

Figure 11.37 Results for Configuration 4a: Amended Proposed Development With Landscaping (Worst-Case)

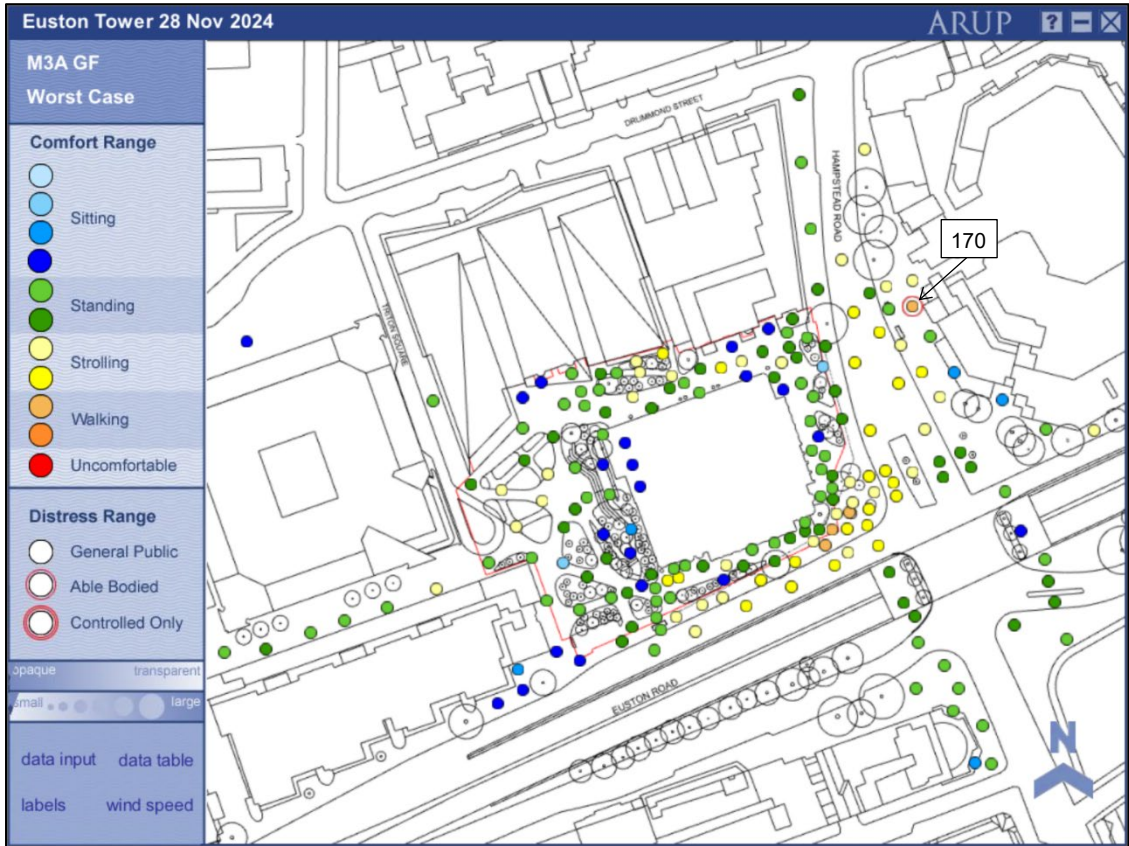


Figure 11.38 Results for Configuration 4a: Amended Proposed Development With Landscaping (Summer)

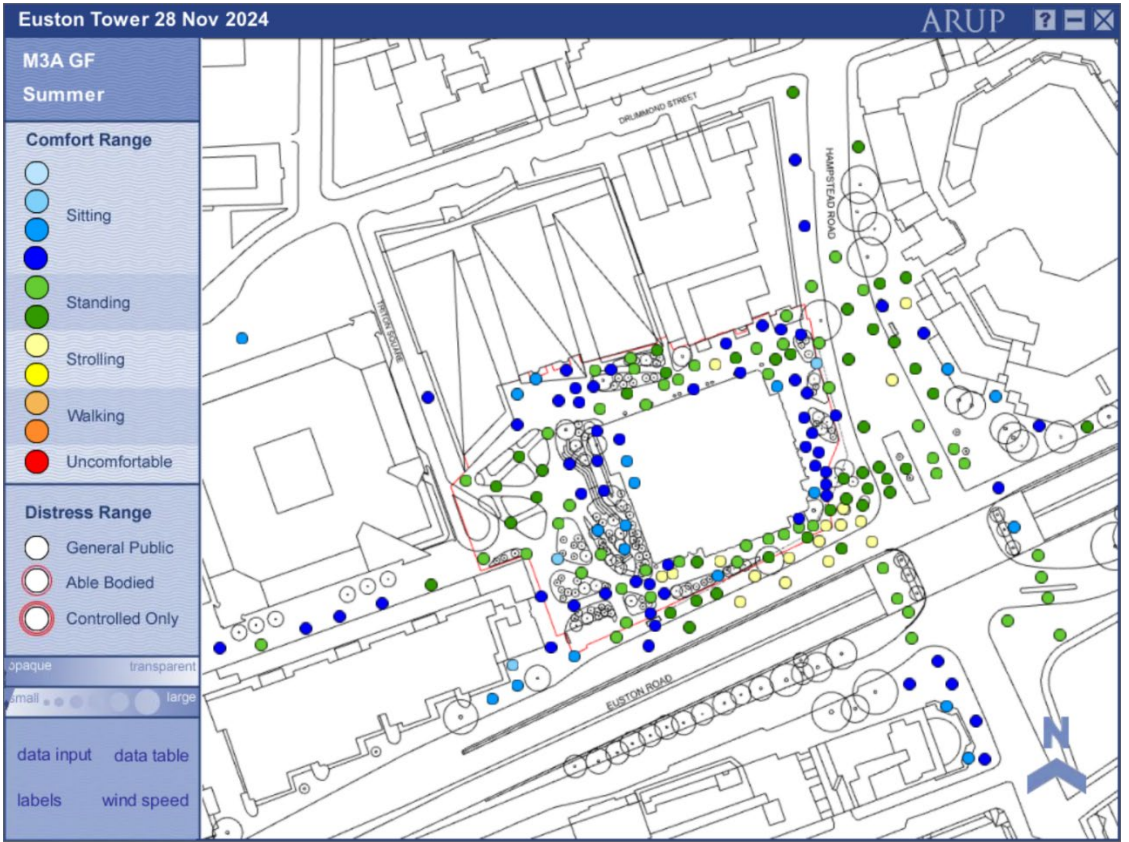


Figure 11.39 Results for Configuration 4a: Amended Proposed Development With Landscaping (Summer)

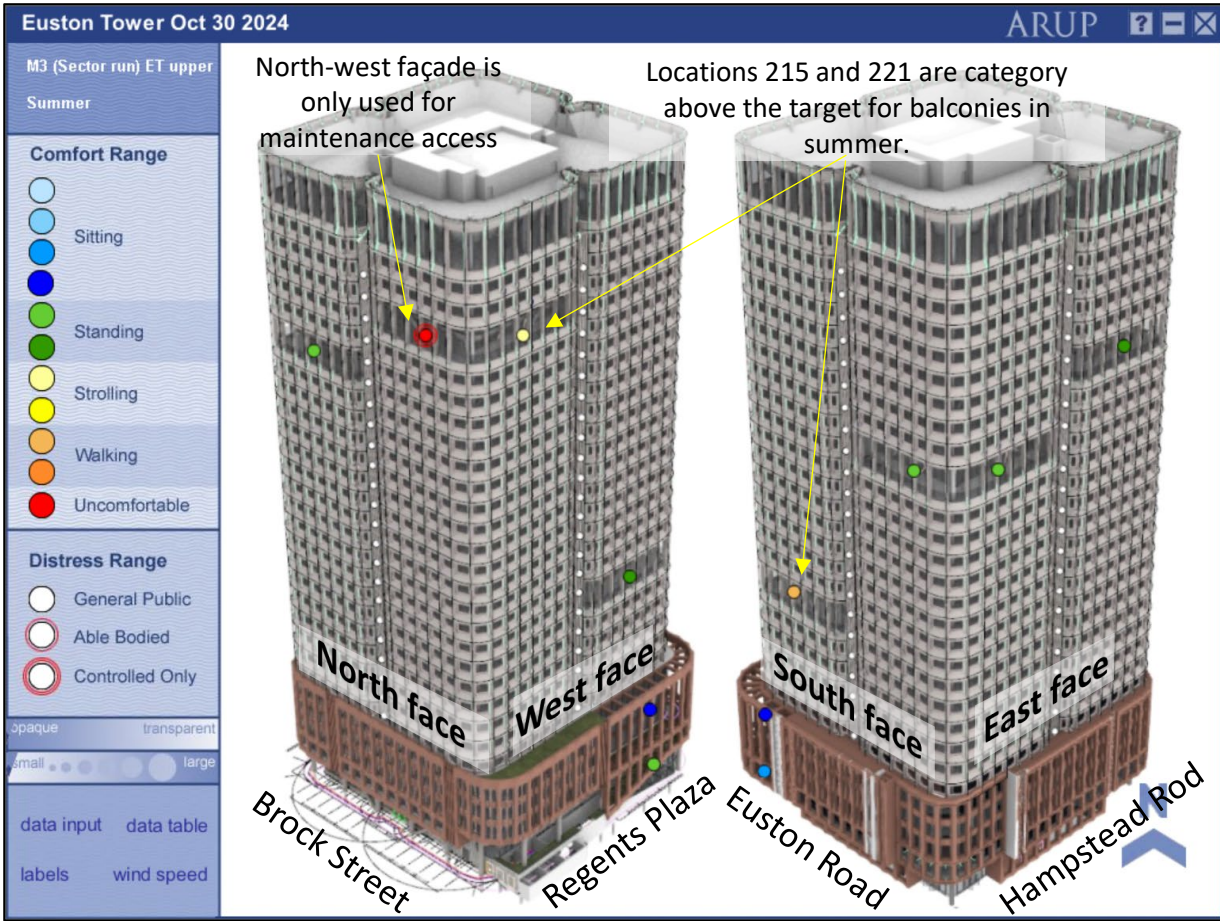
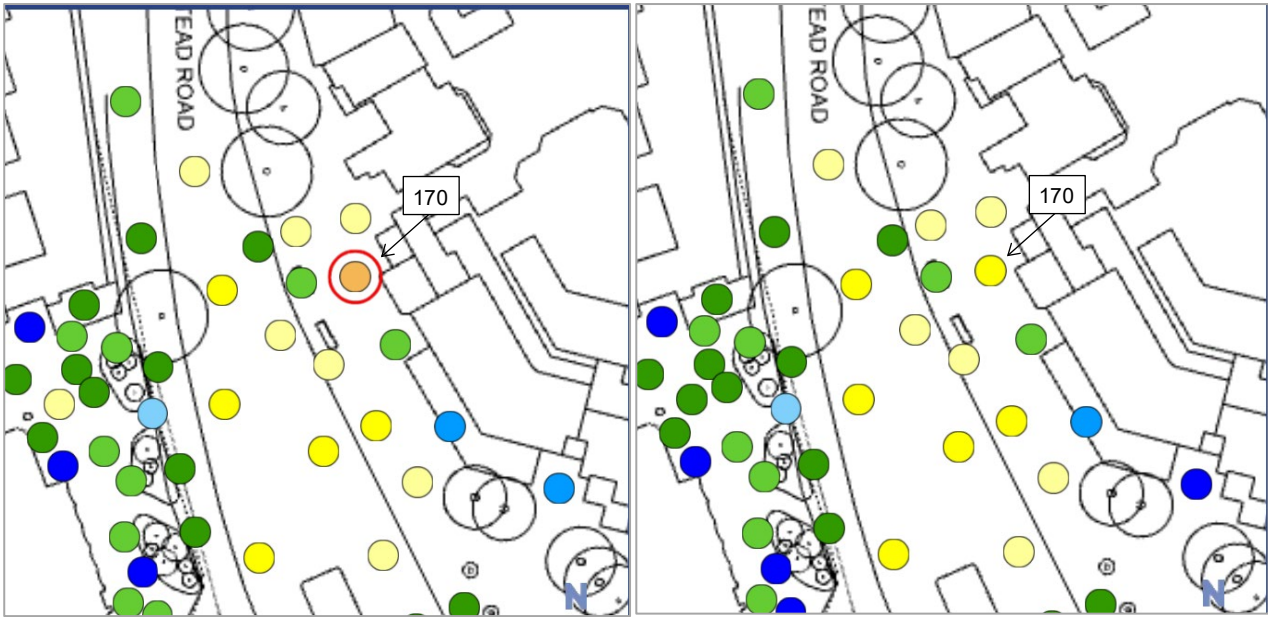


Figure 11.40 Plots Showing the Worst-Case Results Around the Amended Proposed Development Before the Measurement Probe at 170 was Swapped (Left) and After (Right).



On-Site Receptors

11.127 Please refer to Figure 11.35 for the receptors numbers and locations discussed in this section.

Permanent Outdoor Café and Long-Term Sitting Spaces

11.128 There are no proposed permanent café spaces or long-term seating areas on-site. Areas of temporary seating for good weather (for example outside the podium) are covered under 'Outdoor Recreational Spaces and Bus Stops'.

Main Entrances – Probes 51, 56, 58, 59, 66, 68, 189-191, 207, 209, 211, 212

11.129 All on-site entrance locations record acceptable 'Sitting' to 'Standing' conditions all year round, representing a direct, permanent, long-term Negligible (not significant) effect.

Outdoor Recreational Spaces and Bus Stops – Probes 53, 55, 57, 90-94, 96, 99, 124, 140, 141, 147, 152, 154-156, 158, 163, 168, 174, 175, 178-181, 186, 192, 195

11.130 No bus stops are located on-site.

11.131 All on-site recreational locations record acceptable 'Sitting' to 'Strolling' in winter and 'Sitting' to 'Standing' conditions in the summer. This represents a direct, permanent, long-term Negligible (not significant) effect.

Areas for General Public Access and Cycling – Probes 46-47, 49-50, 52, 67, 70-72, 74, 77, 87, 100-102, 108-111, 121-122, 125-127, 129, 144, 148, 153, 157, 158, 164-165, 171-177, 182, 184-185, 187-188, 193-194, 197, 208, 210, 213

11.132 All on-site locations for general public access and cycling record acceptable 'Standing' conditions all year round. This represents a direct, permanent, long-term Negligible (not significant) effect.

Upper-Level Terraces – Probes 214-219, 221-225

11.133 Receptor 215 on the south-west corner records 'Business Walking' conditions in summer, and receptor 221 on the north-west corner records 'Strolling' conditions in summer. Conditions at both locations are above the limit for occasional outdoor spaces at upper levels, representing long-term Moderate Adverse (**significant**) effect.

11.134 All other receptors on the upper terraces record acceptable 'Sitting' to 'Standing' conditions in the summer. These represent a direct, permanent, long-term Negligible (not significant) effect.

Areas for Occasional or Maintenance Access – Probe 220

11.135 One balcony on the north-west face is reserved for maintenance access only (represented by probe 220). conditions on this balcony exceed the safety limit. Unacceptable conditions for such areas are described in Table 11.4 as 'Exceedance of 'Able-bodied Access' criterion in any area likely to be used in windy weather'.

11.136 It is anticipated that this space would only be accessed by building maintenance personnel on an infrequent basis, which is unlikely to correlate with extremely windy days. As such, measures to mitigate wind conditions at this location specifically are not considered to be necessary due to the restricted and sporadic nature where access is likely to be required. Nevertheless, it is noted that conditions at this location do improve with the addition of mitigation measures for a nearby location in Configurations 4b and 4c (see paragraphs 11.147 - 11.154 below) so should access be required during unfavourable wind conditions, measures to ensure the safety of personnel could be achieved as discussed later in this ES chapter.

Off-Site Receptors

Permanent Outdoor Café and Long-Term Sitting Spaces – Probe 107

11.137 The one identified off-site permanent seating location (north side of Regent's Place Plaza) records 'Sitting' conditions in summer and 'Standing' conditions in the worst-case. This represents a direct, permanent, long-term Negligible (not significant) effect.

Main Entrances – Probes 20, 28, 43, 48, 98, 103, 105

11.138 Probe 98 located at the Entrance to 2 Triton Square (to the west of the site), improves from the existing baseline (Configuration 1). Conditions in the worst-case improve from 'Strolling' to 'Standing' conditions, and from 'Standing' to 'Sitting' in summer. These conditions are now acceptable for entrances in all seasons. This represents a direct, permanent, long-term Moderate Beneficial (not significant) effect.

11.139 The previous probes 134 and 137 located at the of the entrances to 1 Triton Square were removed and renumbered from the testing of Configuration 1 (tested in 2019) to Configuration 3 (tested in 2024). Using professional judgment, the conditions across this area of the disc trace generally remains the same as in Configuration 1. Therefore, it is expected that conditions at location 134 (eastern entrance to 1 Triton Square) will continue to experience acceptable 'Standing' conditions for entrances all year round, and conditions at location 137 (southern entrance to 1 Triton Square) will continue to experience 'Strolling' conditions in all seasons. The conditions at these two locations continue to represent a direct, permanent, long-term Negligible (not significant) effect.

11.140 All other on-site entrance locations (probes 20, 28, 43, 48, 103, and 105) record acceptable 'Sitting' to 'Standing' conditions all year round and represents a direct, permanent, long-term Negligible (not significant) effect.

Outdoor Recreational Spaces and Bus Stops – Probes 25, 30, 183

11.141 Conditions at all three off-site bus stops (probe 25 located on the east side of Hampstead Road, probe 30, located on the west side of Hampstead Road and probe 183 located along the north side of Euston Road) recorded acceptable conditions in all seasons. These conditions represent a direct, permanent, long-term Negligible (not significant) effect.

Areas for General Public Access and Cycling – Probes 1-19, 21-24, 26-27, 29, 31-42, 44-45, 54, 75-76, 78-86, 88, 89, 95, 97, 104, 106, 112-120, 128, 130-133, 137-139, 142-143, 146, 149-152, 159, 166-167, 169-170, 195-196, 198-201

11.142 Probe 41 located in the middle of Hampstead Road to the east of the site, improves from Configuration 1 to 'Strolling' the worst-case. This represents a direct, permanent, long-term Major Beneficial (not significant) effect.

11.143 One location (probe 170) across Hampstead Road to the north-east of the site records conditions above the Lawson safety threshold for General Public Access. However, through the course of testing the measurement probe at this location was found to be faulty. Replacing the measurement probe and re-running the later tests, this receptor showed 'Strolling' conditions in the worst-case, which is in line with the surrounding receptors (see Figure 11.40). The results at probe 170 are therefore expected to align with the updated probe readings and represents a direct, permanent, long-term Negligible (not significant) effect.

11.144 These conditions represent a general beneficial trend in off-site wind conditions within the Hampstead Road area. In the baseline (Configuration 1), two locations (probes 41 and 25) record conditions above the safety threshold for general public access in winter (15.5 m/s at probe 41 and 16.6 m/s at probe 25). Location 42 also records conditions on the boarder of the safety threshold in the baseline for winter (14.99 m/s). This shows a

trend in the baseline (Configuration 1) for uncomfortable and potentially unsafe conditions in the Hampstead Road area that is improved with the presence of the Amended Proposed Development (Configuration 4).

- 11.145** All other off-site locations for general public access and cycling record acceptable conditions all year round. This represents a direct, permanent, long-term Negligible (not significant) effect.

Areas for Occasional or Maintenance Access

- 11.146** No obvious areas of occasional access or maintenance were found in the existing surroundings. Therefore, this is a direct, permanent, long-term Negligible (not significant) effect.

MITIGATION, MONITORING AND RESIDUAL EFFECTS

Upper-Level Terraces

- 11.147** Within Configuration 4a, two terraces on the Amended Proposed Development experience wind conditions that exceed the thresholds for the intended uses (south-west terrace Level 11 and north-west terrace Level 26). All private balcony spaces are intended to be used occasionally (either for maintenance or leisure) and users can choose when to use them based on a combination of several factors (including daylight, sunlight, temperature, humidity, precipitation, noise, etc.). The windy conditions above the threshold are not constant and users will be able to use the balconies at times when winds are weaker within the natural ebb and flow of the wind climate.
- 11.148** Therefore, a type of temporary mitigation was developed with the team that could be deployed on days when wind conditions are expected to exceed the comfort and/or safety thresholds and then packed away when calmer conditions are experienced across the terrace. The temporary mitigation is created by installing a single screen on the corner of each of the two affected balconies. Each screen spans the width of the balcony, as shown in Figure 11.41, and is 2m tall to match the balustrade. The screens can be folded way next to the façade or the balustrade itself.
- 11.149** Two porosities of mitigation were tested in the wind tunnel: 50% porous (Configuration 4b) and fully solid (Configuration 4c). The results of each porosity of mitigation tested is shown in Figure 11.42 and Figure 11.43.
- 11.150** Configurations 4b and 4c focus on the wind conditions on the terraces of the Amended Proposed Development only. The changes to the terrace conditions with the inclusion of the proposed mitigation measures do not impact wind conditions in any other areas.

Configuration 4b: Amended Proposed Development with Tower Balcony Mitigation (50% Porous Screens)

- 11.151** The results for the test with 50% porous screens on the office balconies is shown in Figure 11.42. With the 50% porous option, conditions at location 220 (north-west terrace on Level 26, intended for maintenance access only) improve to acceptable 'Business Walking' in summer and conditions at location 221 (north-west terrace on Level 26 intended for general access) improves to acceptable 'Standing' in summer. The improvement in conditions mean both locations can be used more frequently. Conditions at these two locations therefore represent a direct, permanent, long-term Negligible (not significant) effect.
- 11.152** However, conditions at location 215 (on the south-west corner level 11) remain above acceptable levels, recording 'Strolling' conditions in summer. This continues to represent a long-term Moderate Adverse (significant) effect.

Figure 11.41 Photos from the Wind Tunnel of the Tested Balcony Mitigation (Solid Corner Screen)

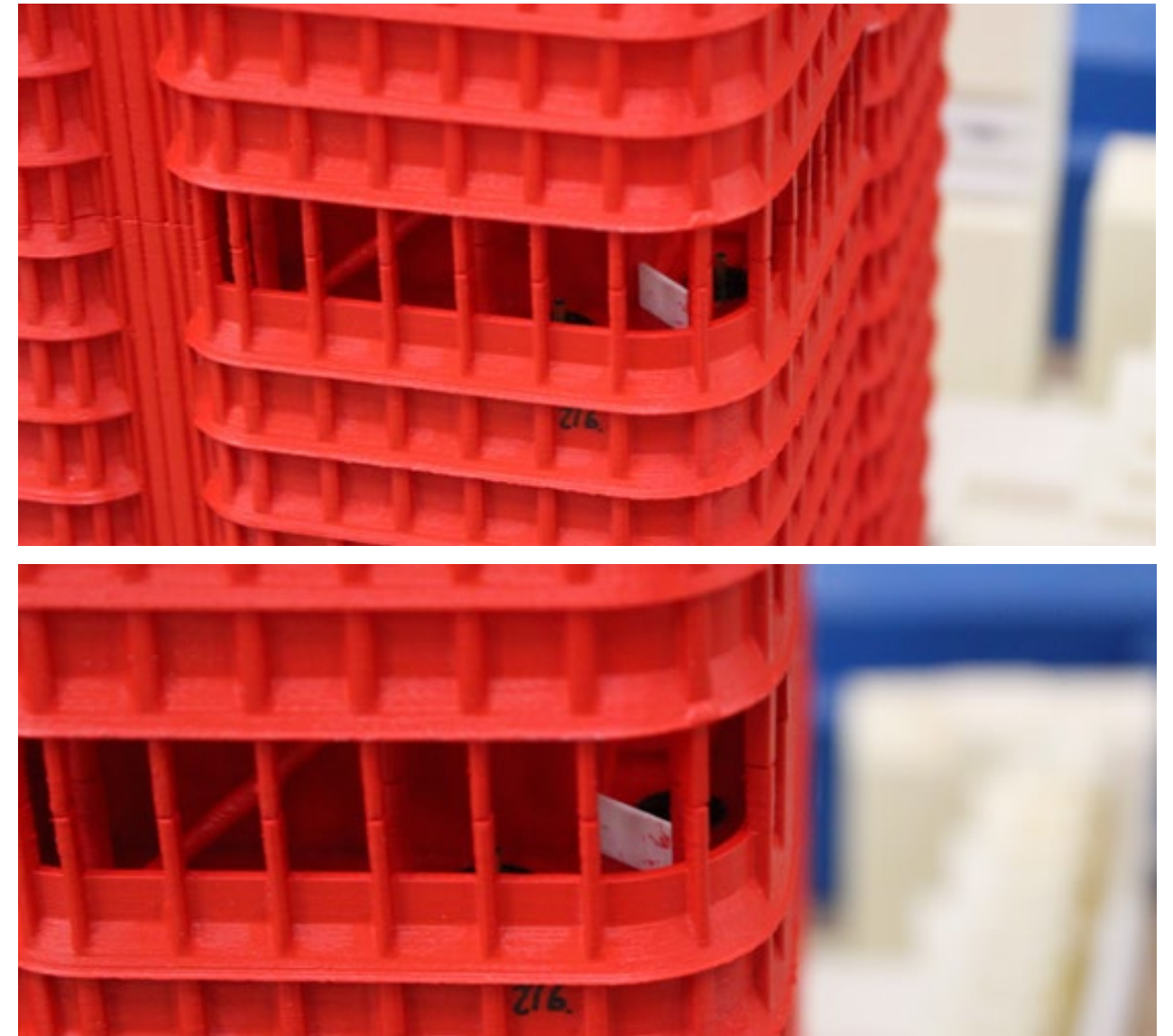
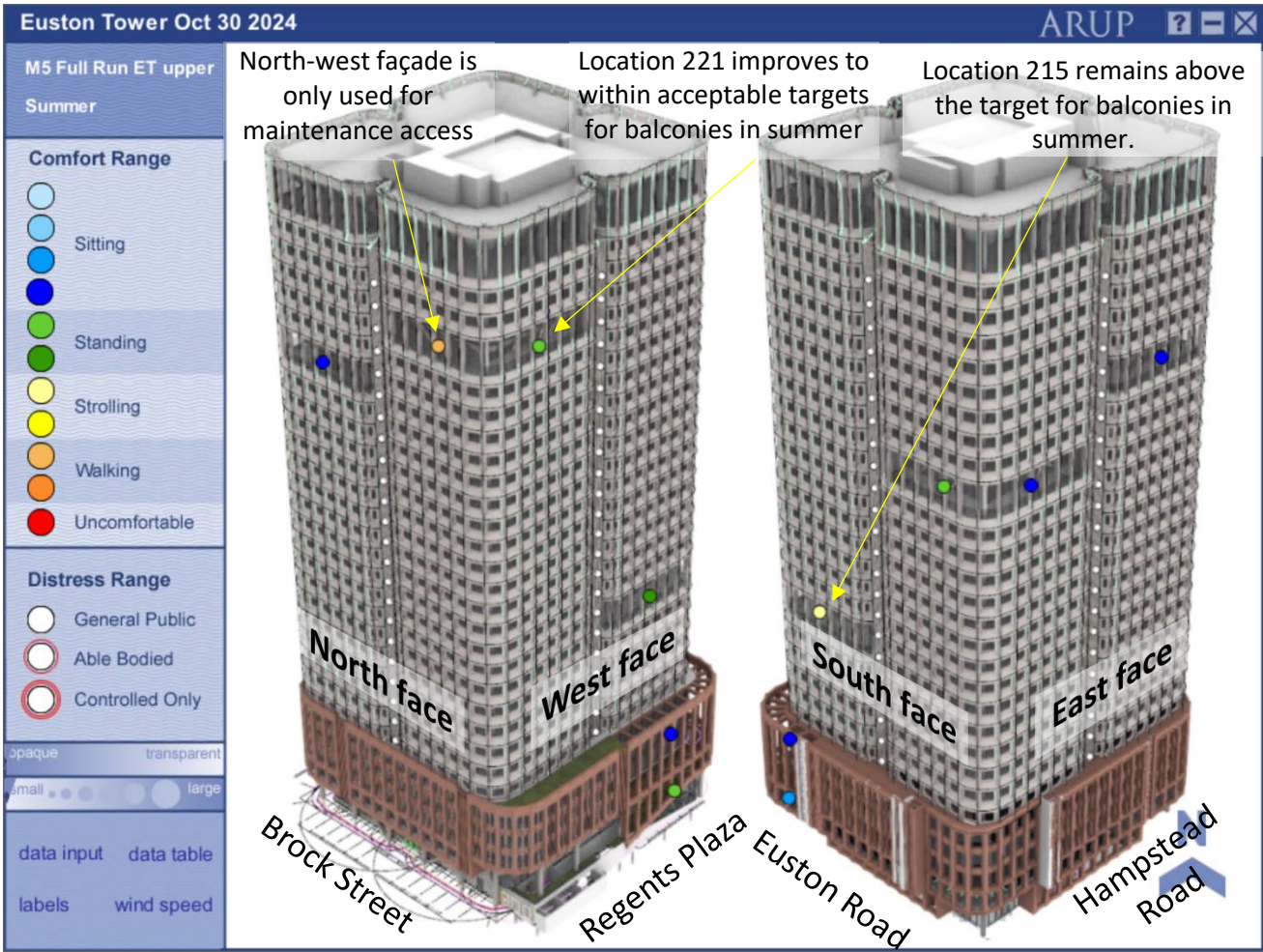


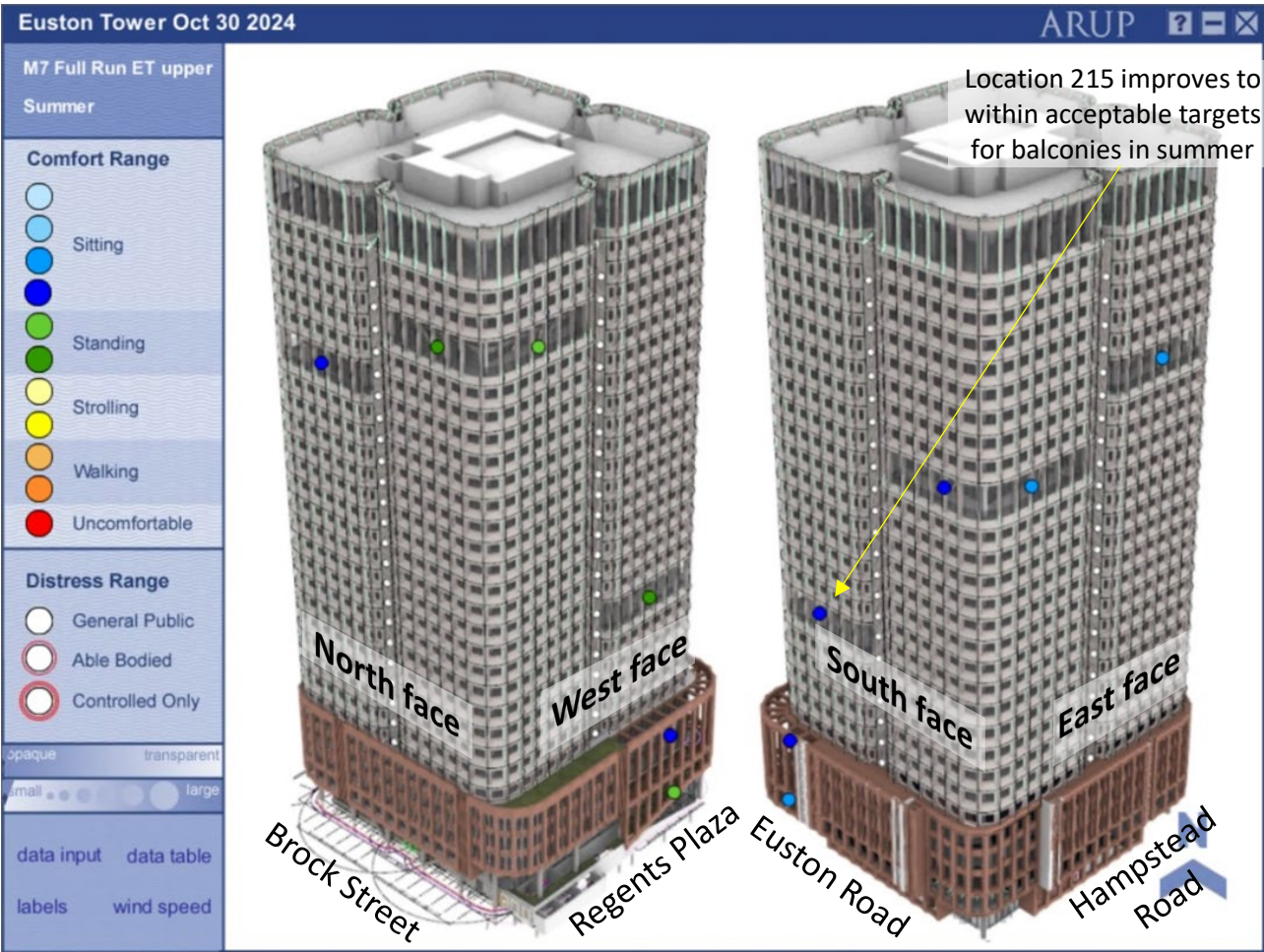
Figure 11.42 Amended Proposed Development with 50% Porous Mitigation on all Terraces (Summer)



Configuration 4c: Amended Proposed Development with Tower Balcony Mitigation (Solid Screens)

- 11.153 Solid screens were also tested in the same locations as the screens in Configuration 4b, and the results are shown in Figure 11.43. With the solid screens in place, conditions on all terraces achieve acceptable ‘Sitting’ to ‘Standing’ conditions in summer representing a direct, permanent, long-term Negligible (not significant) effect.
- 11.154 The two mitigation tests (Configuration 4b and 4c) show that a temporary porous screen is required on the north-west balcony at location 221 (north-west terrace on Level 26 intended for general access), while a more solid screen is required on the south-west balcony location 215 (on the south-west corner on Level 11, intended for general access). No screens are needed to control wind levels on the other tower balconies or within the podium. It is noted that other balcony locations (e.g. location 220) also improve with the inclusion of the mitigation although as these are not publicly accessible spaces do not require mitigation. Nevertheless, following the implementation of the above measures, conditions at this location are anticipated to be Negligible (not significant).

Figure 11.43 Amended Proposed Development with Solid Mitigation on all Terraces (Summer)



Residual Effects

11.155 All of the residual effects resulting from the Amended Proposed Development are presented in Table 11.11 identifying whether the effect is significant or not.

Table 11.11 Residual Effects

Receptor	Description of the Residual Effect	Scale and Nature	Significant / Not Significant	Geo	D	I	P	T	St Mt Lt
Completed Development									
On-site Receptors									
Receptors at outdoor café and long-term sitting spaces	No proposed permanent café spaces or long-term seating areas on-site	Negligible	Not Significant	L	D		P		Lt
Receptors at main entrances	Changes to the local wind conditions and change in use to new main entrances, especially at entrances within the underpass to the north of the site.	Negligible	Not Significant	L	D		P		Lt
		Moderate Beneficial (Probe 98)	Not Significant	L	D		P		Lt
Receptors in outdoor recreational spaces	Changes to the local wind conditions and change in use to new flexible space	Negligible	Not Significant	L	D		P		Lt

LIKELY SIGNIFICANT EFFECTS

11.159 With the proposed landscaping and mitigation measures in place (Configuration 4a at ground level, and 4c at terrace level), there are no significant effects and therefore wind conditions at the site are considered suitable for their intended uses.

Receptor	Description of the Residual Effect	Scale and Nature	Significant / Not Significant	Geo	D I	P T	St Mt Lt
Receptors at general public access and cycling	Changes to the local wind conditions and change in use of some space from not accessible to thoroughfare	Negligible	Not Significant	L	D	P	Lt
Receptors at occasional or maintenance access	Changes to the local wind conditions	Negligible	Not Significant	L	D	P	Lt
Receptors at on-site balconies	Change in use of space from not accessible to accessible balcony	Negligible	Not Significant	L	D	P	Lt
Receptors at occasional or maintenance access	Change in use of space from not accessible to accessible maintenance	Negligible	Not Significant	L	D	P	Lt
Off-site Receptors							
Receptors at outdoor café and long-term sitting spaces	Changes to the local wind conditions around the permanent café spaces or long-term seating areas off-site	Negligible	Not Significant	L	D	P	Lt
Receptors at main entrances	Changes to the local wind conditions and change in use to new main entrances.	Negligible	Not Significant	L	D	P	Lt
Receptors in outdoor recreational spaces	Changes to the local wind conditions and change in use to new flexible space	Negligible	Not Significant	L	D	P	Lt
Receptors at general public access and cycling	Changes to the local wind conditions and change in use of some space from not accessible to thoroughfare	Major Beneficial (Probe 41)	Not Significant	L	D	P	Lt
		Negligible	Not Significant	L	D	P	Lt
Receptors at off-site balconies	No changes to the local wind conditions	Negligible	Not Significant	L	D	P	Lt
<i>Notes:</i> <i>Residual Effect Scale = Negligible / Minor / Moderate / Major</i> <i>Nature = Beneficial or Adverse</i> <i>Geo (Geographic Extent) = Local (L), Borough (B), Regional (R), National (N)</i> <i>D = Direct / I = Indirect P = Permanent / T = Temporary St = Short Term / Mt = Medium Term / Lt = Long Term</i> <i>N/A = not applicable / not assessed</i>							

ASSESSMENT OF THE FUTURE ENVIRONMENT

- 11.156 The only cumulative scheme within the assessment study area was the Network Building (95-100 Tottenham Court Road), 76- 80 Whitfield Street and 88 Whitfield Street, London, W1T 4TP. As this is currently under construction at the time of the assessment it was included in the existing surroundings in Configurations 2, 3a, 3b, 4a, 4b, and 4c.
- 11.157 The other schemes listed in **ES Addendum Volume 1, Chapter 1: introduction, Proposed Design Amendments and ES Addendum Approach**, have not been included in this assessment as they were either outside the study zone (more than the 360m radius from the site) or did not significantly change the massing of the surroundings (i.e. changes to internal uses).
- 11.158 Therefore, the results for Configurations 3 can be considered valid for the cumulative scenarios as well.