



Unlocking potential for a better built environment

WIND MICROCLIMATE ASSESSMENT REPORT

**Plots 4&5, Central Square, City
Centre, Cardiff**

August 2025

GIA No: **22935**

PROJECT DATA:

Client **REAP 3 Limited**
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1 INTRODUCTION

This report outlines the results of a wind microclimate analysis for the proposed development at Plots 4&5, Central Square, City Centre, Cardiff.

1.1 EXECUTIVE SUMMARY

Wind microclimate conditions for the proposed development at Plots 4&5, Central Square, City Centre, Cardiff were assessed using wind tunnel testing.

The proposed development will have a significant beneficial impact on pedestrian wind safety to the north of the site on Park Street.

No wind safety risks have been introduced in locations which are accessible to pedestrians or cyclists.

Wind comfort conditions will be suitable for the intended use or no worse than the baseline conditions for all general thoroughfares and roadways, bus stops, existing off-site building entrances, proposed and existing benches and the proposed roof terrace and balconies.

The majority of proposed entrances would be suitable as tested. The eastern entrance to the pavilion is proposed to be recessed to create a vestibule area to ensure that all entrance conditions are suitable.

The spill out seating to the east of the pavilion is proposed to have access to moveable temporary screens, which can be deployed on windier days to create calmer conditions for long-term sitting.

There are no significant adverse wind effects anticipated relating to the proposed development.

1.2 GUIDANCE

The assessment was performed using the London Docklands Development Corporation (LDDC) variant of the Lawson Comfort Criteria. The Lawson Criteria are well-established in the UK for quantifying wind conditions in relation to build developments and, although not a UK 'standard', the criteria are recognised by local authorities as a suitable benchmark for wind assessments. The Lawson Criteria have been adopted for this assessment.

City of Cardiff Council Tall Buildings Supplementary Planning Guidance 2021

The City of Cardiff Council Tall Buildings Supplementary Planning Guidance 2021 states that:

'The proposal must demonstrate evidence of an acceptable level of impact in terms of microclimatic effects including wind tunnel effect [...] impact on building entrances, pedestrian strolling, public spaces, and seating areas.

2 METHOD

To identify the likely effect of the proposed development on the pedestrian level wind environment, a wind tunnel model of the development and surrounding site was created. This section describes the methodology for the creation of this model and the inputs used.

2.1 ASSESSMENT METHODOLOGY

The assessment was performed using an atmospheric boundary layer wind tunnel.

The wind tunnel was run at 1/300 scale and measurements were taken using Irwin Probes to consider conditions on and around the site.

A full description of the test methodology is included in Appendix 01.

2.2 ESTABLISHING MICROCLIMATE CONDITIONS

Microclimate conditions were established using a 1/300 scale wind tunnel model, extending 400m radius from the Site.

A model of the development was included within the wind tunnel model and tested to determine the conditions at and around the Site. The model used is shown in Figure 1, Figure 2 and Figure 3

The model was run from 18 wind angles, spaced using 10° or 30° increments such that no sector contributes more than 10% of the annual wind. The wind angles which were run are indicated in Appendix 01.

On-site and local wind speeds were combined with wind statistics from 30 years of data recorded at Cardiff Airport, corrected for variations in terrain between the airport and the site, to obtain annual and seasonal frequency and magnitude of wind speeds across the model. This allows the 'grading' of the pedestrian level winds according to the Lawson Comfort Criteria, which are explained later in this report.

The mean correction factors between the site and the airport are shown in Table 1.

The wind microclimate effects are assessed annually, for the Windiest Season months (December, January and February) and for the summer months (June, July, August). Windiest Season conditions are reported as this is the season when the strongest winds are expected, summer conditions are reported as this is the season when pedestrian usage of outdoor spaces is expected to be highest.

Wind speeds were measured at 160 discrete locations, 1.5m above surfaces expected to be used for pedestrian activity.

2.3 LIMITATIONS AND ASSUMPTIONS

The accuracy of the results is dependent upon the accuracy of the CAD used to construct the model.

There is an inherent assumption that on-site wind speeds will scale linearly with the measured wind speeds at the airport.

There is an inherent assumption that the wind speed statistics for the past 30 years will remain applicable for the foreseeable future.

Table 01: Site Wind Correction Factors

DIRECTION (°N)	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°	330°
Corr. Factor	1.36	1.38	1.36	1.39	1.31	1.37	1.34	1.31	1.30	1.42	1.33	1.37



Fig. 01: 3D View of proposed Development

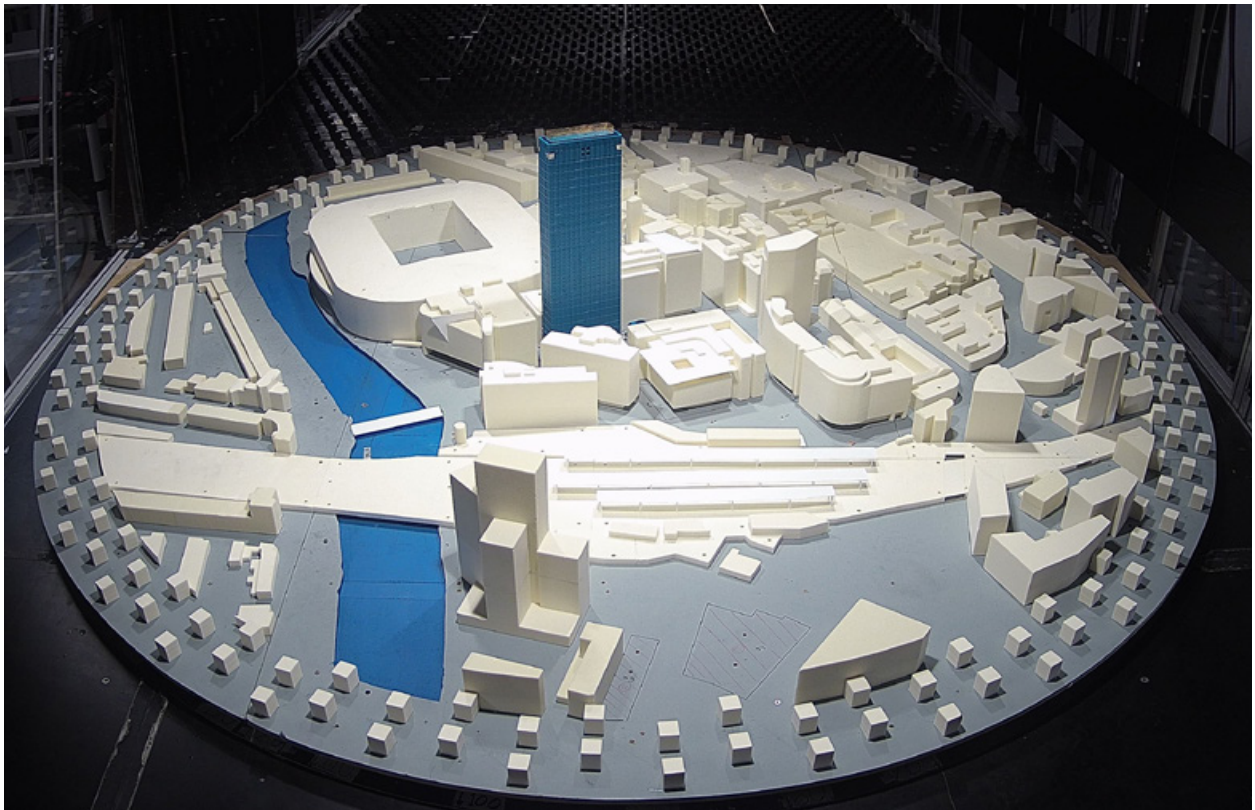


Fig. 02: Proposed Development with Existing Surrounds

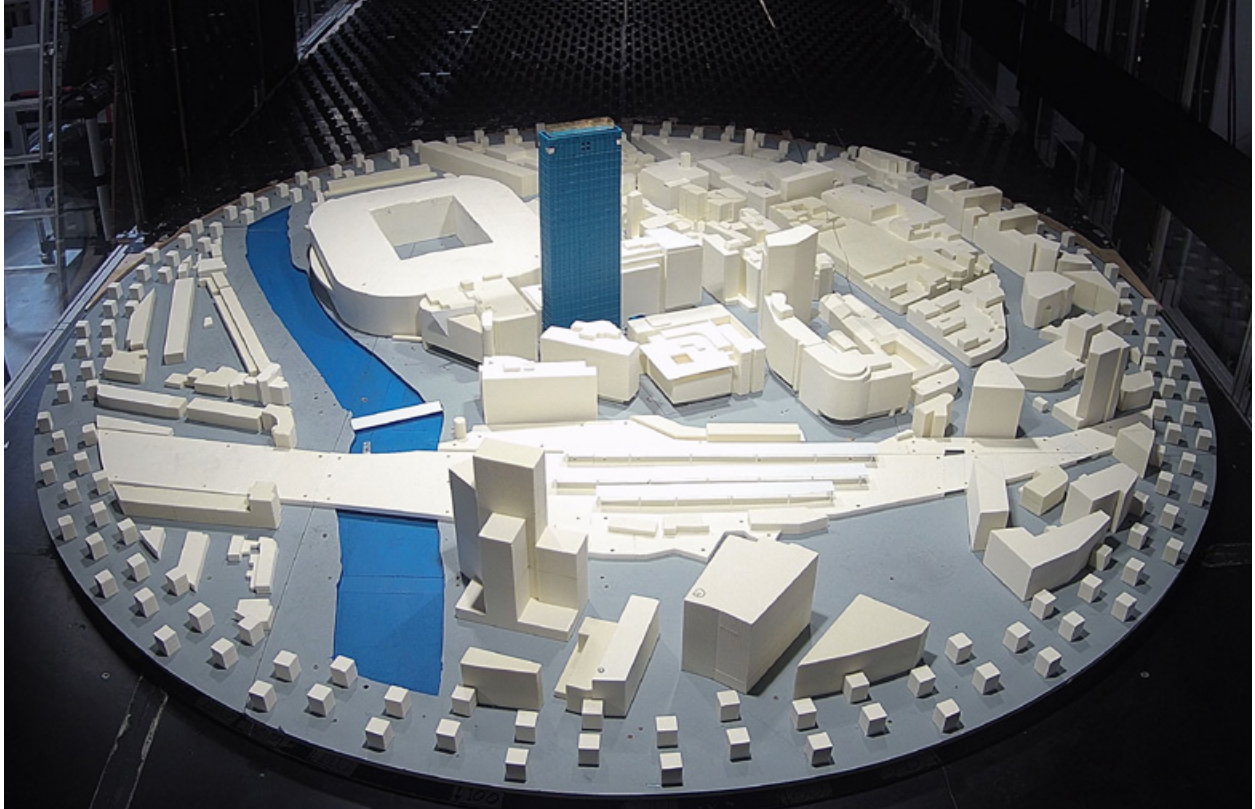


Fig. 03: Proposed Development with Cumulative Surrounds

2.4 LAWSON COMFORT AND SAFETY CRITERIA

The assessment was graded against the Lawson Comfort and Safety Criteria.

Table 2 and Table 3 show the banding of the various categories within the Lawson Comfort and Safety criteria.

Comfort categories are based on the level of wind speed exceedance for 5% of each season, and safety categories are based on the level of wind speed exceedance for 1.9 hours per year.

Table 02: Lawson Comfort Criteria (LDDC variant)

KEY	COMFORT CATEGORY	MEAN WIND SPEED (5% EXCEEDANCE)	DESCRIPTION
	Long-term Sitting	4 m/s	Acceptable for all outdoor long-term sitting use (e.g. cafés, benches, balconies and terraces)
	Standing / Short-term Sitting	6 m/s	Acceptable for main building entrances, pick-up / drop-off points and bus stops, as well as occasional seating such as benches and balconies.
	Walking (leisure)	8 m/s	Acceptable for strolling
	Walking (business)	10 m/s	Acceptable for external pavements, walking purposefully without lingering
	Uncomfortable	>10 m/s	Not comfortable for regular pedestrian access

Table 03: Lawson Safety Criteria (LDDC variant)

KEY	SAFETY CATEGORY	MEAN WIND SPEED (0.022% EXCEEDANCE)	DESCRIPTION
	No Safety Exceedance	<15 m/s	
	S15 (Distress)	>15 m/s	Unsafe for frail individuals, or cyclists
	S20 (Safety)	>20m/s	Wind conditions considered unsafe for all users

2.5 TARGET CONDITIONS

Safety

Any areas which show up as unsafe will require mitigation, unless they are in locations where pedestrian access can be controlled in the event of strong winds. This applies to all thoroughfares (for pedestrians) and roads (for cyclists) around the Development.

Thoroughfares & Roadways

Thoroughfares are targeted to be suitable for leisure walking in the windiest season, although business walking is acceptable provided it is highly localised (i.e. individual probes).

Thoroughfare conditions are captured by wind tunnel probes 9, 25 to 27, 29 to 39, 41 to 104, 110 to 117, 126, 127, 139 and 140.

Roadways are targeted to not be subject to wind safety or distress exceedances, to ensure the safety of cyclists or pedestrians who are crossing the road, but can endure uncomfortable conditions due to the relative infrequency at which they are used by pedestrians.

Roadway conditions are captured by wind tunnel probes 118 to 125 and 128 to 138.

Building Entrances

The areas immediately outside any building entrances should be suitable for standing/short-term sitting use during the windiest season to provide a "buffer" between the still conditions in interior spaces and the general thoroughfare.

There are proposed principal on site building entrances at wind tunnel probes 1, 2, 3, 4, 28 and 40.

Back of house entrances, which are not subject to regular use, do not have specific requirements in terms of wind conditions.

There are also local existing principal off-site entrances at wind tunnel probes 5 to 8, 10 to 14, 24 and 105.

Bus Stops

Bus are targeted to be suitable for standing/short-term sitting in the windiest season.

There are bus stops on Wood Street at wind tunnel probes 106 to 109.

Amenity Spaces

The target for amenity spaces is based on summer conditions, as this is when factors such as temperature or rainfall are not the limiting factors to the use of the space.

The target spill out cafe or restaurant seating is to be suitable for long-term sitting in summer. There is proposed spill out seating to the east of the pavilion at probes 18 and 19.

The target for benches is to be suitable for standing/short-term sitting in summer. There are proposed benches at probes 15 to 17, and existing benches to the east of the site at probes 20 to 23.

The target for roof terraces is to be suitable for standing/short-term sitting in summer. Conditions for the proposed roof terrace on the tower are captured by probes 551 to 566.

There is also a proposed terrace within the pavilion. The physical limitations of this space mean that it could not be instrumented at 1/300 scale, but initial Computational Fluid Dynamics (CFD) testing demonstrated that this space would be suitable for long-term sitting in summer and therefore suitable for amenity use.

The target for balconies is to be suitable for standing/short-term sitting in summer. The proposed balconies on the tower are captured by probes 501 to 504.

The locations of all sensitive wind receptors are shown in Figures 4 and 5.

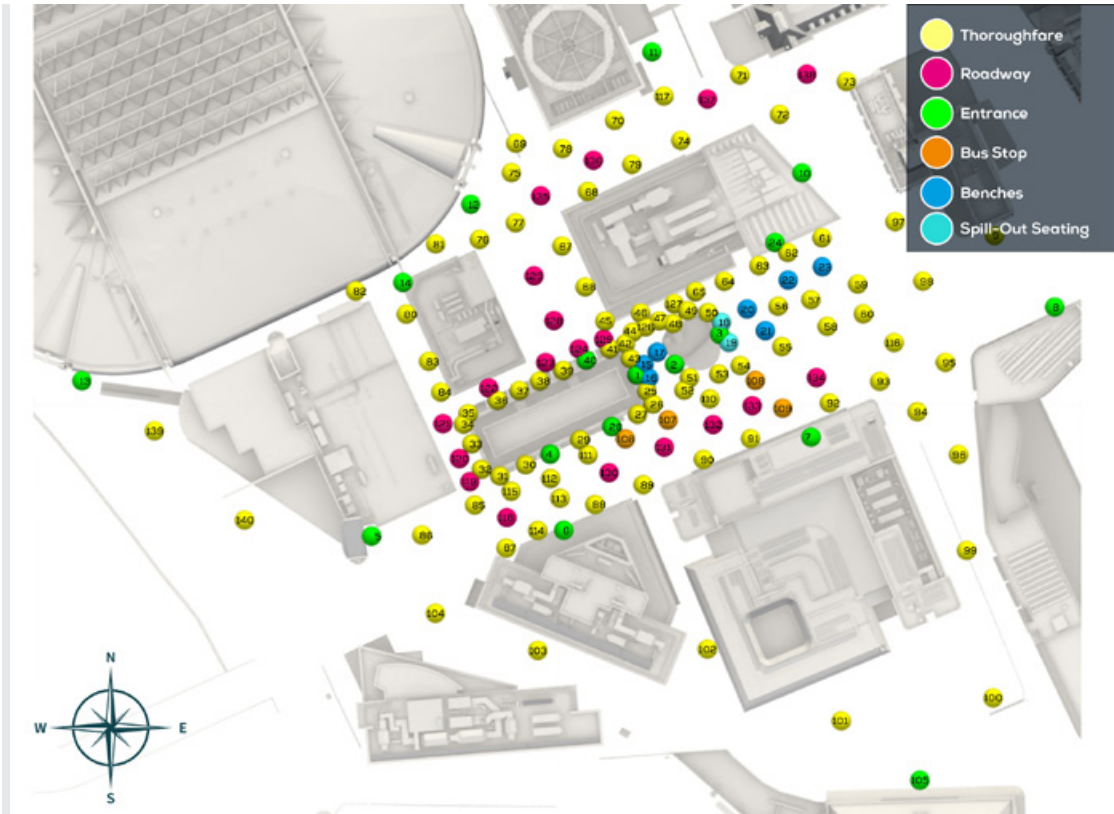


Fig. 04: Sensitive Wind Receptors at Ground Level

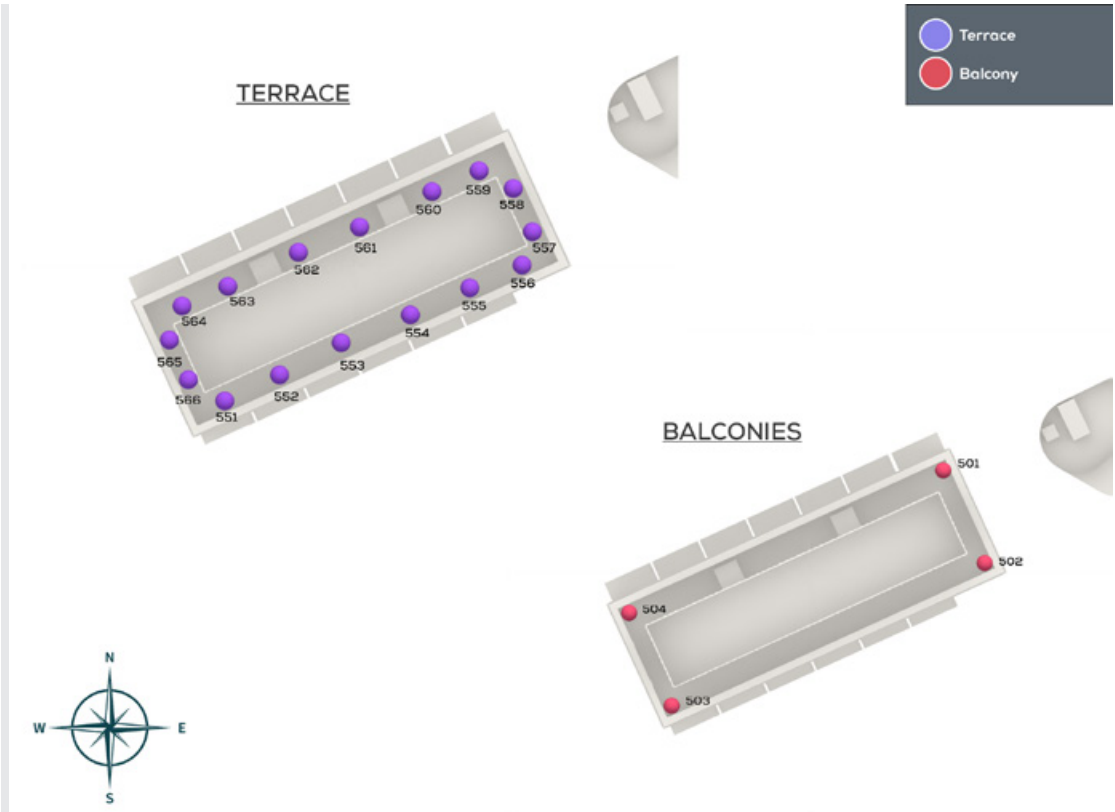


Fig. 05: Sensitive Wind Receptors at Elevated Levels

2.6 TEST SCENARIOS

The purpose of these tests was to compare conditions with and without the proposed development.

The following scenarios were tested:

- Baseline: The cleared site (as existing), with the existing surrounds; and
- Proposed Development, Existing Surrounds: The completed and operational development with the existing surrounds; and
- Proposed Development, Cumulative Surrounds: The completed and operational development with the proposed landscaping within the existing surrounds

Following a review of cumulative schemes, the following were considered sufficiently advanced to be included in the baseline:

- Parkgate (19-01538-MJR)
- Former Marland House And NCP Car Park Central Square Cardiff (19/03052/MJR)
- Central Square Phase 2 Plot 1 (21-02883-MJR)
- Central Square Phase 2 Plot 2 (21-02884-MJR)

The following schemes were also included as part of the cumulative surrounds for Scenario 3:

- Howells of Cardiff (23-02286-FUL)
- Brains Brewery (19-03171-MJR)
- The Brewery (20-00102-MJR)

2.7 EMBEDDED MITIGATION

There are wind mitigation measures embedded within the design of the proposed development and associated landscaping.

Those measures which are within the landscaping are shown in Figure 6, and can be summarised as follows:

- Two free-standing screens (1500mm wide by 300mm tall) within the planter at the north east corner of the tower (marked A in Figure 6);
- The planter around the aforementioned screens being extended to meet the corner of the tower;
- Two large (8-10m tall) evergreen trees in the locations marked B and C in Figure 6; and
- A single storey high screen at the south west corner of the tower, extending to the site boundary (marked D in Figure 6).

Additionally, three canopies are included within the design of the tower, as shown in Figure 7:

- A 3000mm deep canopy at 10m height on the northern elevation of the tower, running the full length of the elevation and broken at each pillar;
- A 1500mm deep canopy level with the top of the colonnade, running the full length of the elevation; and
- A 1500mm deep canopy at 5m height on the southern elevation of the tower, running from the south west corner of the tower to the western end of the colonnade and broken at each pillar.



Fig. 06: Proposed Landscaping

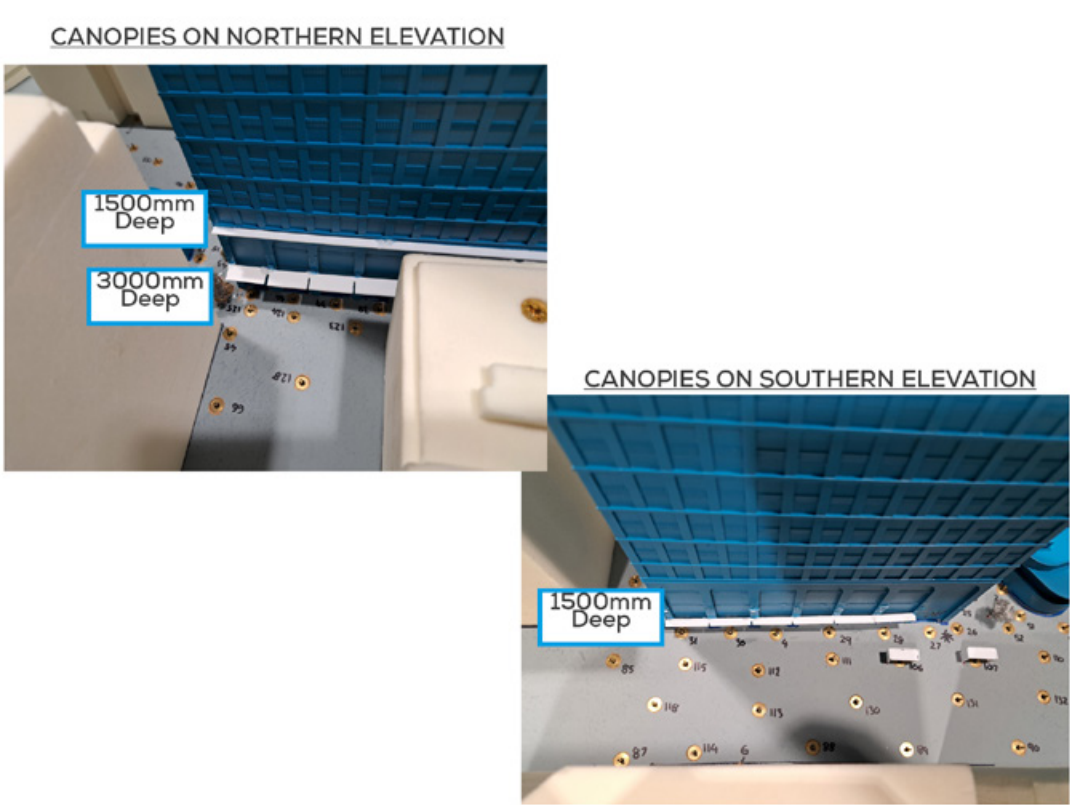


Fig. 07: Proposed Canopies

3 RESULTS

3.1 BASELINE CONDITIONS

Annual safety at ground level for the baseline scenario is shown in Figure 8. Windiest Season comfort at ground level for the baseline scenario is shown in Figure 9. Summer comfort at ground level for the baseline scenario is shown in Figure 10.

Safety

There are 5 instances of safety risks due to strong winds to the north of the site along Park Street (at wind tunnel probes 12, 69, 70, 75 and 117). There is a pre-existing risk to the safety of pedestrians or cyclists in these locations.

Thoroughfares and Roadways

There is one thoroughfare location (probe 75) on park street to the south east of the Principality Stadium which is uncomfortable in the windiest season for the existing baseline conditions.

Windiest season conditions for other thoroughfare locations (9, 25 to 27, 29 to 39, 41 to 74, 76 to 104, 110 to 117, 126, 127, 139 and 140) range between suitable for long-term sitting, standing/short-term sitting, leisure walking and business walking. There are 11 probes which are suitable for business walking, which are predominantly to the north and east of the site.

Roadway conditions (probes 118 to 125 and 128 to 138) range between suitable for long-term sitting, standing/short-term sitting, leisure walking and business walking This is suitable for the intended use.

Entrances

Conditions for the existing principal off-site entrance at the south east of the Principality Stadium (probe 12) is suitable for business walking in the windiest season. This is two categories windier than the target condition for the existing baseline conditions.

Conditions for the entrances to Six Park Street (probe 14) and Wood Street House (probe 8) are suitable for leisure walking in the windiest season. This is one category windier than

the target condition for the existing baseline conditions.

Conditions for all other existing principal off-site entrances (probes 5 to 7, 10, 11, 13, 24 and 105) are suitable for long-term sitting or standing/short-term sitting in the windiest season. This is suitable for the intended use.

Bus Stops

Conditions for the bus stops on Wood Street (probes 106 to 109) are suitable for long-term sitting or standing/short-term sitting in the windiest season. This is suitable for the intended use.

Amenity Spaces

Conditions for the existing benches to the east of the site probes 20 to 23) are suitable for long-term sitting or standing/short-term sitting in summer. This is suitable for the intended use.

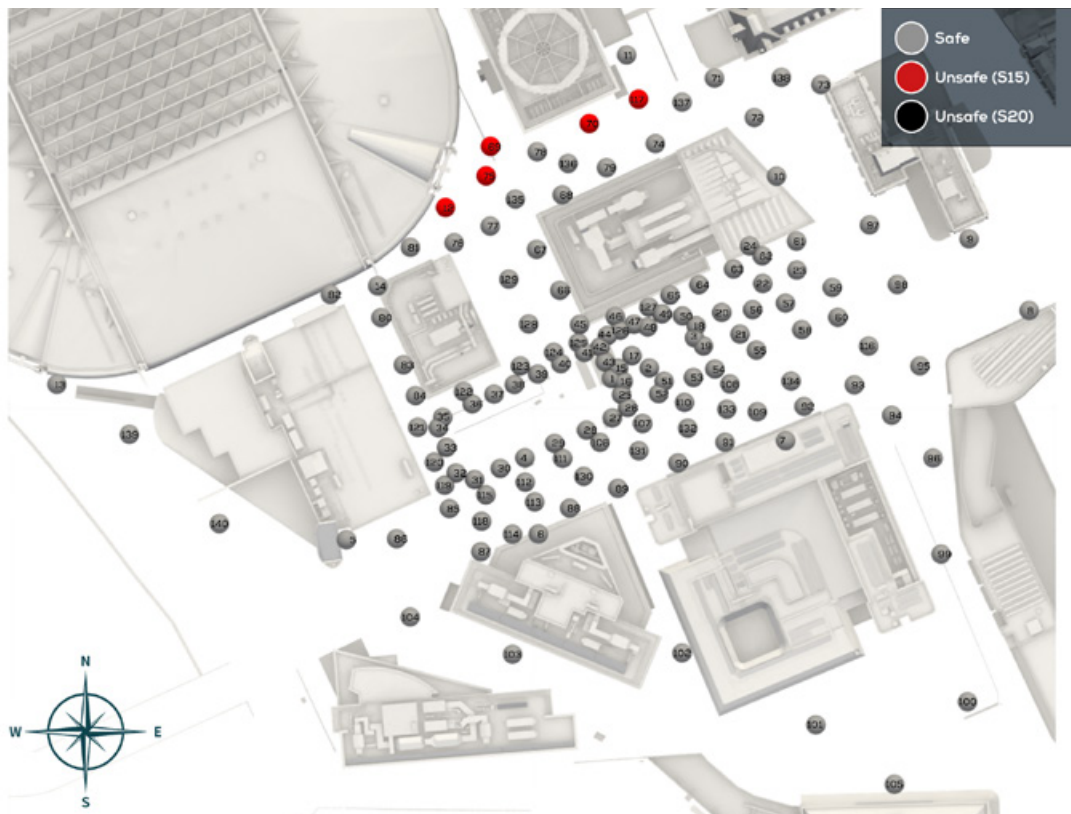


Fig. 08: Annual Safety at Ground Level, Baseline

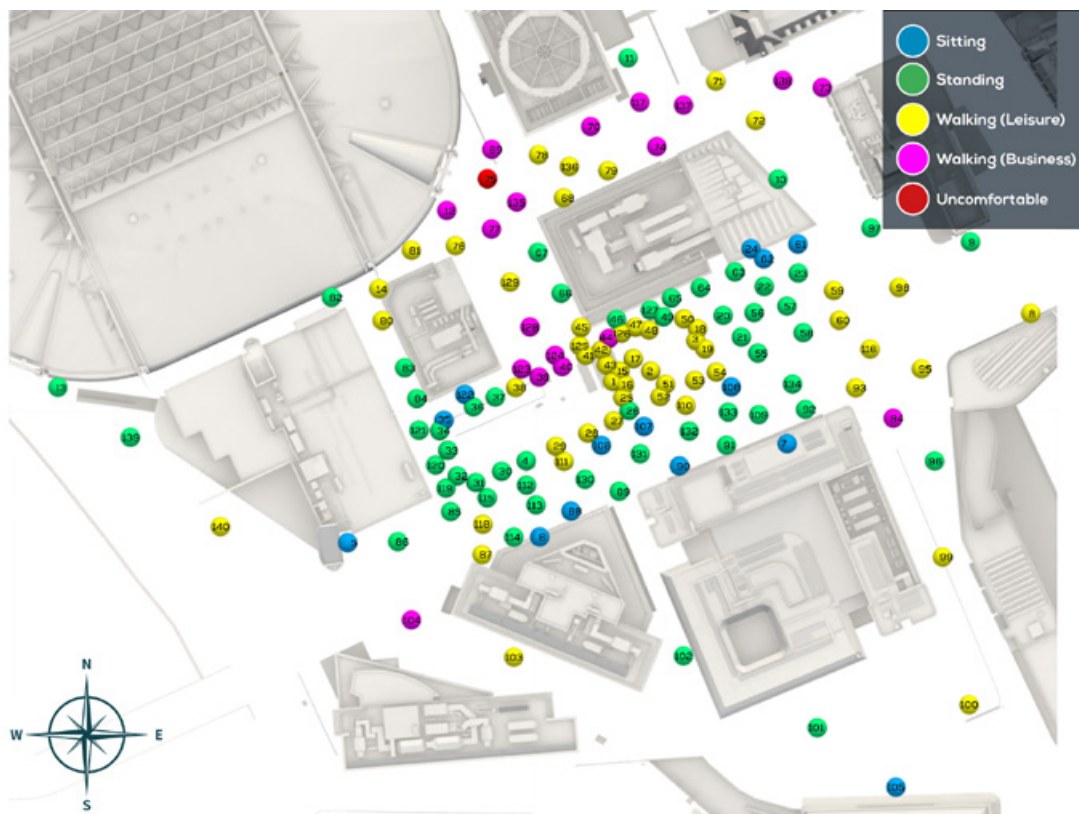


Fig. 09: Windiest Season Comfort at Ground Level, Baseline

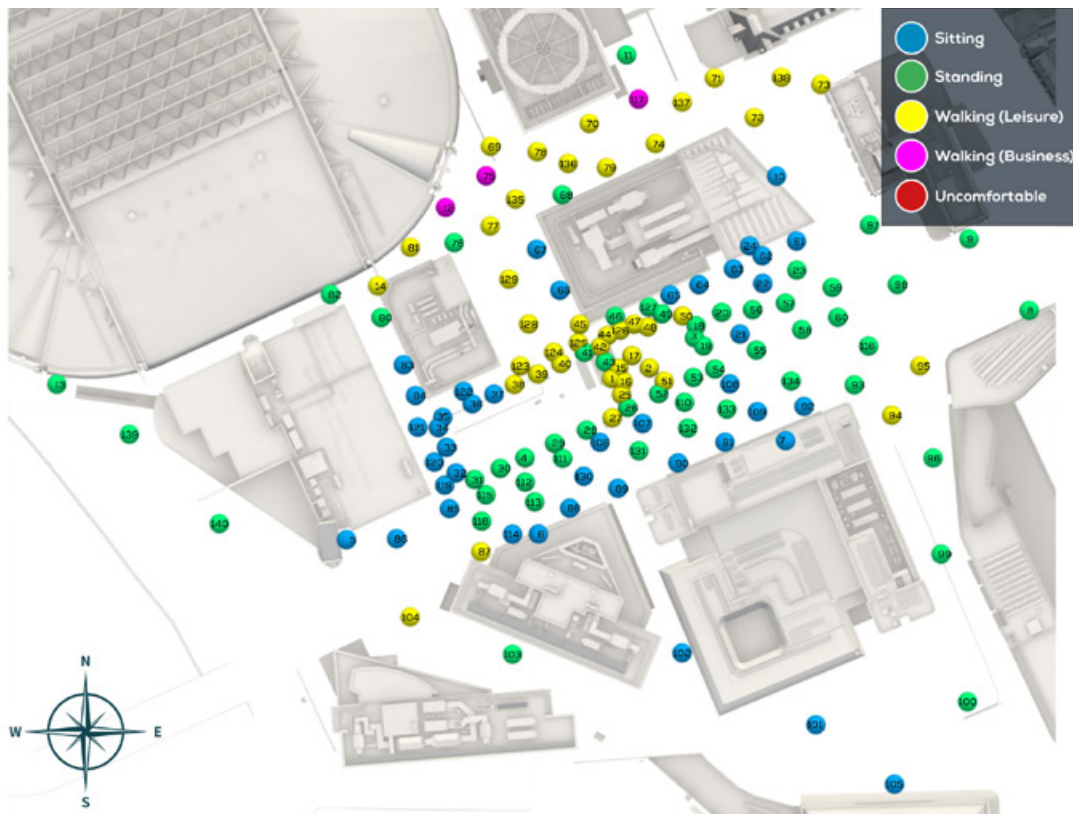


Fig. 10: Summer Comfort at Ground Level, Baseline

3.2 CONDITIONS FOR PROPOSED DEVELOPMENT WITH EXISTING SURROUNDS

Annual safety at ground level for the proposed development with existing surrounds is shown in Figure 11. Windiest Season comfort at ground level for the proposed development with existing surrounds is shown in Figure 12. Summer comfort at ground level for the proposed development with existing surrounds is shown in Figure 13.

Annual safety at elevated levels for the proposed development with existing surrounds is shown in Figure 14. Windiest Season comfort at elevated levels for the proposed development with existing surrounds is shown in Figure 15. Summer comfort at elevated levels for the proposed development with existing surrounds is shown in Figure 16.

Safety

There are 3 locations where baseline exceedances of the safety threshold have been eradicated by the inclusion of the proposed development. These are located to the north of the site along Park Street (at wind tunnel probes 12, 70 and 117). This represents a substantial reduction in the overall wind safety risk in the surrounding area and is a significant beneficial impact of the proposed development.

There are 2 instances of safety risks due to strong winds to the north of the site along Park Street (at wind tunnel probes 69 and 75). These were also present in the baseline conditions so are not attributable to the proposed development.

One instance of strong winds has been introduced at the north east corner of the tower (at probe 42). The design of the landscaping has been set-out to include a planter at this corner to ensure that the area around this probe is not accessible to pedestrians or cyclists. As such, this does not represent a significant wind safety risk.

Thoroughfares and Roadways

The thoroughfare location (probe 75) on park

street to the south east of the Principality Stadium which was uncomfortable in the windiest season for the existing baseline conditions is now suitable for business walking. There would be no accessible locations in the surrounding area which would be classified as uncomfortable for this scenario.

Windiest season conditions for other thoroughfare locations (probes 9, 25 to 27, 29 to 39, 41 to 74, 76 to 104, 110 to 117, 126, 127, 139 and 140) range between suitable for long-term sitting, standing/short-term sitting, leisure walking and business walking. There are 10 probes which are suitable for business walking, compared to 11 for the baseline. The inclusion of the proposed development would make conditions windier to the south and west of the site and calmer to the north and east, but would not fundamentally alter the overall level of windiness of conditions in the local area and does not represent a significant change.

Roadway conditions (probes 118 to 125 and 128 to 138) range between suitable for long-term sitting, standing/short-term sitting, leisure walking and business walking. This is suitable for the intended use.

Entrances

Conditions for the proposed entrance to the east of the pavilion building (probe 3) would be suitable for leisure walking in the windiest season. This is one category windier than the target condition and it is proposed that this entrance is recessed to create a vestibule area. This will provide a buffer region between internal and external conditions and would therefore be suitable for the intended use.

Conditions for the other principal entrances to the proposed development (probes 1, 2, 4, 28 and 40) would be suitable for standing/short-term sitting in the windiest season. This is suitable for the intended use.

Conditions for the existing principal off-site entrance at the south east of the Principality Stadium (probe 12) is suitable for leisure walking in the windiest season. This is one category windier than the target condition but one category calmer than the baseline

condition so is actually a beneficial impact of the proposed development.

Conditions for the entrance to Six Park Street (probe 14) are suitable for leisure walking in the windiest season. This is one category windier than the target condition but is consistent with the baseline condition so is not attributable to the proposed development.

Conditions for the entrance Wood Street House (probe 8) are suitable for standing/short-term sitting in the windiest season. This is suitable for the intended use having been one category windier than the target condition for the existing baseline conditions. This is a beneficial impact of the proposed development.

Conditions for the entrance to BT Stadium House (probe 11) are suitable for leisure walking in the windiest season. This is one category windier than the target having been suitable for standing/short-term sitting in the windiest season for the baseline. This is a marginal exceedance (exceeding the target for 1.7% of the winter) and this entrance is fitted with a revolving door and would have additional protection from local walls which were not included in the wind tunnel model. As such this door is expected to remain suitable for the intended use,

Conditions for all other existing principal off-site entrances (probes 5 to 7, 10, 13, 24 and 105) are suitable for long-term sitting or standing/short-term sitting in the windiest season. This is suitable for the intended use.

Bus Stops

Conditions for the bus stops on Wood Street (probes 106 to 109) are suitable for long-term sitting or standing/short-term sitting in the windiest season. This is suitable for the intended use.

Amenity Spaces

Conditions for the proposed spill out seating to the east of the pavilion (probes 18 and 19) would be suitable for standing/short-term sitting in summer. This is one category windier than the target condition, and it is recommended that moveable temporary

screens are used by this seating on windier days to achieve calmer conditions. This would ensure that conditions are suitable for long-term sitting in summer and would therefore be suitable for the intended use.

Conditions for the proposed benches at probes 15 and 16 are suitable for standing/short-term sitting in summer. This is suitable for the intended use.

Conditions for the proposed bench at probe 17 are suitable for leisure walking in summer. This is a marginal exceedance of the threshold (exceeding the threshold for 6% of the summer rather than 5%) so would still be suitable for the intended use the majority of the time. On windier days this location is close to alternative benches, so the area in general (between the tower and the pavilion) would be suitable for the intended uses.

Conditions for the existing benches to the east of the site (probes 20 to 23) are suitable for long-term sitting or standing/short-term sitting in summer. This is suitable for the intended use.

The target for roof terraces is to be suitable for standing/short-term sitting in summer. Conditions for the proposed roof terrace on the tower (probes 551 to 566) are suitable for a mix of long-term sitting and standing/short-term sitting in summer. This is suitable for the intended use.

Conditions for the balcony on the north west corner of the tower (probe 504) would be suitable for leisure walking in summer, but it should be noted that this exceedance is extremely marginal (exceeding the threshold for 5.8% of the summer rather than 5%) so this balcony would still be usable for short-term sitting for the majority of the summer. All other balconies (probes 501 to 503) would be suitable for long-term sitting in summer. This is suitable for the intended use.

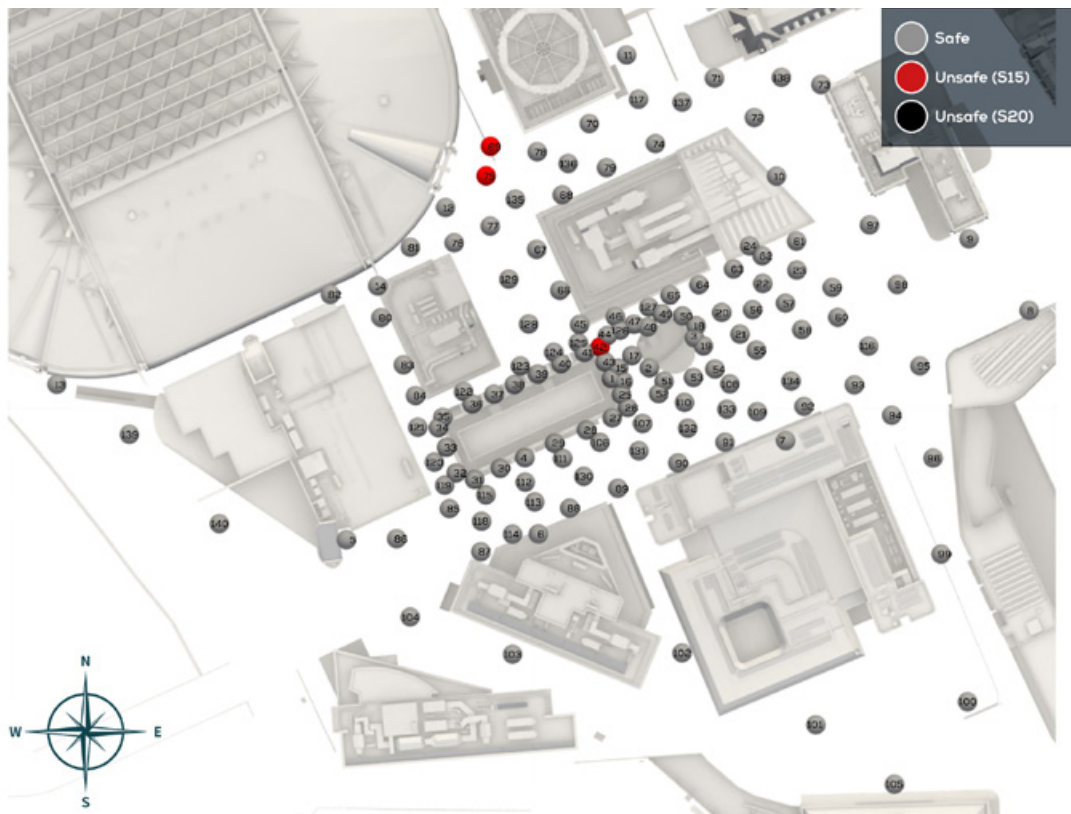


Fig. 11: Annual Safety at Ground Level, Proposed Development with Existing Surrounds

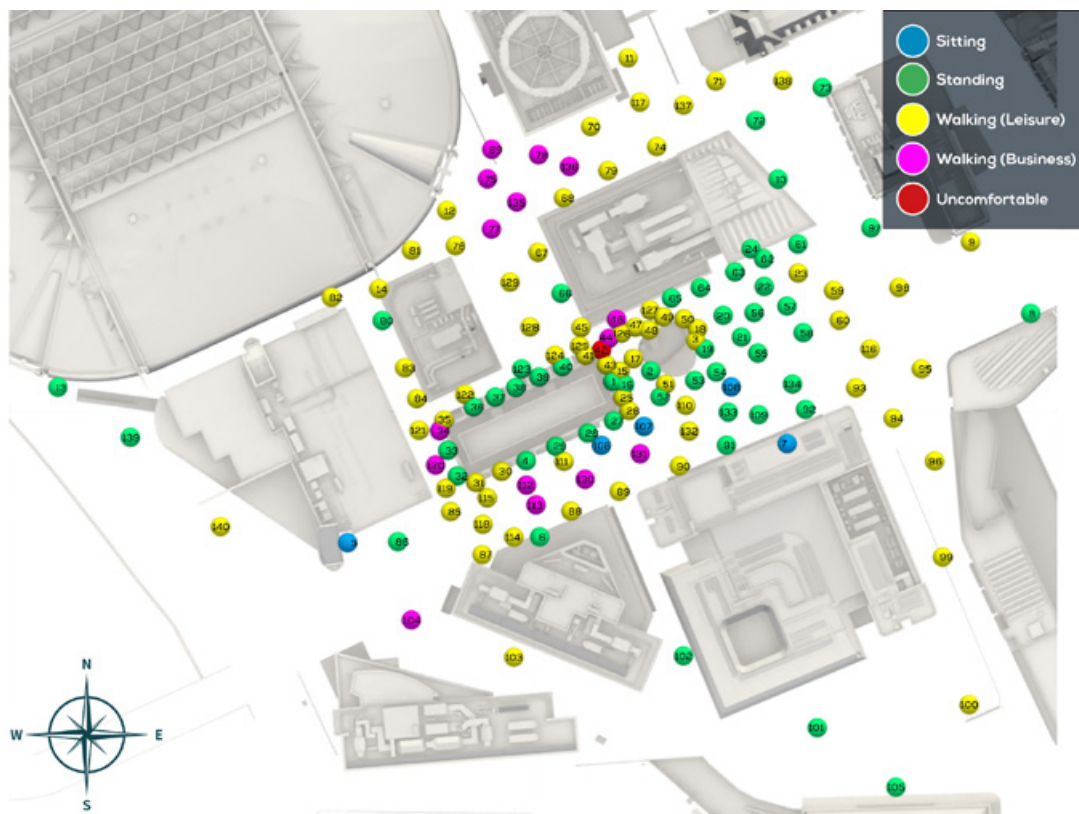


Fig. 12: Windiest Season Comfort at Ground Level, Proposed Development with Existing Surrounds

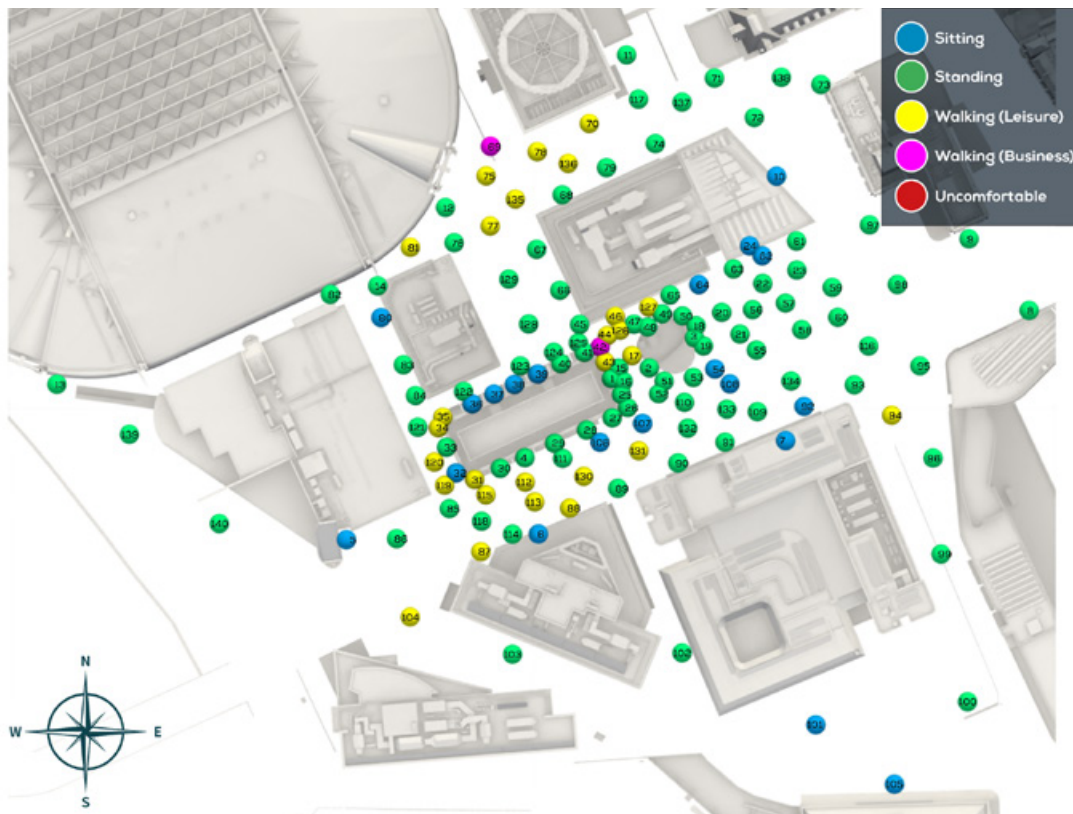


Fig. 13: Summer Comfort at Ground Level, Proposed Development with Existing Surrounds

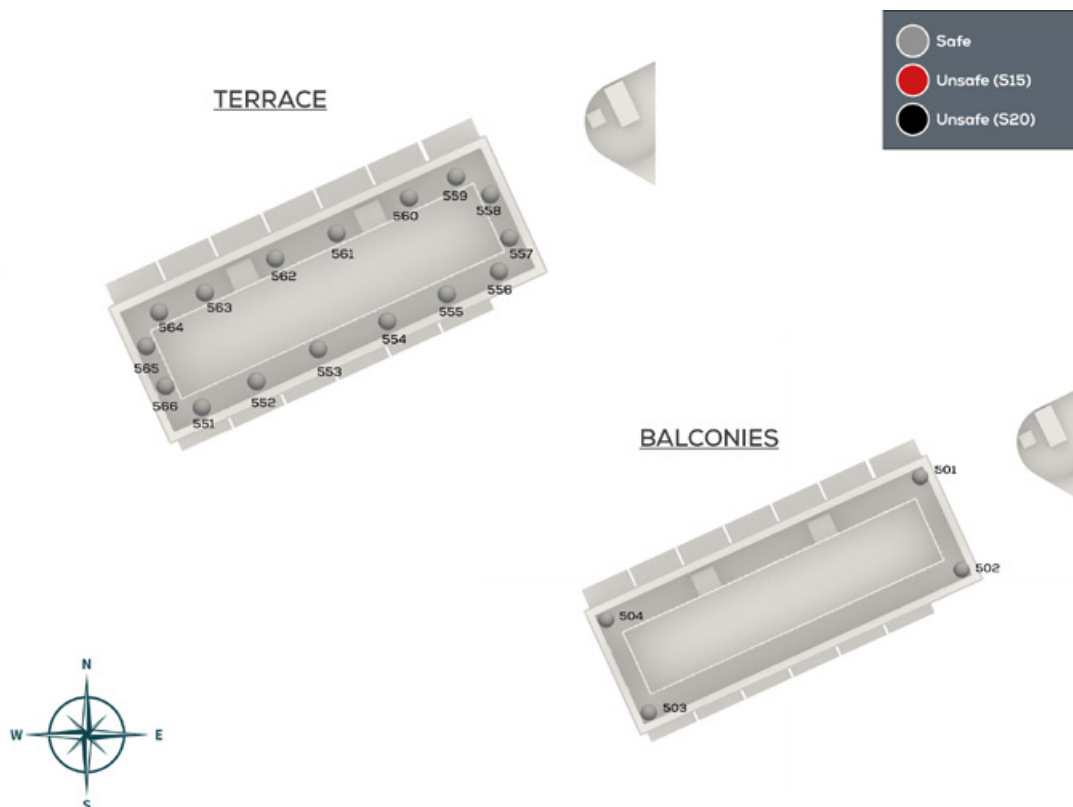


Fig. 14: Annual Safety at Elevated Levels, Proposed Development with Existing Surrounds

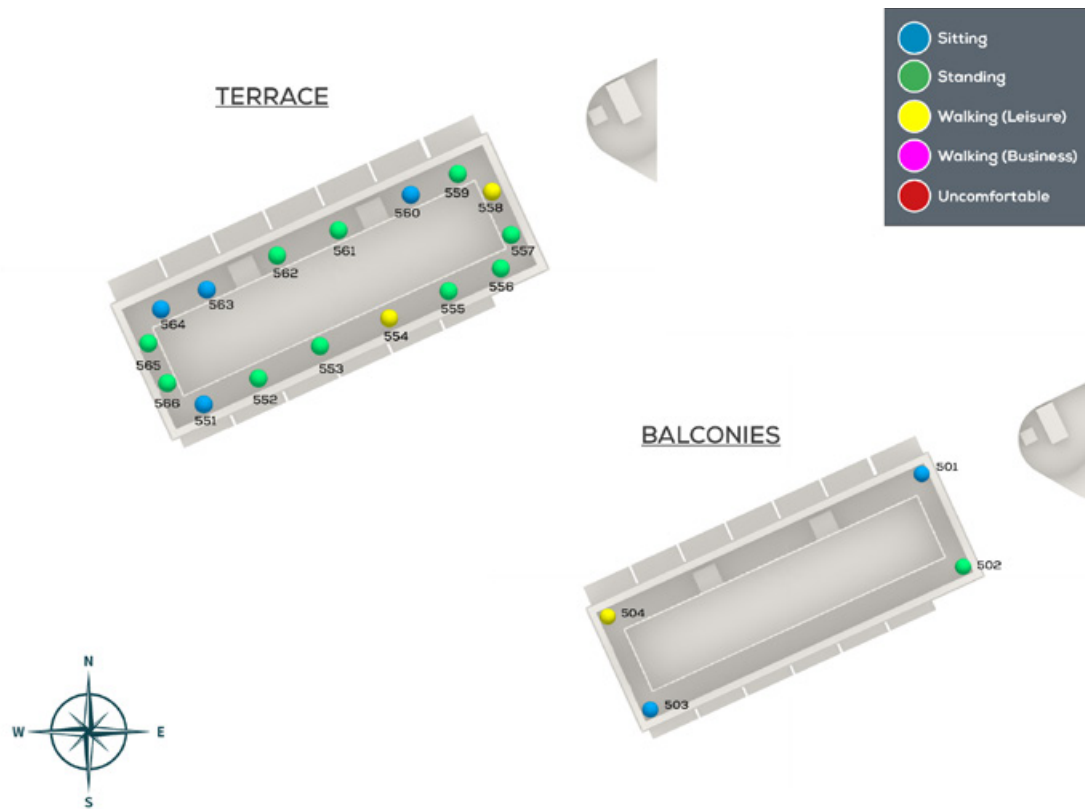


Fig. 15: Windiest Season Comfort at Elevated Levels, Proposed Development with Existing Surrounds

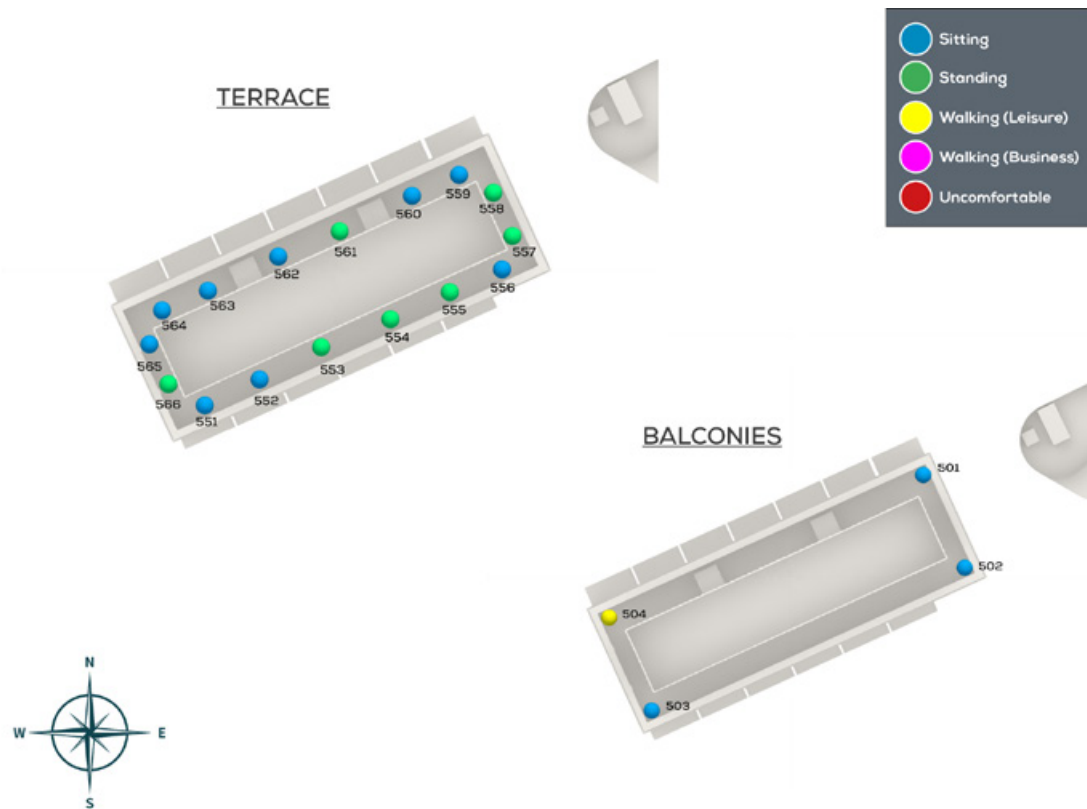


Fig. 16: Summer Comfort at Elevated Levels, Proposed Development with Existing Surrounds

3.3 CONDITIONS FOR PROPOSED DEVELOPMENT WITH CUMULATIVE SURROUNDS

Annual safety at ground level for the proposed development with cumulative surrounds is shown in Figure 17. Windiest Season comfort at ground level for the proposed development with cumulative surrounds is shown in Figure 18. Summer comfort at ground level for the proposed development with cumulative surrounds is shown in Figure 19.

Annual safety at elevated levels for the proposed development with cumulative surrounds is shown in Figure 20. Windiest Season comfort at elevated levels for the proposed development with cumulative surrounds is shown in Figure 21. Summer comfort at elevated levels for the proposed development with cumulative surrounds is shown in Figure 22.

The inclusion of cumulative schemes would make conditions marginally calmer in some locations, but would not alter the suitability of conditions for any receptor and therefore those conditions reported in Section 3.2 would remain valid once future committed development comes forwards.

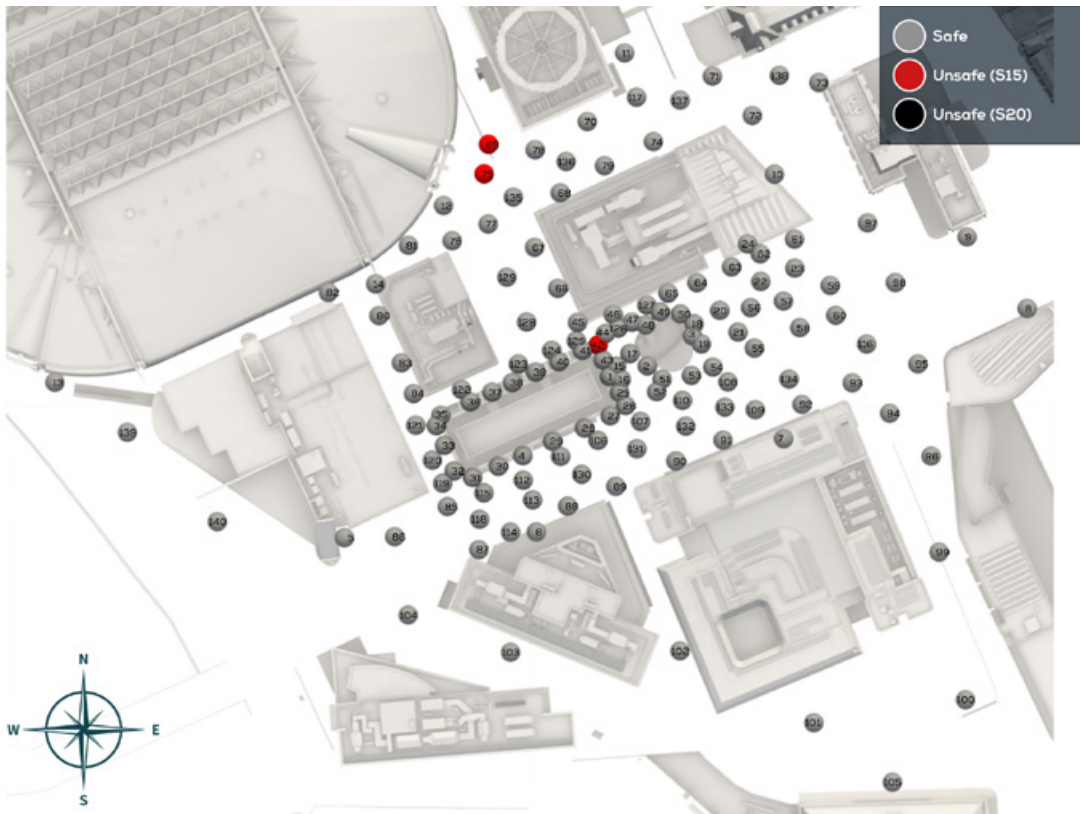


Fig. 17: Annual Safety at Ground Level, Proposed Development with Cumulative Surrounds

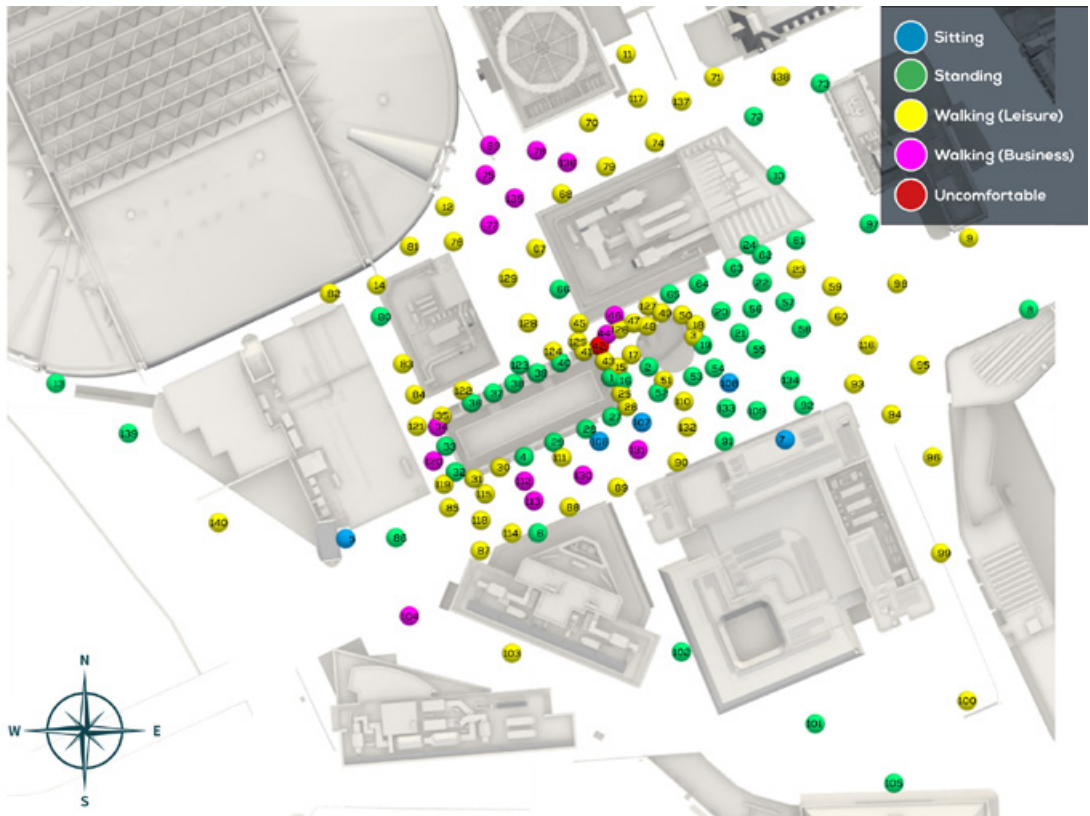


Fig. 18: Windiest Season Comfort at Ground Level, Proposed Development with Cumulative Surrounds

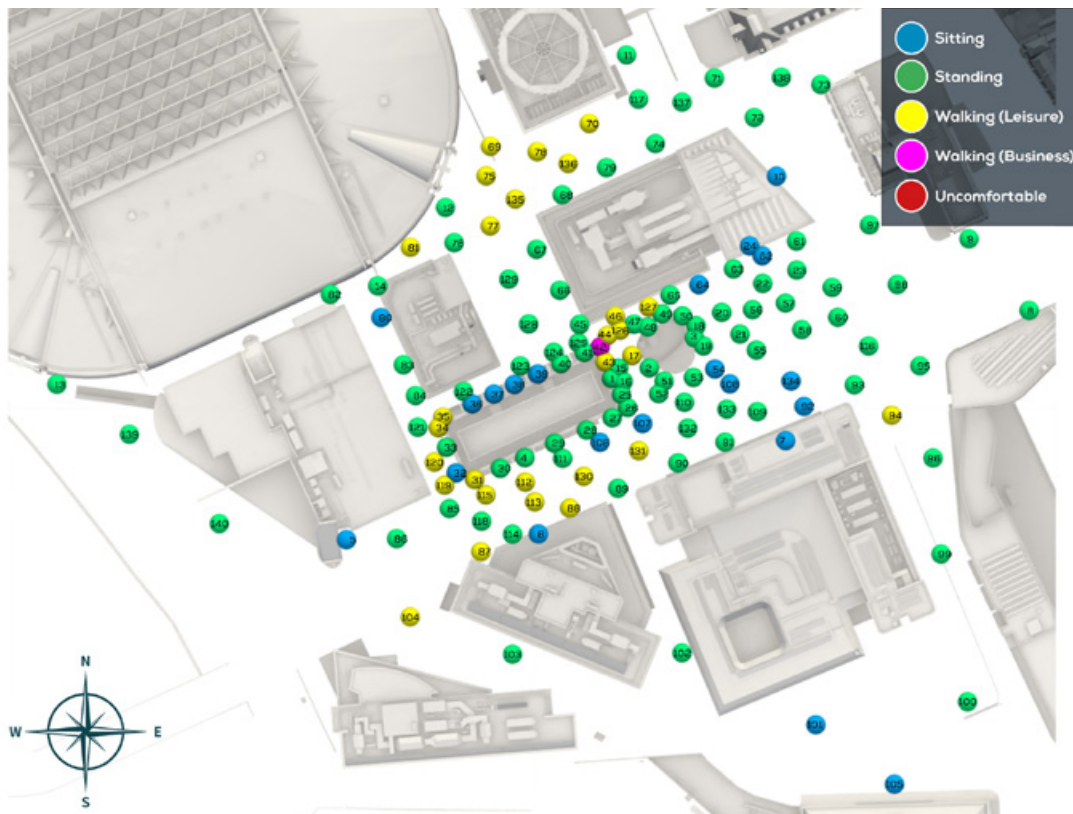


Fig. 19: Summer Comfort at Ground Level, Proposed Development with Cumulative Surrounds

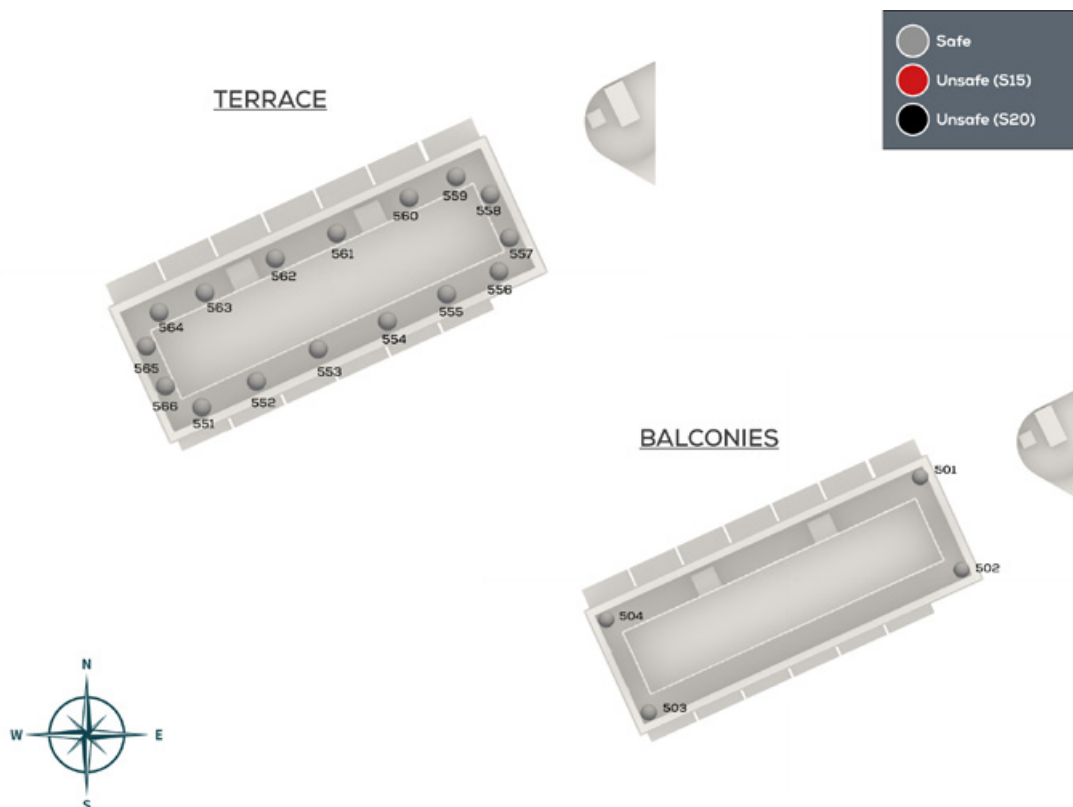


Fig. 20: Annual Safety at Elevated Levels, Proposed Development with Cumulative Surrounds

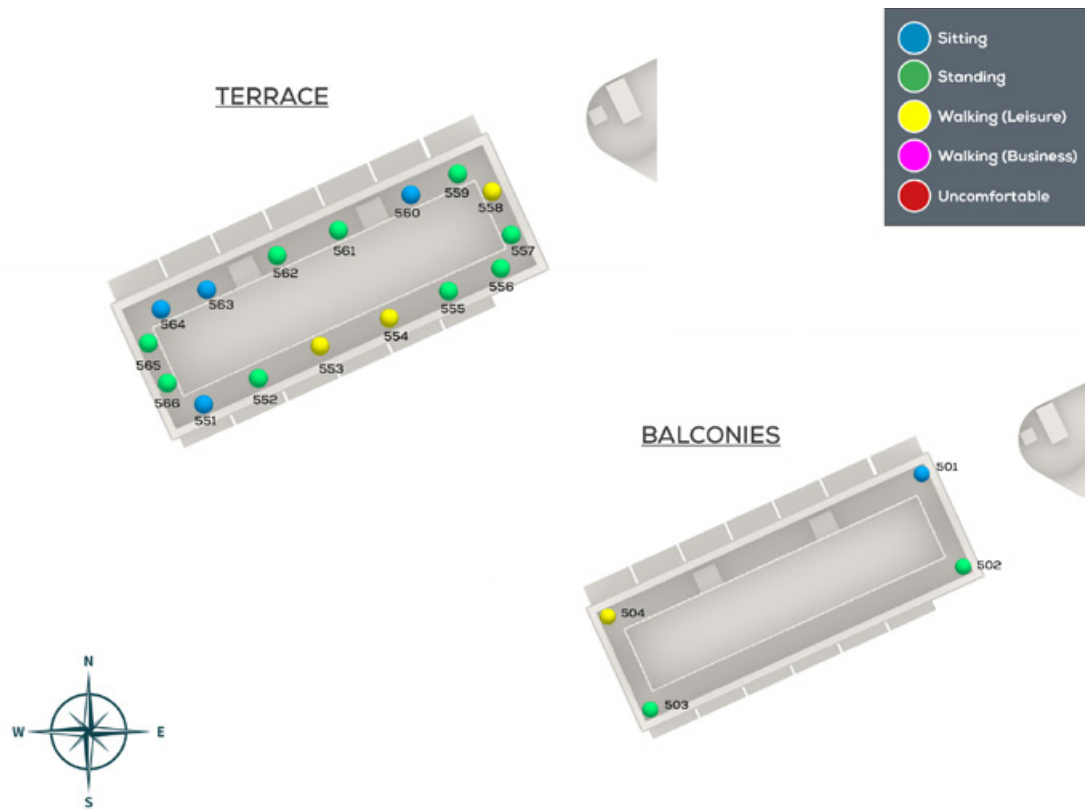


Fig. 21: Windiest Season Comfort at Elevated Levels, Proposed Development with Cumulative Surrounds

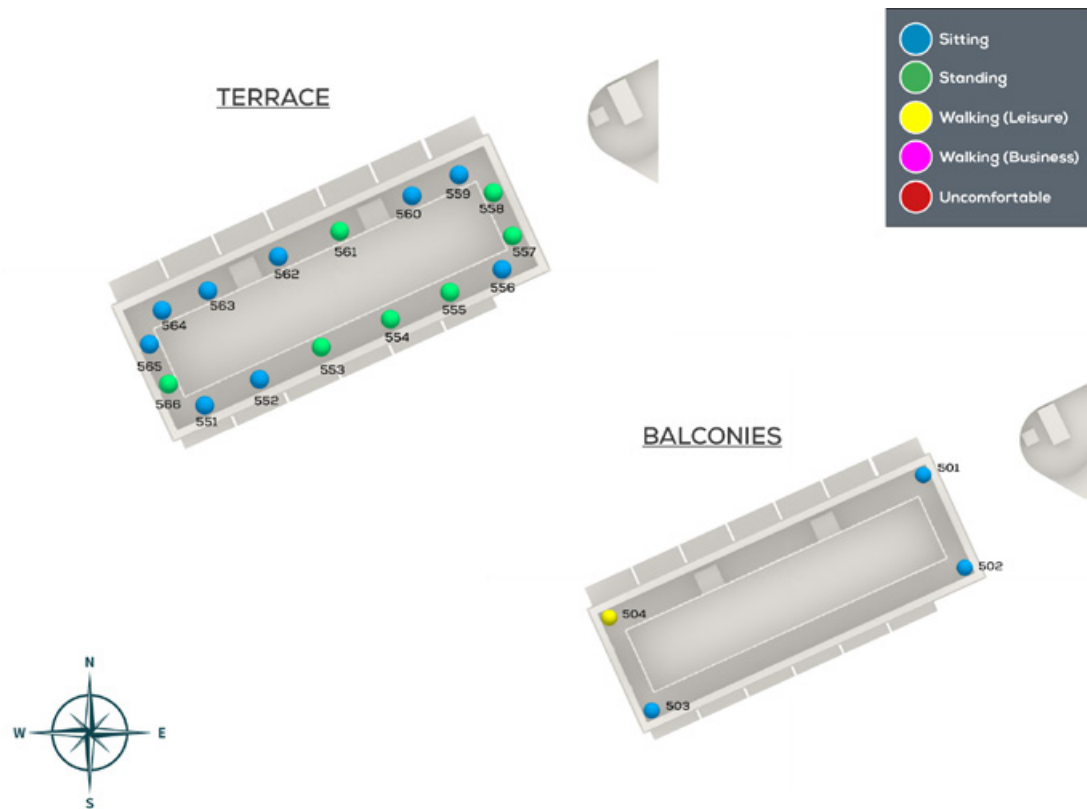


Fig. 22: Summer Comfort at Elevated Levels, Proposed Development with Cumulative Surrounds

4 CONCLUSIONS

Wind microclimate conditions for the proposed development at Plots 4&5, Central Square, City Centre, Cardiff were assessed using wind tunnel testing.

The proposed development will have a significant beneficial impact on pedestrian wind safety to the north of the site on Park Street.

No wind safety risks have been introduced in locations which are accessible to pedestrians or cyclists.

Wind comfort conditions will be suitable for the intended use or no worse than the baseline conditions for all general thoroughfares and roadways, bus stops, existing off-site building entrances, proposed and existing benches and the proposed roof terrace and balconies.

The majority of proposed entrances would be suitable as tested. The eastern entrance to the pavilion is recommended to be recessed to create a vestibule area to ensure that all entrance conditions are suitable.

The spill out seating to the east of the pavilion is proposed to have access to moveable temporary screens, which can be deployed on windier days to create calmer conditions for long-term sitting.

There are no significant adverse wind effects anticipated relating to the proposed development.

APPENDIX 01 DETAILED METHODOLOGY

WIND TUNNEL METHODOLOGY

The present assessment is based on Boundary Layer Wind Tunnel Testing of the proposed development. The assessment is based on 1:300 scale boundary layer wind tunnel testing, carried out in the 10 X 5 wind tunnel in the Aeronautical Engineering Department of Imperial College.

Wind speed measurements were made using "Irwin" probes, which measure simultaneous fluctuating pressures at ground level and at 1.5m above ground level at full scale, to provide fluctuating omnidirectional wind speeds at 1.5m above ground level. Pressure measurement was done using an electronically scanned pressure system that allows up to 512 channels of pressures to be sampled simultaneously at high speeds in order to capture rapid fluctuation of the signals.

As the present assessment was conducted at 1:300 scale, the wind tunnel speed was set at circa at a wind speed equivalent to 15 m/s at full scale (over which safety impacts are noted) so that 48 seconds data acquisition time at 600 Hz would be equivalent to 160 minutes of full scale data acquisition at 2 Hz.

Fluctuating pressures measured through long tubes are subjected to distortion by what commonly known as "organ pipe" effect, which leads to certain frequencies getting amplified or attenuated depending on the geometry of the long tube.

The measured data of this study were digitally corrected by applying a recursive filter, which was calibrated to correct for the distortion caused by the tube length and characteristics used in the assessment.

The speed-up factor time histories were analysed using Extreme Value Analysis to derive statically stable gust wind speeds for each measurement location and wind direction.

WIND CLIMATE METHODOLOGY

The simulations were performed from 18 wind directions, spaced such that no single direction contributed more than 10% of the annual winds.

The directions simulated were 0°, 30°, 50°, 70°, 80°, 90°, 120°, 150°, 180°, 210°, 240°, 260°, 270°, 280°, 290°, 300°, 310°, 330°.

Seasonal wind roses for Cardiff Airport are shown in Figure 23.

Target wind profiles for the site, from each wind direction, were generated using sectoral analysis of the terrain surrounding the site and the local weather stations with ESDU 2010 Item 01008 'Computer program for wind speeds and turbulent properties: flat or hilly sites in terrain with roughness changes'. The target wind profiles, compared to the wind speeds measured from the wind tunnel are shown in Figure 24 and compared to the measured turbulence intensities in Figure 25.

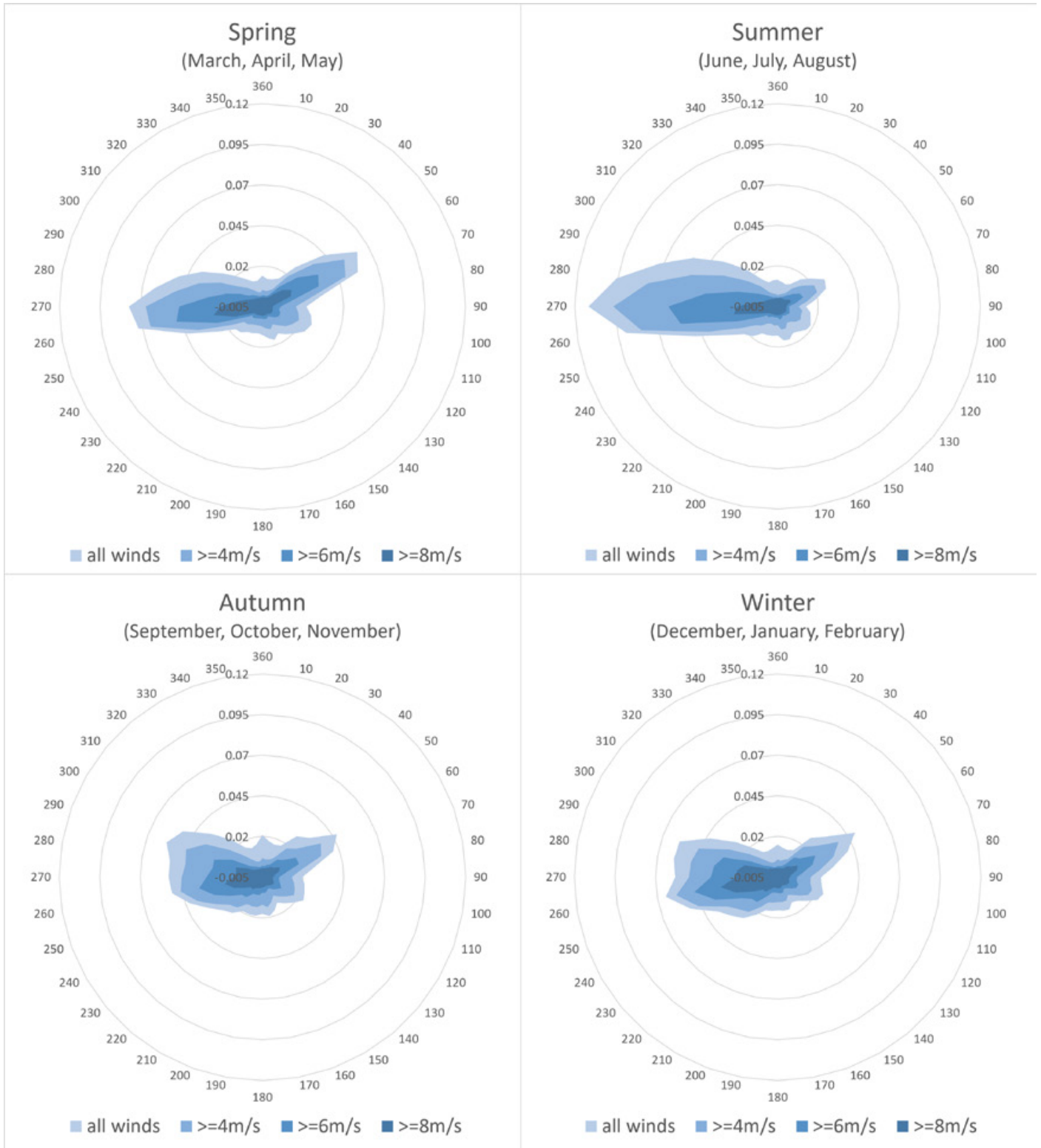


Fig. 23: Seasonal Wind Roses for Cardiff Airport (~30 years data)

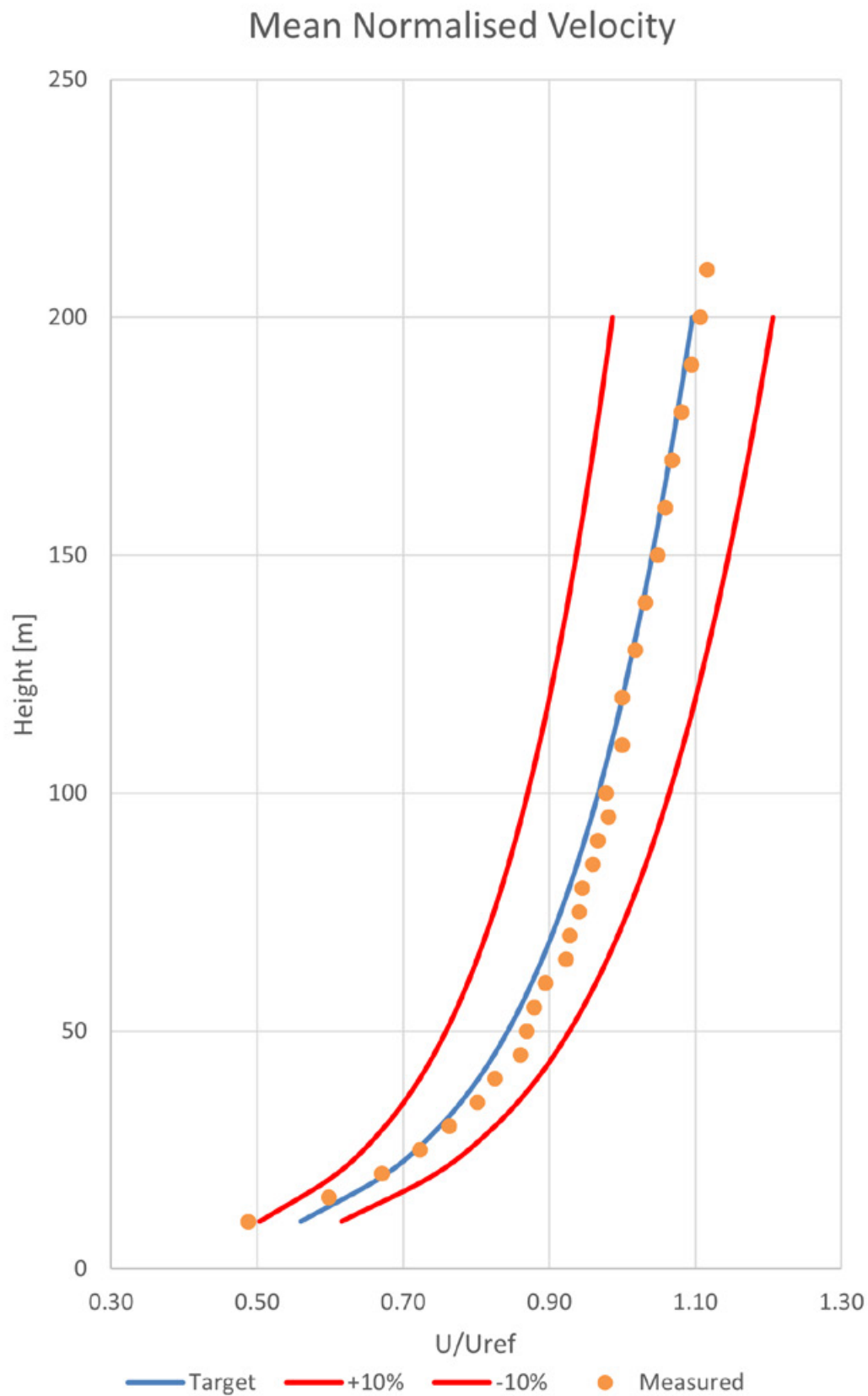


Fig. 24: Wind Profile (Velocity) for Cardiff Central

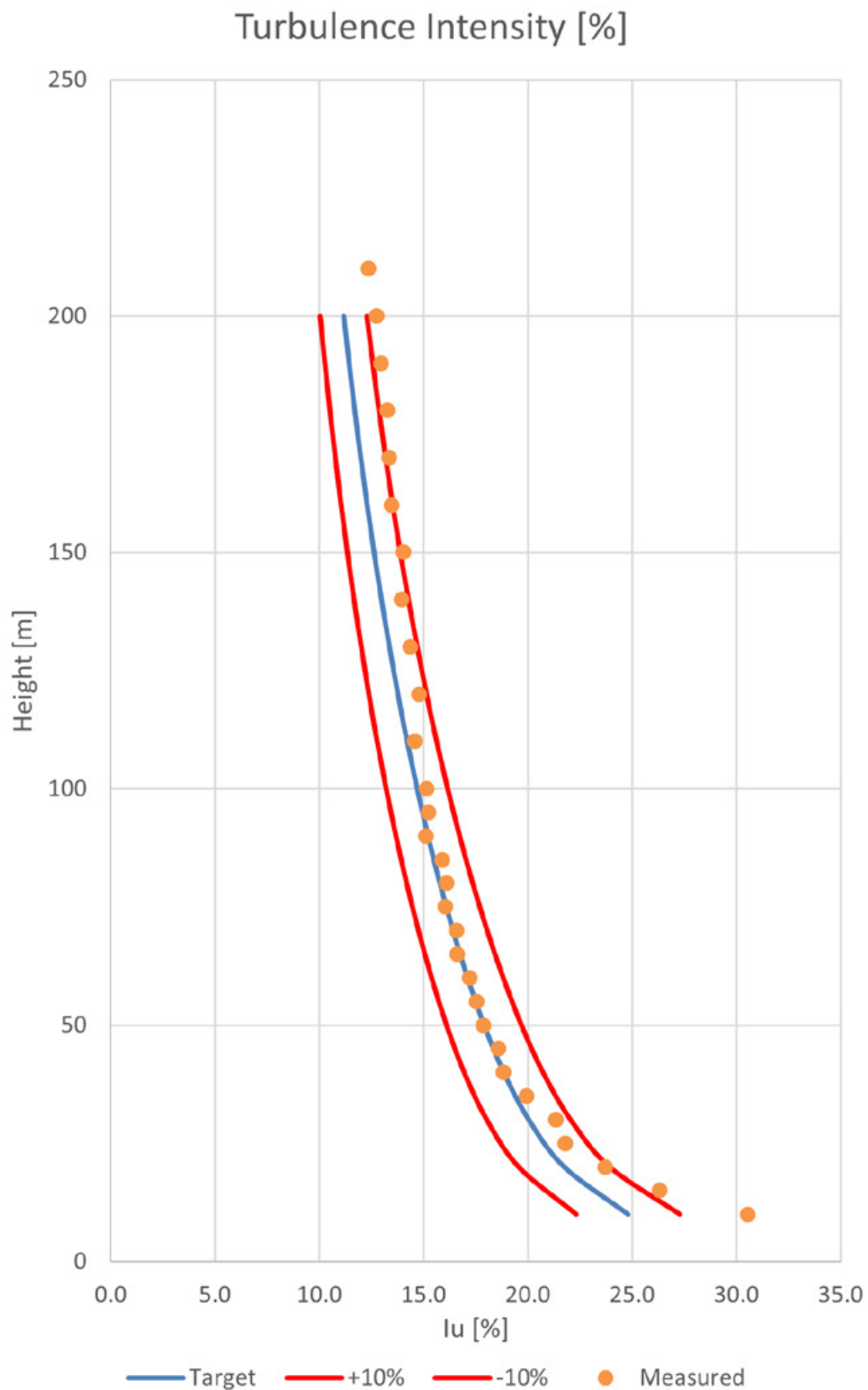


Fig. 25: Wind Profile (Turbulence Intensity) for Cardiff Central



What we do:

Building Surveying
Daylight & Sunlight
Light Obstruction Notices
Measured Surveys
Party Wall & Neighbourly Matters
Rights of Light
Solar PV
Wind Analysis

Where we are:

Belfast
Birmingham
Bristol
Dublin
London
Manchester