

6.0 HERITAGE STATEMENT

The building has always suffered from a poor setting. The closing in of the ground floor in 2000 was a symptom of this fact and the gyratory which the building created, and which allowed the unprecedented height, itself became a compromised setting. Following the Crossrail and West End Project changes to its setting, it is perfect timing to make overall improvements to the setting as a whole and to further reveal the significance of the heritage asset to the eye of the passerby, in addition to the iconic form in more distant views.

The closure of St Giles High St and the creation of the public realm is fundamental to this aim and to create a place of tranquillity from where people can fully appreciate the qualities of the listed building. Thus the concept of the glass box unit arises, to provide enclosure and therefore comfort for people using the public space and a food and beverage facility to encourage its use and provide further comfort.

The execution of the enclosure design and how it impacts on the setting of the Grade II listed building will be key to this proposal.

Rick Mather Architects have designed a bespoke glazed enclosure to lie within the space beneath Centre Point Bridge Link, forming a clear boundary to New Oxford Street to the north and the public space to the south. The enclosure would adjoin Centre Point House and a pedestrian walkway would be retained alongside Centre Point Tower. The glazed enclosure would encompass two of the pilotis to the east, whilst those to the west would lie outside of the enclosure. The glazing would be set back from the edge of the Bridge Link further emphasising its subservient design.

The glazed enclosure would be fully transparent to allow the Bridge Link to continue to be read as a structure linking the Tower and Centre Point House. The glazed panels would be set into the ground and fixed to the soffit of the Bridge Link by minimal metal fittings, the structural nature of the Bridge Link means that it is not possible to fit the glazing into the soffit, thus the fabric of the Bridge

Link would be fully retained. Furthermore, plant relating to the retail unit inside the enclosure is to be located within the floor to minimise intrusion into the listed building, as well as owing to structural implications. The provision of full height glazing would allow a large volume clear of obstruction above head height, further emphasising the transparency of the enclosed space.

The entrances to the retail unit would continue the transparent design of the enclosure. The doorways would have minimal frames and during the summer months the southern elevation would open to create direct access to the public space. This creates greater permeability through the site whilst also providing a flexible retail space, ideal for a cafe or restaurant use.

Overall, it is considered that the sensitive design by Rick Mather Architects fully respects the setting of Centre Point as a grade II listed building and provides the opportunity to further enhance its setting, creating a new space from which the building can be appreciated.

RICHARD COLEMAN





7.0 APPENDIX

7.1 ENVIRONMENTAL IMPACT ASSESSMENT EXCERPT -
APPLICATION 01 (2012) : WIND ANALYSIS

7.2 LIGHTING STRATEGY - RELEVANT INFORMATION

7.1 ENVIRONMENTAL IMPACT ASSESSMENT EXCERPT:
APPLICATION 01 (2012) : WIND ANALYSIS INCORPORATING APPLICATION 02 PROPOSALS



CENTRE POINT
ES VOLUME I



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08 Wind Microclimate

Environmental Statement
Volume I

08 Wind (Microclimate)

Introduction

- 8.1 This chapter of the Environmental Statement (ES) considers the impact of the Proposed Centre Point Development (hereafter referred to as the 'Proposed Development') on the local wind microclimate at the site. In particular it considers the potential effects of wind upon pedestrian comfort and summarises the findings of wind tunnel testing. The full results of the wind tunnel tests are presented within **Appendix B: Wind Microclimate of ES Volume III** of this ES.
- 8.2 This chapter, and the full technical report included within **Appendix B: Wind Microclimate of ES Volume III** of this ES, have been prepared by RWDI, a specialist wind engineering consultancy.
- 8.3 The chapter describes the relevant policies, the methods used to assess the potential impacts, the baseline conditions currently existing at the site and its immediate surrounds and the potential impacts on wind microclimate at the completed development. Where appropriate, the mitigation measures required to prevent, reduce or offset the effects are identified within the chapter, along with a summary of the expected residual impacts.
- 8.4 The Proposed Development programme of works is discussed in **Chapter 5: Site Preparation, Refurbishment and Construction** of this ES. The chapter states that there is an alternative 36 month programme where works to Centre Point Tower and Centre Point House are carried out concurrently. However the assessment of wind microclimate is applicable to both the 52 month and the 36 month programmes.

Planning Policy Context

National Policy

- 8.1 The UK wide National Planning Policy Framework (NPPF) recently came into force in March 2012. There are no national planning policies directly relating to wind microclimate issues, however, the benefits of a high quality built environment are emphasised in the NPPF. For example, paragraph 58:
- 8.2 '... using streetscapes and buildings to create attractive and comfortable places to live, work and visit...'

Regional Policy

The London Plan, Spatial Development Strategy for Greater London, July 2011

- 8.3 The planning Guidance contained within the London Plan (Ref. 8-1) places great importance on the creation and maintenance of a high quality environment for London.
- be of the highest architectural quality;*
 - be of a proportion, composition, scale and orientation that enhances, activates and appropriately encloses the public realm; ...*
 - not cause unacceptable harm to the amenity of surrounding land and buildings, particularly residential buildings, in relation to privacy, overshadowing, wind and microclimate. This is particularly important for tall buildings;*
 - incorporate best practice in resource management and climate change mitigation and adaptation;*
 - provide high quality indoor and outdoor spaces and integrate well with the surrounding streets and open spaces;*
 - be adaptable to different activities and land uses, particularly at ground level;*

- meet the principles of inclusive design; and*
- optimise the potential of sites."*

- 8.4 Under Policy 7.7 'Location and Design of Tall and Large Buildings', the London Plan states that: "A - Tall and large buildings should be part of a plan-led approach to changing or developing an area by the identification of appropriate, sensitive and inappropriate locations. Tall and large buildings should not have an unacceptably harmful impact on their surroundings.
B - Applications for tall or large buildings should include an urban design analysis that demonstrates the proposal is part of a strategy that will meet the criteria below. This is particularly important if the site is not identified as a location for tall or large buildings in the borough's LDF.
C - Tall and Large Buildings should:...
- only be considered in areas whose character would not be affected adversely by the scale, mass or bulk of a tall or large building;...*
 - have ground floor activities that provide a positive relationship to the surrounding streets;*
- D – Tall buildings:
a. *should not affect their surroundings adversely in terms of microclimate, wind turbulence..."*
- 8.5 Wind microclimate is therefore an important factor in achieving the desired planning policy objective. Additionally, consideration of pedestrian comfort has been referenced in Policy 5.3 'Sustainable Design and Construction', Policy 6.10 'Walking', Policy 7.4 'Local Character' and Policy 7.5 'Public Realm' and although no specific reference is made to wind microclimate, would imply the inclusion of wind as a factor for assessing levels of comfort within London's external Spaces

Sustainable Design & Construction, Draft Supplementary Planning Guidance 2006

- 8.6 The Sustainable Design & Construction, Supplementary Planning Guidance' is a formal supplement to the London Plan (Ref. 8-2). This SPG (Ref. 8-3), under Section 2.4.5 'Microclimate', stipulates that a wind environment assessment should be carried-out for tall buildings and suggests that a tall building is over 10-storeys in height. The results of the assessment should show that the Lawson comfort criteria can be met. In addition there is a preferred outcome that the wind impacts on neighbouring surrounding buildings should be negligible implying no significant change in the wind conditions.

Local Policy

London Borough of Camden (LBC) Local Development Framework (LDF) Core Strategy

- 8.7 The LBC Core Strategy (Ref. 8-4) was adopted in November 2010 and forms the main Development Plan Document (DPD) of the Local Development Framework (LDF). The Core Strategy sets out the key elements of the planning framework for LBC, to cover the period of the LDF. The Core Strategy does not include any policies that are relevant to wind microclimate assessment of the Proposed Development.

LBC UDP Saved Policies

- 8.8 The LBC Unitary Development Plan (Ref. 8-5) was replaced by the LDF in November 2010 with the exception of the saved policy; Policy LU1. However, policy LU1 is not specifically relevant to the wind microclimate assessment of the Proposed Development.

Camden Planning Guidance

- 8.9 Camden Planning Guidance 6 – Amenity (Ref. 8-6) states that the 'Wind Impact Statement should:

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- Compare existing and proposed conditions against the Lawson Comfort Criteria in both summer and winter conditions;
- Demonstrate how the proposal has adapted to the local wind environment;
- Reference specific features of the site or the development that make a contribution to the wind environment, both positively or negatively;
- Highlight areas of concern, and
- Describe the proposal's ability to adhere to the guidance.'

Assessment Methodology and Significance Criteria

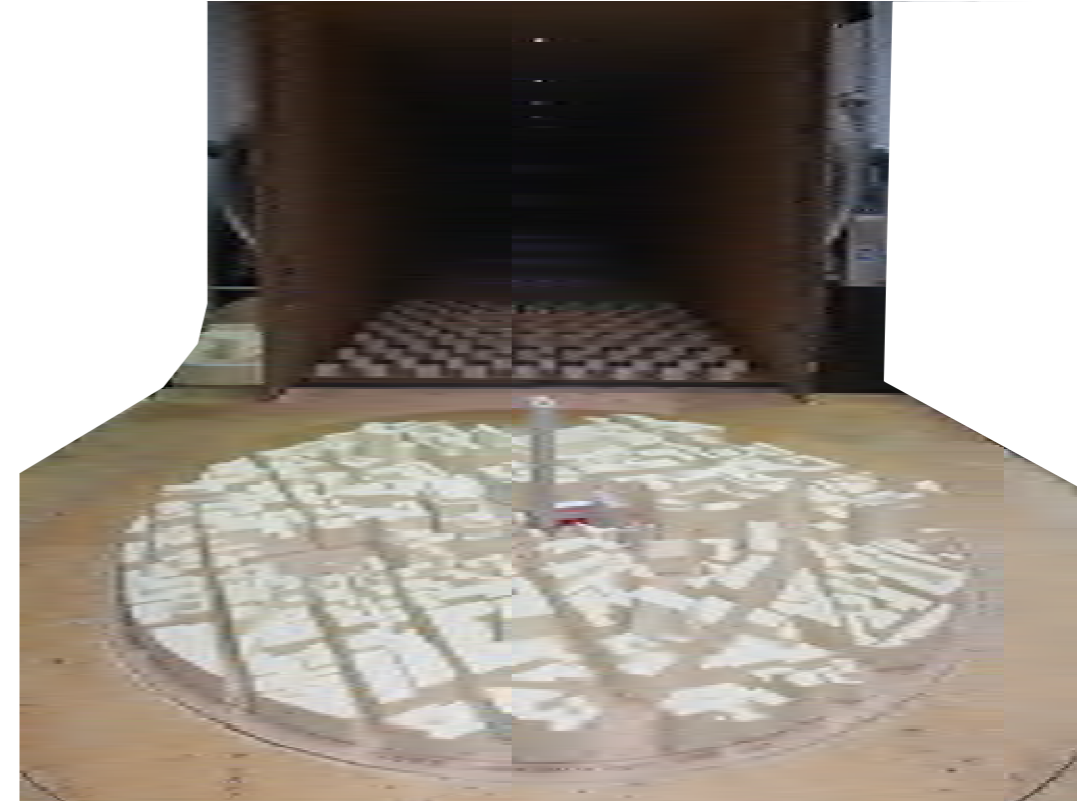
Method of Assessment

- 8.10** Wind tunnel testing is the most well-established and robust means of assessing pedestrian wind microclimate. It enables the wind conditions at a site to be quantified and classified in accordance with the widely accepted Lawson Comfort Criteria.
- 8.11** The wind tunnel test results deliver a detailed assessment of the mean and gust wind conditions around the existing site and the Proposed Development for all wind directions in terms of pedestrian comfort. Strong winds, if they occur, are also identified.
- 8.12** A 1:300 scale model of the existing buildings at and surrounding the site within a 360m radius of the centre of the site was constructed.
- 8.13** The methodology for quantifying the pedestrian level wind environment of the existing site and the Proposed Development is outlined below:
- Step 1: Measure the building-induced wind speeds at pedestrian level in the wind tunnel;
 - Step 2: Adjust standard meteorological data to account for conditions at the site;
 - Step 3: Combine these to obtain the expected frequency and magnitude of wind speeds at pedestrian level; and
 - Step 4: Compare the results with the Lawson Comfort Criteria to 'grade' conditions around the site.

Simulation of Atmospheric Winds

- 8.14** Wind is unsteady, or gusty, and this 'gustiness' or turbulence, varies depending upon the site. Modelling these effects is achieved by a series of grid, barrier and floor roughness elements to create a boundary layer that is representative of urban or open country conditions, as is appropriate. These features can be seen in the background of the Figure 8-1 below:

Figure 8-1 Image of Model in the Wind Tunnel



Measurement Technique

- 8.15** Wind speed measurements are made using Irwin probes, which measure the wind speed at a scaled 1.5 metres (m) height above the ground. For pedestrian comfort studies, both the mean wind speed and peak wind speed were determined at each measurement location.
- 8.16** The wind speed was measured at 66 locations (56 at ground level and 10 on the elevated terrace level), for all wind directions in equal increments, with 0° representing wind blowing from the north and 90° wind from the east. The locations included potential entrances, amenity areas and thoroughfares within and around the Development.

Scenarios Assessed

- 8.17** The following configurations were assessed in the wind tunnel:
- Configuration 1: Existing Site (2018 Baseline) with existing surrounding buildings and completed Crossrail, OSD (One Oxford Street) and TCRSU buildings.
 - Configuration 2: Proposed Development with 2018 surrounding buildings including completed Crossrail, OSD (One Oxford Street) and TCRSU buildings;
 - Configuration 3: Proposed Development with cumulative surrounding buildings, including completed Crossrail, OSD (One Oxford Street), TCRSU buildings and the One Denmark Square development. Note – The One Denmark Square site is cleared for Configurations 1 and 2.

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8.18 Results are presented for the windiest season, which is typically representative of the winter season in the south of the UK (i.e. December, January, February), and summer (June, July, August). This is because some pedestrian activities defined by the Lawson Comfort Criteria need to be met during the windiest season whereas others are dependent upon the summertime conditions.

8.19 The wind tunnel tests have been conducted on a model devoid of trees or landscape detail in order to obtain conservative results (i.e. generate a relatively windy microclimate). In general, planting and other landscape enhancements would increase shelter within the Proposed Development compared to the wind conditions, particularly when the trees and plants are established and in full leaf.

Lawson Comfort Criteria

8.20 Lawson devised a scale for assessing the suitability of wind conditions in the built environment. The Lawson Comfort Criteria (set out in Table 8-1) define a range of pedestrian activities from sitting through to more transient activities such as crossing the road, and for each activity define a threshold wind speed (in Beaufort Force as shown in Table 8-2) and frequency of occurrence.

Table 8-1 The Lawson Comfort Criteria (LCC)

Description	Threshold	Suitable Activity
Roads and Car Parks	6% > B5	open areas where pedestrians are not expected to linger
Business Walking	2% > B5	'purposeful' walking or where, in a business district, pedestrians may be more tolerant of the wind because their presence on site is required for work
Leisure Walking	4% > B4	Strolling
Pedestrian Standing	6% > B3	waiting at bus-stops, window shopping etc
Entrance Doors	6% > B3	pedestrians entering/leaving a building
Sitting	1% > B3	long-term sitting, for example, sitting outside a café

Table 8-2 The Lawson Comfort Criteria (LCC)

Beaufort Force	Hours Average Wind Speed (m/s)	Description of Wind	Noticeable Wind Effect
0	< 0.45	Calm	Smoke rises vertically.
1	0.45 - 1.55	Light Air	Direction shown by smoke drift but not by vanes.
2	1.55 - 3.35	Gentle Breeze	Wind felt on face; leaves rustle; wind vane moves.
3	3.35 - 5.60	Light Breeze	Leaves & twigs in motion; wind extends a flag.
4	5.60 - 8.25	Moderate Breeze	Raises dust and loose paper; small branches move.
5	8.25 - 10.95	Fresh Breeze	Small trees, in leaf, sway.
6	10.95 - 14.10	Strong Breeze	Large branches begin to move; telephone wires whistle.
7	14.10 - 17.20	Near Gale	Whole trees in motion.
8	17.20 - 20.80	Gale	Twigs break off; personal progress impeded.
9	20.80 - 24.35	Strong Gale	Slight structural damage; chimney pots removed.
10	24.35 - 28.40	Storm	Trees uprooted; considerable structural damage.
11	28.40 - 32.40	Violent Storm	Damage is widespread; unusual in the U.K.
12	> 32.40	Hurricane	Countryside is devastated; only occurs in tropical countries.

8.21 The criteria reflect the fact that leisurely activity, such as sitting, requires a low wind speed whereas for more transient activity (such as walking) pedestrians would tolerate stronger winds.

8.22 If the wind conditions exceed the threshold then the conditions are unacceptable for the stated activity. If the wind conditions are below the threshold then they are described as tolerable (or suitable) for the stated activity. For example in Table 8-1, if the wind speed exceeds Beaufort Force 4 (B4) for more than 4% of the time then the conditions would be unacceptable for leisure walking.

8.23 Further detailed information on the Lawson Comfort Criteria can be found in **Appendix B: Wind Microclimate of ES Volume III** of this ES.

Target Wind Conditions

8.24 For a mixed-use urban site, the desired wind microclimate would typically need to have areas suitable for sitting, standing/entrance use and leisure walking. The business walking and roadway classifications may be satisfactory in isolated areas, but these classifications are also associated with occasional strong winds (which are described in the next section).

8.25 The target condition in seating areas, or other amenity spaces, is a wind microclimate that is suitable for sitting in the summer months. This is because these areas are more likely to be frequently used by pedestrians in the summer. If an area is classified as suitable for sitting in the summer, the stronger winds that occur during the winter season usually mean that area would be classified as suitable for standing at this time of year, unless there was additional shelter provided. Upper level terraces and balconies are assessed on the basis that they are amenity spaces. The assessment of significance therefore focuses on the summer season result.

08 Wind (Microclimate)

8.26 A wind environment suitable for standing or better is desired throughout the year near building entrances because these are used throughout the year. Should an entrance be placed near a location where leisure or business walking conditions are predicted, this would be considered unsuitable for pedestrian egress and ingress and therefore would require mitigation. The assessment of significance therefore focuses on the windiest season result.

8.27 A pedestrian thoroughfare should be suitable for leisure walking during the windiest season. The assessment of significance therefore focuses on the windiest season result.

Strong Winds

8.28 The assessment also provides a notification of stronger winds which Lawson defined as wind speeds in excess of Beaufort Force 6 for more than 1 hour per year. The assessment reports on the amount of time that the wind speed exceeds Beaufort Force 6 (B6), B7 or B8 at each location. It is noted that these stronger winds tend to be associated with the business walking and roadway classifications.

8.29 When the wind speed exceeds Beaufort Force 6 on a pedestrian thoroughfare for only a few hours per year this is unlikely to cause nuisance to pedestrians whereas wind speeds in excess of Beaufort Force 7 or 8 would impede walking. In these instances mitigation may be necessary or a careful assessment of whether pedestrian access might be restricted on the windiest days of the year at the windy location.

Significance Criteria

8.30 The significance criteria used in the assessment of potential and residual impacts is based upon the relationship between the desired pedestrian use of a particular area of the Proposed Development, using the categories defined by the Lawson Comfort Criteria, and the predicted wind conditions at the location. A seven point scale has been utilised within this assessment, as shown in Table 8-3.

8.31 As an example, if the desired wind conditions at a particular location are required to be suitable for standing, but the predicted wind conditions are suitable for leisure walking, the predicted wind condition is 1-step windier than desired. In this case, the significance of the impact would be identified as minor adverse.

8.32 An adverse impact implies that a location has a wind environment that is windier than desired and mitigation should therefore be considered. The minor, moderate and major categories indicate the severity of the difference between the desired microclimate and the actual microclimate.

8.33 In line with Lawson's overall methodology, strong winds are reported separately from the comfort assessment and do not form part of the significance criteria.

Table 8-3 Significance Criteria

Recorded Wind Conditions	Significance of Impact
Wind Conditions are 3-steps calmer than desired	Major Beneficial
Wind Conditions are 2 steps calmer than desired	Moderate Beneficial
Wind Conditions are 1 step calmer than desired	Minor Beneficial
Wind Conditions are similar to those desired	Negligible
Wind Conditions are 1 step windier than desired	Minor Adverse
Wind Conditions are 2 steps windier than desired	Moderate Adverse
Wind Conditions are 3 steps windier than desired	Major Adverse

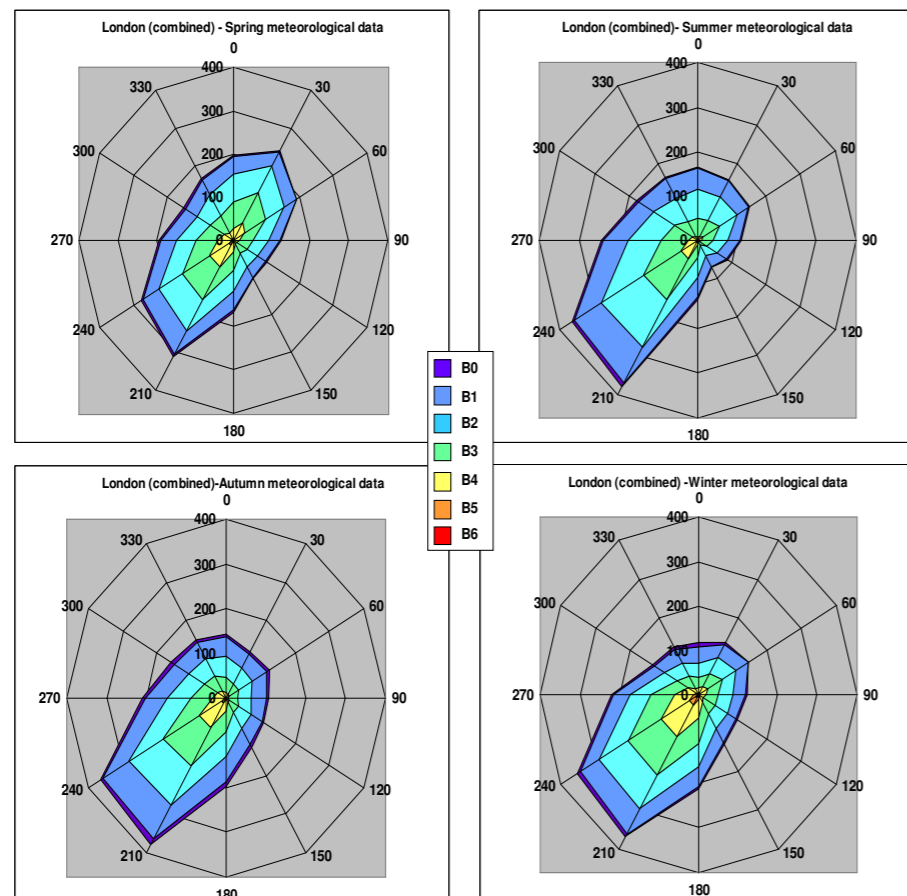
Baseline Conditions

Meteorological Data

8.34 The UK Meteorological Office supplies records of the number of hours that wind occurs for ranges of wind speed (using the Beaufort Scale) and by direction. Meteorological data for London (Heathrow, Gatwick and Stansted Airports), shown in Figure 8-2, were used in this assessment as this is deemed to provide the best representation of the local wind microclimate for the London area.

08 Wind (Microclimate)

Figure 8-2 Seasonal Wind Roses for London, UK



8.35 The adjustment of the meteorological data from open countryside terrain to the site was conducted using the BREVe3.2 (Ref. 8-7) software package which models the wind characteristics caused by changes in the terrain roughness. The BREVe3.2 mean factors at the reference height of 120m are presented in Table 8-4.

Table 8-4 Site Meteorological Data Adjustment

Mean Factors at Reference Height (120m above ground level)												
Direction (°N)	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°	330°
Mean Factor	1.46	1.50	1.49	1.46	1.34	1.41	1.46	1.50	1.45	1.35	1.42	1.43

Pedestrian Wind Comfort

Configuration 1: Baseline - Existing Development with Existing Surrounding Buildings

8.36 The results of the wind tunnel tests conducted for the baseline configuration, with the existing surrounding buildings, indicate that the local wind microclimate is suitable for leisure walking, standing/entrance use or sitting throughout the year.

8.37 During the windiest season, Figure 8-3, the wind microclimate at ground level is summarised as follows:

- Fourteen locations are suitable for sitting;
- Thirty-two locations are suitable for standing; and
- Ten locations are suitable for leisure walking.

8.38 For the terrace locations, Figure 8-5, there were:

- Four locations suitable for sitting;
- Five locations suitable for standing; and
- One location suitable for leisure walking.

8.39 The windiest locations are classified as suitable for leisure walking and occur at isolated locations on New Oxford Street and Earnshaw Street with the greatest concentration in the area to the south of the Centre Point Tower.

8.40 During the summer season, Figure 8-4 and Figure 8-6, the wind microclimate is predominantly suitable for sitting but with standing conditions in the windier areas, for example to the south of Centre Point Tower.

Strong Winds

8.41 For the baseline, there are six locations where the wind speed exceeds Beaufort Force 6 (B6). The windiest location is location 50 on New Oxford Street where the wind speed exceeds B6 for nearly 5 hours per year (Table 8-5).

Table 8-5 Annual Exceedance of Beaufort Force 6, 7, 8 and the most Frequent Wind Direction (Proposed Development)

Location	Beaufort Force Exceedance	Direction	Hours per Annum
Configuration 2 – Proposed Development with Existing Surrounds			
3	B6	240	3.6
27	B6	60	2.9
28	B6	60	2.1
34	B6	240	1.6
38	B6	260	1.1
50	B6	220	4.8

08 Wind (Microclimate)

Potential Impacts and Mitigation Measures

Potential Impacts for the Completed Development

Configuration 2 – Proposed Development with Existing Surrounding Buildings

- 8.42** Figures 8-7 to 8-10 show the windiest and summer season results at the ground and terrace levels within and around the Proposed Development. The range of pedestrian activities for which the wind microclimate would be suitable includes sitting, standing and leisure walking which is the same range that occurred for the baseline assessment.
- 8.43** During the windiest season, the wind microclimate at ground level is summarised as:
- Eighteen locations are suitable for sitting;
 - Twenty-seven locations are suitable for standing; and
 - Eleven locations are suitable for leisure walking.
- 8.44** For the sensor locations at terrace level there were:
- Five locations suitable for sitting;
 - Four locations suitable for standing; and
 - One location suitable for leisure walking.
- 8.45** When compared with the baseline, during the windiest season:
- Locations 9, 25, 42, 51 and 60 are one category windier whereas
 - Locations 7, 12, 14, 21, 24, 30, 48, 63 and 64 are one category calmer.

Pedestrian Thoroughfares

- 8.46** In Figure 8-7 and Figure 8-9, the windiest conditions are suitable for leisure walking which is the target condition for a pedestrian thoroughfare. The significance of the impact of the measured wind microclimate on the pavements and thoroughfares around the site is therefore **negligible, minor beneficial** or **moderate beneficial** for leisure walking, standing and sitting classifications respectively. As reported for the baseline scenario there is a cluster of sample points to the south of the Centre Point Tower where the wind microclimate is suitable for leisure walking.

Entrances

- 8.47** Locations 9, 14, 15, 18, 20, 21, 25, 29, 47 & 48 are outside entrances. From Figure 8-7 the wind microclimate at each of these locations is suitable for either sitting or standing/entrance during the windiest season which would imply **minor beneficial** or **negligible effects** respectively. Location 25, on the east elevation of the Centre Point Tower is suitable for leisure walking during the windiest season which would imply a **minor adverse** impact.

Amenity Spaces

- 8.48** The summertime results are presented in Figure 8-8 and 8-10. The wind speeds at the terrace level are relatively low and all except location 58 are classified as suitable for sitting. At ground level the central Plaza has a wind microclimate that is similar to that of the baseline with the area to the south and east of the Centre Point Tower suitable for standing but with calmer conditions, suitable for sitting in the northeast corner of the Plaza.

- 8.49** This range of conditions would be suitable for meeting points to the south and east of the Tower and with sitting areas in the northeast corner (in the area marked out by locations 19, 62 and 24). On this basis the conditions in the Plaza are considered to have a **negligible** impact.

08 Wind (Microclimate)

Figure 8-3 Configuration 1: Baseline – Existing Site with 2018 Surrounds (Worst Case)

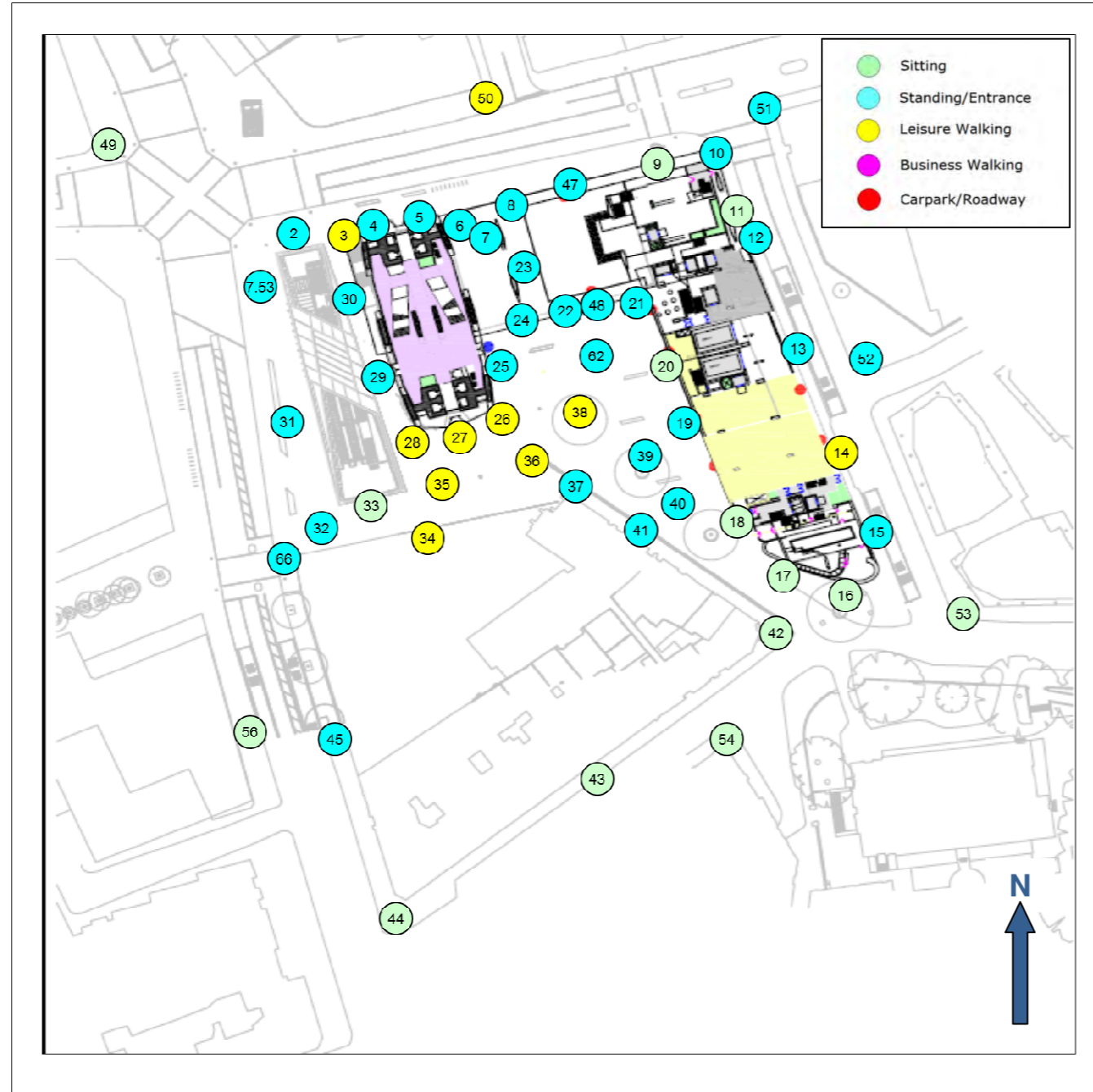


Figure 8-4 Configuration 1: Baseline – Existing Site with 2018 Surrounds (Summer Season)

