is considered there is appropriate justification for classification of the Source Odour Potential as 'small' in accordance with the IAQM guidance criteria. However, in order to ensure a worst-case assessment and to account for potential increases in throughput during future operation of the facility, an overall classification of 'medium' has been utilised as part of the assessment.

5.1.4 The Pathway Effectiveness was subsequently defined based on the separation distance between the sources and the nearest sensitive receptor locations, the prevailing meteorological conditions and the emission dispersion arrangements. This is summarised in Table 9.

¹⁶ Guidance on the Assessment of Odour for Planning v1.1, IAQM, 2018.

¹⁷ H4: Odour Management, EA, 2011.

Table 9 Pathway Effectiveness

Receptor		Pathway Effectiveness	Justification
R1	Residential - Thetford Close	Ineffective	Receptor is local to the source, approximately 130m to the north Receptor is not downwind of the source with respect to prevailing meteorological conditions Roasting processes occur within an enclosed building. Emissions from all sources will be released to atmosphere via dedicated flues which terminate above the building ridge and include high velocity jet cowls to promote effective dilution and dispersion of any residual odour emissions
R2	Residential - Norfolk Avenue	Ineffective	Receptor is local to the source, approximately 110m to the north Receptor is not downwind of the source with respect to prevailing meteorological conditions Roasting processes occur within an enclosed building. Emissions from all sources will be released to atmosphere via dedicated flues which terminate above the building ridge and include high velocity jet cowls to promote effective dilution and dispersion of any residual odour emissions
R3	Industrial - White Hart Works	Ineffective	Receptor is local to the source, approximately 175m to the north-north-east Receptor is not downwind of the source with respect to prevailing meteorological conditions Roasting processes occur within an enclosed building. Emissions from all sources will be released to atmosphere via dedicated flues which terminate above the building ridge and include high velocity jet cowls to promote effective dilution and dispersion of any residual odour emissions
R4	Commercial - Rowland Road	Moderately effective	Receptor is local to the source, approximately 240m to the east Receptor is downwind of the source with respect to prevailing meteorological conditions Roasting processes occur within an enclosed building. Emissions from all sources will be released to atmosphere via dedicated flues which terminate above the building ridge and include high velocity jet cowls to promote effective dilution and dispersion of any residual odour emissions

Receptor		Pathway Effectiveness	Justification
R5	Residential - Fenton Road	Moderately effective	Receptor is local to the source, approximately 250m to the east Receptor is downwind of the source with respect to prevailing meteorological conditions Roasting processes occur within an enclosed building. Emissions from all sources will be released to atmosphere via dedicated flues which terminate above the building ridge and include high velocity jet cowls to promote effective dilution and dispersion of any residual odour emissions
R6	Recreational - Coles Park Stadium	Ineffective	Receptor is local to the source, approximately 110m to the south-east Receptor is not downwind of the source with respect to prevailing meteorological conditions Roasting processes occur within an enclosed building. Emissions from all sources will be released to atmosphere via dedicated flues which terminate above the building ridge and include high velocity jet cowls to promote effective dilution and dispersion of any residual odour emissions
R7	Residential - Rivulet Road	Ineffective	Receptor is local to the source, approximately 85m to the south Receptor is not downwind of the source with respect to prevailing meteorological conditions Roasting processes occur within an enclosed building. Emissions from all sources will be released to atmosphere via dedicated flues which terminate above the building ridge and include high velocity jet cowls to promote effective dilution and dispersion of any residual odour emissions
R8	Residential - Perth Road	Ineffective	Receptor is local to the source, approximately 170m to the south-west Receptor is not downwind of the source with respect to prevailing meteorological conditions Roasting processes occur within an enclosed building. Emissions from all sources will be released to atmosphere via dedicated flues which terminate above the building ridge and include high velocity jet cowls to promote effective dilution and dispersion of any residual odour emissions

Receptor		Pathway Effectiveness	Justification
R9	Educational - Riverside School	Ineffective	Receptor is distanced from the source, approximately 355m to the south-west Receptor is not downwind of the source with respect to prevailing meteorological conditions Roasting processes occur within an enclosed building. Emissions from all sources will be released to atmosphere via dedicated flues which terminate above the building ridge and include high velocity jet cowls to promote effective dilution and dispersion of any residual odour emissions
R10	Recreational - New River Leisure Centre	Ineffective	Receptor is distanced from the source, approximately 320m to the west Receptor is not downwind of the source with respect to prevailing meteorological conditions Roasting processes occur within an enclosed building. Emissions from all sources will be released to atmosphere via dedicated flues which terminate above the building ridge and include high velocity jet cowls to promote effective dilution and dispersion of any residual odour emissions
R11	Residential - Wolves Lane	Ineffective	Receptor is distanced from the source, approximately 585m to the west Receptor is not downwind of the source with respect to prevailing meteorological conditions Roasting processes occur within an enclosed building. Emissions from all sources will be released to atmosphere via dedicated flues which terminate above the building ridge and include high velocity jet cowls to promote effective dilution and dispersion of any residual odour emissions

5.1.5 The above information has been used with the land use sensitivity identified within Table 7 to assess odour risk and effect significance as a result of the proposed development. This is summarised in Table 10.

Table 10 Odour Risk Assessment

Receptor	Source Odour Potential	Pathway Effectiveness	Exposure Risk	Sensitivity	Effect Significance
R1	Medium	Ineffective	Negligible	High	Negligible

Receptor	Source Odour Potential	Pathway Effectiveness	Exposure Risk	Sensitivity	Effect Significance
R2	Medium	Ineffective	Negligible	High	Negligible
R3	Medium	Ineffective	Negligible	Medium	Negligible
R4	Medium	Moderately effective	Low	Medium	Negligible
R5	Medium	Moderately effective	Low	High	Slight
R6	Medium	Ineffective	Negligible	Medium	Negligible
R7	Medium	Ineffective	Negligible	High	Negligible
R8	Medium	Ineffective	Negligible	High	Negligible
R9	Medium	Ineffective	Negligible	High	Negligible
R10	Medium	Ineffective	Negligible	High	Negligible
R11	Medium	Ineffective	Negligible	High	Negligible

- 5.1.6 As shown in Table 10, the predicted odour effect significance was **slight** at R5 and **negligible** at all remaining receptors as a result of emissions from the flues.
- 5.1.7 The IAQM guidance states that only if the impact is **moderate** or **substantial**, the effect is considered **significant**. As such, potential impacts as a result of emissions from the proposals are considered to be **not significant**, in accordance with the stated methodology.
- 5.1.8 Based on the findings of the Risk Assessment, overall effects as a result of emissions from the proposed development are considered to be **not significant**. As such, odour is not considered to represent a constraint to planning consent for the scheme.

6.0 CONCLUSION

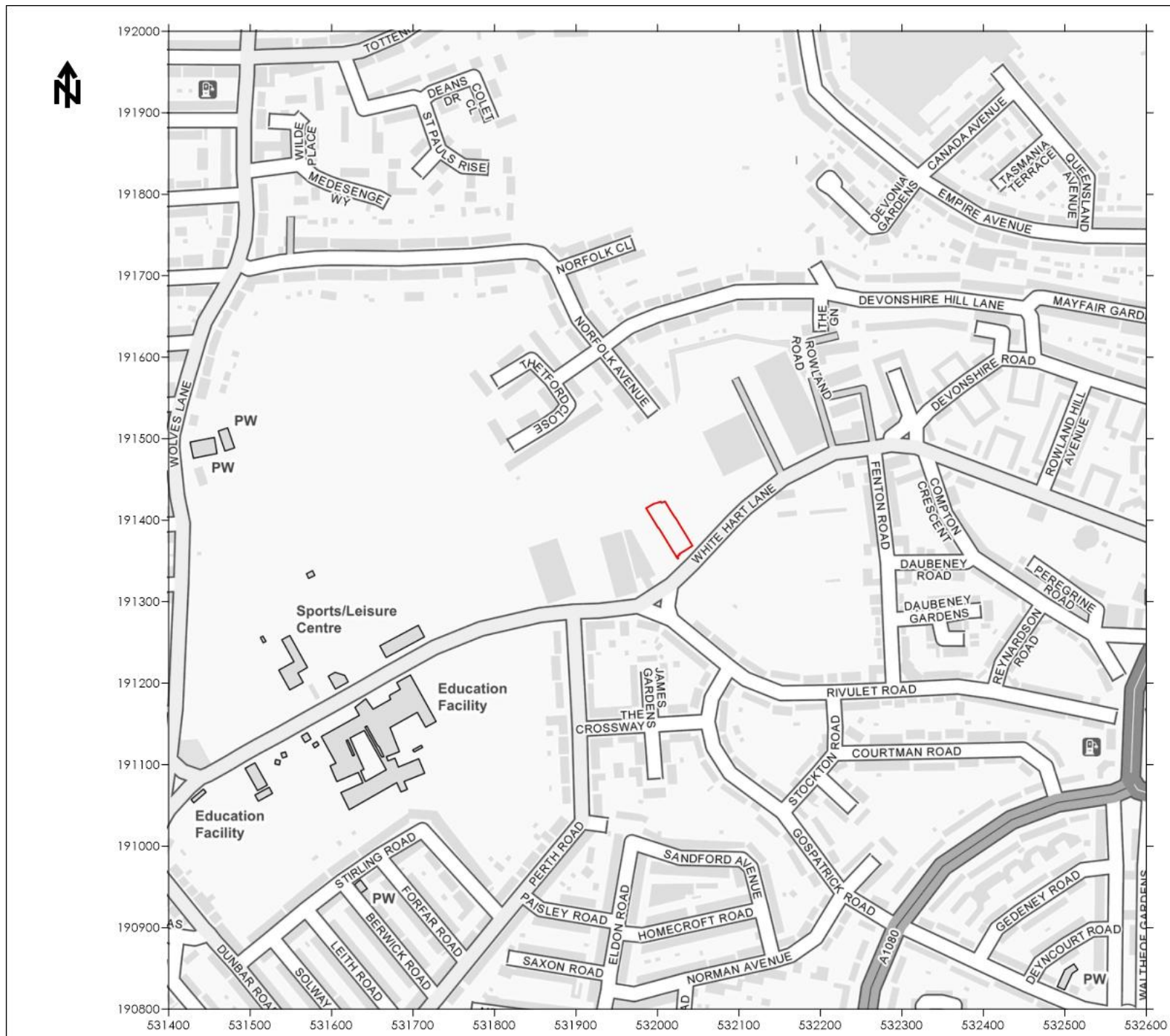
- 6.1.1 Redmore Environmental was commissioned by SEGRO PLC to provide an Odour Assessment in support of a planning application for the installation of a coffee roasting facility at Unit 2, SEGRO Park, Tottenham.
- 6.1.2 Odour emissions with the proposed coffee roasting processes have the potential to cause loss of amenity at sensitive locations in the vicinity of the site and act as a constraint to planning consent. An Odour Assessment was therefore undertaken to evaluate potential effects as a result of the development.
- 6.1.3 The risk of potential odour effects at the development was assessed using the IAQM methodology. This included consideration of the Source Odour Potential, Pathway Effectiveness and receptor sensitivity. The results of the assessment indicated the predicted odour effect significance was **slight** at one receptor and **negligible** at all remaining locations as a result of emissions from the relevant sources.
- 6.1.4 The IAQM guidance¹⁸ states that only if the impact is **moderate** or **substantial**, the effect is considered **significant**. As such, based on the assessment results, potential odour effects as a result of emissions from the proposals are considered to be **not significant**.
- 6.1.5 Based on the findings of the assessment, odour is not considered to represent a constraint to planning consent for the scheme.

¹⁸ Guidance on the Assessment of Odour for Planning, v1.1, IAQM, 2018.

7.0 **ABBREVIATIONS**

DPD	Development Plan Document
EA	Environment Agency
IAQM	Institute of Air Quality Management
LBoH	London Borough of Haringey
LCA	London City Airport
NGR	National Grid Reference
NPPF	National Planning Policy Framework
ODT	Odour Detection Threshold
STW	Sewage Treatment Works

Figures



Legend



Site Boundary

Title

Figure 1 - Site Location Plan

Project

Odour Assessment
SERGO Park, Tottenham

Project Reference

9883

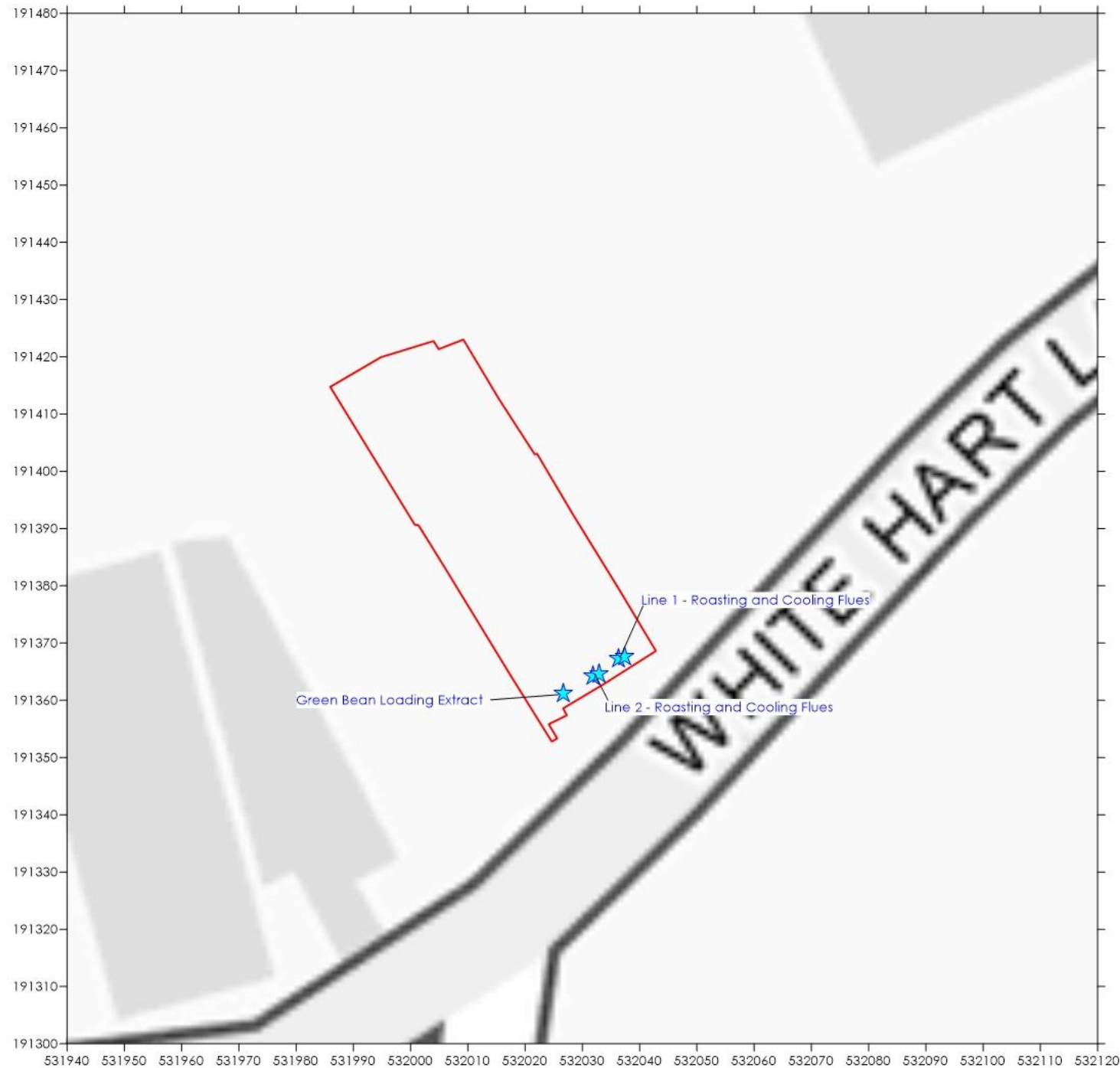
Client

SEGRO PLC

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Legend



Site Boundary



Proposed Flues

Title

Figure 2 - Proposed Flue Locations

Project

Odour Assessment
SERGO Park, Tottenham

Project Reference

9883

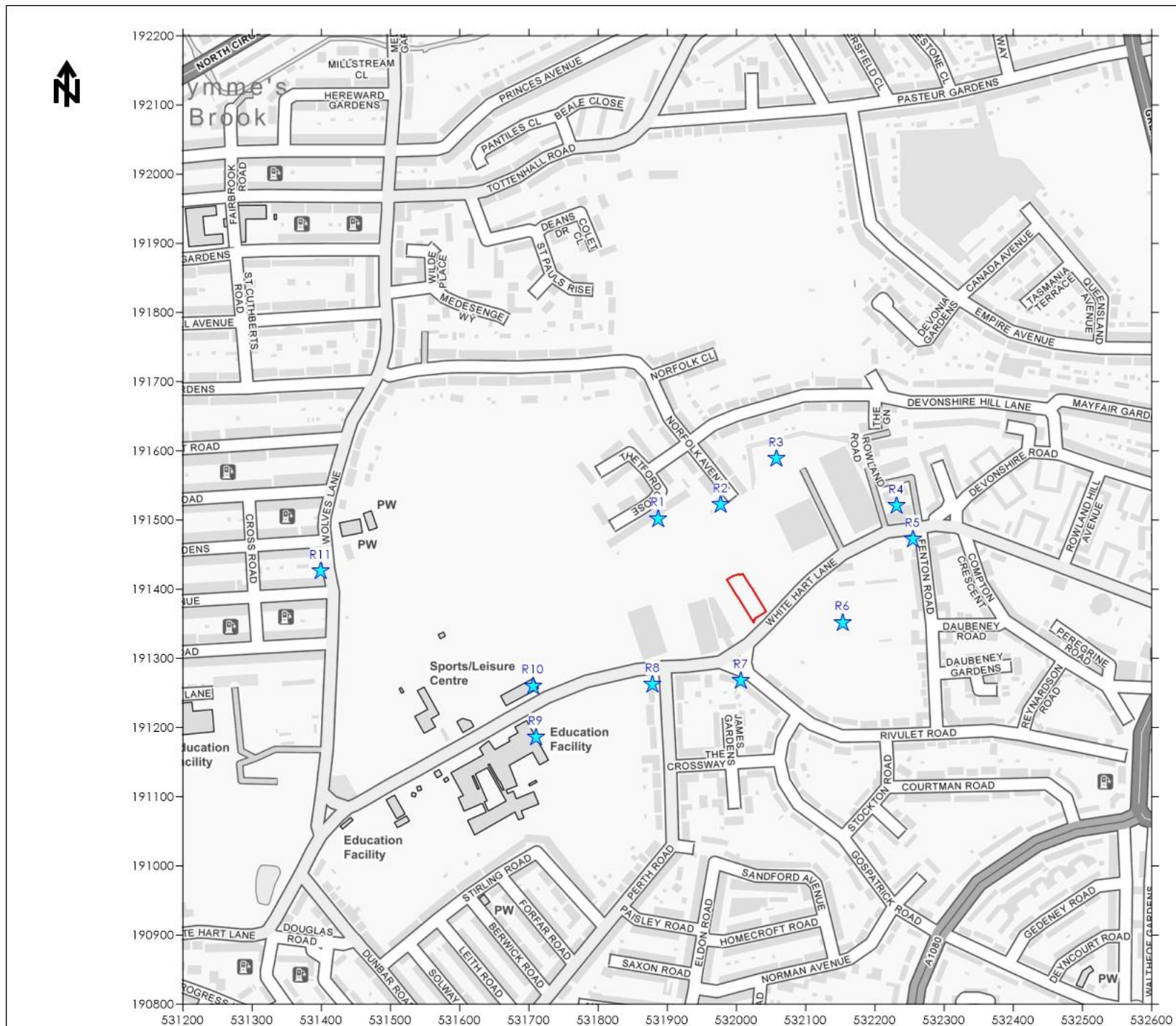
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Legend



Site Boundary



Sensitive Receptor

Title

Figure 3 - Sensitive Receptor Locations

Project

Odour Assessment
SERGO Park, Tottenham

Project Reference

9883

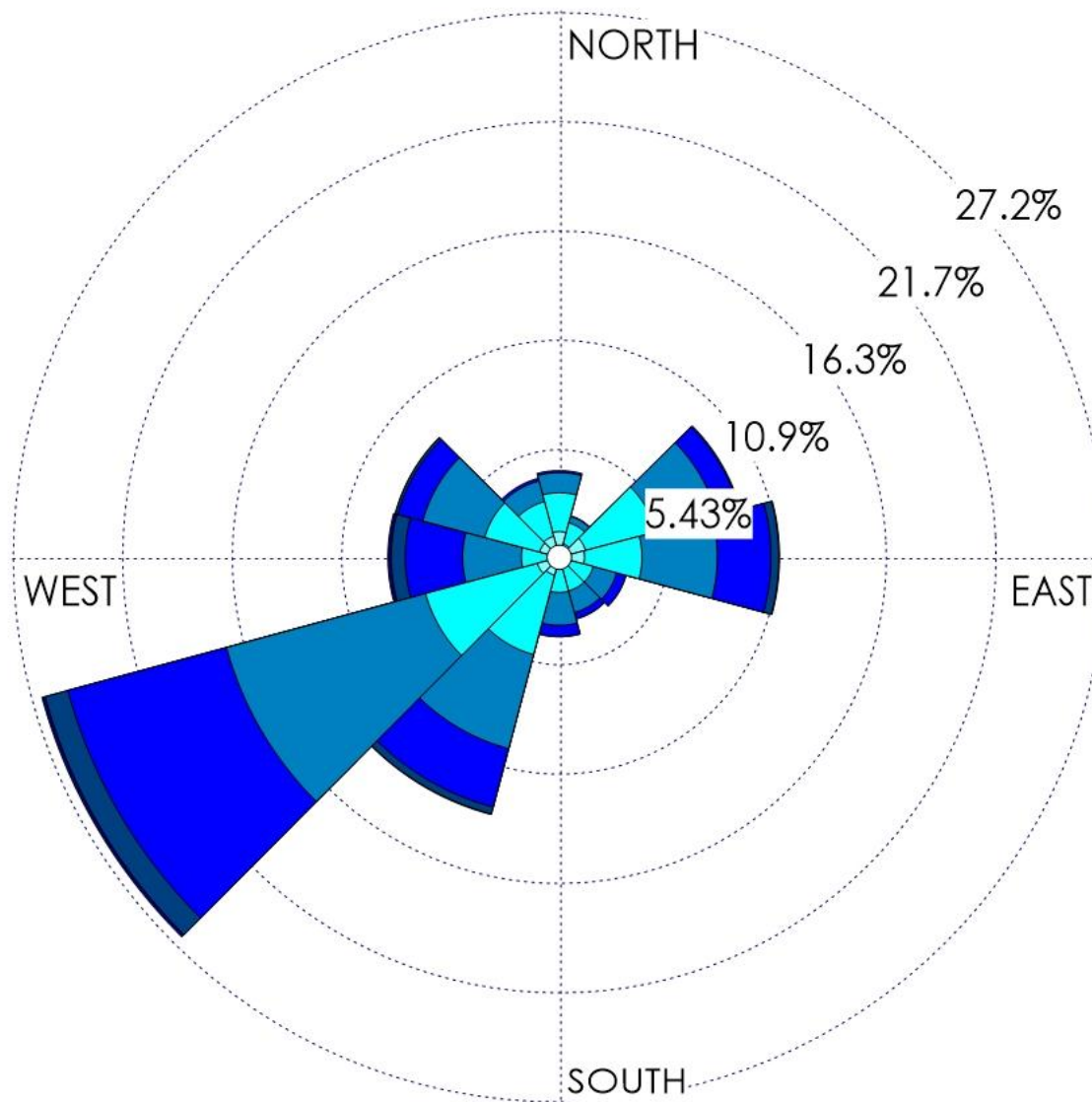
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Legend

WIND SPEED
(m/s)

- ≥ 11.10
- 8.80 - 11.10
- 5.70 - 8.80
- 3.60 - 5.70
- 2.10 - 3.60
- 0.50 - 2.10

Calms: 0.80%

Title

Figure 4 - Wind Rose of 2019 to 2023
London City Airport Meteorological
Data

Project

Odour Assessment
SERGO Park, Tottenham

Project Reference

9883

Client

SEGRO PLC



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Appendix 1 - Curricula Vitae

KEY EXPERIENCE:

Ger is a Director with specialist experience in the odour and air quality sectors. His key capabilities include:

- Production of Air Quality, Dust and Odour Assessments in accordance with Department for Environment, Food and Rural Affairs (DEFRA) and Institute of Air Quality Management (IAQM) methodologies for a range of residential, commercial and industrial sectors.
- Detailed dispersion modelling of industrial sources using ADMS-5 to determine impacts of emissions on local air quality and amenity as a consequence of odour.
- Odour sampling and analysis as part of performance testing for odour abatement plant and mitigation appraisal.
- Odour and dust surveys to assess amenity and suitability of sites for residential development.
- Odour and dust risk assessments to determine odour effect significance in accordance with IAQM Guidance.
- Modelling of road vehicle exhaust emissions using ADMS-Roads. Studies have included assessment of road traffic exhaust emissions on sensitive receptors and exposure of new residents to poor air quality.
- Design and project management of pollutant monitoring campaigns.
- Co-ordination and management of large-scale multi-disciplinary projects and submissions.

SELECT PROJECTS SUMMARY:**Industrial**

GP Plantscape, Blantyre - Odour Assessment in relation to existing operations at the In-Vessel Composting (IVC) facility operated by the company.

Moir Seafoods, Morpeth - Odour Management Plan prepared to control impacts associated with emissions from the facility operated by the company.

Bioganix, Bonby - Odour Assessment in support of an Environmental Permit Variation for the food waste processing facility operated by the company.

Alne Material Recycling, York - Odour Emissions Monitoring and Odour Assessment undertaken in support of compliance with the Environmental Permit for the facility.

Dryholme Anaerobic Digestion (AD) Plant - Odour Assessment in support of an Environmental Permit Variation for the facility.

Pets Choice, Blackburn - Odour Assessment in support of an Environmental Permit Application for the manufacturing facility operated by the company.

Crofthead Biogas AD Plant - Odour Assessment in support of an Environmental Permit Application for the facility.

Cofresh Snack Foods - Odour Assessment to investigate potential impacts associated with emissions from the manufacturing facility operated by the company.

Tulip Fresh Meats, Ashton-Under-Lyne - Odour consultancy services in support of an Environmental Permit Variation Application for the facility.

Five Ways Road, Warwick - Odour Assessment in support of a planning application for an extension to an existing poultry abattoir.

Residential

Broadnook Garden Suburb, Birstall - Odour Assessment in support of a residential development which involved completion of Field Odour Surveys and a Risk Assessment in accordance with IAQM guidance.

Hungerford House Farm, Madeley - Odour Assessment in support of the conversion of an existing agricultural building to a residential dwelling.

Hales Pasture Farm, Allostock - Odour consultancy services in support of a nuisance claim by the owner of the property.

North Leigh Park, Wigan - Odour Assessment in support of a planning application for residential development.

New Road, Tintwistle - Odour Assessment to evaluate potential impacts at a proposed residential development as a result of emissions from an existing Wastewater Treatment Works (WwTWs).

Land at Mobberley - Odour Assessment to evaluate potential impacts at a proposed residential development as a result of emissions from an existing WwTWs.

Island Carr Road, Brigg - Odour Assessment to evaluate potential impacts at a proposed residential development as a result of emissions from an existing WwTWs.

Moorland Grange Farm, Bingley - Odour Assessment in support of the conversion of an existing agricultural building to a residential dwelling.

Irwell Vale Mill, Ramsbottom - Odour Assessment to evaluate potential impacts at a proposed residential development as a result of emissions from an existing WwTWs.

KEY EXPERIENCE:

Megan is an Environmental Consultant with specialist experience in the air quality sector. Her key capabilities include:

- Production of Air Quality Assessments in accordance with Department for Environment, Food and Rural affairs (DEFRA) methodologies for a range of residential, commercial and industrial sectors.
- Detailed dispersion modelling of road vehicle and industrial emissions using ADMS-Roads and ADMS-6. Studies have included impact assessment of ground level pollutant and odour concentrations and assessment of suitability of development sites for proposed end-use.
- Advanced Canyon Modelling to evaluate the impact of altered urban topography on air quality in built up areas.
- Odour surveys to assess amenity of suitability of sites for potential future development for residential use.
- Production of Air Quality Neutral Assessment in accordance with The London Plan.
- Measurement and assessment of indoor air quality in support of BREEAM accreditation. She has conducted Total Volatile Organic Compound (TVOC) and formaldehyde monitoring at numerous commercial developments throughout the UK in pursuit of the relevant credit specified under BREEAM category Hea 02 'Indoor Air Quality'.

SELECT PROJECTS SUMMARY:

Princess of Wales Hospital, Ely

Production of an Air Quality Assessment in support of the installation of an emergency generator unit located at Princess of Wales Hospital, Ely. Dispersion modelling of combustion emissions using ADMS-6 was undertaken in order to predict impacts at sensitive receptors. The results indicated pollutant levels as a result of the operation of the plant were below the relevant AQOs at all locations within the vicinity of the installation. Mitigation was therefore not required.

West Town Road, Avonmouth

Air Quality Assessment in support of a Bio-Compressed Natural Gas fuelling station on land off West Town Road, Avonmouth. Dispersion modelling was undertaken to determine potential changes in pollution levels as a result of emissions from the installation and consider potential impacts at nearby sensitive receptor locations. The overall effects of the development were predicted to be not significant.

Kent Street, Birmingham

Production of an Air Quality Assessment in support of the construction of a residential development across eight blocks. This development was located just outside the boundary of the Birmingham Clean Air Zone (CAZ). ADMS-Roads dispersion modelling was undertaken to determine the exposure of future residents to elevated pollutant concentrations. The results indicated that concentrations were below the relevant AQOs and Interim Target.

Nearsden Lane, London

Air Quality Neutral Assessment in support of the construction of a ten-storey building, with 74 commercial kitchen units. The assessment was carried out in accordance with the London Plan requirements to ensure proposals did not lead to further deterioration of existing air quality. Following discussions and implementation of the identified strategies, compliance with the London Plan was achieved.

Moss Side, Manchester

Odour Assessment in support of a residential development within Moss-Side, Manchester. The proposals were located in close proximity to the Heineken UK Limited Brewery. As such, the Local Authority raised concerns that odour emissions may cause loss of amenity to future residents. A programme of Field Odour Surveys was undertaken to assess odour impacts from said premises. Results indicated odour effects at the site did not represent a constraint to planning consent.

Arax Euston House, London

Indoor Air Quality Monitoring in support of the construction of a redeveloped office space. The scheme was registered to pursue certification through the BREEAM 2014 standard. As such, Indoor Air Quality Monitoring was undertaken at four locations to determine conditions within the building and identify any issues. The results indicated concentrations of TVOCs and formaldehyde were below the BREEAM criteria at all positions.