

**Figure 9.11: Configuration 2: 2022 Amended Proposed Development with Existing Surrounding Buildings–Ground Level Safety Exceedances**

## Assessment of Residual Effects

### Additional Mitigation

- 9.128 Wind tunnel testing of Configuration 2 highlighted ground level measurement locations that would have windier than suitable wind conditions for the intended pedestrian use (see Table 9.6) in addition to safety exceedances due to strong winds which would require mitigation.

### Demolition and Construction Stage

- 9.129 No additional mitigation measures would be required during the demolition and construction stage over and above those described in ES Chapter 5(R): Demolition and Construction Environment Management of this 2022 Replacement ES Volume 1(R). Accordingly, the residual effect for on-site demolition and construction workers would remain direct, temporary, medium-term, **Negligible** (not significant). Off-site receptor locations are predicted to be suitable for the intended pedestrian uses.
- 9.130 As construction of the proposed development proceeds, the wind conditions of the proposed development and the study area would gradually adjust to those described below for the completed development taking into account proposed design mitigation.
- 9.131 Wind conditions both on-site and off-site during the phased occupation would likely be direct, temporary, medium-term and range from **Negligible** (not significant) to **Minor Adverse** (significant) in the absence of mitigation.
- 9.132 During the phased occupation, mitigation measures and the proposed landscaping locally around the constructed blocks would be required in areas accessible to occupants, to ensure suitable conditions.

### Completed Development Stage

- 9.133 As the completed development stage assessment (Configuration 2) concluded that there would be significant effects, as outlined in Table 9.6, further wind tunnel testing of the 2022 amended proposed development was undertaken to develop and validate mitigation measures throughout the site.
- 9.134 A mitigation workshop was undertaken on 24 October 2022 to assess the 2022 amended proposed development in the context of the proposed landscaping strategy for the site and to identify additional wind mitigation measures to be incorporated into the landscape strategy. This scenario was tested as a new configuration; Configuration 3: 2022 Amended Proposed Development with Existing Surrounding Buildings and Mitigation Measures.
- 9.135 The proposed landscaping that was included around the site in the wind tunnel model is shown in Appendix 9.1(R), Figure 12.
- 9.136 It was agreed that the entrances to Block K would be recessed by at least 1.2 m which would be expected to provide suitable shelter for users.
- 9.137 The existing bus stop south of Block K (measurement location 57) would have a bus shelter integrated into the design when the 2022 amended proposed development is *in situ* which would be expected to provide suitable shelter for waiting passengers.
- 9.138 In addition to the above, the following mitigation measures were introduced within Configuration 3:
- 1.5 m tall shrub planting to the south-east of Block K;
  - 1.5 m tall solid screening around the seating amenity at measurement location 87; and
  - Additional 5 m tall tree included at the southern corner of Block K.
- 9.139 The proposed landscaping and a mark-up of the above-mentioned mitigation measures is presented in Figures 12 – 15 within Technical Appendix 9.1(R) in ES Volume 3(R).

- 9.140 The proposed landscaping and mitigation measures have been incorporated into the landscape and planning drawings for submission and would be implemented prior to occupation.

### Configuration 3: 2022 Amended Proposed Development with Existing Surrounding Buildings and Mitigation Measures

- 9.141 Wind tunnel results for Configuration 3 are presented in Figures 9.12 and 9.13 for the windiest and summer seasons respectively at ground level. Figure 9.14 presents wind conditions at balconies of the 2022 amended proposed development during the summer season.

### Pedestrian Comfort

- 9.142 With the inclusion of the proposed landscaping scheme and mitigation measures, wind conditions would range from suitable for sitting to strolling use during the windiest season. Wind conditions during the summer season would overall be calmer, with an increase in the areas suitable for sitting use and localised strolling use conditions at the southern corner of Block K.
- 9.143 All reported effects would be direct, permanent and long-term. Table 9.7 provides a summary of the locations with negligible and beneficial effects and no strong winds.
- 9.144 Locations with residual significant adverse effects following the implementation of the landscaping scheme and additional mitigation measures are presented in Table 9.8. The locations are limited to amenity seating locations within the site. The following sub-sections therefore focus only on those locations. The assessment presented below focuses on the measurement locations presented in Table 9.8. All other locations assessed would have suitable and safe wind conditions.

### Entrances

- 9.145 Entrances to Block K (measurement locations 93 and 168) would have strolling use wind conditions during the windiest season, one category windier than suitable. As mentioned in Configuration 2, the entrances around Block K would be recessed by at least 1.2 m which would provide suitable wind conditions resulting in a direct, permanent, long-term **Negligible** effect (not significant).

### Bus Stops

- 9.146 The existing bus stop south of Block K (measurement location 57) would have strolling use wind conditions during the windiest season, one category windier than suitable, representing a **Minor Adverse** direct, permanent effect (significant). This bus stop would be retrofitted with a bus shelter resulting in suitable wind conditions at this location resulting in a direct, permanent, long-term **Negligible** effect (not significant).

### Ground Level Amenity

- 9.147 There would be seating areas south of Block K which would have standing use conditions during the summer season, as in Configuration 2, which would represent a direct, permanent, long-term **Minor Adverse** effect (significant). As seating would primarily be intended for short-term use, the mix of standing use conditions and sitting use conditions would be appropriate as users would be expected to be able to occupy those calmer areas on unsuitably windy days based on personal wind tolerance.
- 9.148 Furthermore, the adoption of localised screening around windier than suitable seating provision (as demonstrated around measurement location 87) would provide sufficient shelter to occupants such that these locations would have suitable wind conditions resulting in a direct, permanent, long-term **Negligible** effect (not significant). Incorporating similar screening around other windier than suitable seating areas would be expected to result in suitable wind conditions at other identified windier than suitable seating areas.

### Strong Winds

- 9.149 There would be no locations that have instances of strong winds exceeding 15 m/s for more than the safety threshold of 2.2 hours annually.

Table 9.7: Configuration 3 – Summary of Receptor Locations with Negligible and Beneficial Effects and No Strong Winds						
Location	Existing and Proposed Use	Comfort Wind Conditions			Strong Winds	
		Required Wind Conditions	Measured Wind Conditions	Scale and Nature of Effect	Wind Speed Category	Time Exceeding Category per Year (Hours)
Completed Development Stage						
Windiest Season						
21, 22, 30, 41, 42, 49, 50, 51, 98	Thoroughfares (on-site)	Strolling	Sitting	Moderate Beneficial	N/A	N/A
14, 15, 19, 23, 25, 27, 31, 36, 45, 55, 56, 61, 68, 84, 95, 96, 99, 112	Thoroughfares (on-site)	Strolling	Standing	Minor Beneficial	N/A	N/A
32, 58, 65, 67, 113, 129, 130, 169	Thoroughfares (on-site)	Strolling	Strolling	Negligible	N/A	N/A
20, 40, 43 52, 53	Entrances (on-site)	Standing	Sitting	Minor Beneficial	N/A	N/A
24, 26, 33, 34, 37, 39, 44, 60, 63, 64, 66, 69, 71, 91, 92, 114, 127, 128, 162, 163	Entrances (on-site)	Standing	Standing	Negligible	N/A	N/A
5, 8, 9, 10, 12, 77, 79, 81, 82, 101, 134	Thoroughfares (off-site)	Strolling	Sitting-Strolling	Negligible	N/A	N/A
78, 80, 85. 102. 103. 105. 107. 118. 119. 120. 121. 122. 133. 135. 136. 137. 138. 139. 140. 141. 144. 145. 147. 148, 149	Entrances (off-site)	Standing	Sitting-Standing	Negligible	N/A	N/A
100, 104, 150, 152, 154	Crossings (off-site)	Walking	Sitting-Standing	Negligible	N/A	N/A
123	Bus Stops (off-site)	Standing	Standing	Negligible	N/A	N/A
Summer Season						
16, 18, 62, 72, 73, 83, 89, 90, 109, 126	Ground Level Amenity (on-site)	Standing	Sitting–Standing	Negligible	N/A	N/A
17, 28, 29, 35, 38, 48, 59, 70, 74, 75, 76, 86, 87, 97, 131, 155, 156, 157, 158, 160, 164, 165, 167	Ground Level Amenity – Seating (on-site)	Sitting	Sitting	Negligible	N/A	N/A
171, 172, 173, 174,175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194	Balconies (on-site)	Standing	Sitting–Standing	Negligible	N/A	N/A
1, 2, 6, 7	Ground Level Amenity (off-site)	Standing	Sitting	Negligible	N/A	N/A
3, 4	Ground Level Amenity – Seating (off-site)	Sitting	Sitting	Negligible	N/A	N/A
Notes: GL: Ground Level; N/A: Not applicable						

Table 9.8: Configuration 3 – Summary of Receptor Locations with Adverse Effects and/or Strong Winds						
Location	Existing and Proposed Use	Comfort Wind Conditions			Strong Winds	
		Required Wind Conditions	Measured Wind Conditions	Scale and Nature of Effect	Wind Speed Category	Time Exceeding Category per Year (Hours)
Completed Development Stage						
<i>Windiest Season</i>						
93, 168	Entrances (on-site)	Standing	Strolling	Minor Adverse	N/A	N/A
57	Bus Stops (off-site)	Standing	Strolling	Minor Adverse	N/A	N/A
<i>Summer Season</i>						
88, 94, 111, 115, 161, 166	Ground Level Amenity – Seating (on-site)	Sitting	Standing	Minor Adverse	N/A	N/A
Notes: GL: Ground Level; N/A: Not applicable						



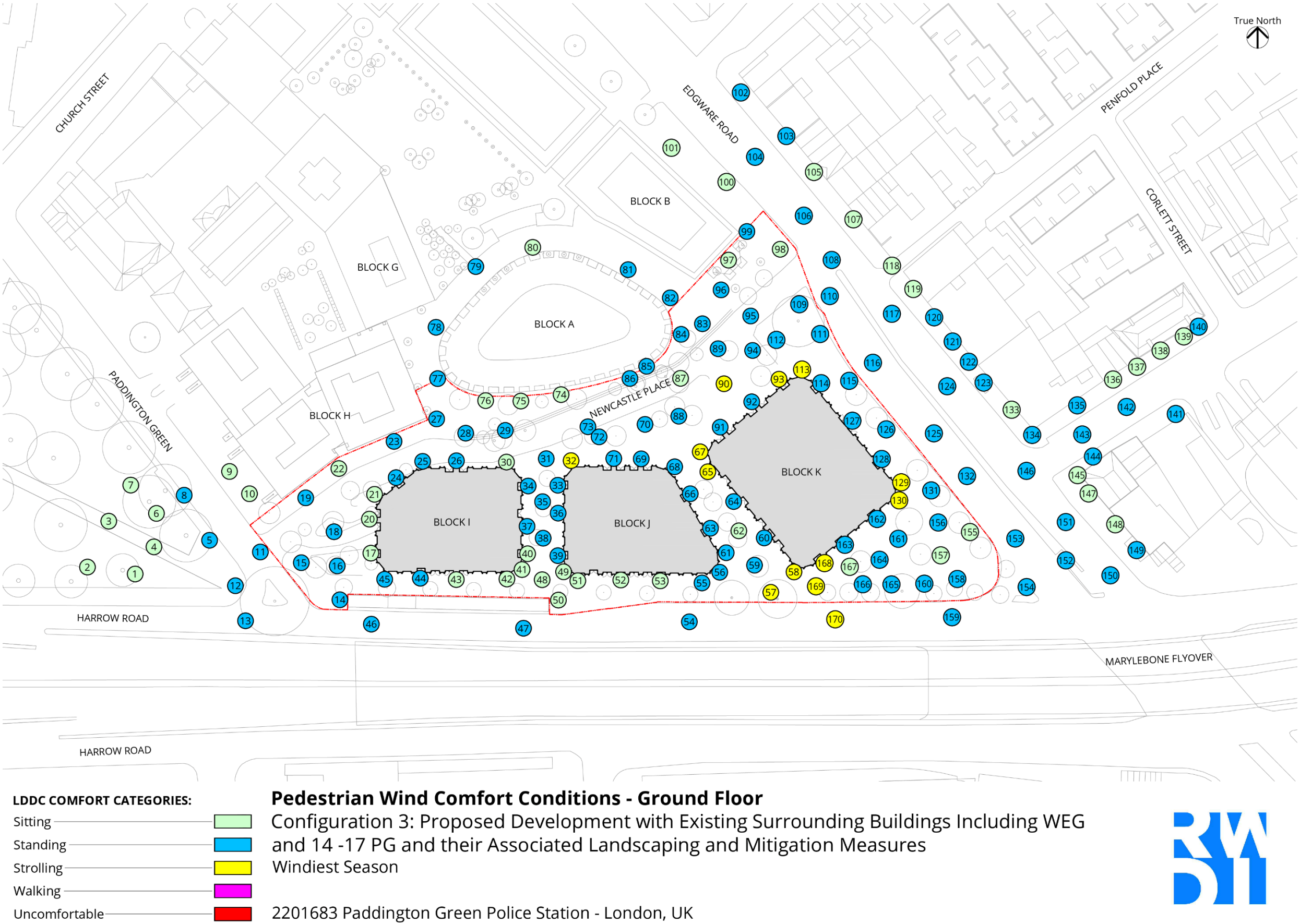


Figure 9.12: Configuration 3: 2022 Amended Proposed Development with Existing Surrounding Buildings and Mitigation Measures – Ground Level During Windiest Season



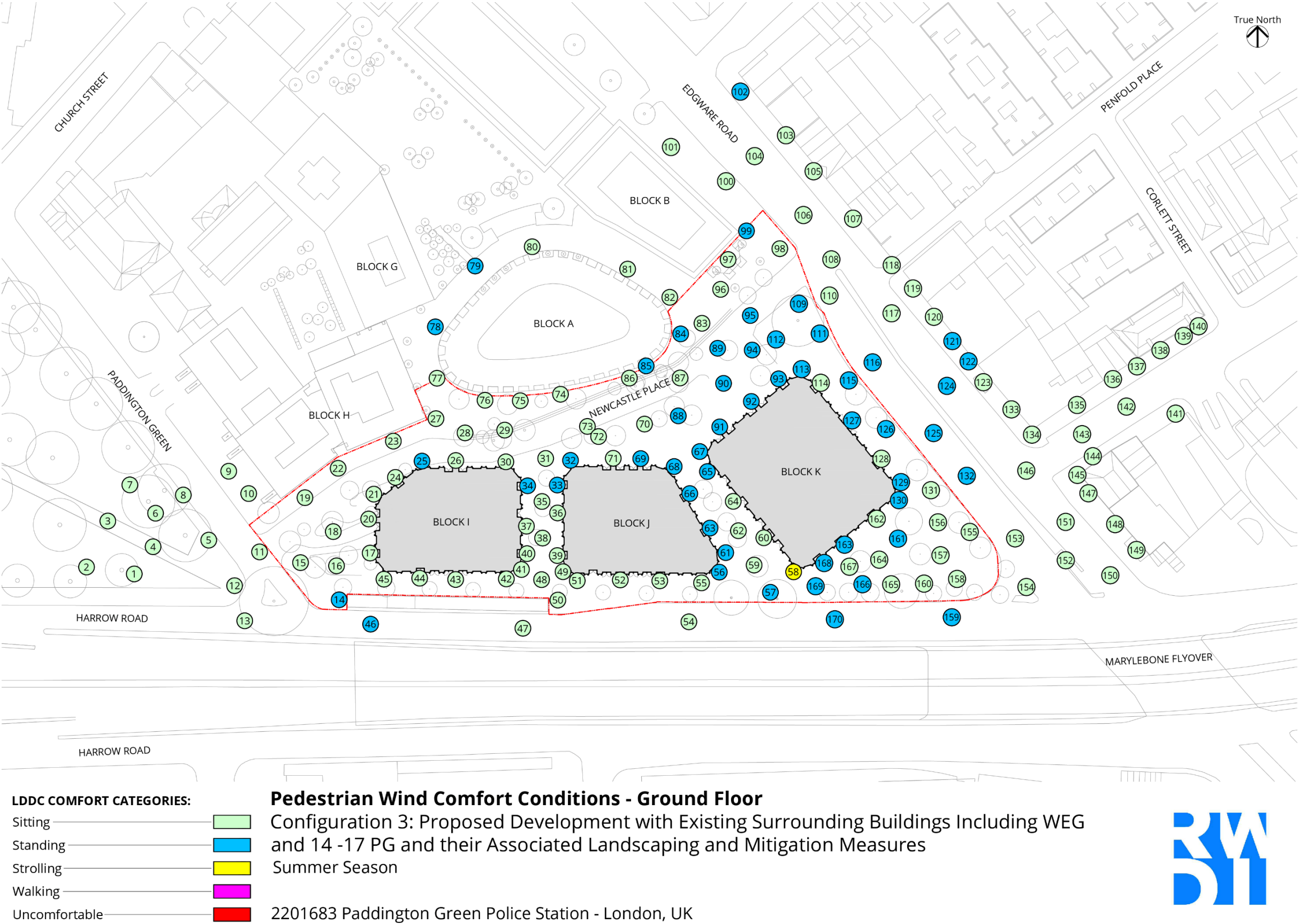
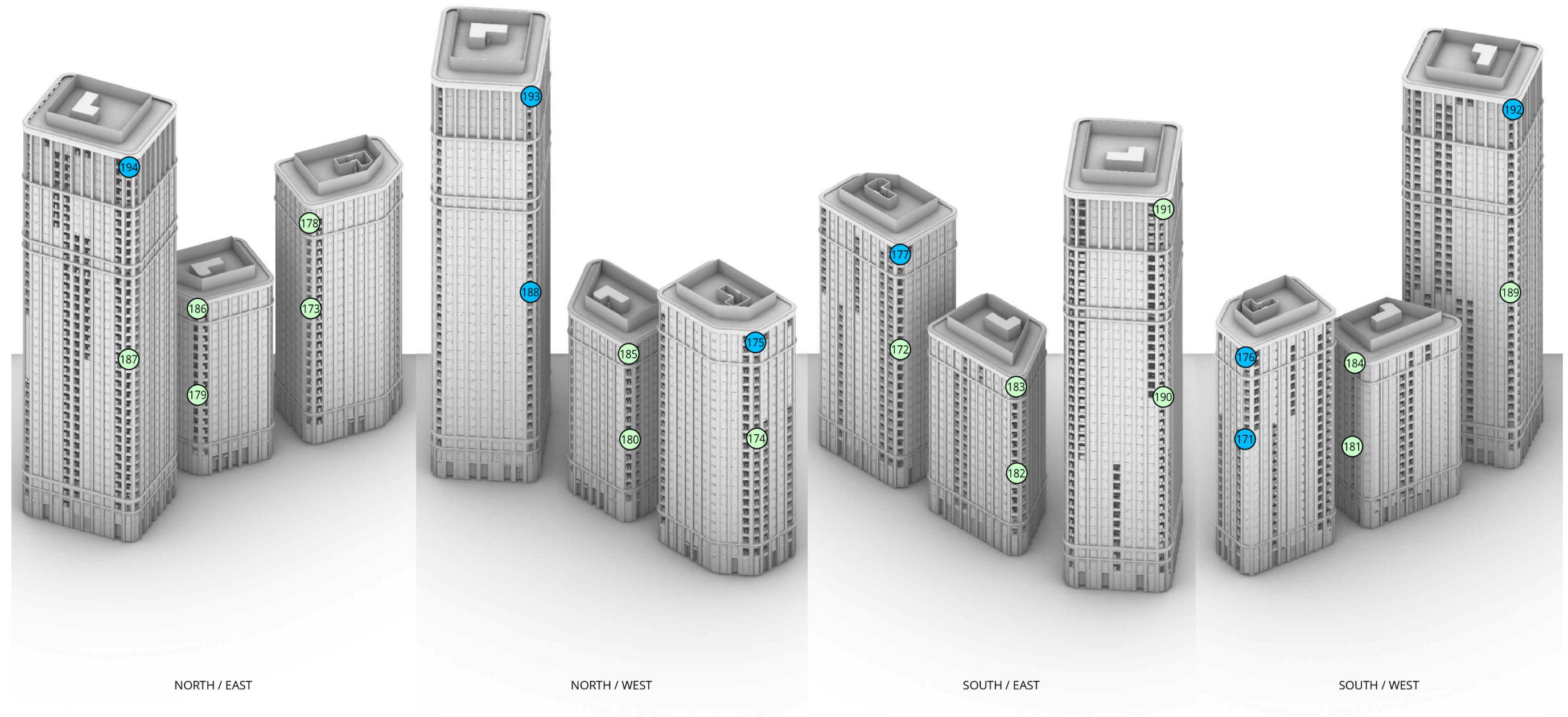


Figure 9.13: Configuration 3: 2022 Amended Proposed Development with Existing Surrounding Buildings and Mitigation Measures – Ground Level During Summer Season



**LDDC COMFORT CATEGORIES:**

Sitting	Light Green
Standing	Blue
Strolling	Yellow
Walking	Pink
Uncomfortable	Red

**Pedestrian Wind Comfort Conditions - Isometric Views**

Configuration 3: Proposed Development with Existing Surrounding Buildings Including WEG and 14 -17 PG and their Associated Landscaping and Mitigation Measures

Summer Season

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**Figure 9.14: Configuration 3: 2022 Amended Proposed Development with Existing Surrounding Buildings and Mitigation Measures – Balconies During the Summer Season**



## Summary of Residual Effects

9.150 Table 9.9 provides a tabulated summary of the outcomes of the wind microclimate assessment of the 2022 amended proposed development as presented in Configuration 3.

Table 9.9: Summary of Residual Wind Microclimate Effects									
Receptor	Description of Residual Effect	Additional Mitigation	Scale and Significance of Residual Effect **	Nature of Residual Effect*					St Mt Lt
				+	D	P	R		
				-	I	T	IR		
Demolition and Construction									
On-Site Workers and Off-site pedestrians	Conditions suitable for Sitting to Strolling use (windiest season)	None	Negligible (not significant) to Minor (significant)	N/A	D	T	IR		St
Completed Development									
Configuration 3 – On-Site									
Thoroughfares	Conditions suitable for Sitting use (windiest season) use	Proposed landscaping scheme, including mitigation measures agreed during wind mitigation workshop to be secured by means of an appropriately worded planning condition.	Moderate (not significant) (Measurement locations 9, 10, 21, 22, 30, 41, 42, 49, 50, 51, 98)	+	D	P	IR		Lt
	Conditions suitable for Standing use (windiest season)		Minor (not significant) (Measurement locations 14, 15, 19, 23, 25, 27, 31, 36, 45, 55, 56, 61, 68, 84, 95, 96, 99, 112)	+	D	P	IR		Lt
	Conditions suitable for Strolling use (windiest season)		Negligible (not significant) (Measurement locations 32, 58, 65, 67, 113, 129, 130, 169)	N/A	D	P	IR		Lt
Entrances	Conditions suitable for Sitting use (windiest season)	None	Minor (not significant) (Measurement locations 20, 40, 43, 52, 53)	+	D	P	IR		Lt
	Conditions suitable for Standing use (windiest season)		Negligible (not significant) (Measurement locations 24, 26, 33, 34, 37, 39, 44, 60, 63, 64, 66, 69, 71, 91, 92, 114, 127, 128, 162, 163)	N/A	D	P	IR		Lt

Table 9.9: Summary of Residual Wind Microclimate Effects								
Receptor	Description of Residual Effect	Additional Mitigation	Scale and Significance of Residual Effect **	Nature of Residual Effect*				
				+ -	D I	P T	R IR	St M Lt
	Conditions suitable for Strolling use (windiest season)	Windier than suitable entrances to Block K recessed by at least 1.2 m, as per planning drawings	Negligible (not significant) (Measurement locations 93, 168)	N/A	D	P	IR	Lt
Ground Level Amenity	Conditions suitable for Sitting use (summer season)	None	Negligible (not significant) (Measurement location 16, 18, 62, 72, 73, 83)	N/A	D	P	IR	Lt
	Conditions suitable for Standing use (summer season)		Negligible (not significant) (Measurement locations 89, 90, 109, 126)					
Ground Level Amenity – Seating	Conditions suitable for Sitting use (summer season)	Proposed landscaping scheme, including mitigation measures agreed during wind mitigation workshop included in planning drawings.	Negligible (not significant) (Measurement locations 17, 28, 29, 35, 38, 48, 59, 70, 74, 75, 76, 86, 87, 97, 131, 155, 156, 157, 158, 160, 164, 165, 167)	N/A	D	P	IR	Lt
	Conditions suitable for Standing use (summer season) use	Inclusion of localised landscaping measures, similar to those included during the mitigation workshop for other windier than suitable seating areas, to be secured by means of an appropriately worded planning condition.	Minor (significant) (Measurement locations 88, 94, 111, 115, 161, 166)					
Balconies	Conditions suitable for Sitting use (summer season)	None	Minor (not significant) (Measurement locations 172, 173, 174, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 189, 190, 191)	+	D	P	IR	Lt



Table 9.9: Summary of Residual Wind Microclimate Effects								
Receptor	Description of Residual Effect	Additional Mitigation	Scale and Significance of Residual Effect **	Nature of Residual Effect*				
				+ -	D I	P T	R IR	St Mt Lt
Balconies	Conditions suitable for Standing use (summer season)	None	Minor (not significant) (Measurement locations 171, 175, 176, 177, 188, 192, 193,194)					
<b>Configuration 3 – Off-Site</b>								
Thoroughfares	Conditions suitable for Sitting use (windiest season)	Proposed landscaping scheme, including mitigation measures agreed during wind mitigation workshop to be secured by means of an appropriately worded planning condition.	Negligible (not significant) (Measurement locations 1, 2, 3, 4, 6, 7, 80, 100, 101, 105, 107, 118, 119, 133, 136, 137, 138, 139, 145, 147, 148)	N/A	D	P	IR	Lt
	Conditions suitable for Standing use (windiest season)		Negligible (not significant) (Measurement locations 5, 8, 11, 12, 13, 46, 47, 54, 77, 78, 79, 81, 82, 85, 102, 103, 104, 106, 108, 110, 116, 117, 120, 121, 122, 123, 124, 125, 132, 134, 135, 140, 141, 142, 143, 144, 146, 149, 150, 151, 152, 153, 154, 159)					
	Conditions suitable for Strolling use (windiest season)		Negligible (not significant) (Measurement location 170)					
Entrances	Conditions suitable for Sitting use (windiest season) use	None	Negligible (not significant) (Measurement locations 80, 105, 107, 118, 119, 133, 136, 137, 138, 139, 145, 147, 148)	N/A	D	P	IR	Lt
	Conditions suitable for Standing use (windiest season)		Negligible (not significant) (Measurement locations 78, 85, 102, 103, 120, 121,					

Table 9.9: Summary of Residual Wind Microclimate Effects								
Receptor	Description of Residual Effect	Additional Mitigation	Scale and Significance of Residual Effect **	Nature of Residual Effect*				
				+ -	D I	P T	R IR	St Mt Lt
			122, 135, 140, 141, 144, 149)					
Crossings	Conditions suitable for Sitting use (windiest season)	None	Negligible (not significant) (Measurement location 100)	N/A	D	P	IR	Lt
	Conditions suitable for Standing use (windiest season)		Negligible (not significant) (Measurement locations 104, 150, 152, 154)					
Bus Stops	Conditions suitable for Standing use (windiest season)	None	Negligible (not significant) (Measurement locations 123)	N/A	D	P	IR	Lt
	Conditions suitable for Strolling use (windiest season)	Implementation of a bus shelter or relocating the bus stop to a location with suitable wind conditions	Negligible (not significant) (Measurement location 57)	N/A	D	P	IR	Lt
Ground Level Amenity	Conditions suitable for Sitting use (summer season)	None	Negligible (not significant) (Measurement locations 1, 2, 6, 7)	N/A	D	P	IR	Lt
Ground Level Amenity – Seating	Conditions suitable for Sitting use (summer season)		Negligible (not significant) (Measurement locations 3, 4)	N/A	D	P	IR	Lt
Notes: * - = Adverse/ + = Beneficial/ +/- Neutral; D = Direct/ I = Indirect; P = Permanent/ T = Temporary; R=Reversible/ IR= Irreversible; St = Short-term/ Mt = Medium-term/ Lt = Long-term. **Negligible/Minor/Moderate/Major								

## Cumulative Effects

### Intra-Project Effects

9.151 As explained in Chapter 2: EIA Process and Methodology, intra-project cumulative effects are discussed in Chapter 11(R): Cumulative Effects.

### Inter-Project Effects

9.152 Table 9.10 provides a summary of the likely cumulative effects resulting from the 2022 amended proposed development and the cumulative developments. Only three schemes have been considered as

all other cumulative schemes are located outside of the assessed 360 m radius, and would therefore not be expected to have a measurable effect on wind conditions around the site.

Table 9.10: Inter-Project Cumulative Effects				
Cumulative Development	Demolition and Construction		Completed Development	
	Cumulative Effects Likely?	Reason	Cumulative Effects Likely?	Reason
18/05018/FULL One Merchant Square	No	Comparing the results of Configurations 2 and 4, no material change in conditions would be expected. As such no adverse cumulative interactions would be expected.	No	Development situated south of the site, therefore providing shelter and not introducing any significant effects
18/05018/FULL Six Merchant Square				
10/09757/FULL Two Merchant Square				

## Demolition and Construction Cumulative Effects

- 9.153 Wind conditions during the demolition and construction stage would be expected to gradually adjust from those of the existing Baseline scenario (Configuration 1, see Figures 9.4 and 9.5) to the likely wind conditions identified in the cumulative assessment in Configuration 4 (see Figures 9.15, 9.16 and 9.17).
- 9.154 Based on professional judgement, the demolition works are not anticipated to give any rise to any significant change to the existing wind microclimate both on and off the site.
- 9.155 There would be no public access to the site during demolition and construction. Hoarding (or other sheltering measures) would be implemented around the site during demolition and construction works to restrict access to the site to construction workers. Wind conditions on-site would be suitable for a construction site. Off-site receptor locations are predicted to be suitable for the intended pedestrian uses.
- 9.156 Wind conditions during the demolition and construction stage would likely be direct, temporary, medium-term **Negligible** (not significant).

## Completed Development Cumulative Effects

### Configuration 4: 2022 Amended Proposed Development with Cumulative Surrounding Buildings

- 9.157 Wind tunnel results for Configuration 4 are presented in Figures 9.15 and 9.16 for the windiest and summer seasons respectively at ground level. Figure 9.17 displays wind conditions at balconies on the 2022 amended proposed development during the summer season. It is noted that this configuration does not include the landscaping or wind mitigation measures of the 2022 amended proposed development and therefore presents a worst-case.
- 9.158 As in Configurations 2 and 3, the proposed landscaping for the WEG and 14-17 Paddington Green schemes was included.

## Pedestrian Comfort

- 9.159 With the introduction of nearby cumulative schemes, wind conditions would remain similar to the Completed Development scenario (Configuration 2), and range from suitable for sitting to strolling use during the windiest season, with strolling conditions situated predominantly to the south-east of Block K. Wind conditions during the summer season would overall be one category calmer, suitable for sitting and standing use, due to the calmer winds experienced during this time of the year.
- 9.160 All reported effects would be direct, permanent, long-term.
- 9.161 Table 9.11 provides a summary of the locations with negligible and beneficial effects and no strong winds.
- 9.162 Locations which would experience significant effects are presented in Table 9.12. The assessment presented in the following sub-sections therefore focuses on the measurement locations presented in Table 9.12. All other locations assessed would have suitable and safe wind conditions.

## Ground Level Amenity

- 9.163 There would be ground level seating amenity areas (measurement locations 28, 29, 35, 87, 88, 94, 111, 115, 131, 156, 157, 158, 160, 161, 164, 165, 166, 167) would have standing use conditions during the summer season, one category windier than suitable for the intended use and representing a direct, permanent, long-term **Minor Adverse** effect (significant). Mitigation measures would be required to improve conditions at these seating areas.

## Strong Winds

- 9.164 There would be no locations that have instances of strong winds exceeding 15 m/s for more than the safety threshold of 2.2 hours annually.

Table 9.11: Configuration 4 – Summary of Receptor Locations with Negligible and Beneficial Effects and No Strong Winds						
Location	Existing and Proposed Use	Comfort Wind Conditions			Strong Winds	
		Required Wind Conditions	Measured Wind Conditions	Scale and Nature of Effect	Wind Speed Category	Time Exceeding Category per Year (Hours)
Completed Development Stage						
Windiest Season						
15, 19, 22, 41, 42, 49, 50, 51, 55, 98	Thoroughfares (on-site)	Strolling	Sitting	Moderate Beneficial	N/A	N/A
14, 21, 23, 27, 30, 31, 36, 45, 56, 61, 65, 67, 68, 84, 95, 96, 99, 112, 113	Thoroughfares (on-site)	Strolling	Standing	Minor Beneficial	N/A	N/A
25, 32, 58, 129, 130, 169	Thoroughfares (on-site)	Strolling	Strolling	Negligible	N/A	N/A
20, 43, 52, 53	Entrances (on-site)	Standing	Sitting	Minor Beneficial	N/A	N/A
24, 26, 33, 34, 37, 39, 40, 44, 60, 63, 64, 66, 69, 71, 91, 92, 93, 114, 127, 128, 162, 163, 168	Entrances (on-site)	Standing	Standing	Negligible	N/A	N/A
5, 8, 9, 10, 12, 77, 79, 81, 82, 101, 134	Thoroughfares (off-site)	Strolling	Sitting-Strolling	Negligible	N/A	N/A
78, 80, 85, 102, 103, 105, 107, 118, 119, 120, 121, 122, 133, 135, 136, 137, 138, 139, 140, 141, 144, 145, 147, 148, 149	Entrances (off-site)	Standing	Sitting-Standing	Negligible	N/A	N/A
100, 104, 150, 152, 154	Crossings (off-site)	Walking	Sitting-Standing	Negligible	N/A	N/A
57, 123	Bus Stops (off-site)	Standing	Standing	Negligible	N/A	N/A
Summer Season						
16, 18, 62, 72, 73, 83, 89, 90, 109, 126	Ground Level Amenity (on-site)	Standing	Sitting-Standing	Negligible	N/A	N/A
17, 38, 48, 59, 70, 74, 75, 76, 86, 97, 155	Ground Level Amenity – Seating (on-site)	Sitting	Sitting	Negligible	N/A	N/A
171, 172, 173, 174,175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194	Balconies (on-site)	Standing	Sitting-Standing	Minor Beneficial	N/A	N/A
1, 2, 6, 7	Ground Level Amenity (off-site)	Standing	Sitting	Negligible	N/A	N/A
3, 4	Ground Level Amenity – Seating (off-site)	Sitting	Sitting	Negligible	N/A	N/A
Notes: GL: Ground Level; N/A: Not applicable						

Table 9.12: Configuration 4 – Summary of Receptors with Adverse Effects and/or Strong Winds						
Location	Existing/Proposed Use	Comfort Wind Conditions			Strong Winds	
		Required Wind Conditions	Measured Wind Conditions	Scale and Nature of Effect	Wind Speed Category	Time Exceeding Category per Year (Hours)
Completed Development Stage						
Summer Season						
28, 29, 35, 87, 88, 94, 111, 115, 131, 156, 157, 158, 160, 161, 164, 165, 166, 167	Ground Level Amenity – Seating (on-site)	Sitting	Standing	Minor Adverse	N/A	N/A
Notes: GL: Ground Level; N/A: Not applicable						





Figure 9.15: Configuration 4: 2022 Amended Proposed Development with Cumulative Surrounding Buildings–Wind Conditions at Ground Level During Windiest Season



**LDDC COMFORT CATEGORIES:**

Sitting	Green
Standing	Blue
Strolling	Yellow
Walking	Magenta
Uncomfortable	Red

**Pedestrian Wind Comfort Conditions - Ground Floor**

Configuration 4: Proposed Development with Cumulative Surrounding Buildings Including WEG and 14-17 PG and their Associated Landscaping

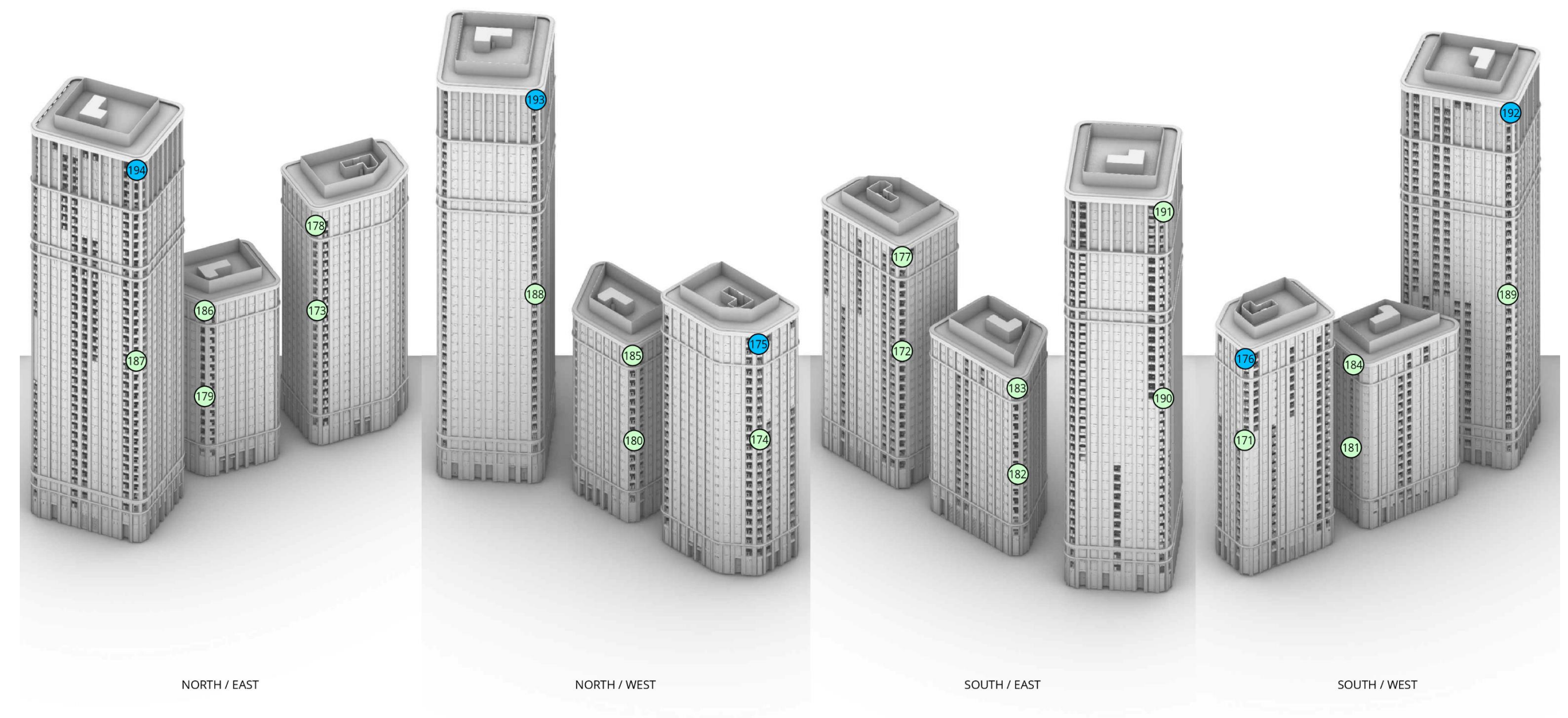
Summer Season

2201683 Paddington Green Police Station - London, UK



**Figure 9.16: Configuration 4: 2022 Amended Proposed Development with Cumulative Surrounding Buildings—Wind Conditions at Ground Level During Summer Season**





**LDDC COMFORT CATEGORIES:**

Sitting	Light Green
Standing	Blue
Strolling	Yellow
Walking	Pink
Uncomfortable	Red

**Pedestrian Wind Comfort Conditions - Isometric Views**  
Configuration 4: Proposed Development with Cumulative Surrounding Buildings Including WEG and 14 -17 PG and their Associated Landscaping  
Summer Season  
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Figure 9.17: Configuration 4: 2022 Amended Proposed Development with Cumulative Surrounding Buildings–Wind Conditions at Balconies During Summer Season



## Configuration 5: 2022 Amended Proposed Development with Cumulative Surrounding Buildings and Mitigation Measures

- 9.165 Wind tunnel results for Configuration 5 are presented in Figures 9.18 and 9.19 for the windiest and summer seasons respectively at ground level. Figure 9.20 displays wind conditions at balconies on the 2022 amended proposed development during the summer season.
- 9.166 As in Configurations 2, 3 and 4, the proposed landscaping for the WEG and 14-17 Paddington Green schemes was included.
- 9.167 The proposed landscaping and a mark-up of the mitigation measures included in Configuration 3 is presented in Figures 12 – 15 within Technical Appendix 9.1(R) in ES Volume 3(R).
- 9.168 The only difference between the mitigation measures included in Configuration 3 and Configuration 5 was the omission of the additional 5 m tall tree adjacent to the southern corner of Block K, as indicated in the mitigation mark-up presented within Figure 13 in Technical Appendix 9.1(R) in ES Volume 3(R).

## Pedestrian Comfort

- 9.169 With the introduction of the proposed landscaping and wind mitigation measures in context of the cumulative schemes, wind conditions would remain similar to, or calmer than, those reported in Configuration 4, and range from suitable for sitting to strolling use during the windiest season. Strolling use conditions would predominantly be situated to the south and eastern corners of Block K. Wind conditions during the summer season would overall be one category calmer, suitable for sitting and standing use.
- 9.170 All reported effects would be direct, permanent, long-term.
- 9.171 Table 9.13 provides a summary of the locations with negligible and beneficial effects and no strong winds.
- 9.172 Locations which would experience significant effects are presented in Table 9.14. The assessment presented in the following sub-sections therefore focuses on the measurement locations presented in Table 9.14.
- 9.173 All other locations assessed would have suitable and safe wind conditions.

## Ground Level Amenity

- 9.174 As in Configurations 2, 3 and 4, there would be windier than suitable seating amenity areas which would have standing use wind conditions during the summer season (measurement locations 94, 111, 161 and 166) representing a direct, permanent, long-term **Minor Adverse** effect (significant). Mitigation measures would be required to improve conditions.
- 9.175 It should be noted that for seating nearby these specific spaces, there would be other locations which would have sitting conditions, suitable for seating provision; therefore pedestrians/occupants are able to sit in nearby spaces which would have suitable conditions on days when these locations are unsuitably windy.
- 9.176 Furthermore, the adoption of localised screening around windier than suitable seating provisions (as was assessed around measurement location 87) would provide sufficient shelter to occupants such that these locations would have suitable wind conditions resulting in a direct, permanent, long-term **Negligible** effect (not significant). Incorporating similar screening around other windier than suitable seating areas would be expected to result in suitable wind conditions.

## Strong Winds

- 9.177 There would be no locations that have instances of strong winds exceeding 15 m/s for more than the safety threshold of 2.2 hours annually.

Table 9.13: Configuration 5 – Summary of Receptor Locations with Negligible and Beneficial Effects and No Strong Winds						
Location	Existing/Proposed Use	Comfort Wind Conditions			Strong Winds	
		Required Wind Conditions	Measured Wind Conditions	Scale and Nature of Effect	Wind Speed Category	Time Exceeding Category per Year (Hours)
Completed Development Stage						
Windiest Season						
15, 19, 21, 22, 41, 42, 49, 50, 51, 55, 98	Thoroughfares (on-site)	Strolling	Sitting	Moderate Beneficial	N/A	N/A
14, 23, 25, 27, 30, 31, 36, 45, 55, 56, 61, 65, 68, 84, 95, 96, 99, 112, 113	Thoroughfares (on-site)	Strolling	Standing	Minor Beneficial	N/A	N/A
32, 58, 67, 129, 130, 169	Thoroughfares (on-site)	Strolling	Strolling	Negligible	N/A	N/A
20, 24, 40, 43, 52, 53, 60, 114	Entrances (on-site)	Standing	Sitting	Minor Beneficial	N/A	N/A
26, 33, 34, 37, 39, 44, 63, 64, 66, 69, 71, 91, 92, 93, 127, 128, 162, 163, 168	Entrances (on-site)	Standing	Stranding	Negligible	N/A	N/A
5, 8, 9, 10, 12, 77, 79, 81, 82, 101, 134	Thoroughfares (off-site)	Strolling	Sitting-Strolling	Negligible	N/A	N/A
78, 80, 85, 102, 103, 105, 107, 118, 119, 120, 121, 122, 133, 135, 136, 137, 138, 139, 140, 141, 144, 145, 147, 148, 149	Entrances (off-site)	Standing	Sitting-Standing	Negligible	N/A	N/A
100, 104, 150, 152, 154	Crossings (off-site)	Walking	Sitting-Standing	Negligible	N/A	N/A
57, 123	Bus Stops (off-site)	Standing	Standing	Negligible	N/A	N/A
Summer Season						
16, 18, 62, 72, 73, 83, 89, 90, 109, 126	Ground Level Amenity (on-site)	Standing	Sitting-Standing	Negligible	N/A	N/A
17, 28, 29, 35, 38, 48, 59, 70, 74, 75, 76, 86, 87, 88, 97, 115, 131, 155, 156, 157, 158, 160, 164, 165, 167	Ground Level Amenity – Seating (on-site)	Sitting	Sitting	Negligible	N/A	N/A
171, 172, 173, 174,175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194	Balconies (on-site)	Standing	Sitting-Standing	Minor Beneficial	N/A	N/A
1, 2, 6, 7	Ground Level Amenity (off-site)	Standing	Sitting	Negligible	N/A	N/A
3, 4	Ground Level Amenity – Seating (off-site)	Sitting	Sitting	Negligible	N/A	N/A
Notes: GL: Ground Level; N/A: Not applicable						

Table 9.14: Configuration 4 – Summary of Receptors with Adverse Effects and/or Strong Winds						
Location	Existing/Proposed Use	Comfort Wind Conditions			Strong Winds	
		Required Wind Conditions	Measured Wind Conditions	Scale and Nature of Effect	Wind Speed Category	Time Exceeding Category per Year (Hours)
Completed Development Stage						
Summer Season						
94, 111, 161, 166	Ground Level Amenity – Seating (on-site)	Sitting	Standing	Minor Adverse	N/A	N/A
<u>Notes</u> GL: Ground Level; N/A: Not applicable						

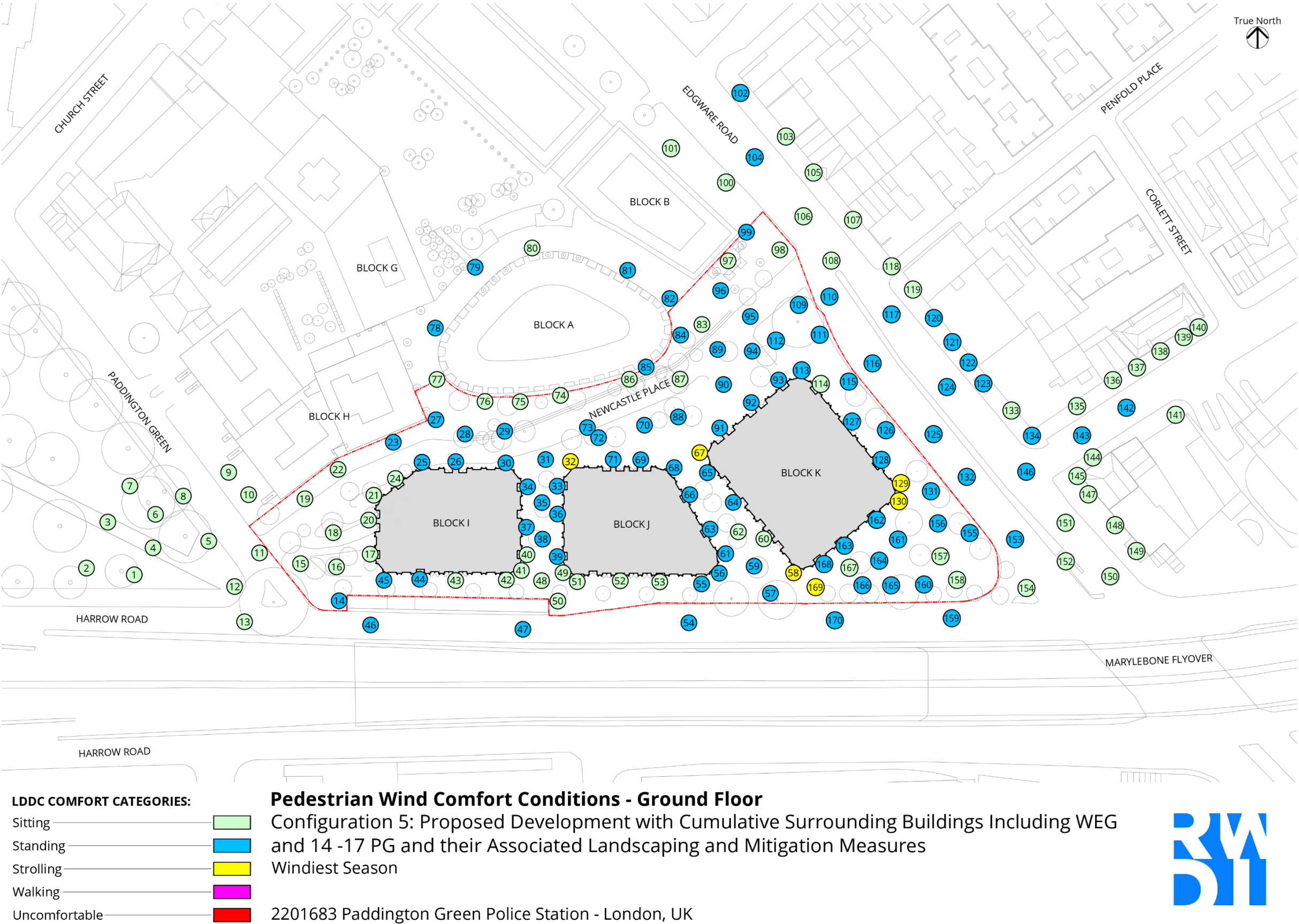


Figure 9.18: Configuration 5: 2022 Amended Proposed Development with Cumulative Surrounding Buildings and Mitigation Measures–Wind Conditions at Ground Level During Windiest Season