



Langstone Park, Havant, PO9 1SA: Odour Technical Note

Introduction

Phlorum Ltd has been commissioned by XLB Property Ltd to produce an odour statement to support the outline planning application for the proposed redevelopment of the Langstone Park, Havant, PO9 1SA. The Masterplan proposals involve the construction of up to 63,290 sqm (including Phase 1) of commercial floorspace, with associated car parking.

An odour statement was required following advice from Havant Borough Council (HBC), who stated the following:

"Given the nature of the range of uses proposed a statement with regard to the approach to preventing odour impacts would need to be set out. Again a condition is likely to be imposed but with units moving closer to residential property, it is important at the outline stage to understand the approach proposed."

This statement includes commentary on the potential impact of the proposed development on nearby uses as instructed by HBC. However, it also considers the potential impact of the nearby Southmoor Lane wastewater treatment works (WwTW), operated by Southern Water (SW), on the proposed development.

The statement briefly introduces how odour is regulated in the UK and in Havant Borough, before assessing the proposed development's impact on, and sensitivity to, the local odour environment.

Odour legislation and regulation

The National Planning Policy Framework

The NPPF¹, which was updated in July 2021, sets out the Government's planning policy for England. At its heart is an intention to promote more sustainable development. A principle in the NPPF that relates to odour is set out in paragraph 186:

¹ Department for Communities and Local Government (DCLG), (2021), National Planning Policy Framework.

"Planning policies and decisions should ensure that new development can be integrated effectively with existing businesses and community facilities (such as places of worship, pubs, music venues and sports clubs). Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established. Where the operation of an existing business or community facility could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant (or 'agent of change') should be required to provide suitable mitigation before the development has been completed"

Local Planning Policy

The Havant Local Plan² includes policies relevant to odour, including Policy CS16: High Quality Design, which states:

"Planning permission will be granted for development that is designed to a high standard, which helps to create places where people want to live, work and relax.

All development should demonstrate that its design: [...]

e) The development does not cause unacceptable harm to the amenity of neighbours through smell, the loss of privacy, outlook, noise and overlooking"

Also relevant is Policy DM10 Pollution, which states:

"Development that may cause pollution of water, air or soil or pollution through noise, smell, smoke, fumes, gases, steam, dust, vibration, light, heat, electromagnetic radiation and other pollutants will only be permitted where all of the following relevant criteria can be met:

1. The health and safety of existing and future users of the site, or nearby occupiers and residents is not put at risk."

The submission version of the HBC emerging Local Plan³, within which the Langstone Park is an allocated site, also contains policy of relevance to odour. This includes Policy E1: High quality design, which states:

"Planning permission will be granted for development that:

a) Is designed to a high standard, which helps to create places where people want to live, work, visit and enjoy; [...]

c) Demonstrates that it:

2 Havant Borough Council. (2011). Havant Borough Core Strategy Local Plan. [Adopted March 2011]. <https://cdn.havant.gov.uk/public/documents/ADOPTED%20CORE%20STRATEGY%20.pdf>

3 HBC (2021) Havant Borough Local Plan (submission version)

- iv. *Avoids over-dominance and does not cause unacceptable harm to the amenity of neighbours through overshadowing, massing, the loss of privacy, outlook, overlooking, and through odour, noise or disturbance [...]*

Development proposals will be permitted where:

- a. *Projected levels of noise, odour, vibration, light, water or air pollution do not have a likely significant negative effect on the amenity of existing and future users of the site, nearby occupiers or the wider environment; or*
- b. *Measures are provided which are suitable for the purposes intended and will ensure that any likely significant negative effect on receptor(s) are mitigated to an acceptable level"*

Odour Regulation

As the tenants of the proposed development are not yet known, it is unknown whether or how any potential odour emissions might be regulated. Some potentially odorous developments/activities are controlled by the Environmental Permitting Regulations (2016)⁴; otherwise, general statutory nuisance provisions under the Environmental Protection Act (1990) would apply.

Odour Assessment

Odour nuisance potential is usually assessed by parameters collectively known as the FIDOL factors (**F**requency, **I**ntensity, **D**uration, **O**ffensiveness and **L**ocation). The magnitude of the effect is determined by the scale of exposure (FIDO) with the location denoting the sensitivity of the receptor.

The magnitude of effect will also be mediated by the emission source itself and the effectiveness of the pathway which conveys the odour to the receptor.

Impact of the nearby wastewater treatment works on the proposed development

Following a freedom of information request, HBC provided a summary of the odour complaints made against the Southmoor Lane WwTW in the past ten years. These are summarised below. Unfortunately, no dates were provided:

-  COMP/19/01692 – “foul smells”, Penner Road.
-  COMP/16/01163 – “foul odour... - often detectable, but particularly bad...today”, Southmoor Lane.

⁴ The Environmental Permitting (England and Wales) Regulations SI 2016/1154

- 🌿 COMP/15/01788 – “the most awful smell - like raw sewage...the same terrible smell a few evenings ago”, Monterey Drive.
- 🌿 COMP/15/01029 – “often a smell of sewage ...however today the stench was in a different league”, “stench”, Southmoor Lane, Brewster Close
- 🌿 COMP/14/00824 – “Foul smell ...over the past week”. Kingscroft Corner, West Street, New Road, Langstone Road.
- 🌿 COMP/13/00598 – “stench [persisting for ~1.5 weeks prior to date of complaint]”. Filenote: “[odour associated with] annual maintenance [at Budds Farm] and therefore some smell is detectable [Bad at the time of writing]...should last [no longer than] a couple of weeks”, Elm Grove, Langstone Road, Southmoor Lane, Havant Road, Longmead Gardens, Sinah Lane, Prinsted Lane, Conifer Rise, Rectory Road, Brockhampton Road

HBC caveat that the road name referenced in the complaints listed above might not correspond to the location where the odour was affecting as only the home addresses of the complainants were recorded. Nevertheless, according to HBC's records, only six periods of odour complaint have been made against the WwTW in the past ten years, with at least one of the odour episodes (COMP/13/00598) linked to the WwTW's annual maintenance. This suggests that when operating normally, the area in the vicinity of the proposed development is not frequently exposed to odours from the WwTW likely to cause annoyance.

Furthermore, the proposed development is located further from the WwTW than existing commercial uses and as such would likely be at lesser odour risk than closer uses. As such, it is considered highly unlikely that the proposed development would be adversely impacted by the operation of the Southmoor Lane WwTW and no further impact assessment would likely be required at the Reserved Matters stage.

Impact of uses within the proposed development on local sensitive receptors

As only an outline application is being progressed at this stage, there are no details of the potential occupiers. Nevertheless, as the proposals include B2 land-use, odorous end-uses are a possibility. As such, an assessment of the potential impact of the proposed development on local receptors has been undertaken.

Qualitative Odour Assessment

A qualitative odour assessment, following the approach set out in the Institute of Air Quality Management's *Odour Guidance for Planning*, is presented below. The assessment is based on the Source-pathway-receptor conceptual model.

Table 1 below, taken directly from IAQM guidance, sets out how the risk of odour exposure is determined in terms of the source odour potential and the pathway effectiveness.

Table 10: Risk of odour exposure (impact) at the specific receptor location

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

Table 2 below, taken directly from IAQM guidance, then sets out the likely magnitude of odour effect based on combining the outcomes of Table 1 with the receptor sensitivity.

Table 11: Likely magnitude of odour effect at the specific receptor location

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

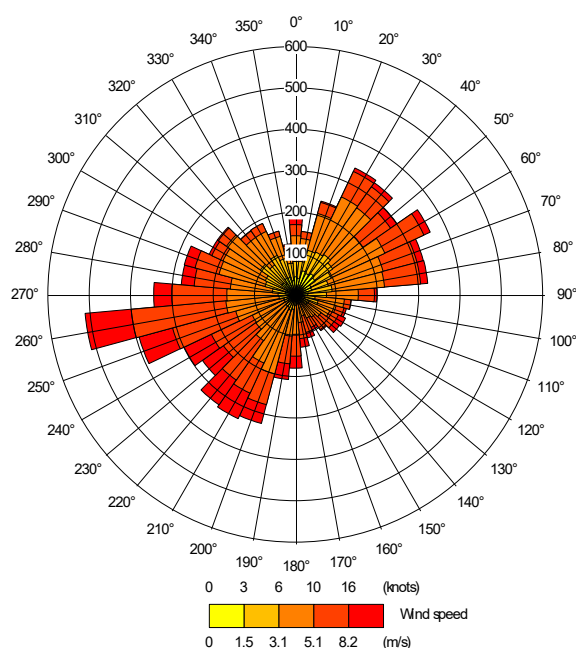
Source Odour Potential

For the purposes of this statement, it has been assumed that a medium sized odour source (e.g. a use that might require a part B environmental permit) might locate in building 5 and/or 13, i.e. the two closest spaces to the residential dwellings on Brookmead Way.

Pathway Effectiveness

Figure 1 below shows the Wind rose for Thorney Island, the closest meteorological station to the proposed development.

Figure 1 Thorney Island 2018



Buildings 5 is located circa 100m to the west of the closest residential receptor. 100m is considered quite distant for a medium sized odour source and there is a vegetative barrier between the proposed development and the dwellings that would likely promote dispersion by deflecting and mixing the air. However, for conservative purposes, it has been concluded that the pathway would be *moderately effective*.

Building 13 is located circa 80m to the north-west of the closest residential receptor. Given the near absence of north-westerly winds and the distance, the pathway from building 13 to nearby sensitive uses is considered *ineffective*.

Summary

Table 3 below combines estimates of Source Odour Potential, Pathway Effectiveness, and receptor sensitivity to estimate the likely odour effects.

Table 3 Summary of the likely odour effects at existing receptors

Receptors	Source Odour Potential	Pathway (Transport Effectiveness)	Source Odour potential	Receptor Sensitivity	Likely Odour Effect
Houses to East of Building 5	Medium	Moderately/ Ineffective	Low	High	Slight
Houses to South-east of Building 13	Medium	Ineffective	Negligible	Negligible	Negligible



The proposed development is considered to present, at worst, a slight adverse impact on local sensitive receptors. Slight impacts are not considered significant with reference to IAQM guidance.

Mitigation

Whilst no significant odour effects are considered likely, mitigation measures should be considered to minimise any residual risk.

The client should consider siting potentially odorous uses away from high sensitivity receptors in a Reserved Matters Application. Furthermore, the design of the ventilation/ extract system of any odorous processes should be designed to promote effective dispersion and, if necessary, to minimise any odorous emissions through appropriate abatement technologies.

Conclusions

The proposed development is considered highly unlikely to be significantly affected by the operation of the nearby wastewater treatment works.

The proposed development is considered to present, at worst, a slight adverse odour risk to nearby sensitive receptors. However, this risk is not considered to be significant. Furthermore, this statement outlines measures that could further minimise any residual odour risk. Odour should not, therefore, present a significant obstacle to the planning process