

17. Wind Microclimate

Introduction

- 17.1 Prepared by RWDI, this Chapter presents an assessment of the likely significant effects of the Development on the local wind microclimate both within the Site and within the immediate vicinity of the Site. In particular, consideration is given to the likely significant effects of wind upon pedestrian comfort and safety. This Chapter summarises the findings of wind tunnel modelling undertaken by RWDI. This Chapter is supported by additional images of the wind tunnel model and technical information supplied in **Appendix 17.1**.
- 17.2 This Chapter describes the methods used to assess the likely significant effects of the Development upon the local wind microclimate. A summary of the wind conditions for the existing Site is provided. This is followed by an assessment of the likely significant effects of the Development and a description of the mitigation measures required to prevent, reduce and offset any likely significant adverse effects. The Chapter concludes with an assessment of the nature and significance of the resulting likely residual effects.

Assessment Methodology and Significance Criteria

- 17.3 The Wind Microclimate Assessment focusses on the Site and not the Section 278 (S278) highways works, due to the fact that there would be no built development proposed within, or close enough to, this area to give rise to significant wind microclimate effects. Accordingly, and based on professional and expert judgement, the proposals at the Chalkers Corner are unlikely to give rise to any significant wind microclimate effects. The geographical coverage of the Wind Microclimate Assessment is therefore considered to be appropriate and robust for the purposes of the assessment.
- 17.4 In respect of the assessment of the outline component of the Development, the assessment set out within this Chapter has considered the maximum allowable spatial parameters sought for approval. This would give rise to the greatest massing and so can be considered to reflect a 'worst-case' assessment. That said, based on professional and expert judgement, it is unlikely that the minimum allowable spatial parameters sought for approval would give rise to materially different wind microclimate effects, given the minimal difference in scale between the minimum and maximum parameters.

Assessment of the Works

Assessment of Construction

- 17.5 For the assessment of the likely significant effects of the Works upon the local wind microclimate, a qualitative assessment has been undertaken using professional judgement and experience. Consideration has been given to the information provided within **Chapter 6: Development Programme, Demolition, Alteration, Refurbishment and Construction**, together with baseline meteorological data / conditions relevant to the Site, as presented within this Chapter.

Assessment of the Completed Development

- 17.6 To predict the local wind environment associated with the completed and operational Development and the resulting pedestrian comfort and safety within the Site and immediately surrounding the Site, wind tunnel testing of the Development has been undertaken.

- 17.7 Wind tunnel testing is one of the most well-established and robust means of assessing the pedestrian wind microclimate. Such testing allows the pedestrian level wind microclimate at and surrounding a site to be quantified and classified in accordance with the widely accepted Lawson Comfort Criteria¹, a summary of which is provided later in this Chapter.
- 17.8 Wind tunnel testing delivers a detailed assessment of the mean and gust wind conditions in and around a subject site for all wind directions in terms of pedestrian comfort and strong winds.
- 17.9 The methodology for quantifying the pedestrian wind environment is outlined below within four steps. Full details of the assessment methodology can be obtained by reference to **Appendix 17.1 (Wind Microclimate Technical Report)**:
- **Step 1:** the subject site's induced wind speeds are measured for the appropriate configuration(s) at the appropriate pedestrian level(s) in the wind tunnel;
 - **Step 2:** standard meteorological data is adjusted to account for conditions at the subject site (for this assessment, combined meteorological data has been derived from the meteorological stations at three major London airports (Heathrow, Gatwick and Stansted));
 - **Step 3:** data from Step 1 and Step 2 is combined to obtain the expected frequency and magnitude of wind speed for the appropriate configuration(s) and at the appropriate pedestrian level(s); and
 - **Step 4:** the results of Step 3 are compared with the Lawson Comfort Criteria, and where relevant, the change in the wind microclimate conditions between appropriate test configuration(s) to 'grade / score' the conditions within and around a subject site.
- 17.10 To model the likely effects of gustiness or turbulence (which depends on the location of the subject site) a series of spires and floor roughness elements have been employed in the wind tunnel in order to create a 'boundary layer' that is representative of the urban location of the Site. In addition, the wind tunnel included relevant buildings with regards to wind flow up to a distance of 360m radius from the centre of the Site.
- 17.11 Wind tunnel testing has been undertaken and the analysis conducted for the full year with regards to pedestrian safety and for all seasons with regards to pedestrian comfort. The results are presented for the windiest season (typically December, January and February in the UK), and summer season (June, July and August) for the following test configurations, all of which have made use of 1:300 scale models of the configuration tests:
- Configuration 1: Existing Site with Existing Surrounding Buildings;
 - Configuration 2: The Development with Existing Surrounding Buildings; and
 - Configuration 3: The Development with Existing Surrounding Buildings and Proposed Landscaping.
- 17.12 Photographs of the wind tunnel test model can be seen within **Figure 17.1**.
- 17.13 Wind speed measurements within and around the Site for the above test configurations were established using Irwin probes¹. These measure the wind speed at a scaled 1.5m height above the ground for all wind directions in equal increments, with 0° representing the wind blowing from the north and 90° for wind from the east. For this assessment, both the mean wind speed and the peak wind speed were determined at each measurement location.

¹ Omnidirectional anemometer used to measure mean and gust wind speeds.

- 17.14 As noted earlier in this Chapter, the results of the wind tunnel testing are presented for the worst-case, windiest season (typically December, January and February in the south of the UK) and summer (June, July and August). This is due to the fact that some pedestrian activities defined by the Lawson Comfort Criteria (refer to later in this Chapter) need to be met during the winter, whereas others are dependent upon summer conditions. When assessing the significance of the wind microclimate, consideration has been given to the sensitivity of the receptor locations. For example, proposed ground level amenity spaces and terraces associated with the Development have been assessed in terms of the summer wind microclimate (as this is when these spaces would be likely to be utilised); whereas standing areas, entrances and pedestrian routes have been assessed for winter, owing to the fact that such spaces must be ‘useable’ throughout the year.
- 17.15 It is important to note that the wind tunnel testing for Configurations 1 and 2 has been undertaken devoid of any existing or proposed trees or landscaping. This is so as to provide a set of conservative, worst-case results.

Lawson Comfort Criteria

- 17.16 The Lawson Comfort Criteria define a scale for assessing the suitability of wind conditions in the urban environment based upon threshold values of wind speed and frequency of occurrence, as set out within **Table 17.1**. If the measured wind conditions exceed the threshold wind speed for more than 5% of the time, then they are unacceptable for the stated pedestrian activity and the expectation is that there may be complaints of nuisance or people will not use the area for its intended purpose.
- 17.17 The Lawson Comfort Criteria sets out four pedestrian activities and reflects the fact that less active pursuits require more benign wind conditions. The four categories are sitting, standing, strolling and walking, in ascending order of activity level, with a fifth category for conditions that are uncomfortable for all uses. In other words, the wind conditions in an area for sitting need to be calmer than in a location that people merely walk past.
- 17.18 The distinction between strolling and walking is that in the strolling scenario pedestrians are more likely to take on a leisurely pace, with the intention of taking time to move through the area, whereas in the walking scenario, pedestrians are intending to move through the area quickly and are therefore expected to be more tolerant of stronger winds.
- 17.19 The Lawson Comfort Criteria are derived for open air conditions and assume that pedestrians would be suitably dressed for the season. Thermal comfort is discussed with reference to acceptable wind environments but not evaluated as part of the assessment.
- 17.20 The key in **Table 17.1** corresponds to the presentation of wind tunnel test results described later in this Chapter and within **Figures 17.3-17.12**.

Table 17.1: Lawson Comfort Criteria

Comfort Category	Threshold	Description
Uncomfortable	>10 m/s	Winds of this magnitude are considered a nuisance for most activities, and wind mitigation is typically recommended.
Walking	8 - 10 m/s	Relatively high speeds that can be tolerated if the objective is to walk, run or cycle without lingering.
Strolling	6 - 8 m/s	Moderate breezes that would be appropriate for strolling along a city/town centre street, plaza or park.
Standing	4 - 6 m/s	Gentle breezes suitable for main building entrances, pick-up/drop-off points and bus stops.
Sitting	0 - 4 m/s	Light breezes desired for outdoor restaurants and seating areas where one can read a paper or comfortably sit for long periods.

17.21 Target conditions based on the above criteria are outlined as:

- thoroughfares (target conditions are strolling use during the windiest season);
- entrances (target conditions are standing / entrance use during the windiest season);
- amenity spaces (target conditions are sitting use during the summer season); and
- outdoor seating (target conditions are sitting use during the summer season).

Strong Winds

17.22 The assessments undertaken also provide a notification of stronger winds, which are defined as wind speeds in excess of 15 m/s for more than two hours of the year which would require wind mitigation. Strong winds are generally associated with areas which would be classified as acceptable for walking or as uncomfortable. In a residential-led urban development, walking and uncomfortable conditions would not usually form part of the 'target' wind environment and would usually require mitigation to improve the situation.

Significance Criteria

17.23 For assessing the significance of the likely wind effects of the Development and the likely residual wind effects of the Development, the significance criteria used have been based upon the relationship between the desired pedestrian use (as defined by the Lawson Comfort Criteria) at a particular location, and the modelled (predicted) wind conditions at this same location.

Accordingly, the following seven-point scale of significance has been used:

- **beneficial effect of substantial significance:** wind conditions are 3-categories calmer than desired;
- **beneficial effect of moderate significance:** wind conditions are 2-categories calmer than desired;
- **beneficial effect of minor significance:** wind conditions are 1-category calmer than desired;
- **insignificant:** wind conditions are similar to those desired;
- **adverse effect of minor significance:** wind conditions are 1-category windier than desired;
- **adverse effect of moderate significance:** wind conditions are 2-categories windier than desired; and
- **adverse effect of substantial significance:** wind conditions are 3-categories windier than desired.

- 17.24 For example, if the desired wind conditions at a particular location within the Site are required to be acceptable for standing / entrance use, but the expected wind conditions are identified as being acceptable for strolling use, the difference between the desired and expected wind condition is 1-category windier than desired. In this case, the likely effect would be identified as being **adverse**, and of **minor significance**.
- 17.25 For assessing the significance of likely wind effects of the Development outside of (surrounding) the Site, the above significance criteria have also been used. However, commentary is also provided in relation to the change in the wind environment, relative to the baseline conditions. This is appropriate at off-Site locations where the pedestrian use before and after implementation of the Development would be identical.
- 17.26 As originally proposed by Lawson, strong winds are reported separately and are not incorporated into the significance criteria.

Baseline Conditions

General Meteorological Conditions

- 17.27 As previously noted in paragraph 17.9, meteorological data derived from three major London airports (Heathrow, Gatwick and Stansted) have been reviewed to develop a statistical model of wind speed and direction, representative of wind conditions at the Site.
- 17.28 **Figure 17.2** shows the wind roses for meteorological standard conditions of 10m above open, flat, level countryside terrain. The meteorological data indicates that the prevailing wind direction in London (and representative of the Site) throughout the year is from the south-west. This is typical for many areas of England. The data also shows that there is a secondary peak from north easterly winds, particularly during the spring. These tend to be cold winds.

Terrain Roughness

- 17.29 The meteorological data has been adjusted to the Site conditions taking account of the terrain roughness using the BREVe3 software package which models the wind characteristics caused by changes in the terrain roughness at the stated reference height of 120 m above the surface. The results are shown in **Table 17.2**.

Table 17.2: BREVe3 Mean Factors for the Site at 120m (Above Ground Level)

Wind Direction (Degrees (o))	BREVe3 Mean Factors at a Height of 120m
0	1.39
30	1.41
60	1.42
90	1.43
120	1.38
150	1.40
180	1.45
210	1.44
240	1.40
270	1.38
300	1.39
330	1.36

Modelled Existing Wind Conditions: Configuration 1

- 17.30 **Figure 17.3** and **Figure 17.4** show the modelled wind conditions for the existing Site with existing surrounding buildings for the worst-case windiest season and the summer season respectively.

On-Site Conditions

- 17.31 Wind conditions across the existing Site range from suitable for 'sitting' activities to suitable for 'strolling / thoroughfare' activities during the windiest season and therefore relatively calm. These conditions are acceptable for their current usage.
- 17.32 There were no strong winds exceeding 15 m/s for more than 2.2 hours per annum recorded within the existing Site with existing surrounds.

Off-Site Conditions

- 17.33 Wind conditions surrounding the Site, including along the towpath, on the River Thames and Mortlake Green, were proven to be relatively calm and suitable for 'sitting' and 'standing' activities during the windiest season.
- 17.34 No off-Site test locations were found to experience strong winds for either the worst-case windiest season, or the summer season.

Likely Significant Effects

The Works

- 17.35 As described in **Chapter 3: Existing Land Uses and Activities**, the majority of the Site comprises the former Stag Brewery estate. This includes 16 industrial buildings surrounded largely by hard-standing. An area of approximately 2.1 ha within the Site is occupied by the Watney's Sports Ground playing fields.
- 17.36 Based upon professional judgement, the demolition of the existing medium rise structures of the Site is not anticipated to give rise to any significant change to the existing (relatively calm) wind

microclimate both on and off-Site. The likely effect is therefore judged to be **insignificant** and wind conditions both on and off-Site would remain suitable for their intended pedestrian uses.

- 17.37 As construction of the Development proceeds, the wind conditions of the Site and its surrounds would gradually adjust to those described below for the completed Development.
- 17.38 Furthermore, exceedances of the pedestrian safety criteria are not expected.

Completed Development

- 17.39 **Figure 17.5 to Figure 17.6** show the modelled wind conditions for the Development with existing surrounding buildings for the worst case windiest season for ground and elevated levels.
- 17.40 **Figure 17.7 to Figure 17.8** show the modelled wind conditions for the Development with existing surrounding buildings for the summer season for ground and elevated levels.

Modelled Wind Conditions, Configuration 2 (The Development with Existing Surrounds) - On-Site Conditions

Thoroughfares

- 17.41 With reference to **Figure 17.5**, pedestrian thoroughfares in and around the Development within the context of existing surrounds would experience wind conditions ranging from being suitable for sitting to suitable for strolling use.
- 17.42 These wind conditions are acceptable for the intended thoroughfare use.
- 17.43 The likely effect of the Development on these conditions ranges from **insignificant to long-term, local, beneficial** and of **moderate significance**.

Entrances

- 17.44 Entrances to the Development are represented by the receptor locations set out in **Table 17.3**. It should be noted that entrance locations are only defined for the detailed component of the Development. Whilst not every entrance location is assessed directly (as this would exceed the physical limit of probes able to be implemented on the model), several entrances and thoroughfares are assessed to provide a sufficient resolution of wind conditions along the façades of the Buildings.

Table 17.3: Entrance Receptor Locations within the Development

Building	Receptor
1	118, 124, 125, 126
2	127, 155, 161, 163, 166
3	133, 134
4	142, 143, 144, 145, 146
5	
6	182, 197
7	169, 175, 177, 180
8	188, 204, 205, 206, 209
9	243
10	225, 232

Building	Receptor
11	213, 217, 221
12	237, 238
School	73, 92

- 17.45 **Table 17.3** demonstrates that the wind conditions at all entrances within the detailed component of the Development (Buildings 1 to 12 inclusive and the school) would be suitable for standing use or calmer during the windiest season. As such, the effect of the Development on these wind conditions would range from **insignificant** to **long-term, local, beneficial** and of **minor significance**.
- 17.46 In relation to the outline component of the Development (Buildings 13 to 21 inclusive), the location of building entrances is not currently known. This is because the outline element of the hybrid planning application does not seek approval for building appearance, layout and so forth. This detail would be sought via future reserved matters applications. However, it is reasonable to assume that building entrances would be located at various ground floor locations around the buildings. Reference to **Figure 17.5** shows that immediately surrounding Building 13 to 21 inclusive, the wind conditions would be suitable for standing use or calmer during the windiest season and therefore the effect of the Development on these wind conditions would range from **insignificant** to **long-term, local, beneficial** and of **minor significance**. However, should building entrances be situated on the north-eastern corner of Building 19 (Location 3), western and south-eastern corners of Building 18 (Locations 6, 12 and 44), north-western corner of Building 15 (Location 109) and on the west façade at Building 16 (Location 40) the wind conditions during the windiest season would be suitable for strolling use. This would be one category windier than the required standing / entrance use wind environment. As such, should building entrances be located here, the effect would be **long-term, local, adverse** and of **minor significance**.

Ground Level Amenity Areas

- 17.47 **Figure 17.7** shows that wind conditions within the Site within the context of existing surrounds during summer are suitable for a mixture of standing and sitting use.
- 17.48 Seating situated at locations 160, 162, 167 and 170, west of Building 7 would have standing conditions (one category windier than suitable), representing a **long term, local, adverse effect of minor significance** in the absence of landscaping mitigation. All other ground level amenity areas would have acceptable conditions for the intended general amenity use (without outdoor seating).

Above Ground Amenity Areas

- 17.49 **Figure 17.8** shows that wind conditions at most elevated balconies and elevated terraces across the Site would be suitable for sitting and standing activities during summer and therefore represent an **insignificant** effect.
- 17.50 Wind conditions across the school rooftop are suitable, in terms of pedestrian comfort, for sitting use during summer (refer to **Figure 17.8**) and would therefore represent an **insignificant** effect.
- 17.51 It should be noted that after testing was conducted, the balustrade on balconies to Buildings 2, 3, 7, 8, 11 and 12 were changed to feature railings. The wind tunnel tests featured a mixture of railings and solid balustrades at balconies. Changing the balustrade to railings in the worst case would likely result in wind conditions at locations with solid balustrades becoming one category

windier, and wind conditions at railings remaining the same. Therefore, wind conditions would still be expected to be suitable for sitting and standing use during the summer season.

Strong Winds

- 17.52 No strong winds in exceedance of the pedestrian safety criteria were recorded.

Modelled Wind Conditions, Configuration 2 (The Development with Existing Surrounds) - Off-Site Conditions

- 17.53 **Figure 17.5** shows that wind conditions around and surrounding the Site within the context of existing surrounds during summer are suitable for a mixture of standing and sitting use. In particular, the wind conditions across Mortlake Green to the south of the Site and the tow path to the north of the Site were found to be suitable for sitting during summer. With the completed Development in place, these locations (as well as within the River Thames) were generally found to be the same as existing conditions during the summer (refer to **Figure 17.6**).
- 17.54 With the completed Development in place, these locations were also generally found to be the same as existing conditions during the windiest season (refer to **Figure 17.3** and **Figure 17.4**). As such, the likely effects of the completed Development on surrounding users of the Site would be **insignificant**.
- 17.55 There were no strong winds exceeding 15m/s for more than 2.2 hours per annum recorded off-Site with existing surrounds.

Mitigation Measures and Likely Residual Effects

The Works

- 17.56 The Works would likely give rise to insignificant effects. Accordingly, no mitigation is considered necessary. The resulting likely residual effect would therefore remain as **insignificant**.

Completed Development

Configuration 3 (The Development with existing surrounding Site and proposed landscaping conditions) - On-Site Conditions

- 17.57 **Figure 17.9** to **Figure 17.10** show the modelled wind conditions for the Development with existing surrounding buildings and proposed landscaping for the worst-case windiest season for ground and elevated levels.
- 17.58 **Figure 17.11** to **Figure 17.12** show the modelled wind conditions for the Development with existing surrounding buildings and proposed landscaping for the summer season for ground and elevated levels.
- 17.59 The assessment of completed Development significant wind microclimate effects has demonstrated that even in the absence of mitigation, the Site (and therefore the Development) would be suitable for its intended pedestrian activities. In all such instances no mitigation would be required, and the likely residual effects would therefore remain as the likely effects, that is:

- thoroughfares - **insignificant to long-term, local, beneficial** and of **moderate significance**;
- entrances to buildings (with the exception of possible building entrances to the Outline Buildings at locations 3, 6, 12, 40, 44 and 109) - **insignificant to long-term, local, beneficial** and of **minor significance**;
- ground level amenity areas - **insignificant**; and
- above ground amenity areas - **insignificant**.

Modelled Wind Conditions, Configuration 2 (The Development with Existing Surrounds) - On-Site Conditions

Thoroughfares

- 17.60 With reference to **Figure 17.9**, pedestrian thoroughfares in and around the Development within the context of existing surrounds would experience wind conditions ranging from being suitable for sitting to suitable for strolling use.
- 17.61 These wind conditions are acceptable for the intended thoroughfare use.
- 17.62 The likely effect of the Development on these conditions ranges from **insignificant to long-term, local, beneficial** and of **moderate significance**.

Entrances

- 17.63 Wind conditions at all entrances within the detailed component of the Development (Buildings 1 to 12 inclusive and the school) would be suitable for standing use or calmer during the windiest season. As such, the effect of the Development on these wind conditions would range from **insignificant to long-term, local, beneficial** and of **minor significance**.
- 17.64 As previously mentioned, the location of building entrances to the outline component of the Development (Buildings 13 to 21 inclusive) is not currently known. Reference to **Figure 17.9** shows that immediately surrounding Buildings 13 to 17 and 19 to 21 inclusive, the wind conditions would be suitable for standing use or calmer during the windiest season and, therefore, the effect of the Development on these wind conditions would range from **insignificant to long-term, local, beneficial** and of **minor significance**. However, should building entrances be situated on the south-eastern corner of Building 18 (Location 44), the wind conditions during the windiest season would be suitable for strolling use. This would be one category windier than the required standing / entrance use wind environment. As such, should building entrances be located here, the effect would be **long-term, local, adverse** and of **minor significance**. This can be confirmed and mitigated if required at the Reserved Matters Stages of Building 18, by:
- excluding a building entrance at this location; or
 - recessing the building entrance; or
 - planting 3m to 5m tall trees or erect screens of at least 2m high on both sides of any entrance at Location 44.

Ground Level Amenity Areas

- 17.65 **Figure 17.11** shows that wind conditions within the Site within the context of existing surrounds during summer are suitable for a mixture of standing and sitting use.
- 17.66 These conditions are acceptable, in terms of pedestrian comfort, for their intended general amenity use (without outdoor seating). Standing conditions at seating location 160 would be one category windier than suitable; however, with the inclusion of the 1.2m tall planting as proposed

this would be expected to improve conditions such that they would be suitable for sitting use. Therefore, the likely effect of the Development on these conditions would be **insignificant**.

Above Ground Amenity Areas

- 17.67 **Figure 17.12** shows that wind conditions at most elevated balconies and elevated terraces across the Site would be suitable for sitting and standing activities during summer and therefore represent an **insignificant** effect.
- 17.68 Wind conditions across the school rooftop are suitable, in terms of pedestrian comfort, for sitting use during summer (refer to **Figure 17.12**) and would therefore represent an **insignificant** effect.
- 17.69 It should be noted that after testing was conducted, the balustrade on balconies to Buildings 2, 3, 7, 8, 11 and 12 would be changed to feature railings. The wind tunnel tests featured a mixture of railings and solid balustrades at balconies. Changing the balustrade to railings would likely result in wind conditions at locations with solid balustrades becoming one category windier, and wind conditions at railings remaining the same. Therefore, wind conditions would still be expected to be suitable for sitting and standing use during the summer season, suitable conditions.

Strong Winds

- 17.70 No strong winds in exceedance of the pedestrian safety criteria would occur.

Summary

- 17.71 **Table 17.4** summarises the likely significant effects, mitigation measures, and likely residual effects identified within this Chapter.

Table 17.4: Summary of Likely Significant Effects, Mitigation Measures and Likely Residual Effects

Issue	Likely Significant Effect	Mitigation Measures	Likely Residual Effect
The Works			
Wind conditions experienced by construction Site workers.	Insignificant.	None required.	Insignificant.
Completed Development			
Thoroughfares.	Insignificant to long-term, local, beneficial and of moderate significance.	None required.	Insignificant to long-term, local, beneficial and of moderate significance.
Entrances to buildings	Insignificant to long-term, local, beneficial and of minor significance.	None required.	Insignificant to long-term, local, beneficial and of minor significance.
Possible entrances on the north-eastern corner of Building 19 (Location 3), western and south-eastern corners of Building 18 (Locations 6, 12 and 44), north-western corner of Building 15 (Location 109) and on the west façade at Building 16 (Location 40).	Long-term, local, adverse and of minor significance.	Proposed landscaping scheme.	Insignificant to long-term, local, beneficial and of minor significance.

Issue	Likely Significant Effect	Mitigation Measures	Likely Residual Effect
Possible entrances on the south-eastern corner of Building 18 (Location 44).	Long-term, local, adverse and of minor significance	Reserved matters application to either: <ul style="list-style-type: none"> • exclude a building entrance at this location; or • recess the building entrance; or • plant 3m to 5m tall trees or erect screens of at least 2m high on both sides of any entrance at Location 44. 	Insignificant.
Ground level amenity areas.	Insignificant.	None required.	Insignificant.
Ground level amenity seating (Locations 160, 162, 167 and 170).	Long-term, local, adverse and of minor significance	Proposed landscaping scheme.	Insignificant.
Above ground amenity areas.	Insignificant.	None required.	Insignificant.
Off-Site Receptors (including Mortlake Green, the tow path and within the River Thames).	Insignificant.	None required.	Insignificant.

References

1 Lawson TV (2001); 'Building Aerodynamics', Imperial College Press, London.