

Figure 12.23 Configuration 4: The Indicative Scheme Model of the Proposed Development with Existing Surrounding Buildings, the Indicative Landscaping Scheme, and Wind Mitigation Measures during the Summer Season – Ground Level

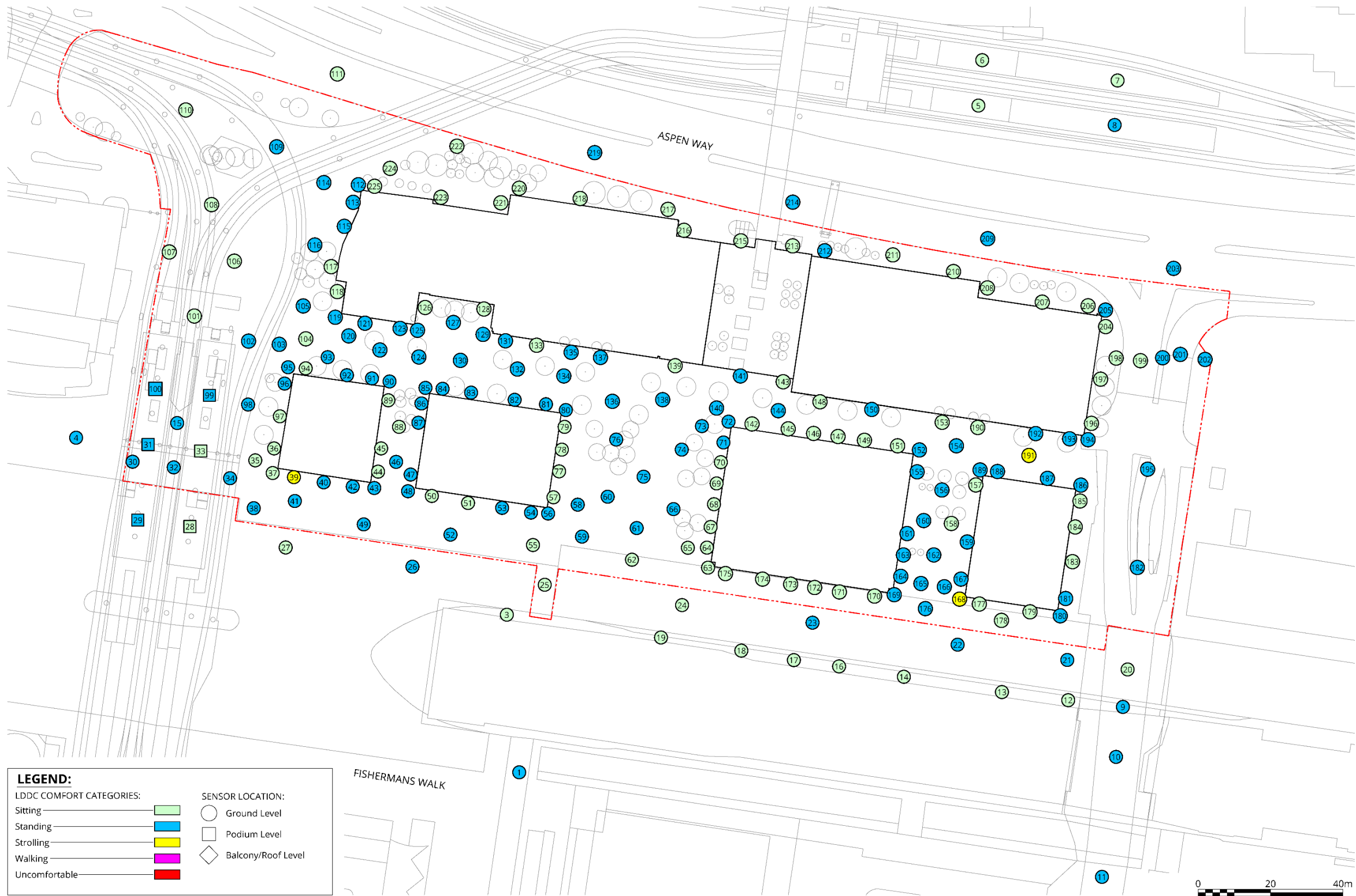


Figure 12.24 Configuration 4: The Indicative Scheme Model of the Proposed Development with Existing Surrounding Buildings, the Indicative Landscaping Scheme, and Wind Mitigation Measures during the Summer Season – Isometric Views and Roof Level

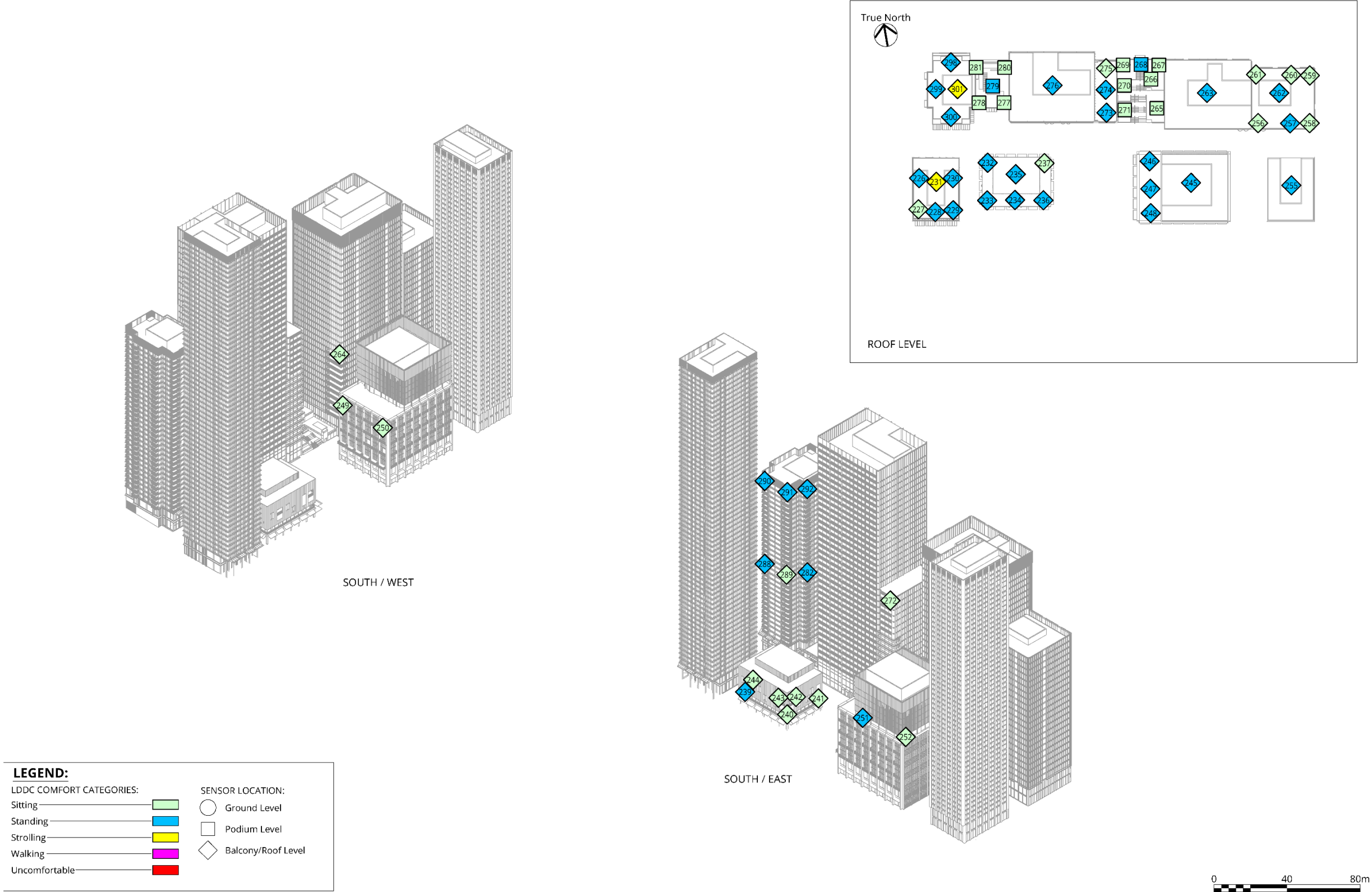


Figure 12.25 Configuration 4: The Indicative Scheme Model of the Proposed Development with Existing Surrounding Buildings, the Indicative Landscaping Scheme, and Wind Mitigation Measures during the Summer Season – Isometric Views

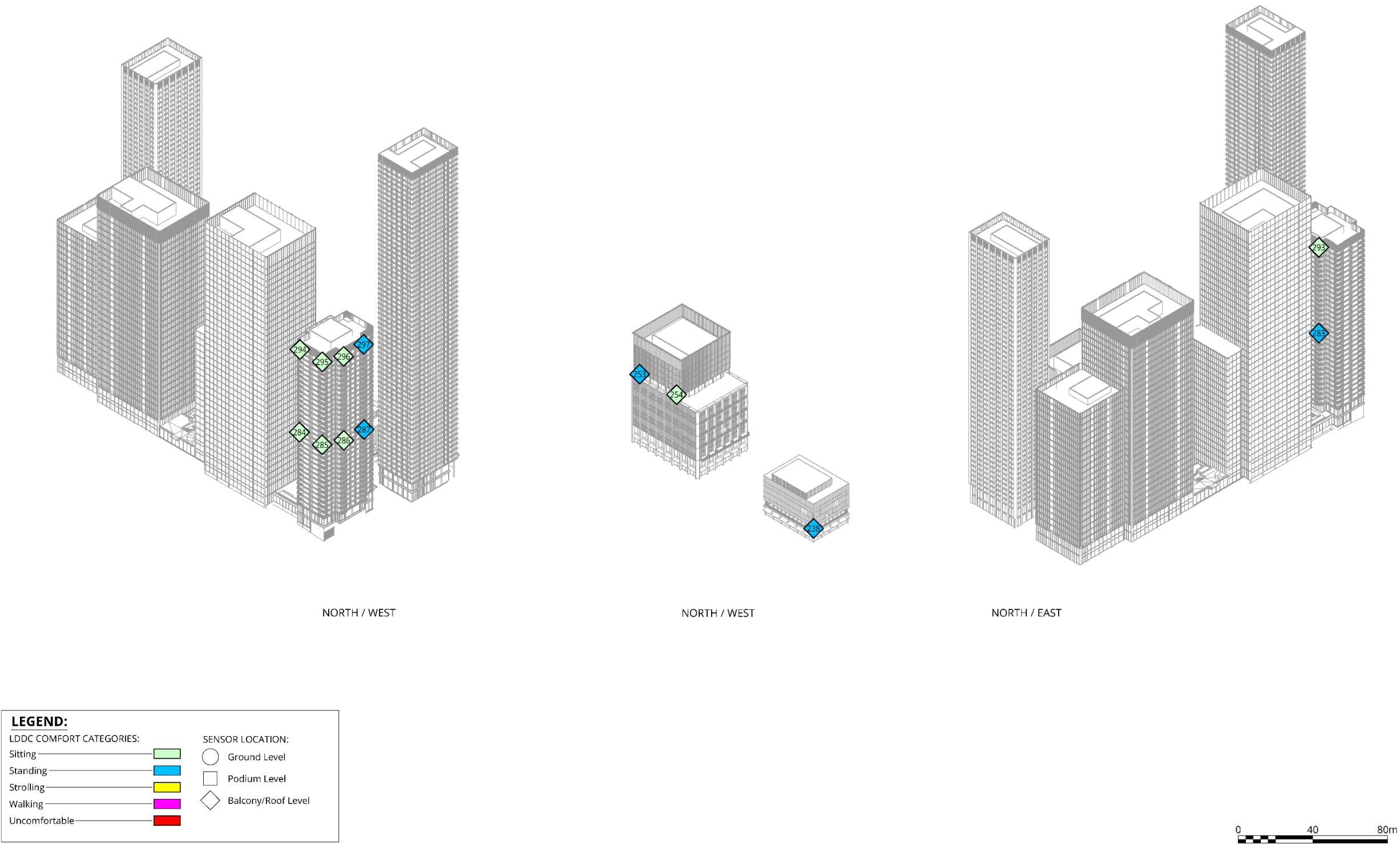


Figure 12.26 Configuration 4: Safety Exceedances around the Ground Level of the Indicative Scheme Model of the Proposed Development with Existing Surrounding Buildings, the Indicative Landscaping Scheme, and Wind Mitigation Measures – Ground Level

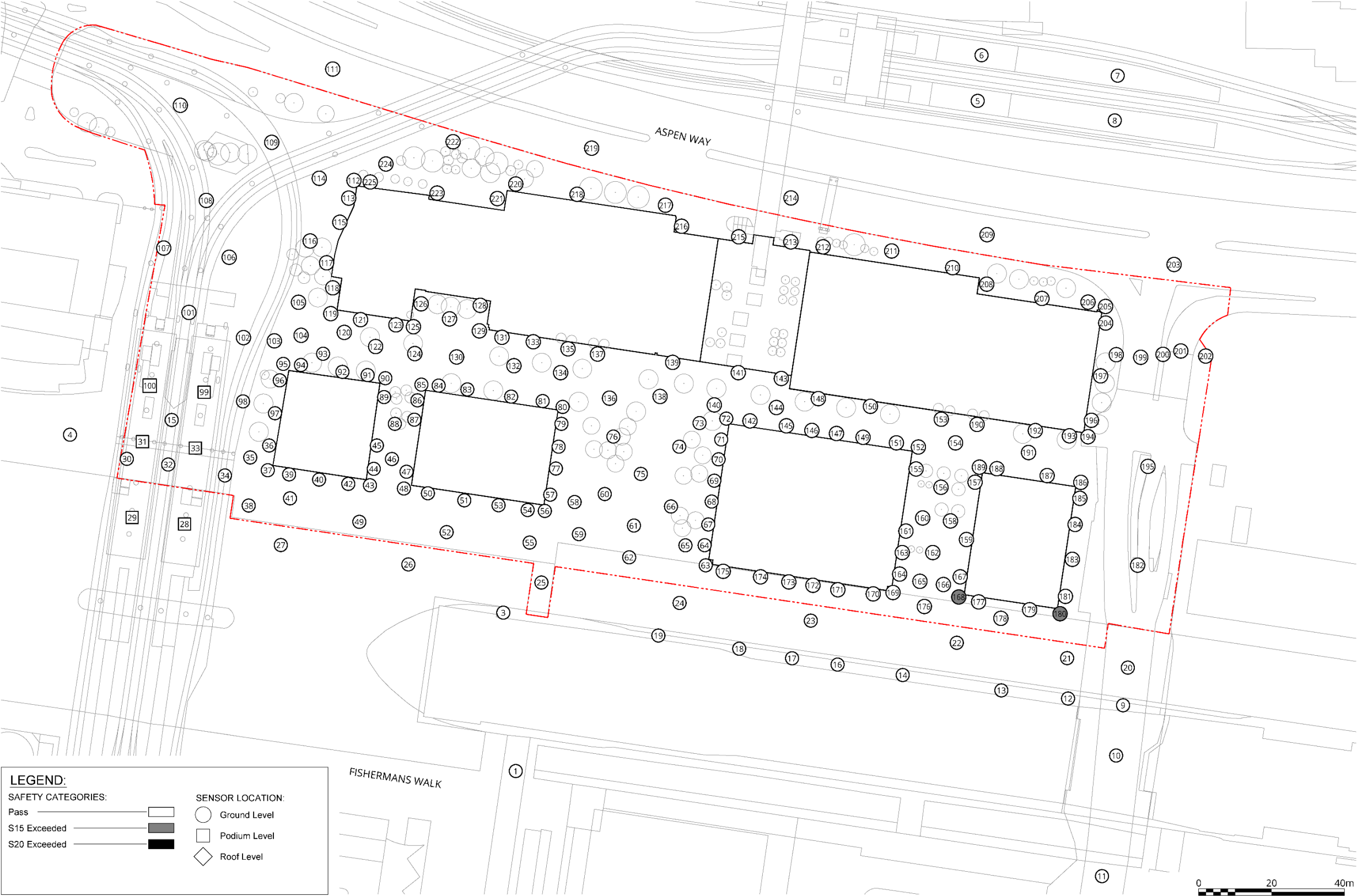


Figure 12.27 Configuration 4: Safety Exceedances around the Ground Level of the Indicative Scheme Model of the Proposed Development with Existing Surrounding Buildings, the Indicative Landscaping Scheme, and Wind Mitigation Measures – Isometric Views and Roof Level

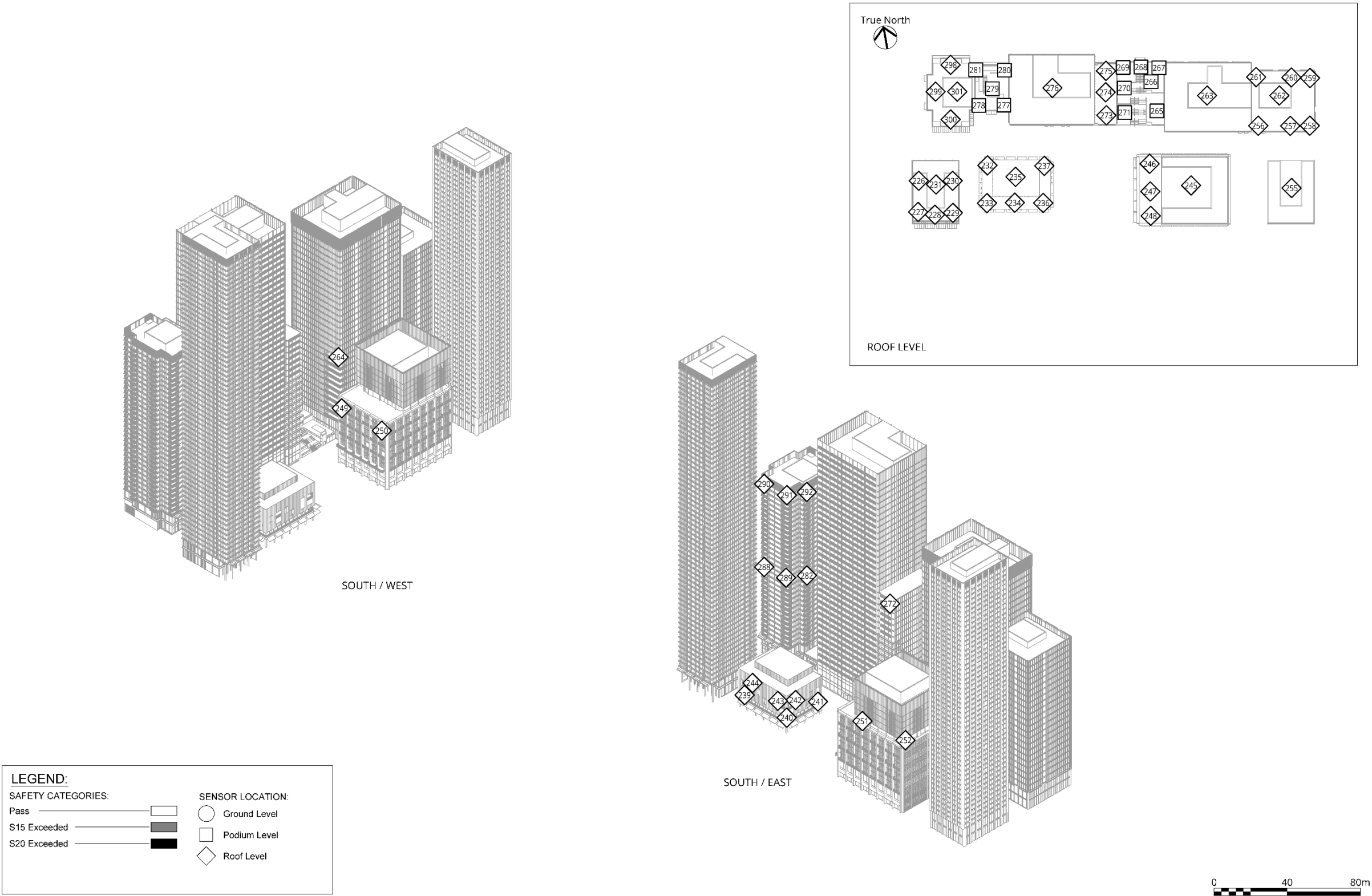
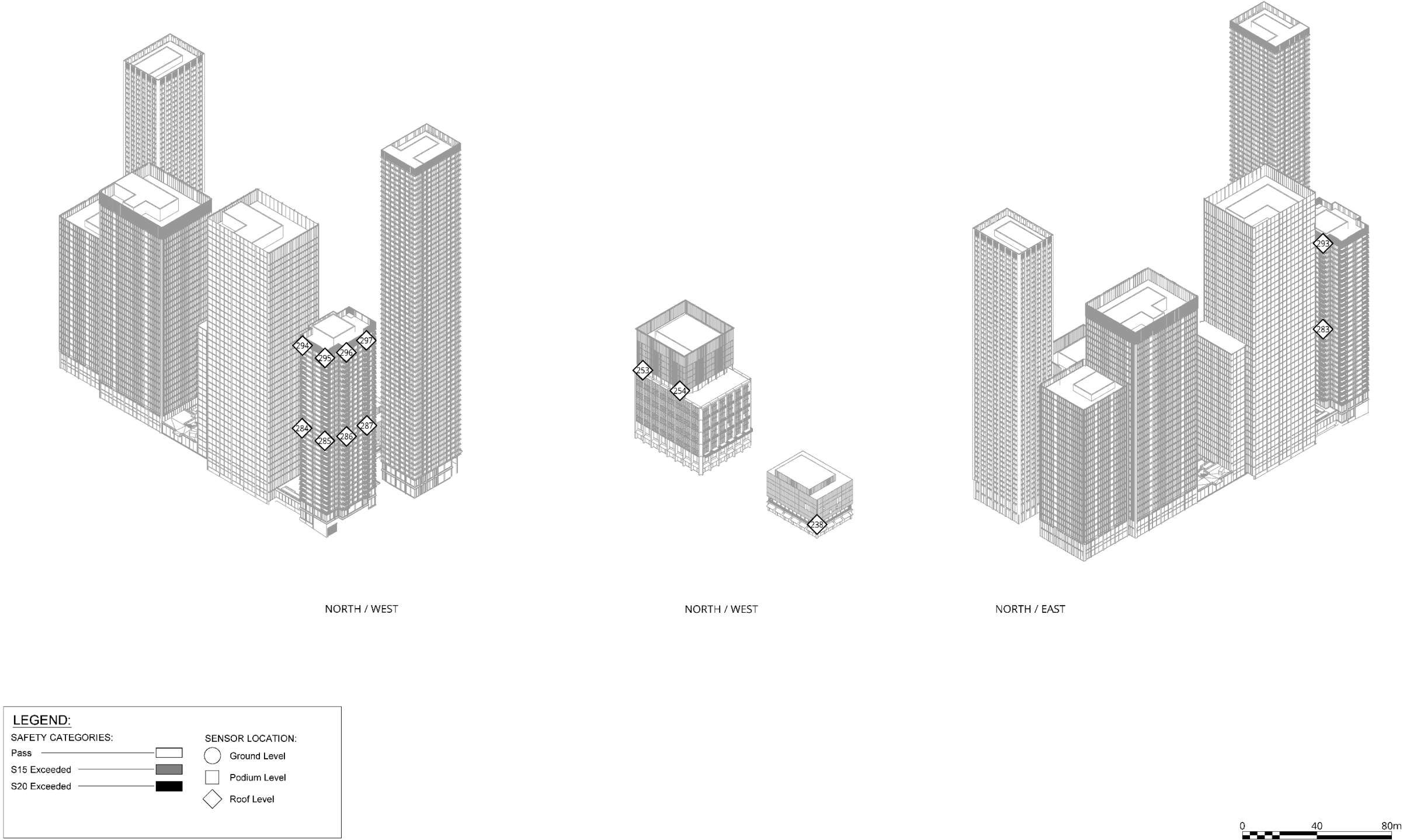


Figure 12.28 Configuration 4: Safety Exceedances around the Ground Level of the Indicative Scheme Model of the Proposed Development with Existing Surrounding Buildings, the Indicative Landscaping Scheme, and Wind Mitigation Measures – Isometric Views



Residual Effects

12.154 All residual effects resulting from the Indicative Scheme model with indicative wind mitigation measures of the Proposed Development are presented in Table 12.5. The table identifies whether the effect is significant or not. Only the receptors with significant residual effects have been identified with specific Receptor location numbers.

Table 12.5 Residual Effects of Configuration 4: The Indicative Scheme Model of the Proposed Development with Existing Surrounding Buildings, the Indicative Landscaping Scheme, and Wind Mitigation Measures

Receptor	Receptor Location	Description of the Residual Effect	Scale and Nature	Significant / Not Significant	Ge o	D I	P T	St Mt Lt
Configuration 4: The Indicative Scheme Model of the Proposed Development with Existing Surrounding Buildings, the Indicative Landscaping Scheme, and Wind Mitigation Measures								
On-site								
Roads (walking - windiest)	-	Strolling wind conditions	Minor Beneficial	Not Significant	L	D	P	Lt
	-	Standing wind conditions	Moderate Beneficial	Not Significant	L	D	P	Lt
	-	Sitting wind conditions	Major Beneficial	Not Significant	L	D	P	Lt
Thoroughfare s (strolling - windiest)	Receptor locations 168 and 180.	Exceedances of 15m/s pedestrian safety limit	Adverse	Significant	L	D	P	Lt
	-	Strolling wind conditions (windiest)	Negligible	Not Significant	L	D	P	Lt
Maintenance Areas (strolling - windiest)	-	Strolling wind conditions (windiest)	Negligible	Not Significant	L	D	P	Lt
	-	Standing wind conditions (windiest)	Minor Beneficial	Not Significant	L	D	P	Lt
Pedestrian Crossing Waiting Areas (standing – windiest)	-	Standing wind conditions (windiest)	Negligible	Not Significant	L	D	P	Lt
Ground Level Entrance (standing – windiest)	Receptor location 39, 161	Strolling wind conditions (windiest)	Negligible	Not Significant	L	D	P	Lt
	-	Standing wind conditions (windiest)	Negligible	Not Significant	L	D	P	Lt
	-	Sitting wind conditions (windiest)	Minor Beneficial	Not Significant	L	D	P	Lt
	-	Standing wind conditions	Negligible	Not Significant	L	D	P	Lt

Receptor	Receptor Location	Description of the Residual Effect	Scale and Nature	Significant / Not Significant	Ge o	D I	P T	St Mt Lt
Amenity Space Standing Areas (standing – summer)		(summer)						
	-	Sitting wind conditions (summer)	Minor Beneficial	Not Significant	L	D	P	Lt
Terrace Level Public Amenity Space (standing – summer)	Receptor Locations 231, 301 (not accessible)	Strolling wind conditions (summer)	Negligible	Not Significant	L	D	P	Lt
	-	Standing wind conditions (summer)	Negligible	Not Significant	L	D	P	Lt
	-	Sitting wind conditions (summer)	Minor Beneficial	Not Significant	L	D	P	Lt
Roof Level Public Amenity Space (standing - summer)	-	Standing wind conditions (summer)	Negligible	Not Significant	L	D	P	Lt
	-	Sitting wind conditions (summer)	Minor Beneficial	Not Significant	L	D	P	Lt
Balcony Level Private Amenity Space (standing – summer)	-	Standing wind conditions (summer)	Negligible	Not Significant	L	D	P	Lt
	-	Sitting wind conditions (summer)	Minor Beneficial	Not Significant	L	D	P	Lt
Ground Level Public Amenity Space Outdoor Seating Areas (sitting – summer)	-	Sitting wind conditions (summer)	Negligible	Not Significant	L	D	P	Lt
Off-site								
Roads (walking – windiest)	-	Strolling wind conditions	Negligible	Not Significant	L	D	P	Lt
	-	Standing wind conditions	Negligible	Not Significant	L	D	P	Lt
Thoroughfare s (strolling - windiest)	-	Standing wind conditions (windiest)	Negligible	Not Significant	L	D	P	Lt
Railway Station Platforms	Receptor locations 29, 31, and 100.	Strolling wind conditions (windiest)	Negligible	Not Significant	L	D	P	Lt

Receptor	Receptor Location	Description of the Residual Effect	Scale and Nature	Significant / Not Significant	Geo	D I	P T	St Mt Lt
(standing – windiest)	-	Standing wind conditions (windiest)	Negligible	Not Significant	L	D	P	Lt
Ground Level Entrance (standing – windiest)	-	Standing wind conditions (windiest)	Negligible	Not Significant	L	D	P	Lt
	-	Sitting wind conditions (windiest)	Negligible	Not Significant	L	D	P	Lt
Notes: Residual Effect Scale = Negligible / Minor / Moderate / Major Nature = Beneficial or Adverse Geo (Geographic Extent) = Local (L), Borough (B), Regional (R), National (N) D = Direct / I = Indirect P = Permanent / T = Temporary St = Short Term / Mt = Medium Term / Lt = Long Term N/A = not applicable / not assessed								

12.155 There are a number of further design and landscaping measures that can be applied to mitigate the remaining strong winds in locations 168 and 180, as described above in paragraphs 12.150-12.152. These measures will be explored and tested at the RMA stage in order to provide safe and comfortable wind conditions at these two remaining locations.

12.156 All residual effects resulting from the Maximum Parameter Model of the Proposed Development are presented in Table 12.6. The table identifies whether the effect would be considered to be significant or not. Only the receptor locations with significant residual effects have been identified with specific location numbers. As noted above at paragraph 12.4, mitigating the Maximum Parameter Model scheme would not be reasonable and would result in unnecessarily large measures which could be unfeasible and unrealistic; also, importantly, the Maximum Parameter Model would never be built out as tested.

Table 12.6 Residual Effects of Configuration 2: The Maximum Parameter Model of the Proposed Development with Existing Surrounding Buildings.

Receptor (target condition)	Receptor Location	Description of the Residual Effect	Scale and Nature	Significant / Not Significant	Geo	D I	P T	St Mt Lt
Configuration 2: The Maximum Parameter Model of the Proposed Development with Existing Surrounding Buildings								
On-site								
Roads (walking - windiest)	-	Strolling wind conditions (windiest)	Minor Beneficial	Not Significant	L	D	P	Lt
	-	Standing wind conditions (windiest)	Moderate Beneficial	Not Significant	L	D	P	Lt
Thoroughfares	Receptor location 419.	Exceedance s of 15m/s safety limit	Adverse	Significant	L	D	P	Lt

Receptor (target condition)	Receptor Location	Description of the Residual Effect	Scale and Nature	Significant / Not Significant	Geo	D I	P T	St Mt Lt
(strolling - windiest)	-	Strolling wind conditions (windiest)	Negligible	Not Significant	L	D	P	Lt
	-	Standing wind conditions (windiest)	Minor Beneficial	Not Significant	L	D	P	Lt
Railway Station Platforms (standing - windiest)	-	Standing wind conditions (windiest)	Negligible	Not Significant	L	D	P	Lt
	-	Sitting wind conditions (windiest)	Minor Beneficial	Not Significant	L	D	P	Lt
Pedestrian Crossing Waiting Areas (standing - windiest)	-	Standing wind conditions (windiest)	Negligible	Not Significant	L	D	P	Lt
Ground Level Entrances (standing – windiest)	Receptor locations 320, 382, 383, 407, 414, and 425.	Exceedance s of 15m/s safety limit	-	Significant	L	D	P	Lt
	Receptor locations 383, 407, 414, and 425.	Walking wind conditions (windiest)	Moderate Adverse	Significant	L	D	P	Lt
	Receptor locations 320, 338, 339, 340, 346, 352, 356, 359, 365, 366, 381, 382, 400, and 401.	Strolling wind conditions (windiest)	Minor Adverse	Significant	L	D	P	Lt
	-	Standing wind conditions (windiest)	Negligible	Not Significant	L	D	P	Lt
	-	Sitting wind conditions (windiest)	Minor Beneficial	Not Significant	L	D	P	Lt
Ground Level Public Amenity Spaces (standing – summer)	Receptor location 410.	Exceedance s of 15m/s safety limit	-	Significant	L	D	P	Lt
	Receptor location 410.	Strolling wind conditions (summer)	Minor Adverse	Significant	L	D	P	Lt
	-	Standing wind conditions	Negligible	Not Significant	L	D	P	Lt

Receptor (target condition)	Receptor Location	Description of the Residual Effect	Scale and Nature	Significant / Not Significant	Geo	D I	P T	St Mt Lt
		(summer)						
	-	Sitting wind conditions (summer)	Minor Beneficial	Not Significant	L	D	P	Lt
Terrace Level Public Amenity Spaces (standing – summer)	Receptor locations 431, 432, and 433.	Exceedance s of 15m/s safety limit	-	Significant	L	D	P	Lt
	Receptor locations 432 and 433.	Walking wind conditions (summer)	Moderate Adverse	Significant	L	D	P	Lt
	Receptor location 431.	Strolling wind conditions (summer)	Minor Adverse	Significant	L	D	P	Lt
	-	Standing wind conditions (summer)	Negligible	Not Significant	L	D	P	Lt
Roof Level Public Amenity Spaces (standing – summer)	Receptor location 439.	Exceedance s of 20m/s safety limit	-	Significant	L	D	P	Lt
	Receptor locations 426 434, 438, and 439.	Exceedance s of 15m/s safety limit	-	Significant	L	D	P	Lt
	Receptor locations 426 and 439.	Walking wind conditions (summer)	Moderate Adverse	Significant	L	D	P	Lt
	Receptor locations 430, 434, 436, 437, and 438.	Strolling wind conditions (summer)	Minor Adverse	Significant	L	D	P	Lt
	-	Standing wind conditions (summer)	Negligible	Not Significant	L	D	P	Lt
Off-site								
Roads (walking - windiest)	Receptor location 386.	Exceedance s of 15m/s safety limit	-	Significant	L	D	P	Lt
	-	Strolling wind conditions (windiest)	Negligible	Not Significant	L	D	P	Lt
	-	Standing wind conditions (windiest)	Negligible	Not Significant	L	D	P	Lt

Receptor (target condition)	Receptor Location	Description of the Residual Effect	Scale and Nature	Significant / Not Significant	Geo	D I	P T	St Mt Lt
Thoroughfares (strolling – windiest)	-	Standing wind conditions (windiest)	Negligible	Not Significant	L	D	P	Lt
Railway Station Platforms (standing - windiest)	Receptor location 424.	Strolling wind conditions (windiest)	Negligible	Not Significant	L	D	P	Lt
	-	Standing wind conditions (windiest)	Negligible	Not Significant	L	D	P	Lt
	Receptor locations 312, 314.	Standing wind conditions (windiest)	Minor Beneficial	Not Significant	L	D	P	Lt
	Receptor location 14.	Exceedance s of 15m/s safety limit	-	Significant	L	D	P	Lt
Ground Level Entrances (standing – windiest)	Receptor location 14.	Walking wind conditions (windiest)	Moderate Adverse	Significant	L	D	P	Lt
	Receptor locations 9, 13, 16, 17, and 18.	Strolling wind conditions (windiest)	Minor Adverse	Significant	L	D	P	Lt
	-	Standing wind conditions (windiest)	Negligible	Not Significant	L	D	P	Lt
Notes: Residual Effect Scale = Negligible / Minor / Moderate / Major Nature = Beneficial or Adverse Geo (Geographic Extent) = Local (L), Borough (B), Regional (R), National (N) D = Direct / I = Indirect P = Permanent / T = Temporary St = Short Term / Mt = Medium Term / Lt = Long Term N/A = not applicable / not assessed								

CLIMATE CHANGE

12.157 The UK Climate Projections (UKCP18) published by the Met Office presents several different predicted scenarios. The 'Climate Projects Report' published by UKCP18 presents the probable changes in wind speed for 2070 – 2099 (timeframe considered most relevant for urban regeneration projects) in both the summer and winter seasons. With these predictions, the current trends in climate change are not likely to have any significant effects or material changes on the predicted wind microclimate conditions in and around the Proposed Development. It is therefore not necessary to provide a quantitative analysis of the increase in storm frequency or changes in mean wind speed and its implication on the effect on the Wind Microclimate for the Proposed Development.

ASSESSMENT OF THE FUTURE ENVIRONMENT

Evolution of the Baseline Scenario

- 12.158** No cumulative schemes were located within the 360m radius covered by the wind tunnel model. As a result, the wind tunnel testing did not include configurations to assess the impact of the introduction of future surrounds. Additionally, it is not expected that any cumulative schemes outside this range will have an effect on wind conditions on-site. As such, the baseline has not been considered to have an evolution in this assessment.
- 12.159** It has been noted that there is a potential future development that would fall within the 360m radius of the wind tunnel model. The potential future development is referred to as “New City College Poplar Campus” and currently only has an EIA Scoping Report submitted (PA/20/00137). The potential future development would be positioned north of the Site on the northern side of Poplar Railway Station. Given the current status and lack of available detail of this potential future development, it has not been included within this assessment. However, the potential impact of the introduction of the “New City College Poplar Campus” has been qualitatively assessed in this section. Considering the meteorological data used in this analysis, and the relatively weak and low frequency northerly winds, it is expected that the introduction of the potential future development would not have a significant impact on the wind microclimate around the Site of the Proposed Development.

Cumulative Effects Assessment

- 12.160** A cumulative effects assessment has not been undertaken as a part of this overall assessment as there were no approved cumulative schemes within the 360m radius of the wind tunnel model. However, the potential impact of a potential future development, referred to as “New City College Poplar Campus” has been qualitatively assessed in the “Evolution of the Baseline Scenario” section.

LIKELY SIGNIFICANT EFFECTS

- 12.161** The likely significant effects of Configuration 4 (Indicative Scheme, landscaping and mitigation measures) are presented below as this provides a scenario representative of the likely wind microclimate of a scheme that could come forward at the site under the OPA and feasible mitigation options. While the Maximum Parameter Model scheme would not be representative of a scheme which could be developed and no landscaping has been proposed, the residual effects (including significant effects) of the Maximum Parameter Model are presented in Table 12.6.

Configuration 4: The Indicative Scheme Model of the Proposed Development with Existing Surrounding Buildings, the Indicative Landscaping Scheme, and Wind Mitigation Measures

- 12.162** Configuration 4 tested a conceptual mitigation strategy to demonstrate that wind conditions at and surrounding the Proposed Development can be improved; the wind mitigation strategy will be developed in detail and refined during the RMA stages of the Proposed Development. Receptor locations 168 and 180 (thoroughfares) at the southern corners of NQ.D4 experience Adverse (Significant) wind conditions. However, additional potential wind mitigation measures have been described in paragraphs 12.150 – 12.152 which would likely provide beneficial shelter at measurement locations and reduce any adverse effects. These

locations should be assessed at the reserved matters stage with additional wind mitigation measures at these locations if required following detailed design.

INDICATIVE SCHEME COMPARISON

- 12.163** Wind conditions in Configuration 3 (The Indicative Scheme Design Model of the Proposed Development with Existing Surrounding Buildings and the Indicative Landscaping Scheme) would be significantly calmer than those of Configuration 2 (The Maximum Parameter Model of the Proposed Development with Existing Surrounding Buildings) especially in the immediate surrounding of the Site to the west and north-east.
- 12.164** Calmer wind conditions would also occur at the upper level amenity spaces in Configuration 3, and fewer instances of strong winds exceeding the safety threshold would occur in this configuration compared to Configuration 2.