



Albion Land

Catalyst Bicester, Wendlebury Road, Bicester

Odour Assessment

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1. Introduction

WYG Environment Planning Transport (WYG) have been commissioned by Albion Land to prepare an odour survey in support of planning application for employment floorspace and a health and racquet club on land to the south-east of Wendlebury Road, Bicester, OX25 2PA (the Site) (Shown at Figure 1).

The proposed development site boundary is presented in Figure 2.

Planning permission is sought via two planning applications:

- Application 1 is submitted in hybrid form (part full and part outline). It seeks outline planning permission for up to 23,400 sq.m of employment floorspace (Use Classes B1a and/or B1b and/or B1c) and full planning permission for a health and racquet club on Site A (see Figure 2a).

Application 1 does not include the poultry farm.

- Application 2 is submitted in outline and seeks permission for up to 10,200 sq.m of further employment floorspace (also in Use Classes B1a and/or B1b and/or B1c) on Site B (see Figure 2b). The poultry farm will be demolished and will be replaced by part of the new development.

The development proposed by Application 2 will not come forward unless the development proposed by Application 1 is delivered.

1.1 Site Location and Context

The Site is bounded by:

- Bicester Avenue Garden Centre to the North, ;
- The Wendlebury Road to the West;
- Agricultural land to the South; and,
- Agricultural land to the East.

Thames Water's Sewage Treatment Plant at Ambrosden, Bicester, OX25 2PA is approximately 160 meters northeast of the proposed development at its closest point.

A poultry farm is currently located at the south-western corner of the proposed development site. The poultry farm, however, will be demolished and will be replaced by part of the new development (if application 1 approved).

The approximate United Kingdom National Grid Reference (NGR) is approximately 457500, 221000. Reference should be made to Figure 1 for a map of the proposed development site and surrounding area.



1.2 Overview and Scope of Odour Survey

The objectives of this odour survey are to study the potential odour impact from both the existing operations of Bicester Sewage Treatment Works and the poultry farm on the proposed development sensitive receptor locations.

Therefore, two odour assessment scenarios have been undertaken.

- Scenario 1 – based on the poultry farm to be removed, the odour assessment will be mainly concentrated on the odour impact from the Bicester Sewage Treatment Works.
- Scenario 2 – assuming the poultry farm to remain, the odour assessment focuses on the odour impact from both Bicester Sewage Treatment Works and the poultry farm.

This assessment includes the completion of field odour surveys to assess the odour impacts from the Bicester Sewage Treatment Works and the poultry farm on the proposed development site and surrounding environment.

The results are detailed in the following sections of this report.



2. Odour Assessment Methodology

Following major regulations/guidance/guidelines have been used in the assessment:

- Guidance on the assessment of odour for planning, IAQM, July 2018; and,
- H4 Odour Management, How to comply with your environmental permit, March 2011.

2.1 Definition of Impact and Effect

IEMA Guidelines for Environmental Impact Assessment (2004) recommend a clear progression from the characterisation of “impact” to the assessment of the significance of the “effect” taking into account the evaluation of the sensitivity and value of the receptors. The guidelines emphasise the need to clearly define at the outset how the two terms will be used and then to apply them in a consistent fashion. In this IAQM guidance, the following definitions are used:

- **Impacts** – these are changes to the environment attributable to the development proposal.
- **Effects** – these are the results of the changes on specific receptors.
- **Receptors** - are the users of the adjacent land, which may vary in their sensitivity to odour.

An increase in odour levels (the impact) would therefore cause a particular effect (e.g. loss of amenity) if the adjacent land use was residential, and perhaps a lesser effect if the adjacent land use was an industrial facility.

2.2 Assessment Methodology

A total of four field odour surveys have been undertaken between the 6th June 2019 and the 26th June 2019.

The surveys have been using the Environment Agency’s protocol for testing (“sniff testing”) as described in Section 5 of the Guidance Note of *“H4 Odour Management, How to comply with your environmental permit”* (March 2011). The protocol is derived from methodologies set out in the Association of German Engineers(VDI) 3883 Part 1, VDI 3883 Part 2 and VDI 3940. The VDI standards are the German equivalent to British Standards. This odour assessment also used the *“Guidance on the assessment of odour for planning”* published by The Institute of Air Quality Management (IAQM) in July 2018.

The protocol provides a ‘snapshot’ of the presence, strength, character and extent of an odour at the time of the assessment. It is, however, subjective, with individual perception of odour varying. Odour may

vary dependent on weather conditions or when there is limited dispersion due to the presence of an atmospheric inversion.

The odour assessment methodology requires the assessor to use their own sense of smell to detect odour. The assessor should move from areas of weaker odour to stronger.

The route followed by the assessors is shown in Figures 3a and 3b. All assessors have known olfactory acuity, which means that their sense of smell has been quantified in a laboratory. A description of the odour intensity and its extent was recorded using the following classification system:

Odour Intensity is presented in Table 2.1.

Table 2.1 Odour intensity Scale/Level

Intensity Level	Odour Strength	Comments
0	No odour/not perceptible	No odour when compared to the clean site
<i>The Odour Detection Threshold (ODT) of 1 OU_E/m³ is somewhere between 0 and 1</i>		
1	Slight/very weak	There is probably some doubt as to whether the odour is actually present
2	Slight/weak	The odour is present but cannot be described using precise words or terms
3	Distinct	The odour character is barely recognisable
<i>The recognition threshold intensity is generally 3-10 times higher than the ODT (i.e. 3-10 OU_E/m³)</i>		
4	Strong	The odour character is easily recognisable
5	Very strong	The odour is offensive. Exposure to this level would be considered undesirable
6	Extremely strong	The odour is offensive. An instinctive reaction would be to mitigate against further exposure

Odour Extent (assuming odour detectable, if not then 0):

1. Local and non-persistent (only detected during brief periods when wind drops or blows);
2. Non-persistent as above, but detected away from site boundary;
3. Persistent, but fairly localised;
4. Persistent and pervasive up to 50 m from site boundary; and,
5. Persistent and widespread (odour detected >50 m from site boundary).

H4 states "the measurement scale for hedonic tones typically ranges from +4 for very pleasant odours (bakeries) to -4 for foul one (rotting flesh, for example. Neutral odours score 0. This score refers to the type of smell, irrespective of its strength (intensity) and can help to decide how offensive an odour may be."

Hedonic Tone Scale is presented in Table 2.2 (overleaf).

Table 2.2 Hedonic Tone Scale

Hedonic Tone	Scale
Very Pleasant	+4
Pleasant	+3
Moderately Pleasant	+2
Mildly Pleasant	+1
Neutral Odour / No Odour	0
Mildly Unpleasant	-1
Moderately Unpleasant	-2
Unpleasant	-3
Very Unpleasant	-4

Most odours are mixtures of many chemicals that interact to produce what we detect as a smell. A distinction should be made between: odour-free air, containing no odorous chemicals; and fresh air, usually perceived as being air that contains no chemicals or contaminants that are unpleasant (i.e. air that smells 'clean'). Fresh air may contain odorous chemicals, but these odours will usually be pleasant in character, such as freshly-mown grass or sea spray. Perceptions of an odour - whether it is found to be acceptable, objectionable or offensive - are partly innate and hard-wired, and partly determined through life experiences and hence can be subjective to the individual.

2.3 Odour Benchmarks and Odour Effect Descriptors for Impact Assessment

Environment Agency Guidance H4 Odour Management (March 2011) and the latest Institute of Air Quality Management (IAQM) Guidance on the Assessment of Odour for Planning (July 2018) provides a methodology for assessing the impacts of odour based on the combinations of field odour survey observations and odour dispersion modelling.

The modelling method calculates the 98th percentile of hourly average odour concentrations ($C_{98, 1\text{-hour}}$) over a year, (i.e. the levels exceeded for 2% of the time) with the results being expressed as European Odour Unit contours on a map. The exposure contours can then be used to check unacceptable levels of odour pollution against exposure benchmarks at sensitive receptor locations.

The H4 benchmarks are based on the 98th percentile of hourly averages and they are presented in Table 2.3.

Table 2.3 H4 Benchmark Odour Criteria

Criterion C ₉₈ ouE/m ³	Offensiveness	Odour Emission Sources
1.5	Most offensive odours	Processes involving decaying animal or fish remains Processes involving septic effluent or sludge Biological landfill odours
3.0	Moderately offensive odours	Intensive livestock rearing Fat frying (food processing) Sugar beet processing Well aerated green waste composting
6.0	Less offensive odours	Brewery Confectionery Coffee

The latest IAQM guidance states that the predictive, quantitative approach involves obtaining estimates of the odour source emission rate, use of the emissions in a dispersion model to predict 98th percentile concentration at sensitive receptors and comparison of these with criteria that have evolved from research and survey work. At the present time, this remains an accepted technique and the IAQM supports this.

IAQM confirm that in the absence of comprehensive dose-response information the assessor should allow the derivation of exact C₉₈ concentration metrics for different types of odour, IAQM is *'of the opinion that the practitioner should observe, from the various scientific studies, case law and practical examples of the investigation of odour annoyance cases, that in any specific case, an appropriate criterion could lie somewhere in the range of 1 to 10 ouE/m³ as a 98th percentile of hourly mean odour concentrations.*

Taking into account the available scientific evidence and the collective experience of IAQM members involved in drafting this guidance, the odour concentration change descriptors together with impact descriptors in Table 2.4 are proposed by IAQM for an odour at the offensive end of the spectrum. These adopt the C₉₈ as the appropriate frequency metric, encompasses the 1 to 10 ouE/m³ concentration range referred to above and also considers also the potential sensitivity of different receptors. It is also consistent in format and concept with other guidance in the air quality field.

For odours that are less unpleasant, the level of odour exposure required to elicit the same effect may be somewhat higher, requiring professional judgement to be applied. For example, odours from sewage treatment works plant operating normally, i.e. non-septic conditions, would not be expected to be at the 'most offensive' end of the spectrum (Table 2.3) and can be considered on par with 'moderately offensive' odours such as intensive livestock rearing.

3. Odour Survey Observations and Results

3.1 Field Odour Survey Observations and Results

A summary of the field based olfactory (sniff) testing surveys is provided in Table 3.1. More than 300 observation locations have been marked on the map for the odour survey, as shown on Figures 3a & 3b. Detailed survey results were used to identify intensity, extent and geographical distribution of perceived odour.

Table 3.1 Field Based Odour Assessment Summary

Date/Time	Temp.	Wind Speed	Wind Direction (Blowing From)	Details
06/06/2019 17:30 – 18:30	15 – 18 °C	5-8 m/s	South-west	<p>Wind direction at the time of the odour survey was south-west with a wind speed between 5 and 8 m/s.</p> <p>Odour was detectable at the car park of the south-east corner of the Bicester Village.</p> <p>Odour was detectable on a small section of A41 Road north to the Bicester Sewage Treatment Works.</p> <p>No odour was detected on Graven Hill (Road).</p>
12/06/2019 11:00 – 13:00	15-16 °C	0 – 2 m/s	North-East	<p>Wind direction at the time of the odour survey was from the northeast with a wind speed between 0 and 2 m/s.</p> <p>A slight 'moderately unpleasant' odour was detectable infrequently next to the sewage treatment works northern boundary at the points 178- 190, and 193</p> <p>A very weak 'mildly unpleasant' odour was detectable 'very occasionally' further north at points 196- 199 and 201</p> <p>No odour was detected to the south of Bicester Sewage Treatment Works</p> <p>Location points of 172- 177 were not accessible.</p>
14/06/2019 17:00 – 18:00	21 °C	2 – 4 m/s	South	<p>Wind Direction at the time of the odour survey was south with a wind speed of between 2 and 4 m/s.</p> <p>A strong sewage/ faecal odour was detectable approximately 150 m north of the north boundary of Bicester Sewage Treatment Works (at points 177, 178, 181, 182, 183, 184, 185, 188, 189, 190, 194, 195, 200, 201, 205, 206, 207, 211, 212, 217, 254, 260, 261, 263, 264, 270, 271, 275, 276, 278, 279, 283).</p> <p>A distinct sewage/ faecal odour was detectable further away from north boundary of Bicester Sewage Treatment Works at points 180, 193, 199, 216, 221, 229, 241, 247, 284.</p> <p>A slight sewage/ faecal odour was detectable other areas at points 186, 187, 192, 198, 204, 210, 220, 222, 223, 224, 225, 226, 227, 228, 230, 231, 232, 236- 240, 242- 245, 248- 252, 225- 258, 262, 265- 268, 272- 274, 277, 280, 281.</p> <p>No odour was detectable at the area of the points 1- 176, 191, 196, 197, 202, 203, 208, 209, 213- 215, 218, 219, 233- 235, 246, 253, 259, 269, 282, 285- 332.</p>

Date/Time	Temp.	Wind Speed	Wind Direction (Blowing From)	Details
26/06/2019 10:45 – 13:30	17 °C	1-5 m/s	North-East	<p>Wind Direction at the time of the odour survey was from the north-east with a wind speed of between 1 and 5 m/s.</p> <p>A strong sewage/ faecal odour was detectable approximately 50 m away of the southwest boundary corner of Bicester Sewage Treatment Works at points of 324 to 327.</p> <p>A slight sewage/ faecal odour was detectable approximately 200 away of the southwest boundary corner of Bicester Sewage Treatment Works at points 44, 53, and 63.</p> <p>Very strong poultry farm odour was detected at locations 143 and 144 approximately 150 m southwest to the poultry farm.</p> <p>Poultry farm odour was detectable further south down the Wendlebury Road at locations 145 and 146 (north of the farm house).</p>
30/07/2019 15:00 – 16:30	18-20 °C	2-4.5 m/s	Southwest	<p>Wind Direction at the time of the odour survey was from the south-west with a wind speed of between 2 and 4.5 m/s.</p> <p>Poultry farm odour was detected adjacent to the northeast corner of poultry farm at location 108</p> <p>Faint poultry farm odour was detected at location approximately 30 m north-eastern poultry farm boundary at locations of 90 and 93</p> <p>Poultry farm odour was detectable further northeast downwind location at locations of 81 and 80.</p>

A detailed summary of the on-site assessments using the classification system described in the EA/VDI methodology, is provided in Appendix I.

The areas of odour extent from the survey observations are presented in Figures 4 to 8.

3.2 Complaint History

Consultation has been undertaken with Thames Water (TW) with regards to any odour complaints from the neighbouring Bicester Sewage Treatment Works. An email request for information was sent to TW on the 3rd June 2019.

Morgan Smart, Data Protection Advisor for TW emailed WYG back on the 14th June 2019 and confirmed that:

"Please see below a list of odour complaints we've received broken down by year, please note that not all of these complaints relate solely to the Water treatment facility. We don't categorise complaints about flies (these kinds of complaints cannot be solely attributed to the treatments works). To help articulate this information we've provided a percentage figure for what relates solely to the development in Graven Hill.

The odour complaints received by Thames Water and the complaints which related solely to the development (Bicester Sewage Treatment Plant) in Graven Hill are presented in Table 3.2 as provided.

Table 3.2 Odour Complaints Recorded by Thames Water

Year/Location	2013	2014	2015	2016	2017	2018	2019 YTD (to June)
Bicester (total complaints in Bicester including the Sewage treatment Plant)	0	2	4	31	90	62	13
Graven Hill (Bicester Sewage Treatment Plant)	0	1	0	29	71	38	0
Percentage of Bicester complaints received from Graven Hill development (%)	N/A	N/A	N/A	94%	79%	61%	N/A

From Table 3.2, it can be seen that the odour complaints peaked in 2017 and decrease in 2018. There were no odour complaints received up to June 2019.

Consultation has also been undertaken with Cherwell District Council and South Northamptonshire Council with regards to any odour complaints from the neighbouring Bicester Sewage Treatment Works.

Mr Trevor Dixon, Environmental Protection Manager, Environmental Health and Licensing provided WYG with the following three documents on the 20th June 2019 under the terms of the Freedom of Information Act:

- (1) Complaint Notes;
- (2) Letter Closing Case; and
- (3) Table of Complaint details.

The details to those documents are presented in Appendix II.

In summary, there were a total of 12 recorded odour complaints in 2017. The odour complaints reduced to 4 complaints in 2018. As stated in the "Letter Closing Case" by Cherwell District Council, North Oxfordshire, dated 14th November 2018, the Council and Thames Water have worked together to investigate and improve the odour situation as far as is practical in the short term. It demonstrates that Thames Water are doing all they can to manage the odour in the short to medium term, which has resulted in reduced odour complaints during 2018.



2017 and 2018 odour complaint data shows that most complaints were from Foundation Square, Graven Hill, which is located approximately 100 m (at its closest point) to 250 m southeast of the Bicester Sewage Treatment Works.

3.3 Identifications of Odour Effect Zones

The relevant site boundary for the proposed development and the recommended odour effect zones associated with the operation of the sewage treatment works and poultry farm are provided in:

- Figure 9a for Scenario 1 of the poultry farm being removed; and
- Figure 9b for Scenario 2 of the poultry farm to be remained.

Odour Effect Zone A (Salmon)

Given the results of the sniff testing, it is considered that odour is likely to be regularly detected over a limited area at the north-eastern corner of the proposed development site and close to the existing sewage treatment works. Odour is also likely to be regularly detected over a limited area adjacent to the poultry farm.

Further mitigation measures, such as, no amenity spaces in this area, or providing mechanical ventilation and/or filtration to, for example, any offices and commercial buildings, should be considered.

An ecological enhancement area (wetland) has been allocated in 'the odour effect zone A' associated with the operation of sewage treatment works and there are no proposed buildings in this area.

Odour Effect Zone B (Yellow)

The odour effect of Zone B is only likely to experience odour from time to time, depending on weather conditions and operations at sewage treatment works or poultry farm. In Zone B, there remains a risk of odour being detected but the risk is minimal. No further mitigation is required.

Odour Effect Zone C (Green)

The odour effect of Zone C is unlikely to experience odour from the sewage treatment works or poultry farm frequently. It is considered that the odour may be potentially detectable only very infrequently. The potential odour impacts on the proposed development from the Sewage treatment works are therefore not significant. No further mitigation is required.



4. Conclusion

WYG Environment Planning Transport (WYG) have been commissioned by Albion Land undertake an odour survey in the support of planning permission for employment floorspace and a health and racquet club on land to the south-east of Wendlebury Road, Bicester, OX25 2PA.

The objectives of this odour survey and assessment are to study the potential magnitude and significance of potential odour impact from the existing Bicester Sewage Treatment Works' and poultry farm operations on the sensitive receptor locations within the proposed development site.

The assessment included the following assessment major stage and scope:

- Undertook 5 field odour assessments to assess the extent of existing odour exposure from the Sewage Treatment Works.

There were a number of odour complaints recorded regarding the existing neighbouring sewage treatment works. The odour complaints have reduced from 12 times in 2017 down to 4 times in 2018.

Three odour effect zones associated with the operation of the Bicester Sewage Treatment Works and poultry farm have been identified for two scenarios:

- Scenario 1 of the poultry farm being removed; and
- Scenario 2 of the poultry farm to be remained

The mitigation measures, such as, no amenity spaces in this area, or providing mechanical ventilation and/or filtration to, for example, any offices and commercial buildings, are required within the 'odour effect zone A'.

An ecological enhancement area (wetland) have been allocated in 'the odour effect zone A' associated with the operation of sewage treatment works and there are no proposed buildings in this area. Therefore, no mitigation measures are required in this area.

However, if the poultry farm is to remain, mitigation measures should be considered to the identified 'odour effect zone A' next to the poultry farm.



Figures

Wendlebury Road, Bicester Odour Survey



Figure 1 Site Location





Figure 2 Site Boundary



Wendlebury Road, Bicester Odour Survey



Figure 2a – Site A

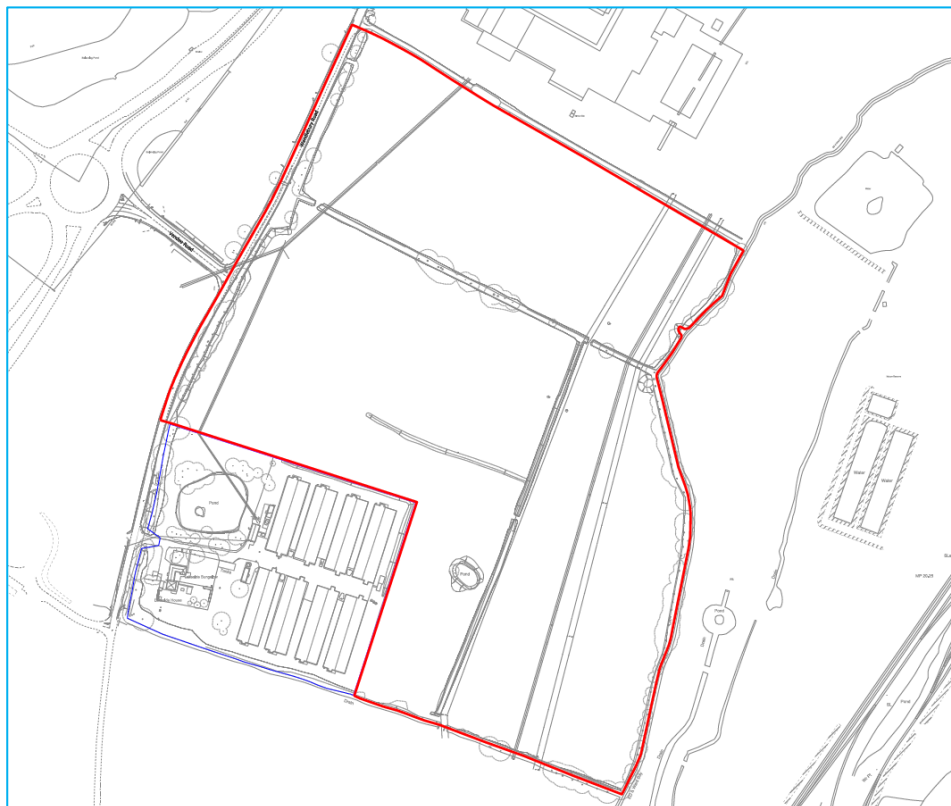
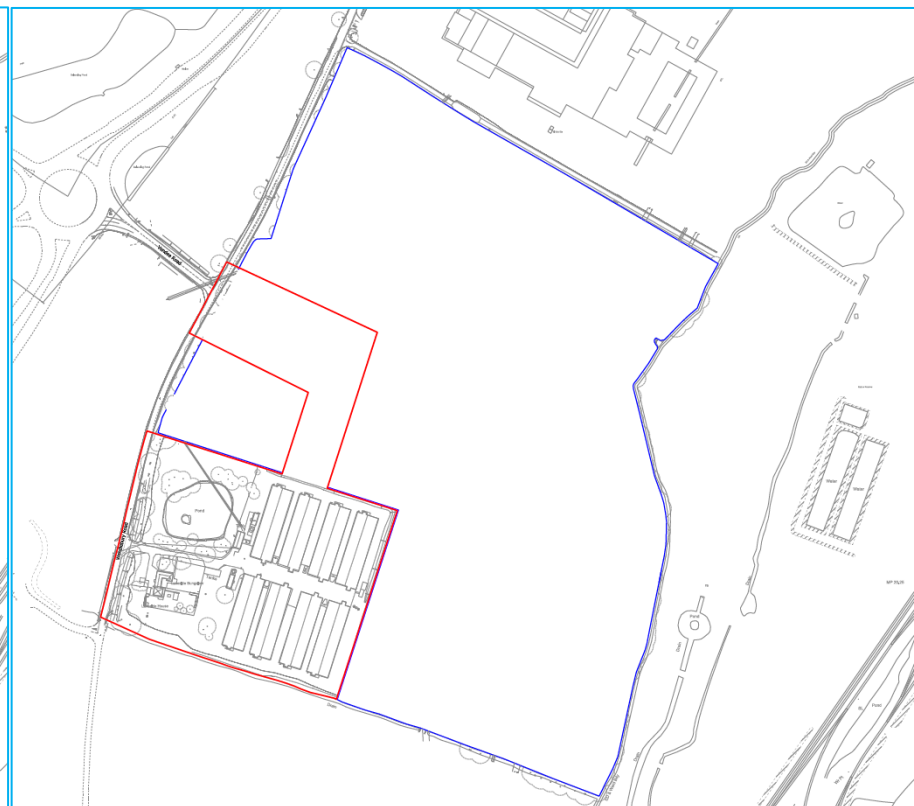


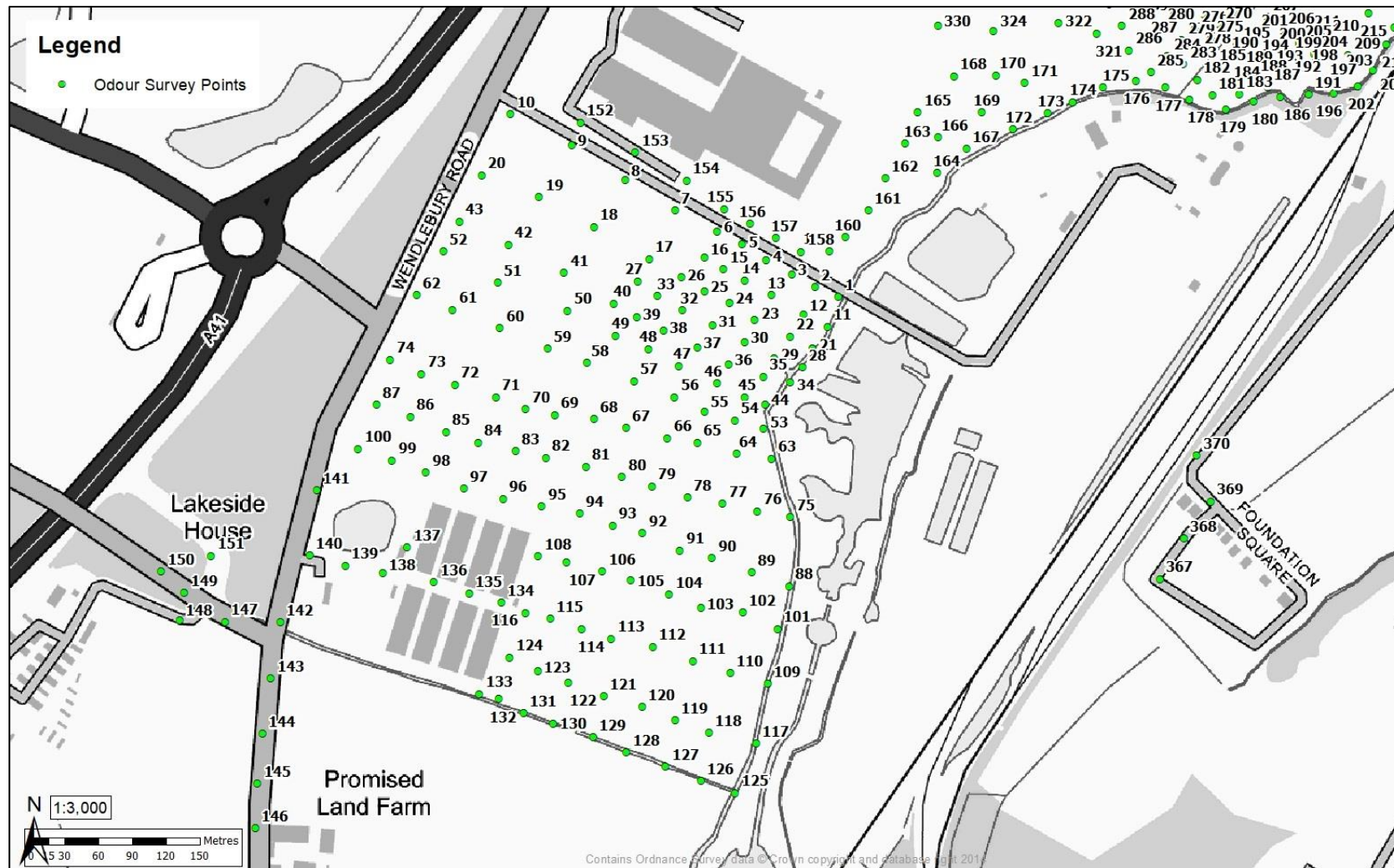
Figure 2B – Site B



Wendlebury Road, Bicester Odour Survey



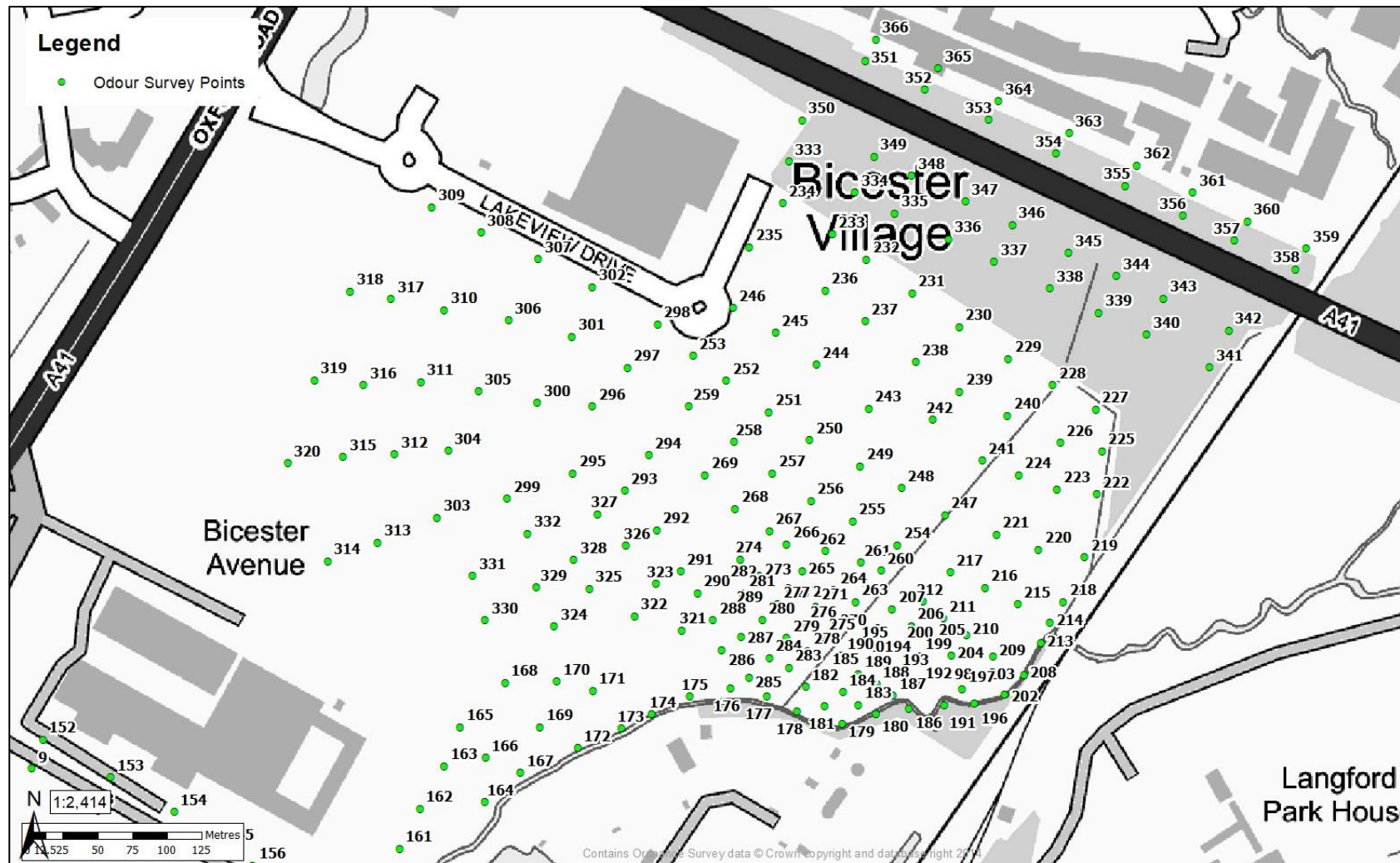
Figure 3a Odour Survey Points Plan



Wendlebury Road, Bicester Odour Survey



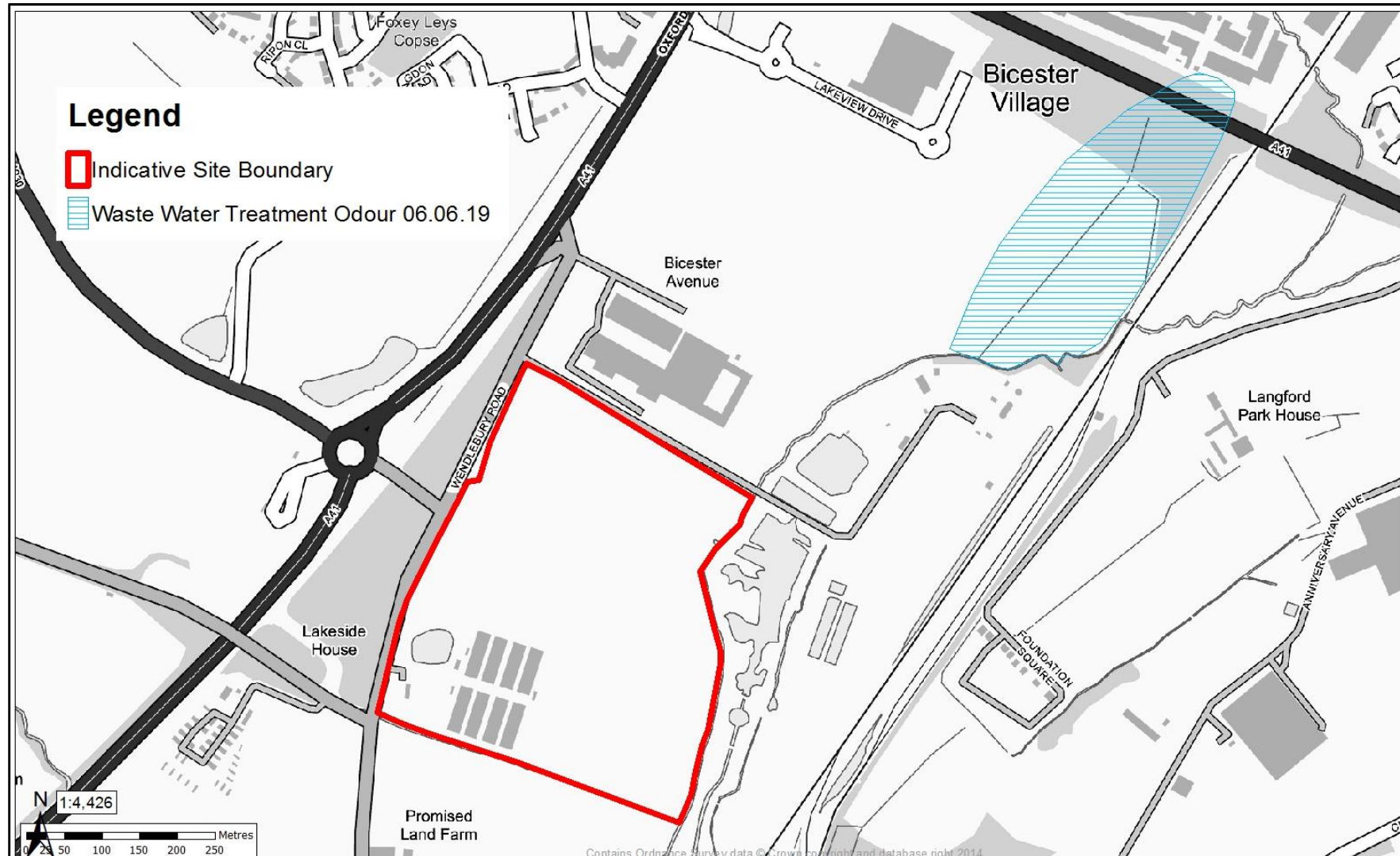
Figure 3b Odour Survey Points Plan



Wendlebury Road, Bicester Odour Survey



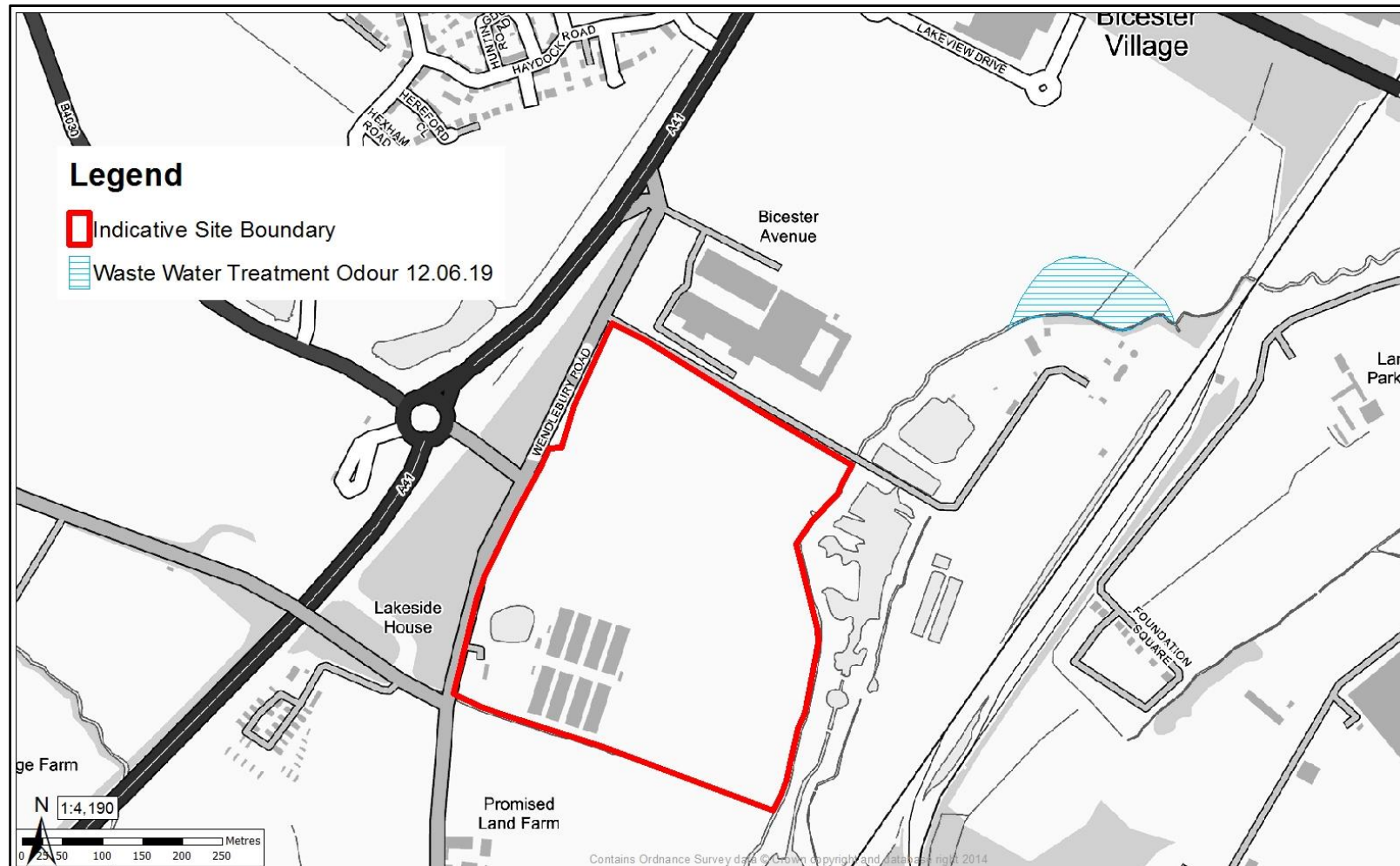
Figure 4 Areas of Odour Extent - Survey Observations – 06/06/2019



Wendlebury Road, Bicester Odour Survey



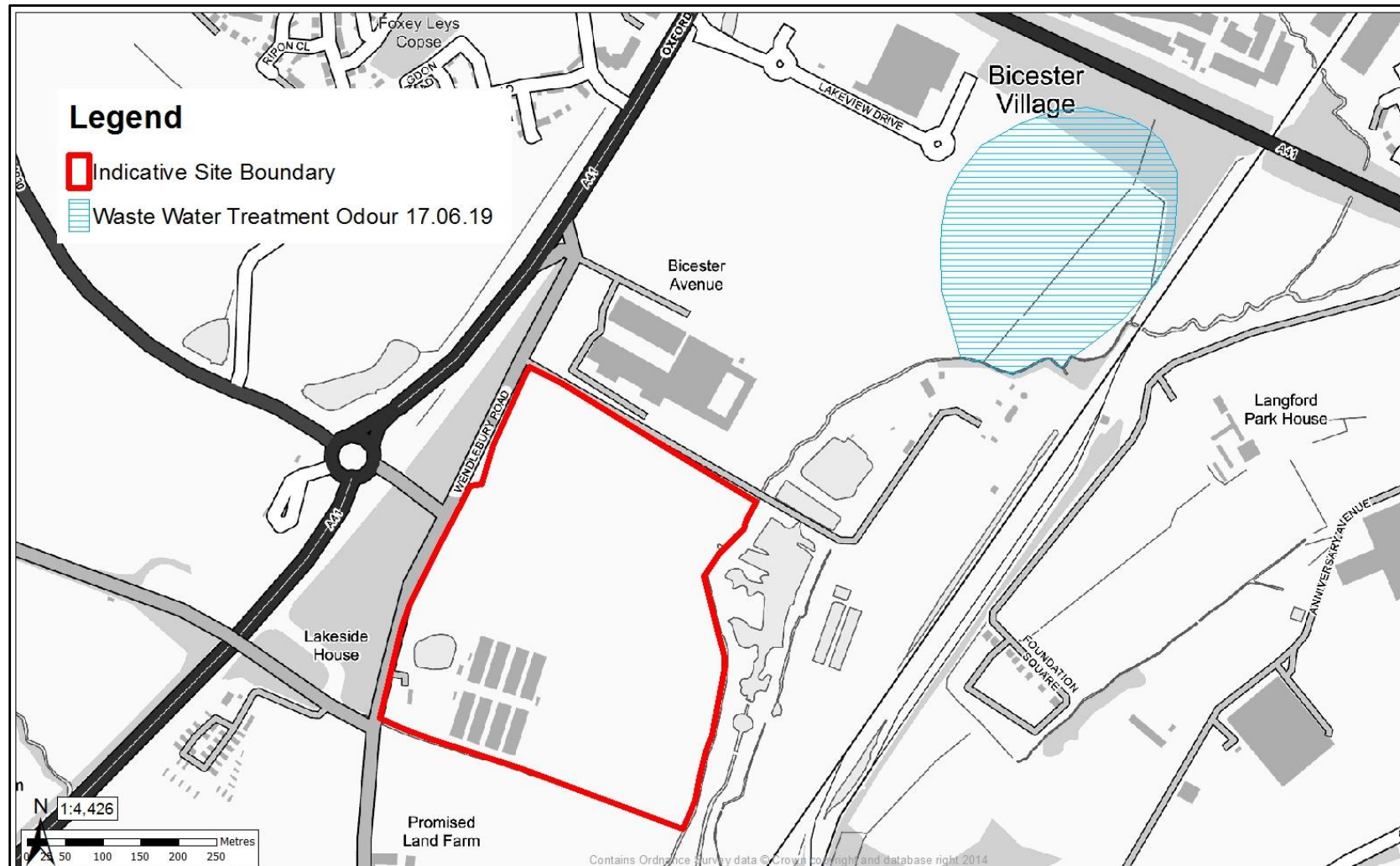
Figure 5 Areas of Odour Extent - Survey Observations – 12/06/2019



Wendlebury Road, Bicester Odour Survey



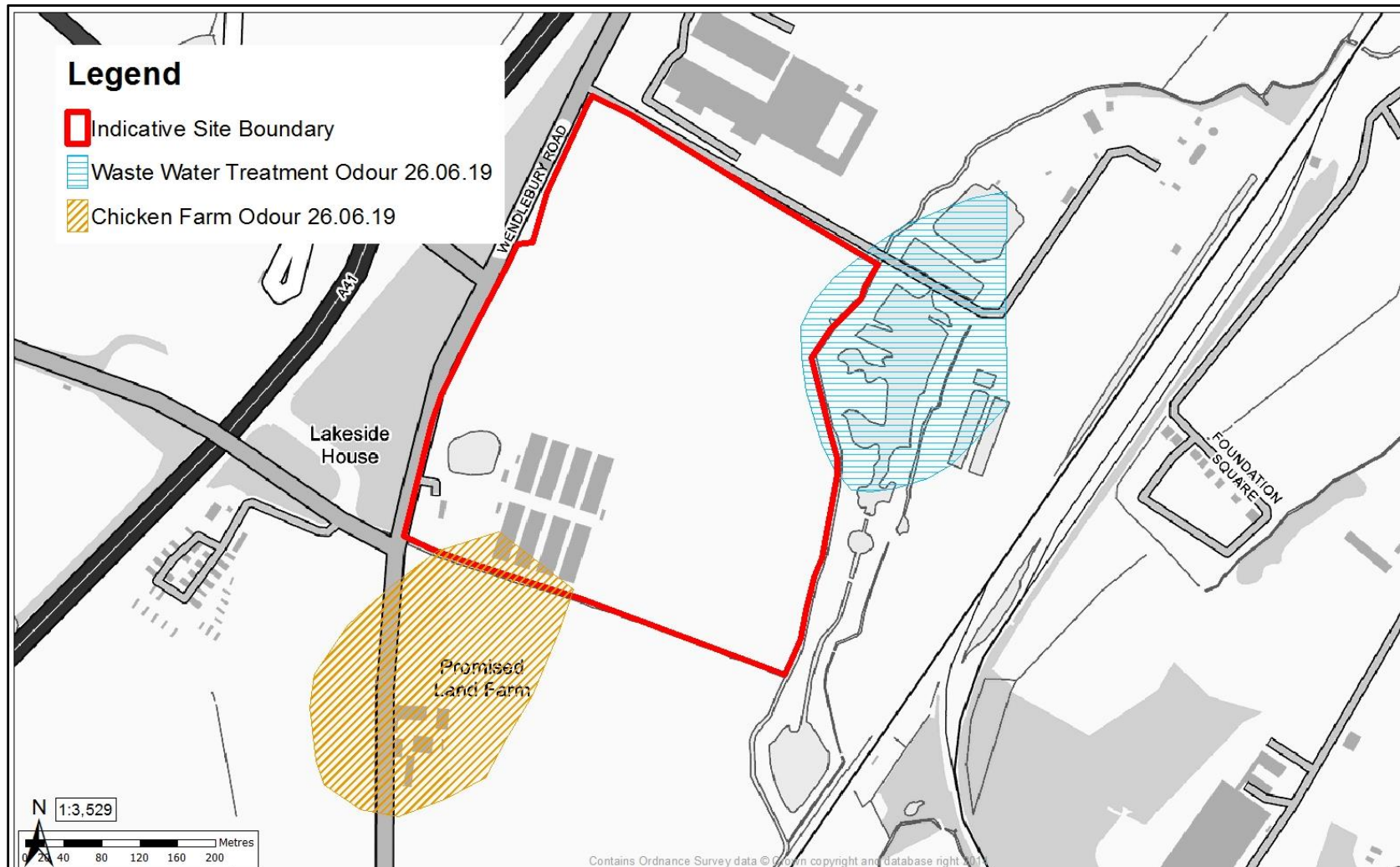
Figure 6 Areas of Odour Extent - Survey Observations – 17/06/2019



Wendlebury Road, Bicester Odour Survey



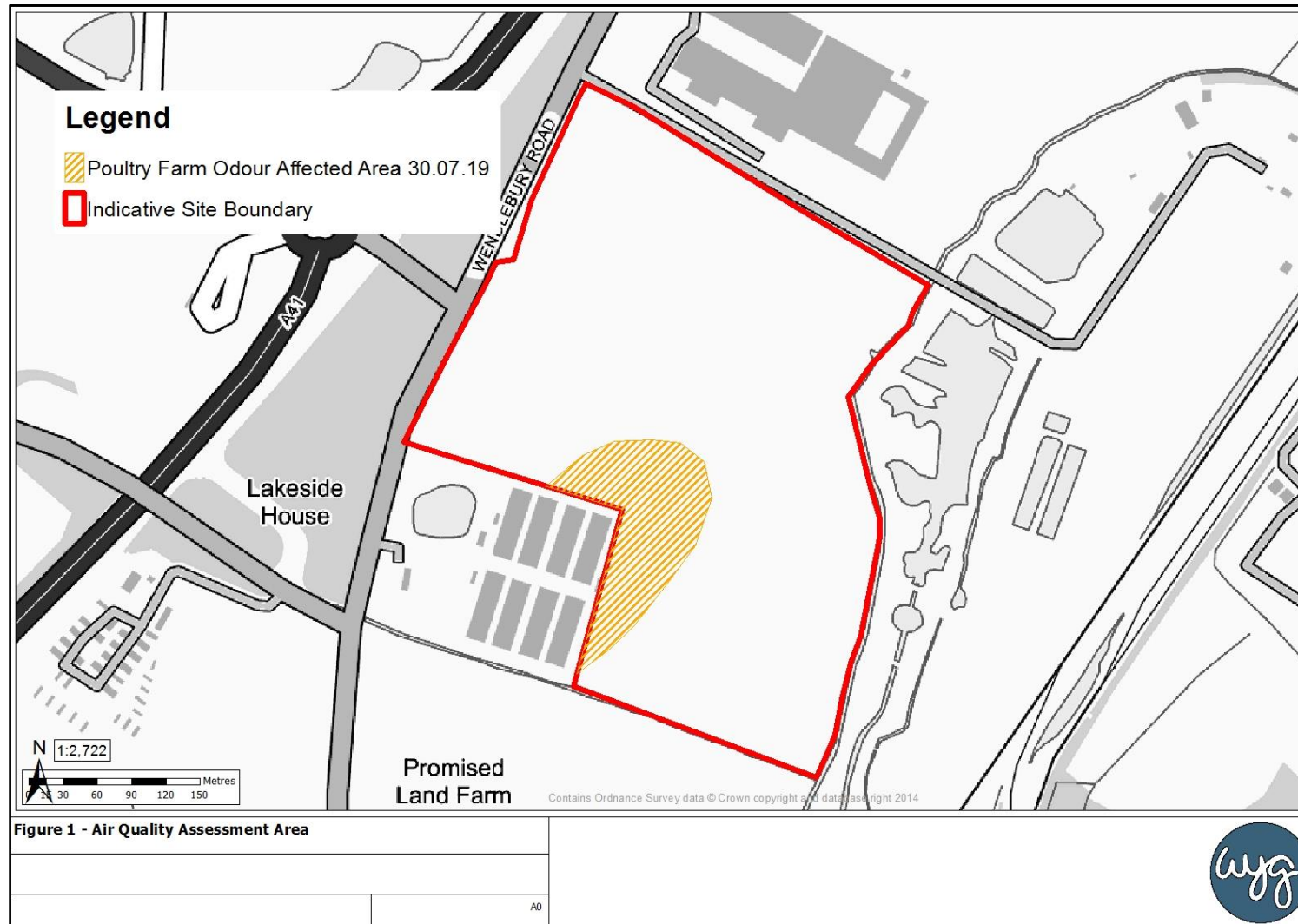
Figure 7 Areas of Odour Extent - Survey Observations – 26/06/2019



Wendlebury Road, Bicester Odour Survey



Figure 8 Areas of Odour Extent - Survey Observations – 30/07/2019



Wendlebury Road, Bicester Odour Survey



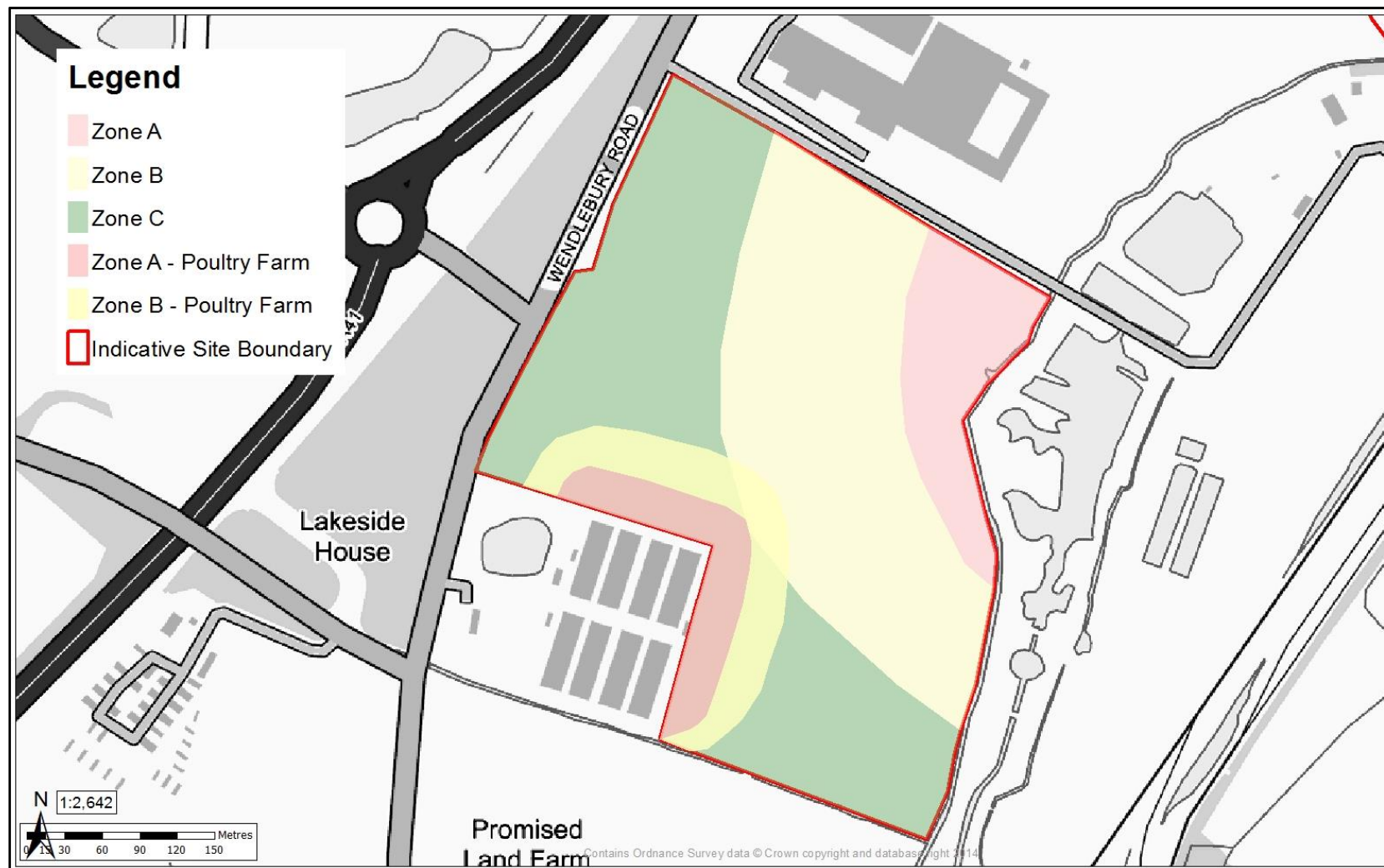
Figure 9a Odour Effect Zones - Scenario 1 of the Poultry Farm Being Removed



Wendlebury Road, Bicester Odour Survey



Figure 9b Odour Effect Zones – Scenario 2 of the Poultry Farm to Remain





Appendices



Appendix I - Site Survey Data - Odour Intensity and Extent

Assessment Point	06/06/2019			12/06/2019			17/06/2019			26/06/2019			31/07/2019		
	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone
A1	This was first initial sniffing test by surveyed a limited areas around the Waste Water Works.			0	0	0	0	0	0	1	3	-2	0	0	0
A2				0	0	0	0	0	0	0	0	0	0	0	0
A3				0	0	0	0	0	0	0	0	0	0	0	0
A4				0	0	0	0	0	0	0	0	0	0	0	0
A5				0	0	0	0	0	0	0	0	0	0	0	0
A6				0	0	0	0	0	0	0	0	0	0	0	0
A7				0	0	0	0	0	0	0	0	0	0	0	0
A8				0	0	0	0	0	0	0	0	0	0	0	0
A9	The odour was detected at the northern Waste Water Works site boundary of locations of 178 and 178 and on the road of A41 of locations of 356 and 375.			0	0	0	0	0	0	0	0	0	0	0	0
A10				0	0	0	0	0	0	0	0	0	0	0	0
A11				0	0	0	0	0	0	1	3	-2	0	0	0
A12				0	0	0	0	0	0	0	0	0	0	0	0
A13				0	0	0	0	0	0	0	0	0	0	0	0
A14				0	0	0	0	0	0	0	0	0	0	0	0
A15				0	0	0	0	0	0	0	0	0	0	0	0
A16				0	0	0	0	0	0	0	0	0	0	0	0
A17				0	0	0	0	0	0	0	0	0	0	0	0
A18				0	0	0	0	0	0	0	0	0	0	0	0
A19				0	0	0	0	0	0	0	0	0	0	0	0
A20				0	0	0	0	0	0	0	0	0	0	0	0
A21	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A22	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A23	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A24	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A25	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A26	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A27	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A28	-	-	-	0	0	0	0	0	0	1	0	0	0	0	0
A29	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A30	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A31	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A32	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A33	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A34	-	-	-	0	0	0	0	0	0	2	0	0	0	0	0
A35	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A36	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A37	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A38	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A39	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0

Wendlebury Road, Bicester Odour Survey



Assessment Point	06/06/2019			12/06/2019			17/06/2019			26/06/2019			31/07/2019		
	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone
A40	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A41	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A42	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A43	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A44	-	-	-	0	0	0	0	0	0	2	0	0	0	0	0
A45	-	-	-	0	0	0	0	0	0	2	0	0	0	0	0
A46	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A47	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A48	-	-	-	0	0	0	0	0	0	3	0	0	0	0	0
A49	-	-	-	0	0	0	0	0	0	3	0	0	0	0	0
A50	-	-	-	0	0	0	0	0	0	3	0	0	0	0	0
A51	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A52	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A53	-	-	-	0	0	0	0	0	0	3	0	0	0	0	0
A54	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A55	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A56	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A57	-	-	-	0	0	0	0	0	0	3	0	0	0	0	0
A58	-	-	-	0	0	0	0	0	0	3	0	0	0	0	0
A59	-	-	-	0	0	0	0	0	0	3	0	0	0	0	0
A60	-	-	-	0	0	0	0	0	0	3	0	0	0	0	0
A61	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A62	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A63	-	-	-	0	0	0	0	0	0	3	0	0	0	0	0
A64	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A65	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A66	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A67	-	-	-	0	0	0	0	0	0	2	0	0	0	0	0
A68	-	-	-	0	0	0	0	0	0	2	0	0	0	0	0
A69	-	-	-	0	0	0	0	0	0	2	0	0	0	0	0
A70	-	-	-	0	0	0	0	0	0	2	0	0	0	0	0
A71	-	-	-	0	0	0	0	0	0	2	0	0	0	0	0
A72	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A73	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A74	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A75	-	-	-	0	0	0	0	0	0	1	0	0	0	0	0
A76	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A77	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A78	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A79	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A80	-	-	-	0	0	0	0	0	0	0	0	0	1	1	-1

Wendlebury Road, Bicester Odour Survey



Assessment Point	06/06/2019			12/06/2019			17/06/2019			26/06/2019			31/07/2019		
	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone
A81	-	-	-	0	0	0	0	0	0	0	0	0	1	1	-1
A82	-	-	-	0	0	0	0	0	0	1	0	0	1	1	-1
A83	-	-	-	0	0	0	0	0	0	1	0	0	0	0	0
A84	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A85	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A86	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A87	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A88	-	-	-	0	0	0	0	0	0	1	0	0	0	0	0
A89	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A90	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A91	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A92	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A93	-	-	-	0	0	0	0	0	0	0	0	0	2	2	-1
A94	-	-	-	0	0	0	0	0	0	0	0	0	2	2	-1
A95	-	-	-	0	0	0	0	0	0	0	0	0	2	2	-1
A96	-	-	-	0	0	0	0	0	0	0	0	0	1	1	-1
A97	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A98	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A99	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A100	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A101	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A102	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A103	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A104	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A105	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A106	-	-	-	0	0	0	0	0	0	0	0	0	1	1	-1
A107	-	-	-	0	0	0	0	0	0	0	0	0	2	2	-1
A108	-	-	-	0	0	0	0	0	0	0	0	0	3	2	-1
A109	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A110	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A111	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A112	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A113	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A114	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A115	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A116	-	-	-	0	0	0	0	0	0	0	0	0	2	2	-1
A117	-	-	-	0	0	0	0	0	0	0	0	0	2	2	-1
A118	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A119	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A120	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A121	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0

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Assessment Point	06/06/2019			12/06/2019			17/06/2019			26/06/2019			31/07/2019		
	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone
A122	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A123	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A124	-	-	-	0	0	0	0	0	0	0	0	0	2	2	-1
A125	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A126	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A127	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A128	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A129	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A130	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A131	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A132	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A133	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A134	-	-	-	0	0	0	0	0	0	N/A	0	0	0	0	0
A135	-	-	-	0	0	0	0	0	0	N/A	0	0	0	0	0
A136	-	-	-	0	0	0	0	0	0	N/A	0	0	0	0	0
A137	-	-	-	0	0	0	0	0	0	N/A	0	0	0	0	0
A138	-	-	-	0	0	0	0	0	0	N/A	0	0	0	0	0
A139	-	-	-	0	0	0	0	0	0	N/A	0	0	0	0	0
A140	-	-	-	0	0	0	0	0	0	5	0	0	0	0	0
A141	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A142	-	-	-	0	0	0	0	0	0	4	0	0	0	0	0
A143	-	-	-	0	0	0	0	0	0	3	0	0	0	0	0
A144	-	-	-	0	0	0	0	0	0	3	0	0	0	0	0
A145	-	-	-	0	0	0	0	0	0	2	0	0	0	0	0
A146	-	-	-	0	0	0	0	0	0	2	0	0	0	0	0
A147	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A148	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A149	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A150	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A151	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A152	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A153	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A154	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A155	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A156	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A157	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A158	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A159	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A160	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A161	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A162	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0

Wendlebury Road, Bicester Odour Survey



Assessment Point	06/06/2019			12/06/2019			17/06/2019			26/06/2019			31/07/2019		
	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone
A163	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A164	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A165	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A166	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A167	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A168	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A169	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A170	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
A171	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
B172	-	-	-	-	-	-	0	0	0	0	0	0	-	-	-
B173	-	-	-	-	-	-	0	0	0	0	0	0	-	-	-
B174	-	-	-	-	-	-	0	0	0	0	0	0	-	-	-
B175	-	-	-	-	-	-	0	0	0	0	0	0	-	-	-
B176	-	-	-	-	-	-	0	0	0	0	0	0	-	-	-
B177	-	-	-	-	-	-	4	4	-3	0	0	0	-	-	-
B178	-	-	-	2	2	-2	4	4	-3	0	0	0	-	-	-
B179	-	-	-	2	2	-2	4	3	-3	0	0	0	-	-	-
B180	-	-	-	2	2	-2	3	3	-3	0	0	0	-	-	-
B181	-	-	-	2	2	-2	5	4	-3	0	0	0	-	-	-
B182	-	-	-	2	2	-2	4	4	-3	0	0	0	-	-	-
B183	-	-	-	2	2	-2	5	4	-3	0	0	0	-	-	-
B184	-	-	-	2	2	-2	5	4	-3	0	0	0	-	-	-
B185	-	-	-	2	2	-2	5	4	-3	0	0	0	-	-	-
B186	-	-	-	2	2	-2	1	2	-3	0	0	0	-	-	-
B187	-	-	-	2	2	-2	1	2	-3	0	0	0	-	-	-
B188	-	-	-	2	2	-2	5	4	-3	0	0	0	-	-	-
B189	-	-	-	2	2	-2	5	4	-3	0	0	0	-	-	-
B190	-	-	-	2	2	-2	5	4	-3	0	0	0	-	-	-
B191	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B192	-	-	-	0	0	0	1	2	-3	1	0	0	-	-	-
B193	-	-	-	2	2	-2	3	3	-3	0	0	0	-	-	-
B194	-	-	-	0	0	0	5	4	-3	0	0	0	-	-	-
B195	-	-	-	0	0	0	5	4	-3	0	0	0	-	-	-
B196	-	-	-	1	1	-1	0	0	0	0	0	0	-	-	-
B197	-	-	-	1	1	-1	0	0	0	0	0	0	-	-	-
B198	-	-	-	1	1	-1	1	2	-3	1	0	0	-	-	-
B199	-	-	-	1	1	-1	3	3	-3	1	0	0	-	-	-
B200	-	-	-	0	0	0	5	4	-3	1	0	0	-	-	-
B201	-	-	-	1	1	-1	5	4	-3	1	0	0	-	-	-
B202	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B203	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-

Wendlebury Road, Bicester Odour Survey



Assessment Point	06/06/2019			12/06/2019			17/06/2019			26/06/2019			31/07/2019		
	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone
B204	-	-	-	0	0	0	1	2	-3	1	0	0	-	-	-
B205	-	-	-	0	0	0	4	4	-3	1	0	0	-	-	-
B206	-	-	-	0	0	0	4	4	-3	1	0	0	-	-	-
B207	-	-	-	0	0	0	4	4	-3	0	0	0	-	-	-
B208	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B209	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B210	-	-	-	0	0	0	1	2	-3	1	0	0	-	-	-
B211	-	-	-	0	0	0	4	3	-3	1	0	0	-	-	-
B212	-	-	-	0	0	0	4	4	-3	1	0	0	-	-	-
B213	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B214	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B215	-	-	-	0	0	0	0	0	0	1	0	0	-	-	-
B216	-	-	-	0	0	0	3	3	-3	1	0	0	-	-	-
B217	-	-	-	0	0	0	4	4	-3	1	0	0	-	-	-
B218	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B219	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B220	-	-	-	0	0	0	1	2	-3	1	0	0	-	-	-
B221	-	-	-	0	0	0	3	4	-3	1	0	0	-	-	-
B222	-	-	-	0	0	0	1	2	-3	1	0	0	-	-	-
B223	-	-	-	0	0	0	1	2	-3	1	0	0	-	-	-
B224	-	-	-	0	0	0	2	3	-3	0	0	0	-	-	-
B225	-	-	-	0	0	0	1	1	-3	1	0	0	-	-	-
B226	-	-	-	0	0	0	2	3	-3	0	0	0	-	-	-
B227	-	-	-	0	0	0	2	3	-3	0	0	0	-	-	-
B228	-	-	-	0	0	0	2	3	-3	0	0	0	-	-	-
B229	-	-	-	0	0	0	3	3	-3	0	0	0	-	-	-
B230	-	-	-	0	0	0	2	2	-3	0	0	0	-	-	-
B231	-	-	-	0	0	0	1	2	-3	0	0	0	-	-	-
B232	-	-	-	0	0	0	1	2	-3	0	0	0	-	-	-
B233	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B234	-	-	-	0	0	0	1	1	-3	0	0	0	-	-	-
B235	-	-	-	0	0	0	1	2	-3	0	0	0	-	-	-
B236	-	-	-	0	0	0	2	2	-3	0	0	0	-	-	-
B237	-	-	-	0	0	0	2	2	-3	0	0	0	-	-	-
B238	-	-	-	0	0	0	2	2	-3	0	0	0	-	-	-
B239	-	-	-	0	0	0	3	3	-3	0	0	0	-	-	-
B240	-	-	-	0	0	0	2	2	-3	0	0	0	-	-	-
B241	-	-	-	0	0	0	2	1	-3	0	0	0	-	-	-
B242	-	-	-	0	0	0	1	2	-3	0	0	0	-	-	-
B243	-	-	-	0	0	0	1	2	-3	0	0	0	-	-	-
B244	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-

Wendlebury Road, Bicester Odour Survey



Assessment Point	06/06/2019			12/06/2019			17/06/2019			26/06/2019			31/07/2019		
	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone
B245	-	-	-	0	0	0	3	3	-3	0	0	0	-	-	-
B246	-	-	-	0	0	0	2	2	-3	0	0	0	-	-	-
B247	-	-	-	0	0	0	2	2	-3	0	0	0	-	-	-
B248	-	-	-	0	0	0	1	1	-3	0	0	0	-	-	-
B249	-	-	-	0	0	0	1	1	-3	0	0	0	-	-	-
B250	-	-	-	0	0	0	1	1	-3	0	0	0	-	-	-
B251	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B252	-	-	-	0	0	0	4	3	-3	0	0	0	-	-	-
B253	-	-	-	0	0	0	2	2	-3	0	0	0	-	-	-
B254	-	-	-	0	0	0	2	2	-3	0	0	0	-	-	-
B255	-	-	-	0	0	0	1	1	-3	0	0	0	-	-	-
B256	-	-	-	0	0	0	1	1	-3	0	0	0	-	-	-
B257	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B258	-	-	-	0	0	0	4	4	-3	0	0	0	-	-	-
B259	-	-	-	0	0	0	4	3	-3	0	0	0	-	-	-
B260	-	-	-	0	0	0	2	2	-3	0	0	0	-	-	-
B261	-	-	-	0	0	0	4	4	-3	0	0	0	-	-	-
B262	-	-	-	0	0	0	4	3	-3	0	0	0	-	-	-
B263	-	-	-	0	0	0	2	2	-3	0	0	0	-	-	-
B264	-	-	-	0	0	0	2	2	-3	0	0	0	-	-	-
B265	-	-	-	0	0	0	2	2	-3	0	0	0	-	-	-
B266	-	-	-	0	0	0	1	1	-3	0	0	0	-	-	-
B267	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B268	-	-	-	0	0	0	4	4	-3	0	0	0	-	-	-
B269	-	-	-	0	0	0	4	3	-3	0	0	0	-	-	-
B270	-	-	-	0	0	0	2	2	-3	0	0	0	-	-	-
B271	-	-	-	0	0	0	2	2	-3	0	0	0	-	-	-
B272	-	-	-	0	0	0	2	1	-3	0	0	0	-	-	-
B273	-	-	-	0	0	0	4	4	-3	0	0	0	-	-	-
B274	-	-	-	0	0	0	4	3	-3	0	0	0	-	-	-
B275	-	-	-	0	0	0	2	2	-3	0	0	0	-	-	-
B276	-	-	-	0	0	0	4	4	-3	0	0	0	-	-	-
B277	-	-	-	0	0	0	4	3	-3	0	0	0	-	-	-
B278	-	-	-	0	0	0	2	2	-3	0	0	0	-	-	-
B279	-	-	-	0	0	0	2	2	-3	0	0	0	-	-	-
B280	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B281	-	-	-	0	0	0	4	3	-3	0	0	0	-	-	-
B282	-	-	-	0	0	0	3	3	-3	0	0	0	-	-	-
B283	-	-	-	0	0	0	4	4	-3	0	0	0	-	-	-
B284	-	-	-	0	0	0	4	4	-3	0	0	0	-	-	-
B285	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-

Wendlebury Road, Bicester Odour Survey



Assessment Point	06/06/2019			12/06/2019			17/06/2019			26/06/2019			31/07/2019		
	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone
B286	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B287	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B288	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B289	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B290	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B291	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B292	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B293	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B294	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B295	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B296	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B297	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B298	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B299	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B300	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B301	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B302	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B303	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B304	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B305	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B306	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B307	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B308	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B309	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B310	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B311	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B312	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B313	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B314	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B315	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B316	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B317	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B318	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B319	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B320	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B321	-	-	-	0	0	0	0	0	0	0	0	0	-	-	-
B322	-	-	-	-	-	-	0	0	0	0	0	0	-	-	-
B323	-	-	-	-	-	-	0	0	0	2	0	0	-	-	-
B324	-	-	-	-	-	-	0	0	0	3	0	0	-	-	-
B325	-	-	-	-	-	-	0	0	0	4	0	0	-	-	-
B326	-	-	-	-	-	-	0	0	0	5	0	0	-	-	-

Wendlebury Road, Bicester Odour Survey



Assessment Point	06/06/2019			12/06/2019			17/06/2019			26/06/2019			31/07/2019		
	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone	Intensity	Extent	Hedonic Tone
B327	-	-	-	-	-	-	0	0	0	5	0	0	-	-	-
B328	-	-	-	-	-	-	0	0	0	0	0	0	-	-	-
B329	-	-	-	-	-	-	0	0	0	0	0	0	-	-	-
B330	-	-	-	-	-	-	0	0	0	0	0	0	-	-	-
B331	-	-	-	-	-	-	0	0	0	0	0	0	-	-	-
B332	-	-	-	-	-	-	0	0	0	0	0	0	-	-	-

Note:

- (1) Assessment points refer to those shown in Figures 3a and 3b.



Appendix II – Documents Related to Odour Complaints from Cherwell District Council and South Northamptonshire Council

Document One - Complaint Notes

"0116 FOI RE: CDC FW: Odour Complaints History Request - Thames Water - Waste Water Treatment Plant at Ambrosden, Bicester, OX25 2PA

Notes

As you can see from our information the council has no complaints recorded against the sewage works prior to 2016 except for one in 2007 which was a general enquiry.

In 2016 a new housing scheme started to be built across the railway line at Graven Hill and as part of this Foundation Square was commenced as a self-build site of 10 homes approximately 90m from the boundary of the sewage works to the SE.

As the builders came on site then we started to receive a large number of complaints and began to look into this. The builders/future occupiers set up their own website to record the details which sent an email to both the council and Thames Water to give us an idea of the time, frequency and duration of the odour. These were recorded on a separate spreadsheet of which I have attached a copy.

Following the investigation Thames Water agreed to some operational changes regarding the storage and removal of the waste sludge which has significantly improved the situation and the complaints and contact to the council have fallen to near zero.

I have also included a copy of the letter we sent to all those who contacted us with the outcome of the investigation for your information."

(2) Document Two - Letter Closing Case

Cherwell District Council, North Oxfordshire

Council's Ref: 17/09220/O/DIND

Letter Dated on 14th November 2018

Letter Written By Neil Whitton Environmental Protection Officer

"Dear Sir/Madam

Environmental Protection Act 1990 Part III

Odour at Bicester Sewage Treatment Works Oxford Road Bicester



As you are aware the council has carried out a full and thorough investigation into the odour from the sewage work and have worked closely with Thames Water to investigate and improve the situation as far as is practical in the short term which we believe has made a significant improvement.

That is not to say that there will not be an odour from the site at times as I am sure you understand the process involved in dealing with sewage is an intrinsically odour producing one but we feel that Thames Water are now doing all they can to manage the odour in the short to medium term prior to potential upgrades to the plant in their next financial investment cycle.

The trial that took place to remove the sludge cake on a regular basis at times when there is a lower chance of residents being affected rather than every six weeks has proved to be a success and Thames Water have now written this into standard operating procedures for the site and as further improvements are looking to add an additional wall in the sludge cake area to try to reduce the odour release further. They have also changed the draw down time of the inlet well which aids odour reduction. In addition Thames Water have employed an independent odour monitoring company to carry out a year-long assessment of the odour from the site and this will continue until August 2019 to allow them to gain data to steer the forward planning and investment in the plant.

Therefore at this time the council will not be taking any further action on this matter and will not re-investigate unless there is a significant change from the current situation. If you have concerns that the odour is affecting you more than you believe is reasonable we would ask that in the first instance you contact Thames Water on 0800 316 9800 or customer.feedback@thameswater.co.uk and follow their complaints procedure. If having done this you are not satisfied with the outcome or believe that the problem has not been resolved then please contact the council.

I do hope that you agree that the situation has improved and if you would like to discuss this letter further please contact me on the number or via the email given above. I have enclosed a customer satisfaction survey that I would appreciate you filling out if you can find the time."

(3) Document Three - Table of Complaint Details by the Council

Table 3.3 Odour Complaints Recorded by the Council

Date	Time of Receipt of Contact	Street Name	Direction from STW
14/12/2016	10:44	Bicester Avenue Shopping	W
23/03/2017	15:24	Flanders Close, Bicester	NE
04/05/2017	17:13	Foundation Square, Graven Hill	SE
16/05/2017	16:34	Foundation Square, Graven Hill	SE
27/06/2017	15:34	Foundation Square, Graven Hill	SE
27/06/2017	15:41	Foundation Square, Graven Hill	SE
11/08/2017	13:31	Foundation Square, Graven Hill	SE
30/08/2017	16:35	Foundation Square, Graven Hill	SE

Wendlebury Road, Bicester Odour Survey



Date	Time of Receipt of Contact	Street Name	Direction from STW
13/10/2017	11:33	Bicester Village Station	NE
02/11/2017	16:57	Anonymous	-
03/11/2017	10:52	Anonymous	-
22/12/2017	10:42	Flanders Close, Bicester	NE
22/12/2017	12:56	Bicester Village Shopping Centre	N
21/02/2018	14:32	Langford Village, Bicester	NE
28/12/2018	12:54	Foundation Square, Graven Hill	SE
28/12/2018	13:34	Foundation Square, Graven Hill	SE
28/12/2018	13:54	Foundation Square, Graven Hill	SE



Appendix III – Report Terms and Conditions

This Report has been prepared using reasonable skill and care for the sole benefit of Albion Land ("the Client") for the proposed uses stated in the report by [WYG Environment Planning Transport Limited] ("WYG"). WYG exclude all liability for any other uses and to any other party. The report must not be relied on or reproduced in whole or in part by any other party without the copyright holder's permission.

No liability is accepted or warranty given for; unconfirmed data, third party documents and information supplied to WYG or for the performance, reliability, standing etc of any products, services, organisations or companies referred to in this report. WYG does not purport to provide specialist legal, tax or accounting advice.

The report refers, within the limitations stated, to the environment of the site in the context of the surrounding area at the time of the inspections'. Environmental conditions can vary and no warranty is given as to the possibility of changes in the environment of the site and surrounding area at differing times. No investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or not fully representative information. Any monitoring or survey work undertaken as part of the commission will have been subject to limitations, including for example timescale, seasonal and weather-related conditions. Actual environmental conditions are typically more complex and variable than the investigative, predictive and modelling approaches indicate in practice, and the output of such approaches cannot be relied upon as a comprehensive or accurate indicator of future conditions. The "shelf life" of the Report will be determined by a number of factors including; its original purpose, the Client's instructions, passage of time, advances in technology and techniques, changes in legislation etc. and therefore may require future re-assessment.

The whole of the report must be read as other sections of the report may contain information which puts into context the findings in any executive summary.

The performance of environmental protection measures and of buildings and other structures in relation to acoustics, vibration, noise mitigation and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. WYG accept no liability for issues with performance arising from such factors.