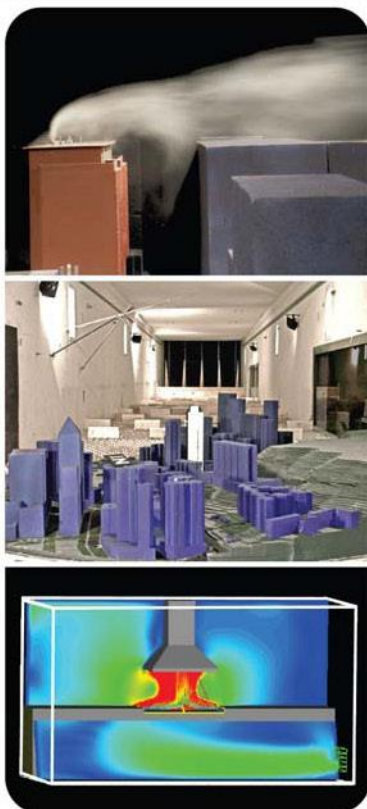


## Final Report



Wind Tunnel Tests for:

**BARANGAROO SOUTH  
CONCEPT PLAN MOD 8**

Sydney, Australia

CPP Project 6029

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## EXECUTIVE SUMMARY

A wind tunnel study of the proposed Barangaroo South Concept Plan Mod 8 development, to be located in Sydney, Australia, was conducted to assess pedestrian wind comfort. This report supports a modification to Concept Plan (MP06\_0162) submitted to the Minister for Planning and Infrastructure pursuant to Section 75W of Part 3A of the Environmental Planning and Assessment Act 1979 (EP&A Act).

The proposed application is the outcome of negotiations between Lend Lease and the NSW Government, including the Barangaroo Delivery Authority, to relocate the approved landmark hotel building on a pier into Sydney Harbour to a location on land elsewhere on the site. It incorporates both the physical relocation of the hotel, along with a number of consequent and related changes that are required to maintain an appropriate built form and public domain outcome for the Barangaroo South site.

A model of the project was fabricated to a 1:400 scale and centred on a turntable in the wind tunnel. Replicas of surrounding buildings within a 570 m radius were constructed and placed on the turntable. The wind tunnel testing was performed in the natural boundary layer wind tunnel of Cermak Peterka Petersen Pty. Ltd., St Peters. Approach boundary layers representative of the environment surrounding the proposed development were established in the test section of the wind tunnel. The approach wind flow had appropriate turbulence characteristics corresponding to Terrain Category 3 as defined in Standards Australia (2011).

Measurements of winds likely to be experienced by pedestrians were made with a hot-film anemometer at 111 locations in various configurations for 16 wind directions each. These points were tested in the proposed Barangaroo South Concept Plan Mod 8 configuration. The measurements were combined with wind statistics to produce results of wind speed versus the percentage of time that wind speed is exceeded for each location.

Wind conditions around the site were generally found to be acceptable for pedestrian standing type activities, with a number of locations classified for pedestrian sitting, walking, and business walking activities. Similar to the existing Concept Plan, no location failed the safety criterion, and a few locations were found to exceed the safety criterion for general pedestrians. It is anticipated that these exceedances can be mitigated during detailed design investigations.



**DOCUMENT VERIFICATION**

<b>Date</b>	<b>Revision</b>	<b>Prepared by</b>	<b>Checked by</b>	<b>Approved by</b>
08/09/14	Initial release for review	AN/GSW	PB	GSW
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## LIST OF SYMBOLS

$D$	Characteristic dimension (building height, width, etc.), m
$n$	Mean velocity profile power law exponent
$T_u$	Turbulence intensity, $U_{rms}/U$
$U$	Local mean velocity, m/s
$U_{ref}$	Reference velocity at reference height $z_{ref}$ , m/s
$U_{pk}$	Peak wind speed in pedestrian studies, m/s
$U_{rms}$	Root-mean-square of fluctuating velocity, m/s
$z$	Height above surface, m
$\nu$	Kinematic viscosity of approach flow, m <sup>2</sup> /s
$\sigma( )$	Standard deviation of $( )$ , $= ( )'_{rms}$
$\rho$	Density of approach flow, kg/m <sup>3</sup>
$( )_{max}$	Maximum value during data record
$( )_{min}$	Minimum value during data record
$( )_{mean}$	Mean value during data record
$( )_{rms}$	Root mean square about the mean

## 1. INTRODUCTION

This report supports a modification to Concept Plan (MP06\_0162) submitted to the Minister for Planning and Infrastructure pursuant to Section 75W of Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The proposed application is the outcome of negotiations between Lend Lease and the NSW Government, including the Barangaroo Delivery Authority, to relocate the approved landmark hotel building site from a pier over Sydney Harbour to a location on land elsewhere on the Barangaroo South site. It also incorporates a number of consequent and related changes to the urban design guidelines that are required to maintain an appropriate built form and public domain outcome for the Barangaroo South site.

Pedestrian acceptability of footpaths, entrances, plazas, and terraces is often an important design parameter of interest to the building owner and architect. Assessment of the acceptability of the pedestrian level wind environment is desirable and more appropriate during the project design phase so that modifications can be made, if necessary, to create wind conditions suitable for the intended use of the space.

Analytical methods such as computational fluid dynamics (CFD) are not capable, except in very simple geometries, to estimate wind pressures, frame loads, or windiness in pedestrian areas.

Techniques have been developed that permit boundary layer wind tunnel modelling of buildings to determine wind velocities in pedestrian areas. This report includes wind tunnel test procedures, test results, and a discussion of test results obtained. Table 1 summarises the model configurations, test methods, and data acquisition parameters used. All the data collection was performed in accordance with Australasian Wind Engineering Society (2001), and American Society of Civil Engineers (1999, 2006).

Table 1: Configurations for data acquisition

<i>Configuration A</i>	
Geometry:	Proposed Barangaroo South Concept Plan Mod 8 with surrounding buildings and landscape, as shown in Figure 7.
Pedestrian Velocities:	Pedestrian winds measured at 111 locations for 16 wind directions in 22.5° increments from 0° (north).
<i>Configuration B</i>	
Geometry:	Barangaroo South Concept Plan November 2010 as shown in Figure 6
Pedestrian Velocities:	Pedestrian winds measured at 6 locations for 16 wind directions in 22.5° increments from 0° (north) surrounding the site.

## 2. OVERVIEW OF PROPOSED MODIFICATION

The proposed modification to the Concept Plan seeks to:

- relocate the landmark building (Block Y) from the harbour onto the land in the Barangaroo South site in front of the existing Blocks 4A, B and C;
- revise the layout of Blocks 4A-C;
- amend the size and location of the Southern Cove and public domain;
- redistribute the GFA, public domain and land uses across development blocks 1-3, 4A-C, X, Y;
- increase the maximum GFA on the site to provide for additional GFA within the hotel building and redistribution of land uses;
- increase the height of the buildings within modified 'Block 4' and the relocated Block Y; and
- amend the conditions of the Concept Approval to reflect the modifications to development.

It is also proposed to amend Part 12 of Schedule 3 of the Major Development SEPP to reconcile the SEPP with the modifications to the Concept Plan, including amending the location of the RE1 and B4 Mixed Use zone boundaries.

## 3. SITE LOCATION

Barangaroo is located on the north western edge of the Sydney Central Business District. It is bounded by Sydney Harbour to the west and north, the historic precinct of Millers Point (for the northern half), The Rocks and the Sydney Harbour Bridge approach to the east and a range of development dominated by large CBD commercial tenants to the south.

The Barangaroo site has been divided into three distinct redevelopment areas (from north to south) - the Headland Park, Barangaroo Central, and Barangaroo South. Concept Plan (Mod 8) relates to Barangaroo South only as shown in Figure 1.



Figure 1: Indicative Site Boundary for Barangaroo South

#### 4. THE WIND TUNNEL TEST

Modelling of the aerodynamic loading on a structure requires special consideration of flow conditions to obtain similitude between the model and the prototype. A detailed discussion of the similarity requirements and their wind tunnel implementation can be found in Cermak (1971, 1975, 1976). In general, the requirements are that the model and prototype be geometrically similar, that the approach mean velocity and turbulence characteristics at the model building site have a vertical profile shape similar to the full-scale flow, and that the Reynolds number for the model and prototype be equal. Due to modelling constraints the Reynolds number cannot be made equal and Australasian Wind Engineering Society Quality Assurance Manual (2001) suggests a minimum Reynolds number of 50,000, based on characteristic width and wind velocity at the top of the model; in this study the modelled Reynolds number was over 50,000.

The wind tunnel test was performed in the boundary layer wind tunnel shown in Figure 2. The wind tunnel test section is 3.0 m wide, by 2.4 m high with a porous slatted roof for passive blockage correction. This wind tunnel has a 21 m long test section, the floor of which is covered with roughness elements, preceded by a vorticity generating fence and spires. The spires, barrier, and roughness elements were designed to provide a modelled atmospheric boundary layer approximately 1.2 m thick with a mean velocity and turbulence intensity profile similar to that expected to occur in the region approaching the modelled area. The approach wind characteristics used for the model test are shown in Figure 3 and are explained more fully in Section 6.1.1.

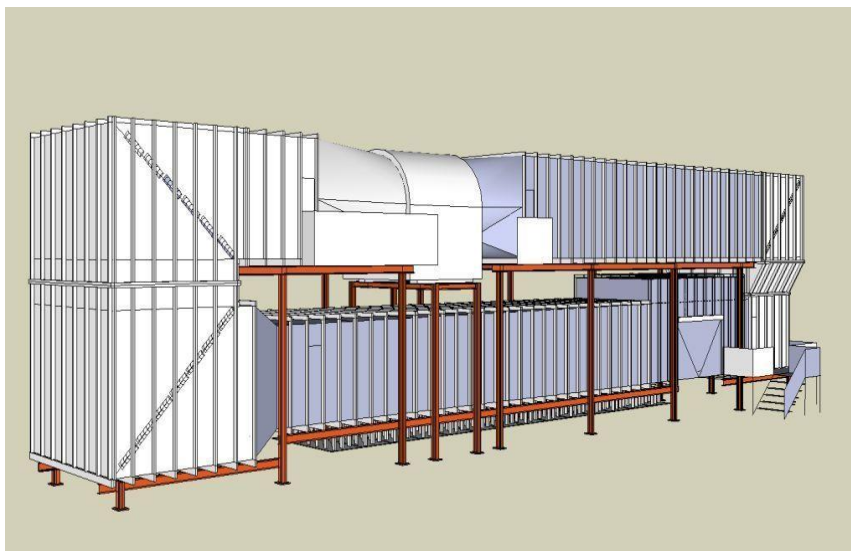


Figure 2: Schematic of the closed circuit wind tunnel

A model of the proposed development and surrounds to a radius of 570 m was constructed at a scale of 1:400, which was consistent with the modelled atmospheric flow, permitted a reasonable test model size with an adequate portion of the adjoining environment to be included in a proximity

model, and was within wind tunnel blockage limitations. Significant variations in the building surface were formed into the model. The models were mounted on the turntable located near the downstream end of the wind tunnel test section, Figure 4 and Figure 5. The turntable permitted rotation of the modelled area for examination of velocities from any approach wind direction. Additional photos of the testing are in Appendix 1.

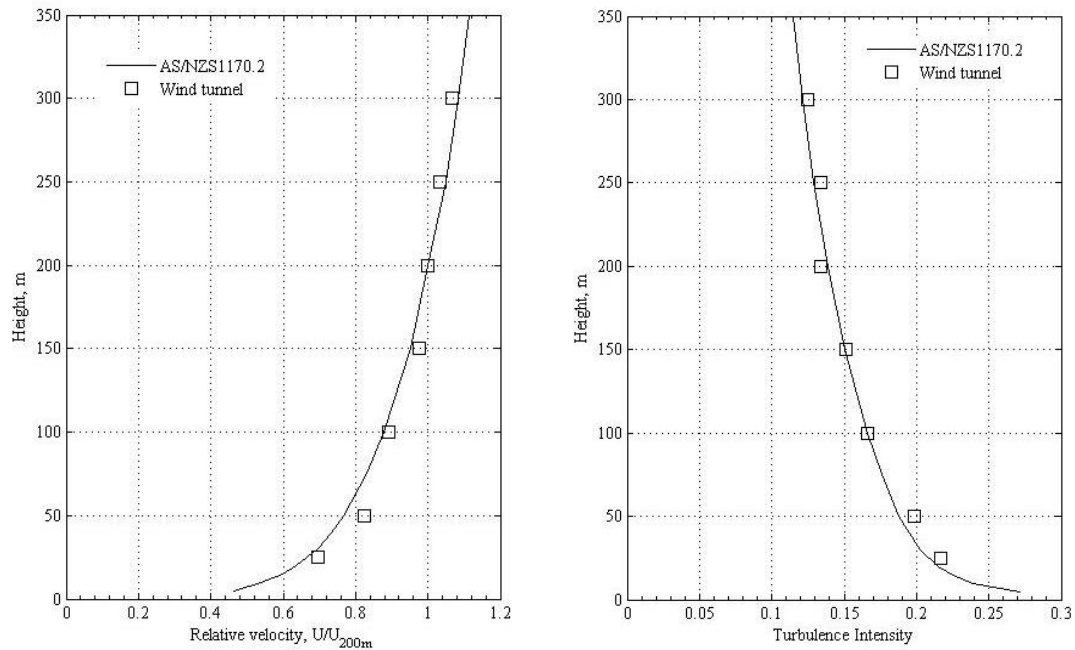


Figure 3: Mean velocity and turbulence profiles approaching the model

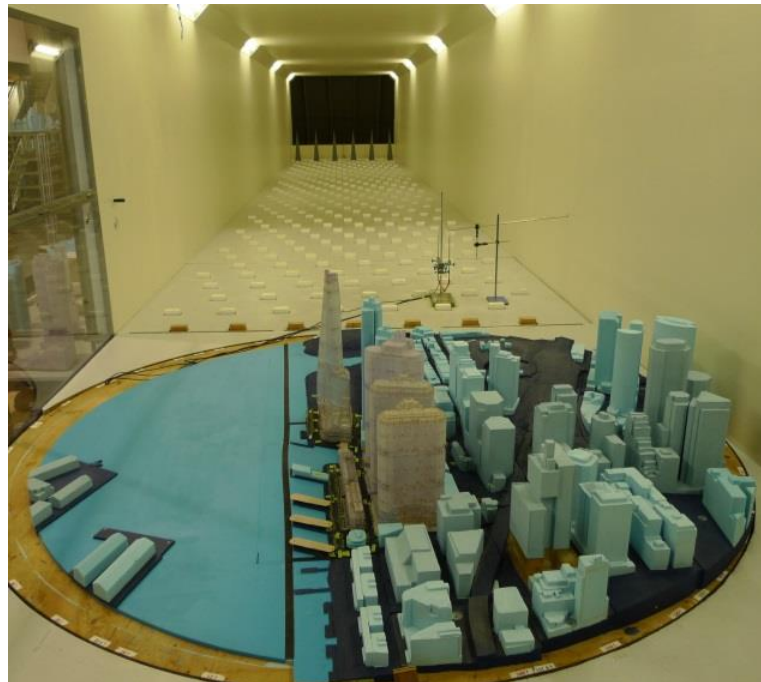


Figure 4: Photograph of the Barangaroo model in the CPP wind tunnel (Configuration A)





Figure 5: Configuration A from the west in the wind tunnel



## 5. ENVIRONMENTAL WIND CRITERIA

Over the years, a number of researchers have added to the knowledge of wind effects on pedestrians by suggesting criteria for comfort and safety. Because pedestrians will tolerate higher wind speeds for a smaller period of time than for lower wind speeds, these criteria provide a means of evaluating the overall acceptability of a pedestrian location. Also, a location can be evaluated for its intended use, such as for an outdoor café or a footpath. One of the most widely accepted set of criteria was developed by Lawson (1990), which is described in Table 2.

Lawson's criteria have categories for discomfort, based on wind speeds exceeded five percent of the time, allowing planners to judge the usability of locations for various intended purposes ranging from "Business Walking" to "Pedestrian sitting". The level and severity of these comfort categories can vary based on individual preference, so calibration to the local wind environment is recommended when evaluating the Lawson ratings. The criteria also include a distress rating, for safety assessment, which is based on occasional (once or twice per year) wind speeds<sup>1</sup>. In both cases, the wind speed used the larger of a mean or gust equivalent-mean (GEM) wind speed. The GEM is defined as the peak gust wind speed divided by 1.85; this is intended to account for locations where the gustiness is the dominant characteristic of the wind. Assessment using the Lawson criteria provides a similar classification as using once per annum gust criteria, which are the basis of the City of Sydney (2004) DCP, however provides significantly more information regarding the serviceability wind climate.

Table 2: Summary of Lawson criteria

<b>Comfort</b> (maximum of mean or gust equivalent mean (GEM <sup>+</sup> ) wind speed exceeded 5% of the time)	
< 4 m/s	Pedestrian Sitting (considered to be of long duration)
4 - 6 m/s	Pedestrian Standing (or sitting for a short time or exposure)
6 - 8 m/s	Pedestrian Walking
8 - 10 m/s	Business Walking (objective walking from A to B or for cycling)
> 10 m/s	Uncomfortable
<b>Distress</b> (maximum of mean or GEM wind speed exceeded 0.022% of the time)	
<15 m/s	not to be exceeded more than two times per year (or one time per season) for general access area
<20 m/s	not to be exceeded more than two times per year (or one time per season) where only able bodied people would be expected; frail or cyclists would not be expected

Note: <sup>+</sup> The gust equivalent mean (GEM) is the peak 3 s gust wind speed divided by 1.85.

<sup>1</sup> The rating of "uncomfortable" in Table 2 is the word of the acceptance criteria author and may not apply directly to any particular project. High wind areas are certainly not uncomfortable all the time, just on windier days. The word uncomfortable, in our understanding, refers to acceptability of the site by pedestrians for typical pedestrian use; i.e., on the windiest days, pedestrians will not find the areas "acceptable" for walking and will tend to avoid such areas if possible. The distress rating fail indicates some unspecified potential for causing injury to a less stable individual who might be blown over. The likelihood of such events is not well described in the literature and is likely to be strongly affected by individual differences, presence of water, blowing dust or particulates, and other variables in addition to the wind speed.

## 6. DATA ACQUISITION AND RESULTS

### 6.1 Velocities

Velocity profile measurements were taken to verify that appropriate boundary layer flow approaching the site was established and to determine the likely pedestrian level wind climate around the test site. Pedestrian wind measurements and analysis are described in Section 6.1.2. All velocity measurements were made with hot-film anemometers, which were calibrated against a Pitot-static tube in the wind tunnel. The calibration data were described by a King's Law relationship (King, 1914)

#### 6.1.1 Velocity Profiles

Mean velocity and turbulence intensity profiles for the boundary layer flow approaching the model are shown in Figure 3. Turbulence intensities are related to the local mean wind speed. These profiles have the form as defined in Standards Australia (2011) and are appropriate for the approach conditions.

#### 6.1.2 Pedestrian Winds

For this report wind speed measurements were recorded at 111 locations to evaluate pedestrian comfort in and around the project site, Figure 6 and Figure 8. The points tested close to the site were tested for configuration A, as described in Table 1 and Figure 7. Velocity measurements were made at the model scale equivalent of 1.5 to 2.1 m above the ground surface for 16 wind directions at 22.5° intervals. Locations were chosen to determine the degree of pedestrian comfort at the building corners where relatively severe conditions frequently are found, near building entrances, on adjacent pavements with heavy pedestrian traffic, and in open plaza areas. Seven comparative pedestrian positions located in a familiar or relatively undisturbed area near the project site were tested for reference purposes.

The hot-film signal was sampled for a period corresponding to one hour in prototype. All velocity data were digitally filtered to obtain the two to three second running mean wind speed at each point; this is the size of a gust affecting a pedestrian and used as the basis for the assessment criterion. These local wind speeds,  $U$ , were normalised by the tunnel reference velocity,  $U_{\text{ref}}$ . Mean and turbulence statistics were calculated and used to calculate the normalised effective peak gust using

$$\frac{U_{\text{pk}}}{U_{\text{ref}}} = \frac{U + 3 \cdot U_{\text{rms}}}{U_{\text{ref}}}.$$



Figure 6: Remote pedestrian wind speed measurement locations with comfort/distress ratings



Figure 7: Turntable layout for Configuration A



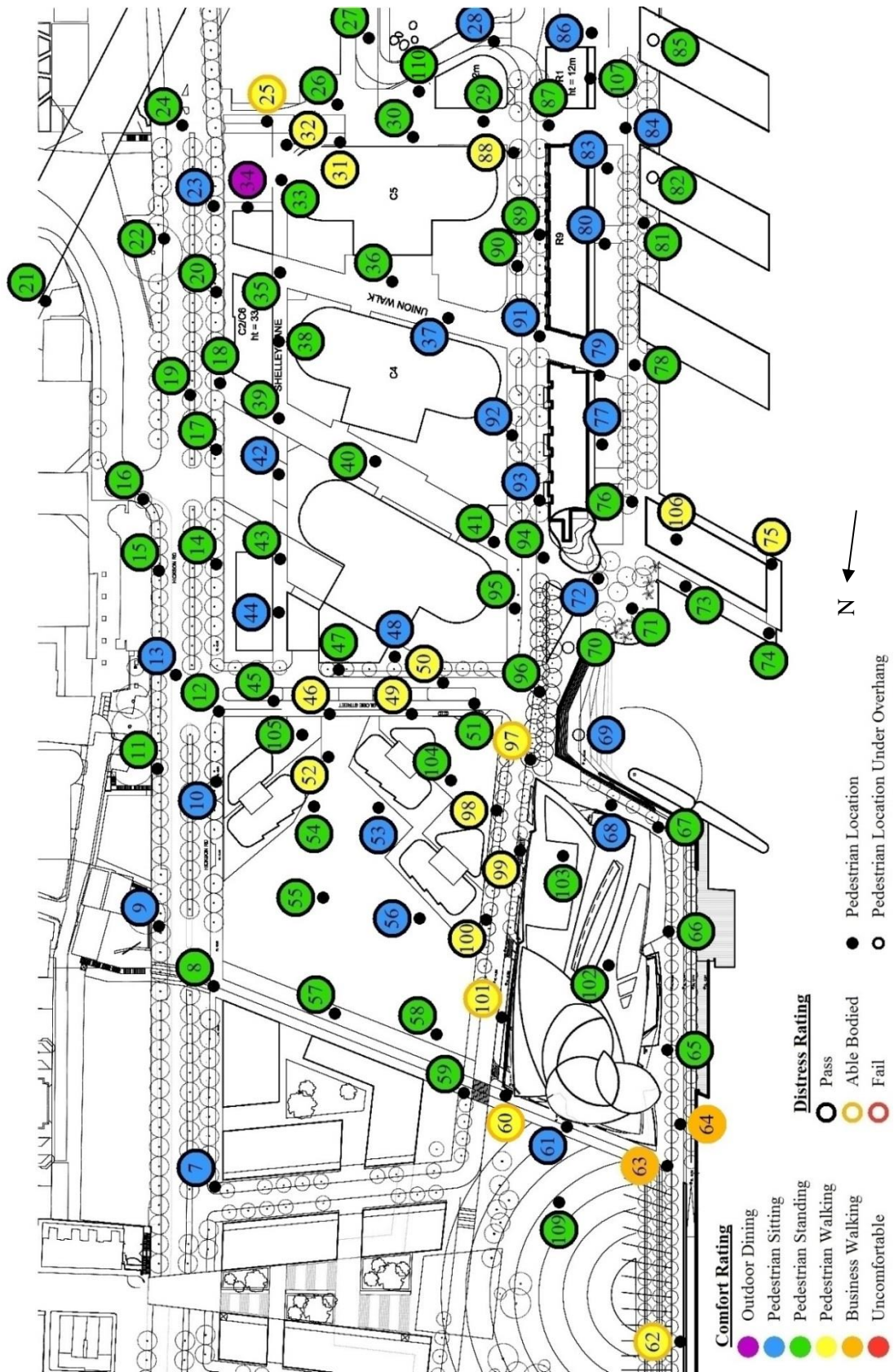


Figure 8: Pedestrian wind speed measurement locations – annual

The mean and gust equivalent mean velocities relative to the free stream wind tunnel reference velocity at a full-scale elevation of 200 m are plotted in polar form in Appendix 2. The graphs show velocity magnitude and the approach wind direction for which that velocity was measured. The polar plots aid in visualisation of the effects of the nearby structures or topography, the relative significance of various wind azimuths, and whether the mean or gust is of greater importance.

To enable a quantitative assessment of the wind environment, the wind tunnel data were combined with wind frequency and direction information measured by the Bureau of Meteorology at a standard height of 10 m at Sydney Airport from 1974 to 2008, Figure 9. From these data, directional criterion lines for the Lawson rating wind speeds have been calculated and included on the polar plots in Appendix 2; this gives additional information regarding directional sensitivity at each location.

The Lawson criteria consider the integration of the velocity measurements with local wind climate statistical data summarized in Figure 9 to rate each location. From the cumulative wind speed distributions for each location, the percentage of time each of the Lawson comfort rating wind speeds are exceeded are presented in tabular form under the polar plots in Appendix 2. In addition to the rating wind speeds, the percentage of time that 2 m/s is exceeded is also reported. This has been provided as it has found that the limiting wind speed for long-term stationary activities such as fine outdoor dining should be about 2 to 2.5 m/s rather than 4 m/s. Interpretation of these wind levels can be aided by the description of the effects of wind of various magnitudes on people. The earliest quantitative description of wind effects was established by Sir Francis Beaufort in 1806, for use at sea; the Beaufort scale is reproduced in Table 3 including qualitative descriptions of wind effects.

The tables in Appendix 2 also give the wind speed exceeded 5% and 0.022% for direct comparison with the Lawson criteria and the associated Lawson ratings for both mean and GEM wind speeds. A colour coded summary assessment of pedestrian comfort and safety with respect to the Lawson criteria is presented in Figure 6 and Figure 8 and for each test location. Because some pedestrian wind measurement positions are purposely chosen at sites where large velocities of small spatial extent may exist, the general wind environment about the structure may be less severe than one might infer from an analysis only of Figure 6 and Figure 8. The implications of the results are discussed in Section 7.

A more detailed seasonal assessment of the wind climate around the site has been prepared for this project. Similar results to those presented in Figure 8 and Appendix 2 are reproduced for Autumn to Summer in Figure 11 to Figure 14 and Appendices 3 to 6 respectively.

## Sydney Airport

1974-2008  
All hours

Calm 14.1 %

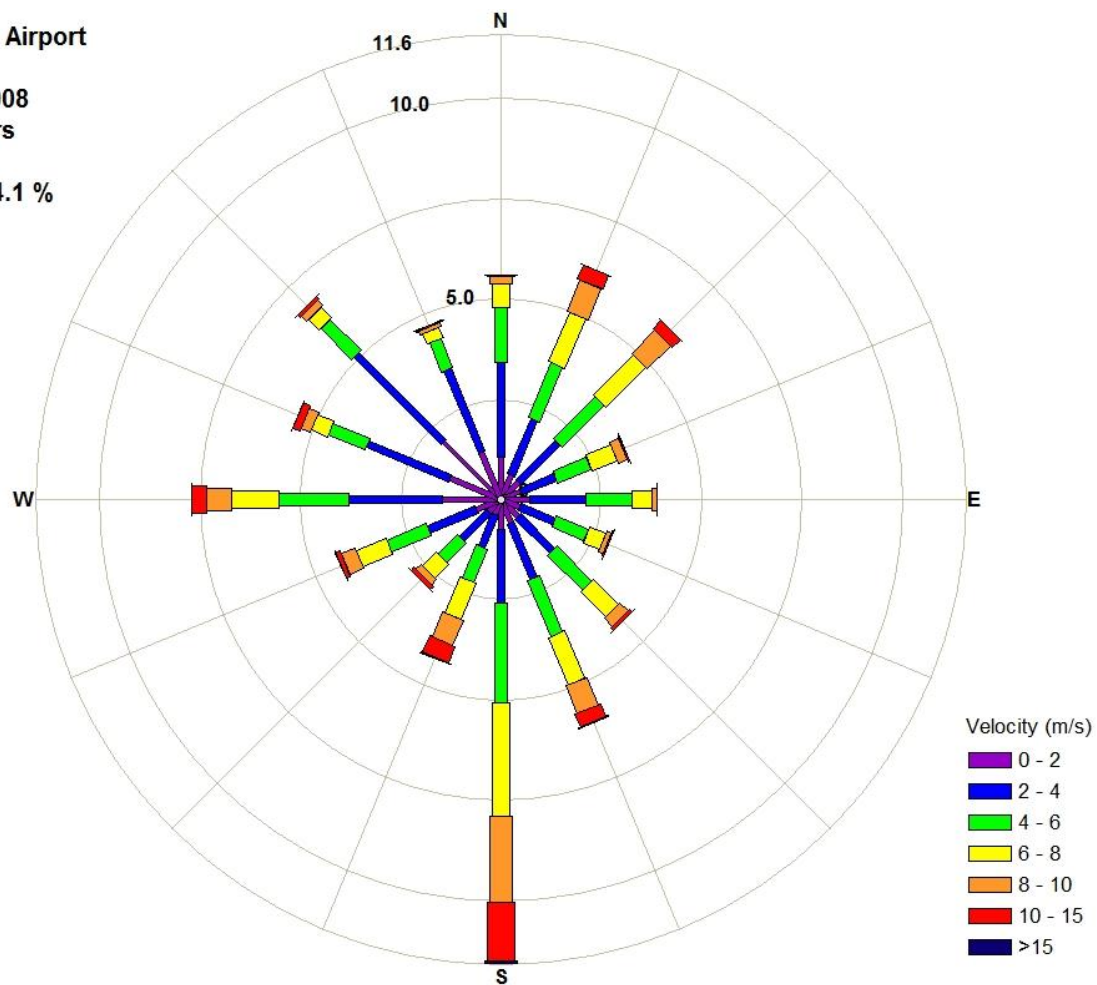


Figure 9: Wind rose of direction and speed for Sydney Airport

Description	Beaufort Number	Speed (m/s)	Effects
Calm, light air	0, 1	0–2	Calm, no noticeable wind.
Light breeze	2	2–3	Wind felt on face.
Gentle breeze	3	3–5	Wind extends light flag. Hair is disturbed. Clothing flaps
Moderate breeze	4	5–8	Raises dust, dry soil, and loose paper. Hair disarranged.
Fresh breeze	5	8–11	Force of wind felt on body. Drifting snow becomes airborne. Limit of agreeable wind on land.
Strong breeze	6	11–14	Umbrellas used with difficulty. Hair blown straight. Difficult to walk steadily. Wind noise on ears unpleasant. Windborne snow above head height (blizzard).
Near gale	7	14–17	Inconvenience felt when walking.
Gale	8	17–21	Generally impedes progress. Great difficulty with balance in gusts.
Strong gale	9	21–24	People blown over by gusts.

Table 3: Summary of wind effects on people, Penwarden (1973)



## 7. DISCUSSION

The wind climatology chart of Figure 9 indicates that the most frequent strong winds are from the south, and to a lesser extent, the west and north-east. The locations tested around the development site are susceptible to winds from different directions, depending on the relative location of the point tested to the geometry of development. However, in general terms the winds from the north-east, south, and west quadrants had the most pronounced effect on the site as higher level winds were brought to street level as downwash, channelled between the large buildings, and across Darling Harbour. The influence of wind direction on the suitability of a location for an intended purpose can be ascertained from the graphs in Appendix 2.

The primary conclusions of the pedestrian study can be understood by reviewing the colour coded images of Figure 6 and Figure 8, which depict the locations selected for investigation of pedestrian wind comfort around the site along with the Lawson criteria rating for both comfort and distress. It should be noted that the comfort criteria are based on 95% of the time that the mean wind speed is below specific levels. Note that testing was performed with and aerodynamic representation of planned trees on the streets and waterfront. The central colour indicates the comfort rating for the location, and the colour of the outer ring indicates whether the location passes the distress criterion. Mitigation measures are likely to be required for orange and red locations, and may be necessary for other locations depending on the intended use of the space. Although conditions may be classified acceptable there may be certain wind directions that cause regular strong events, these can be determined by an inspection of the plots in Appendix 2.

It is evident from Figure 8 that except for the area to the north-west of the hotel, the wind comfort environment around the proposed development is generally classified as satisfactory for pedestrian sitting, standing, or walking. It is understood that the locations with pedestrian or business walking are intended to be used for pedestrian movement corridors rather than recreational spaces. During detailed design, strategies are available to further improve the local wind conditions. The general wind amenity of the site is similar to wind conditions measured at locations 1 to 6, Figure 6, which are located in well-known areas remote from the site. These remote locations give a general indication of the surrounding wind climate and can be used for comparison with the wind environment in and around the development. From an inspection of the directional plots in Appendix 2, it is evident that at location 2 on the junction of Gas Lane and Kent Street, it is the winds from the north-east and north-west quadrants that produce the strong wind events. Locations 3 and 4 will be influenced by the scale of the Barangaroo South development with wind conditions being slightly improved compared with existing conditions, due to the additional shielding provided by the large buildings. In general, the modelled wind conditions on the Barangaroo South site are not dissimilar to existing conditions in

surrounding areas, and the proposed development is expected to improve wind conditions for many existing surrounding locations.

In general, all locations south of Globe Street are suitable for at least pedestrian walking, with some locations suitable for pedestrian standing and sitting. All locations tested in this southern zone of the Barangaroo South site pass the safety criterion, with the exception of Location 25 to the south-west of building C5. The results in Figure 8 were taken without any wind mitigation device. This localised exceedance has been mitigated with a design of a loggia structure to the south-east of Building C5. The final results of this localised testing are presented in Figure 10 showing that the exceedance of the safety criterion has been mitigated and the comfort wind conditions improved.

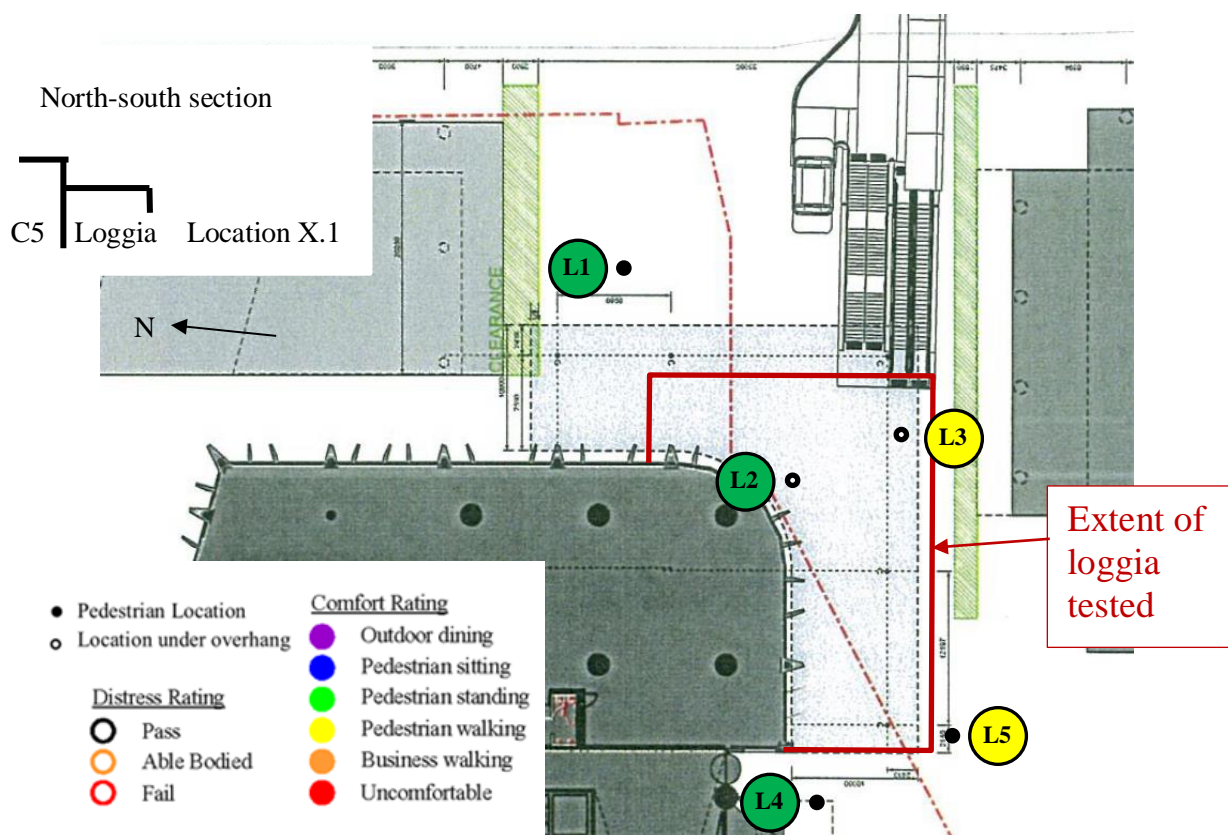


Figure 10: Pedestrian wind conditions with loggia

The relocation of the hotel from the edge of Globe Harbour, Figure 6, to a more northern, inland location, Figure 8, has slightly worsened wind conditions along the Waterfront Promenade due to the removal of the blockage, but improved due to the indicative landscaping resulting in a similar wind environment. Location 75 is located close to the edge of the water and is classified as suitable for pedestrian walking, with windy conditions expected when winds from the south and north are channelled along the front. Wind conditions are calmer closer to the buildings. In general, data for the locations south of Globe Street indicate that if outdoor dining or café-style activities are to be implemented, additional temporary or permanent localised mitigation measures may be implemented

to improve the wind amenity. If appropriate, these will be investigated and included in the detailed applications for the approval of the individual buildings.

Locations 45 to 51 are on Globe Street, Figure 8. Locations along the south side of Globe Street remote from the north-west corner of Building C3 are classified as suitable for pedestrian sitting or standing, with the north side of the road classified as suitable for pedestrian walking. The variation in wind speed on different sides of Globe Street is due to channelling of winds from the south-west quadrant between Building C3, the hotel, and the R4 residential towers. All locations are fit for their intended use as a pedestrian thoroughfare and pass the distress criterion. The wind conditions could be further improved with implementation of various mitigation strategies as required during detailed design.

The northern section of Lime Street between the hotel and Building R4A experiences instances of very strong winds due to the channelling of winds between the towers. Location 96 is suitable for pedestrian standing and passes the distress criterion, but will be windy for winds from the north-east. Locations 97 to 101 are classified for pedestrian walking from a comfort perspective and pass the distress criterion except for Location 97 and 101, which are classified as suitable for able bodied pedestrians. Winds from the north-east quadrant are channelled and accelerated down the passage between the hotel podium and Building R4A, with winds from the south-west undergoing a similar acceleration process. These wind conditions are generated by strong downwash flows induced by the hotel and R4A towers and appropriate mitigation strategies can be addressed during detailed design to improve the level of classification. It is understood that these areas are intended to be used as pedestrian movement corridors rather than where pedestrians would relax. These wind issues should be carefully considered during detailed design for the intended use of the space. Location 59 is further to the north on the eastern side of Lime Street and is classified as suitable for standing and passes the distress criterion.

Wind conditions at Locations 65 to 85 along the pedestrian foreshore are generally classified as suitable for pedestrian sitting or standing.

Locations 62 to 64 are located around the north-west corner of the hotel to the north-west of the site. This area is the most exposed to prevailing wind directions and the windiest part of the Barangaroo South site. These locations are classified as suitable for able-bodied persons from a distress perspective. With reference to Appendix 2, these exceedances are caused for a range of wind directions from the south-west and north-east quadrants and would satisfy the pedestrian walking level wind speed for over 92% of the time. These locations are exposed to downwash from the hotel tower accelerating around the north-west corner, and winds from the south being accelerated along the west façade of the tall commercial buildings before interacting with the hotel tower. There are local

mitigation strategies that could be adopted to improve the wind conditions in this area and would be investigated during detailed design.

Locations 102 and 103, situated to the southern end of the hotel podium roof, are more amenable than locations on Lime Street, due to its elevation and setback distance. This location is similarly classified as suitable for pedestrian standing from a comfort perspective and passes the distress criterion.

Locations 53 to 59 are located to the north of residential towers R4 and R5 and are classified as suitable for pedestrian sitting or standing and pass the distress criterion. Local calmer conditions are experienced close to the tower podium Locations 53 and 56. This area of lower wind speeds is due to the massing of the three tall towers to the south and the hotel to the west creating an area of slow moving flow with consequently higher pressure, which escapes through gaps between the large buildings.

## 8. CONCLUSIONS

A wind tunnel study of the proposed Barangaroo South Concept Plan Mod 8 development, to be located in Sydney, Australia, was conducted to assess pedestrian wind comfort.

Measurements of winds likely to be experienced by pedestrians were made with a hot-film anemometer at 111 locations in various configurations for 16 wind directions each. These points were tested in the proposed Barangaroo South Concept Plan Mod 8 configuration. The measurements were combined with wind statistics to produce results of wind speed versus the percentage of time that wind speed is exceeded for each location.

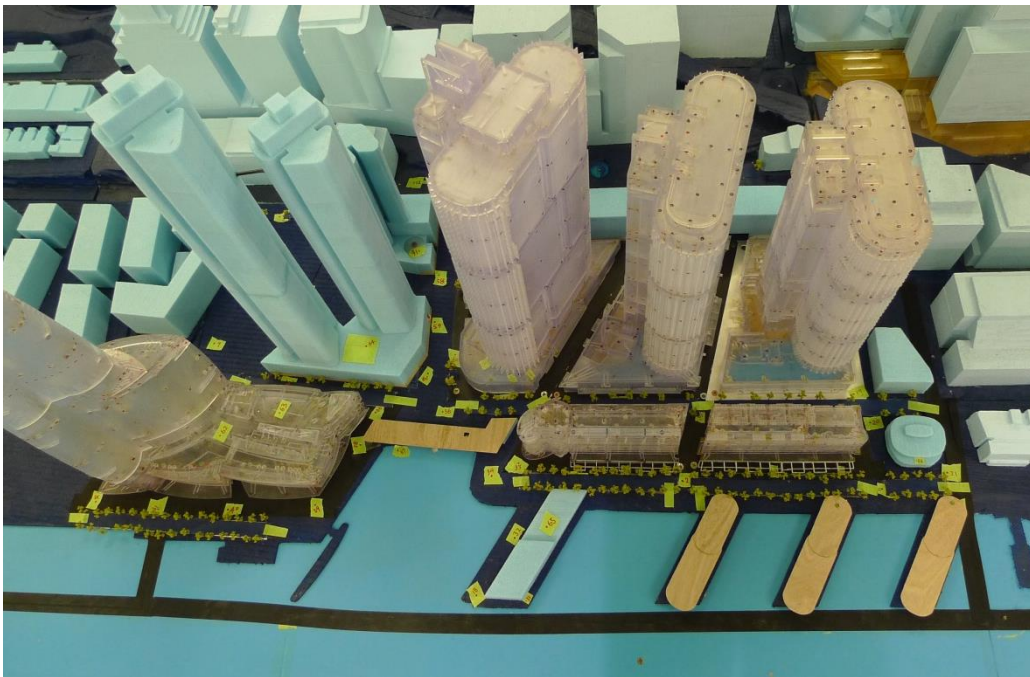
Wind conditions around the site were generally found to be acceptable for pedestrian standing type activities, with a number of locations classified for pedestrian sitting, walking, and business walking activities. The comfort criteria are based on 95% of the time that the mean wind speed is below specific levels. The wind conditions measured are generally similar to those in the existing surrounding areas and results from previous Concept Plan tests. The building massing and layout plan generally provides suitable wind conditions for the intended use of the outdoor spaces between buildings. The inclusion of the Barangaroo South development is expected to generally improve the wind conditions in the area to the east of the site, due to shielding effects and changing the flow pattern through the city. Similar to the existing Concept Plan, no location failed the safety criterion, and a few locations were found to exceed the safety criterion for general pedestrians. It is anticipated that these exceedances can be mitigated during detailed design investigations; similar to the area to the south-east of the site. The comfort wind conditions in other areas around the site could be improved during detailed design with local amelioration techniques.

## 9. REFERENCES

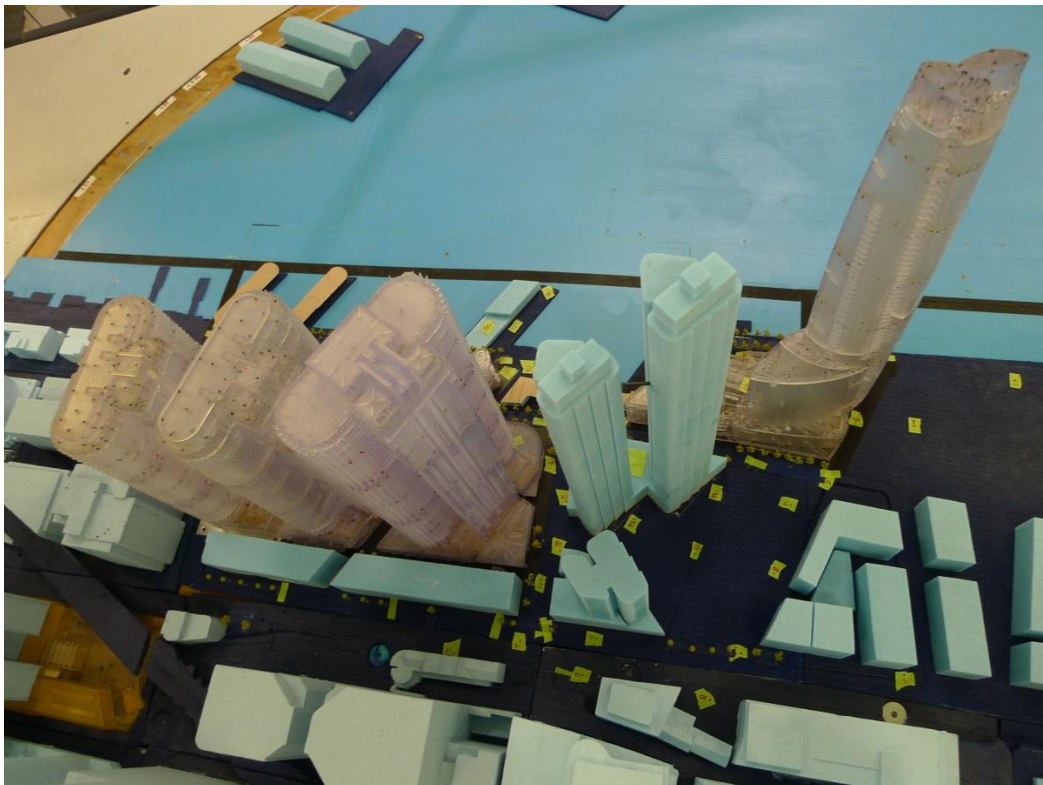
- American Society of Civil Engineers (2006), *Minimum Design Loads for Buildings and Other Structures* (ASCE 7-05).
- American Society of Civil Engineers (1999), *Wind Tunnel Model Studies of Buildings and Structures* (ASCE Manual of Practice Number 67).
- Australasian Wind Engineering Society (2001), *Wind Engineering Studies of Buildings* (AWES-QAM-1-2001).
- Cermak, J.E. (1971), "Laboratory Simulation of the Atmospheric Boundary Layer," *AIAA Jl.*, Vol. 9, September.
- Cermak, J.E. (1975), "Applications of Fluid Mechanics to Wind Engineering," A Freeman Scholar Lecture, *ASME Journal of Fluids Engineering*, Vol. 97, No. 1, March.
- Cermak, J.E. (1976), "Aerodynamics of Buildings," *Annual Review of Fluid Mechanics*, Vol. 8, pp. 75 – 106.
- King, C.V. (1914), "On the Convection of Heat From Small Cylinders in a Stream of Fluid," *Philosophical Transactions of the Royal Society*, London, Vol. A214, p. 373.
- Lawson, T.V. (1990), "The Determination of the Wind Environment of a Building Complex before Construction" Department of Aerospace Engineering, University of Bristol, *Report Number TVL 9025*.
- Penwarden, A.D. (1973), "Acceptable wind speeds in towns", *Building Science*, Vol.8, pp. 259-267.
- Standards Australia (2011), *Australian/New Zealand Standard, Structural Design Actions, Part 2: Wind Actions* (AS/NZS1170.2:2011).



### Appendix 1: Additional Photographs of the CPP Wind Tunnel Model



Configuration A from the west

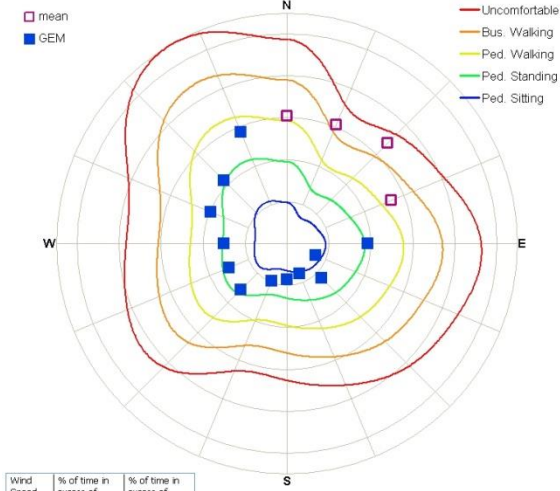


Configuration A viewed from the east



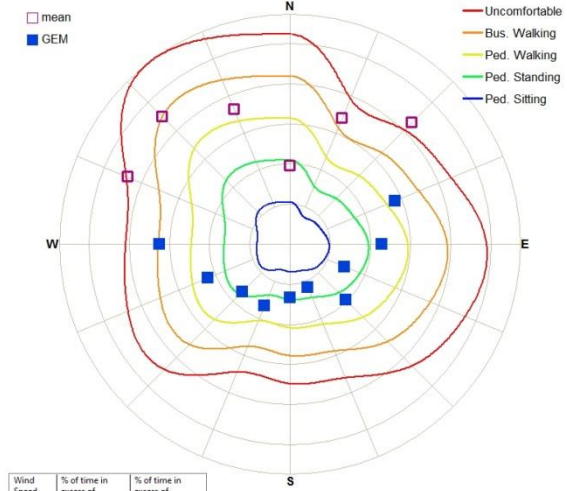
## Appendix 2: Directional Wind Results, Annual

### LOCATION 1



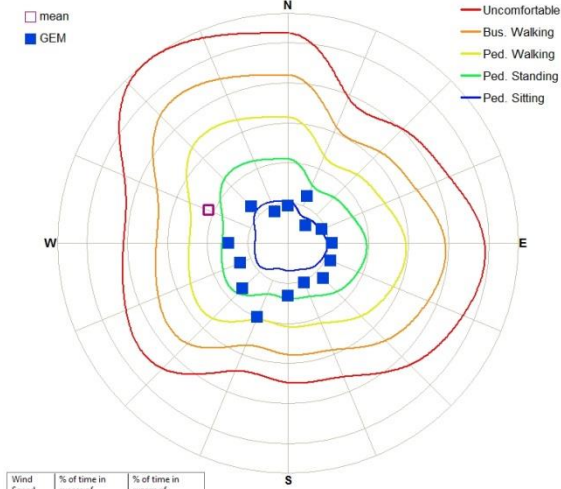
Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	29.4	37.3
4.0	11.5	10.9
6.0	4.9	3.2
8.0	1.5	0.5
10.0	0.3	0.1
5.9	5.0	Ped Standing
12.1	0.022	Pass
5.3	Ped Standing	5.0
10.5	Pass	0.022

### LOCATION 2



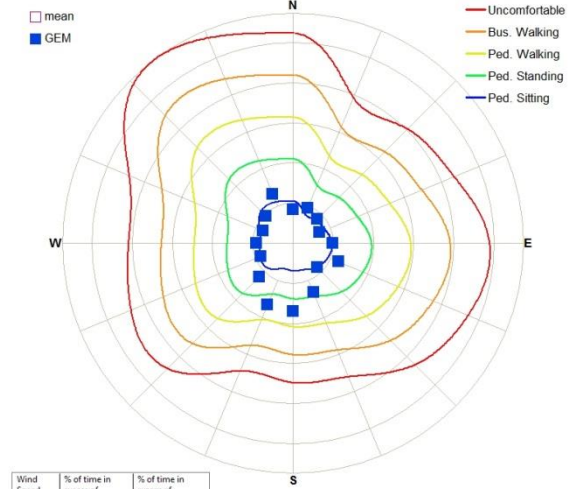
Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	48.7	53.6
4.0	19.4	19.3
6.0	8.7	7.7
8.0	3.8	2.7
10.0	1.3	0.7
7.3	5.0	Ped Walking
16.9	0.022	Able Body
6.8	Ped Walking	5.0
14.8	Pass	0.022

### LOCATION 3



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	16.4	23.7
4.0	1.8	2.6
6.0	0.3	0.3
8.0	0.0	0.0
10.0	0.0	0.0
3.0	5.0	Ped Sitting
8.3	0.022	Pass
3.4	Ped Sitting	5.0
8.1	Pass	0.022

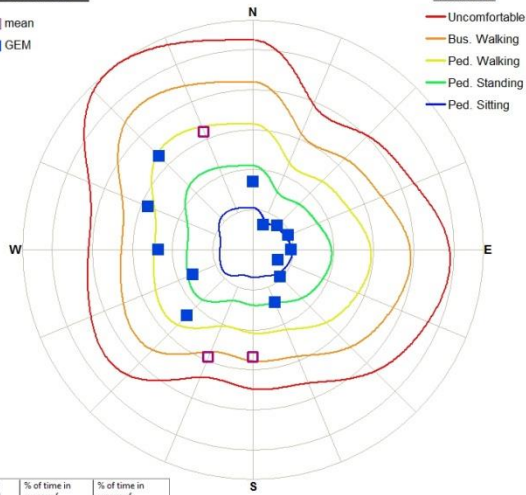
### LOCATION 4



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	11.7	18.7
4.0	0.8	2.7
6.0	0.0	0.1
8.0	0.0	0.0
10.0	0.0	0.0
2.8	5.0	Ped Sitting
6.0	0.022	Pass
3.4	Ped Sitting	5.0
7.3	Pass	0.022

### LOCATION 5

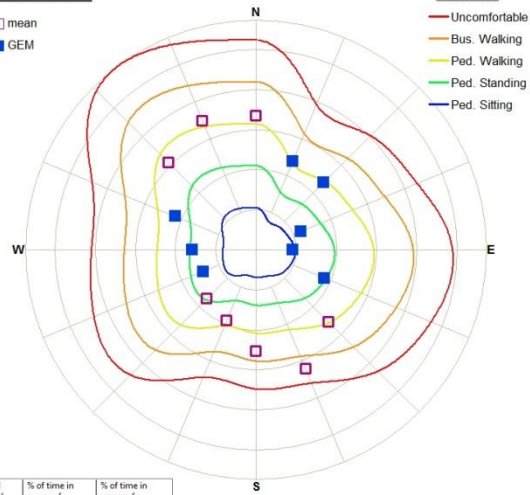
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	32.2	38.2
4.0	12.6	13.8
6.0	4.5	4.1
8.0	1.1	0.8
10.0	0.2	0.1
5.8	5.0	Ped Standing
12.7	0.022	Pass
5.6	Ped Standing	5.0
12.1	Pass	0.022

### LOCATION 6

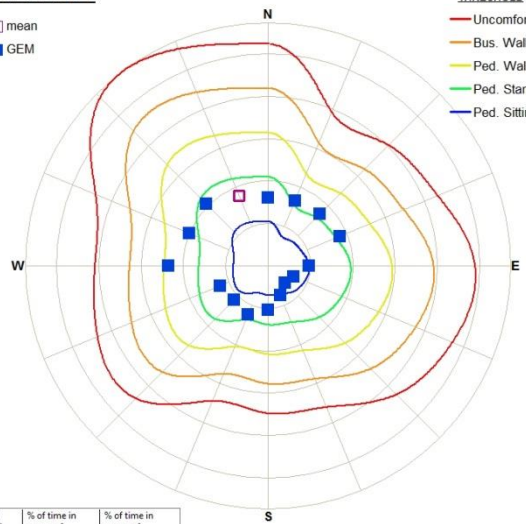
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	48.1	49.1
4.0	19.6	16.7
6.0	5.7	3.2
8.0	1.2	0.4
10.0	0.2	0.0
6.1	5.0	Ped Walking
13.2	0.022	Pass
5.5	Ped Standing	5.0
10.8	Pass	0.022

### LOCATION 7

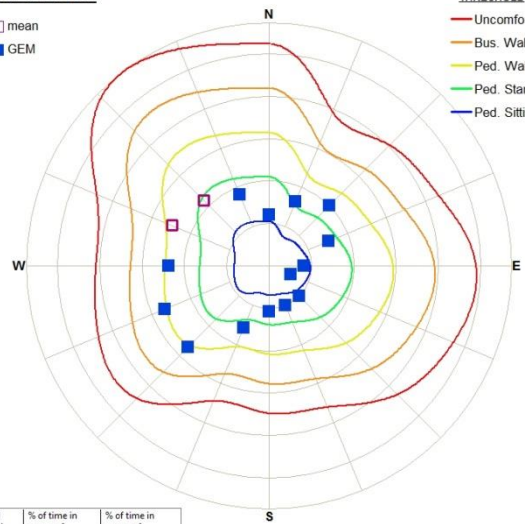
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	19.8	28.1
4.0	1.9	4.2
6.0	0.1	0.5
8.0	0.0	0.1
10.0	0.0	0.0
3.2	5.0	Ped Sitting
7.0	0.022	Pass
3.8	Ped Sitting	5.0
8.7	Pass	0.022

### LOCATION 8

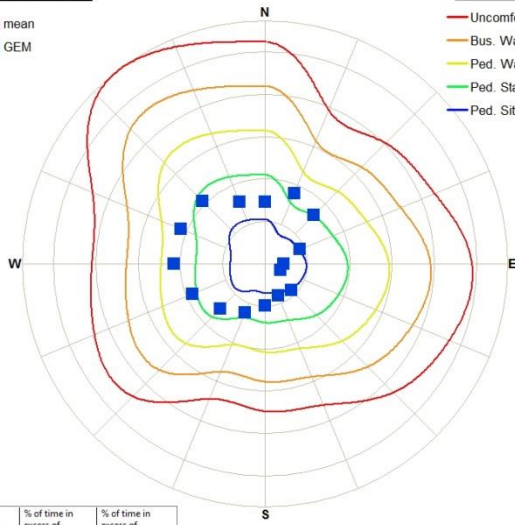
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	25.3	34.4
4.0	5.0	7.4
6.0	0.8	1.2
8.0	0.1	0.2
10.0	0.0	0.0
4.0	5.0	Ped Sitting
9.4	0.022	Pass
4.4	Ped Standing	5.0
9.6	Pass	0.022

### LOCATION 9

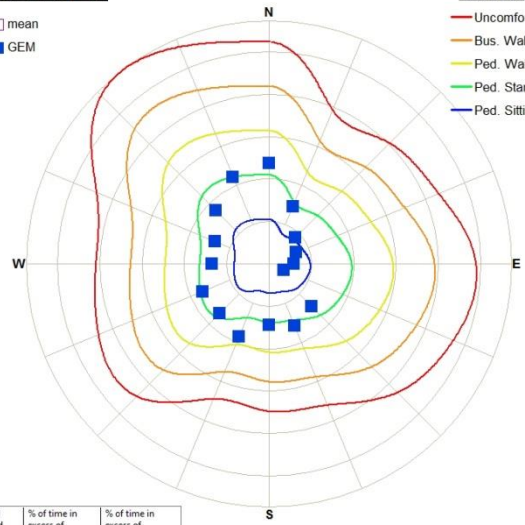
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	18.6	27.5
4.0	2.1	4.1
6.0	0.1	0.5
8.0	0.0	0.0
10.0	0.0	0.0
3.3	5.0	Ped Sitting
6.8	0.022	Pass
3.8	Ped Sitting	5.0
8.5	Pass	0.022

### LOCATION 10

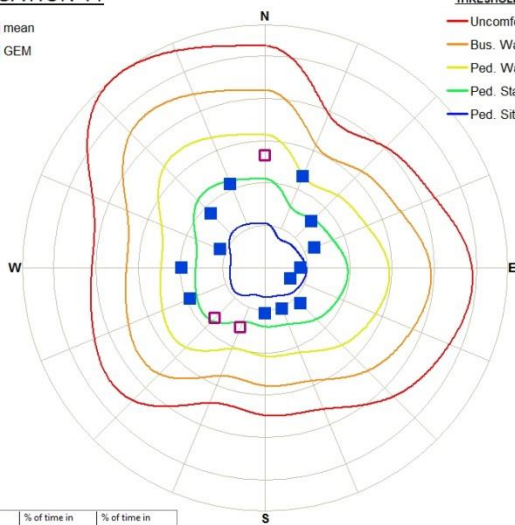
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	22.1	31.4
4.0	1.6	4.2
6.0	0.1	0.3
8.0	0.0	0.0
10.0	0.0	0.0
3.2	5.0	Ped Sitting
6.9	0.022	Pass
3.8	Ped Sitting	5.0
7.9	Pass	0.022

### LOCATION 11

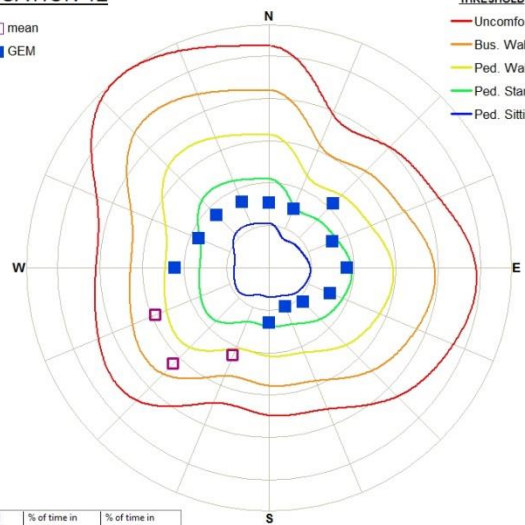
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	23.4	32.9
4.0	3.1	5.4
6.0	0.2	0.6
8.0	0.0	0.0
10.0	0.0	0.0
3.5	5.0	Ped Sitting
7.5	0.022	Pass
4.0	Ped Standing	5.0
8.0	Pass	0.022

### LOCATION 12

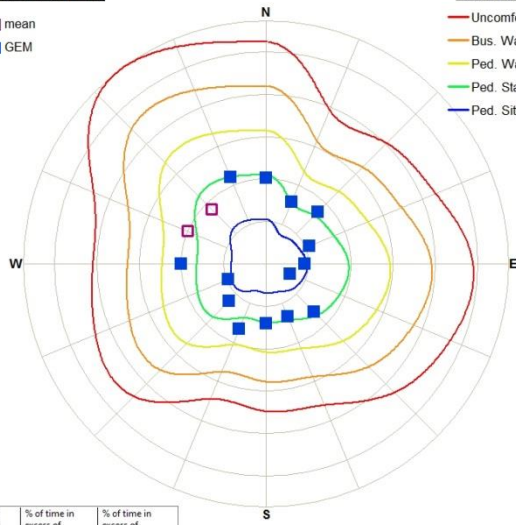
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	28.3	38.6
4.0	6.1	8.5
6.0	1.3	1.4
8.0	0.2	0.2
10.0	0.0	0.0
4.2	5.0	Ped Standing
10.6	0.022	Pass
4.6	Ped Standing	5.0
10.0	Pass	0.022

### LOCATION 13

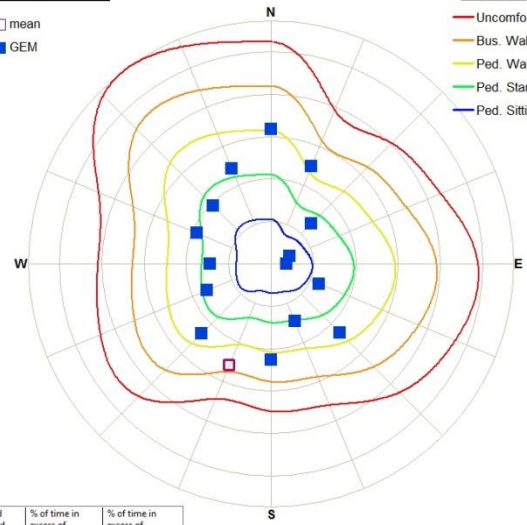
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	27.8	34.6
4.0	3.0	4.8
6.0	0.3	0.4
8.0	0.0	0.0
10.0	0.0	0.0
3.5	5.0	Ped Sitting
7.9	0.022	Pass
3.9	Ped Sitting	5.0
7.9	Pass	0.022

### LOCATION 14

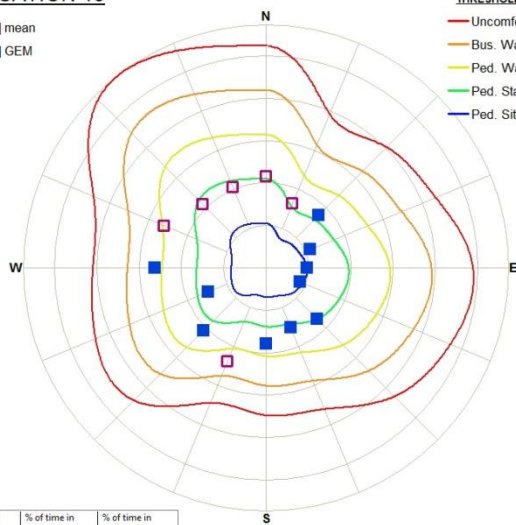
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	37.3	42.7
4.0	10.4	13.9
6.0	1.9	2.8
8.0	0.2	0.3
10.0	0.0	0.0
4.9	5.0	Ped Standing
10.5	0.022	Pass
5.3	Ped Standing	5.0
10.4	Pass	0.022

### LOCATION 15

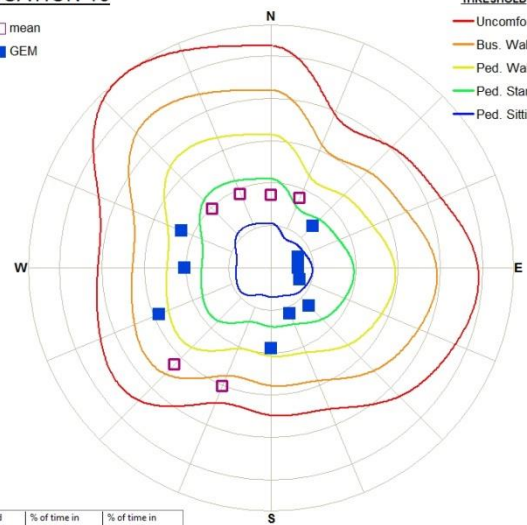
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	37.9	42.6
4.0	7.3	10.2
6.0	1.1	1.7
8.0	0.2	0.3
10.0	0.0	0.0
4.4	5.0	Ped Standing
10.3	0.022	Pass
4.8	Ped Standing	5.0
10.4	Pass	0.022

### LOCATION 16

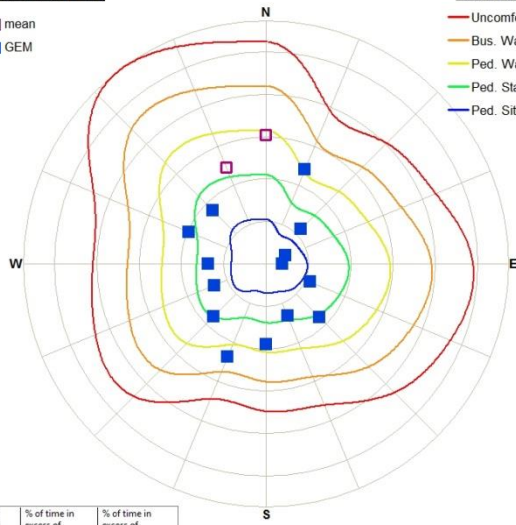
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	34.6	37.6
4.0	8.6	10.4
6.0	2.4	2.1
8.0	0.6	0.4
10.0	0.1	0.1
4.8	5.0	Ped Standing
12.4	0.022	Pass
4.9	Ped Standing	5.0
11.1	Pass	0.022

### LOCATION 17

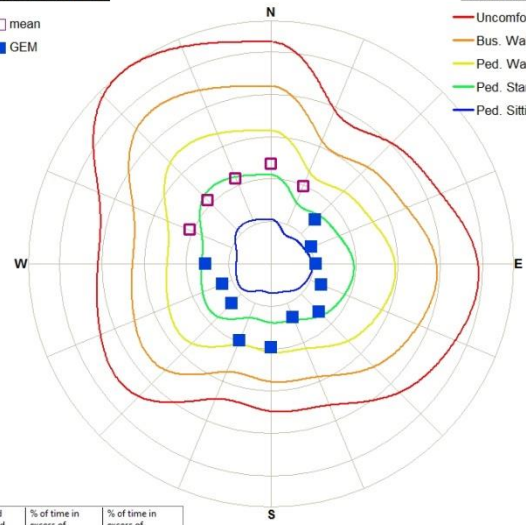
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	28.5	38.0
4.0	5.5	9.8
6.0	0.9	1.5
8.0	0.1	0.1
10.0	0.0	0.0
4.1	5.0	Ped Standing
8.8	0.022	Pass
4.8	Ped Standing	5.0
9.7	Pass	0.022

### LOCATION 18

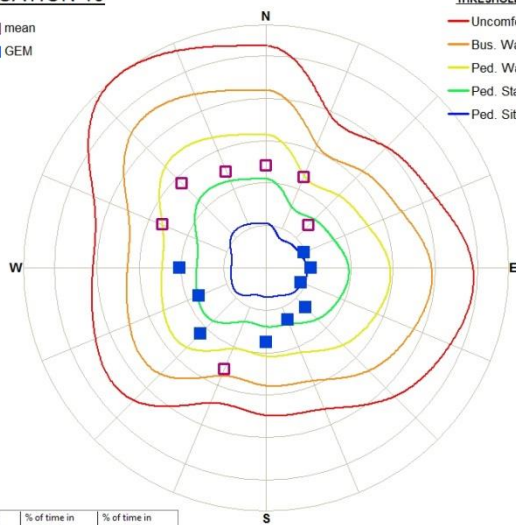
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	31.5	36.3
4.0	4.2	7.2
6.0	0.4	0.7
8.0	0.0	0.0
10.0	0.0	0.0
3.8	5.0	Ped Sitting
8.1	0.022	Pass
4.3	Ped Standing	5.0
8.7	Pass	0.022

### LOCATION 19

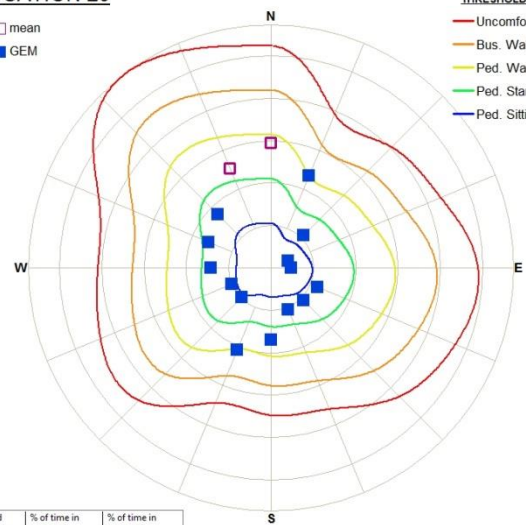
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	40.4	40.7
4.0	9.3	9.3
6.0	2.0	1.4
8.0	0.3	0.2
10.0	0.1	0.0
4.8	5.0	Ped Standing
11.0	0.022	Pass
4.7	Ped Standing	5.0
10.2	Pass	0.022

### LOCATION 20

□ mean  
■ GEM

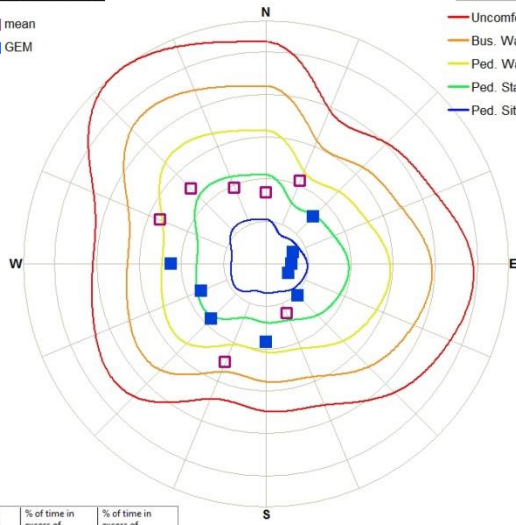


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	21.1	32.0
4.0	3.6	7.1
6.0	0.5	0.9
8.0	0.0	0.1
10.0	0.0	0.0
3.5	5.0	Ped Sitting
8.4	0.022	Pass
4.4	Ped Standing	5.0
8.8	Pass	0.022



### LOCATION 21

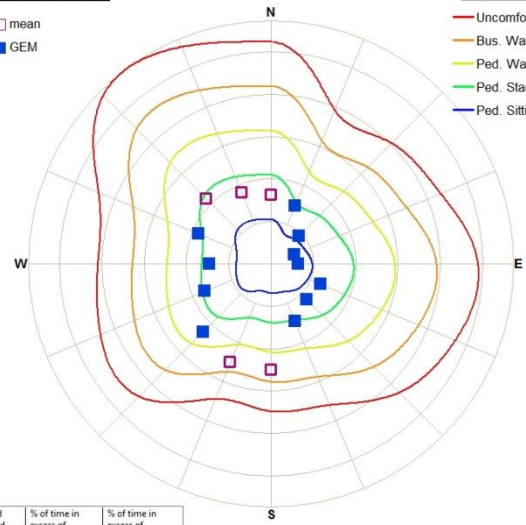
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	37.2	36.9
4.0	9.2	8.8
6.0	1.7	1.4
8.0	0.3	0.2
10.0	0.1	0.0
4.7	5.0	Ped Standing
10.8	0.022	Pass
4.6	Ped Standing	5.0
10.1	Pass	0.022

### LOCATION 22

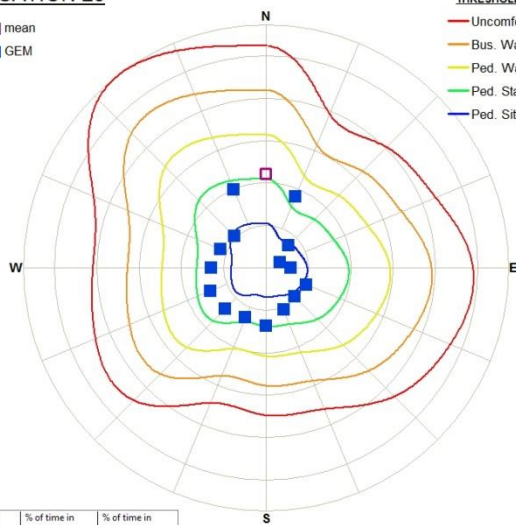
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	30.5	34.0
4.0	9.6	9.6
6.0	2.5	2.1
8.0	0.4	0.3
10.0	0.1	0.0
5.0	5.0	Ped Standing
11.0	0.022	Pass
4.9	Ped Standing	5.0
10.5	Pass	0.022

### LOCATION 23

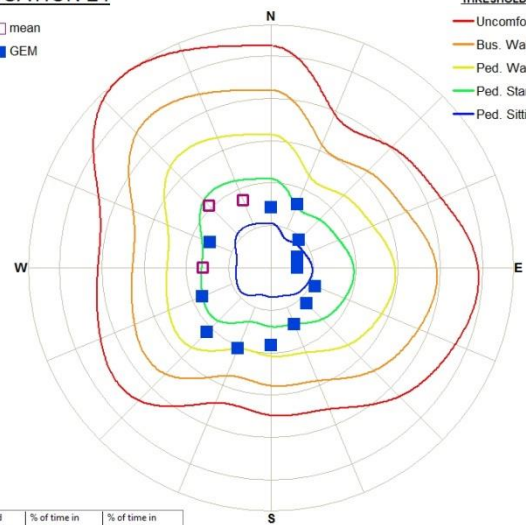
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	19.1	24.6
4.0	1.3	2.3
6.0	0.0	0.1
8.0	0.0	0.0
10.0	0.0	0.0
3.1	5.0	Ped Sitting
6.2	0.022	Pass
3.4	Ped Sitting	5.0
6.6	Pass	0.022

### LOCATION 24

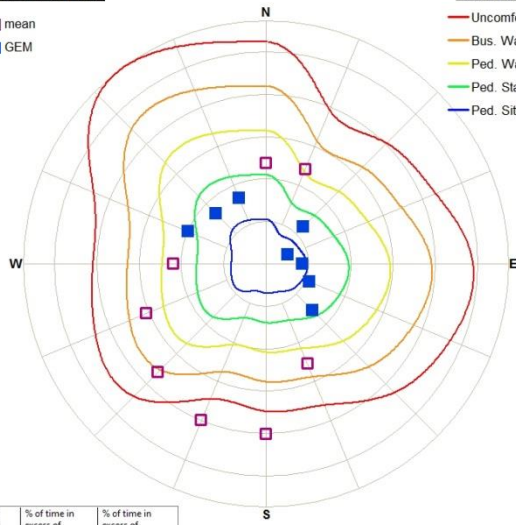
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	26.8	31.9
4.0	3.9	6.2
6.0	0.3	0.6
8.0	0.0	0.1
10.0	0.0	0.0
3.7	5.0	Ped Sitting
8.3	0.022	Pass
4.2	Ped Standing	5.0
8.6	Pass	0.022

### LOCATION 25

□ mean  
■ GEM

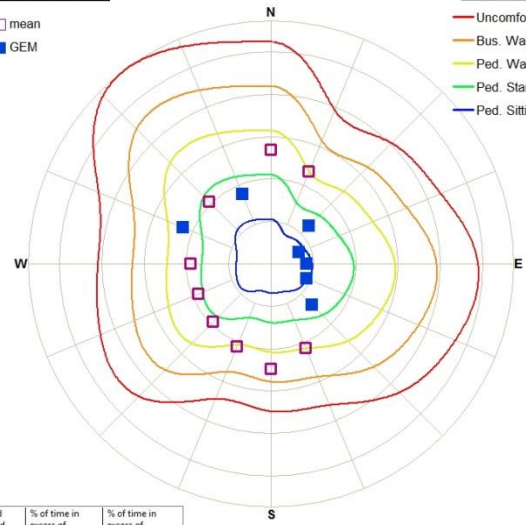


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	42.7	43.2
4.0	22.0	18.6
6.0	11.3	7.4
8.0	5.2	2.3
10.0	2.0	0.6
8.0	5.0	Ped Walking
17.5	0.022	Able Body
6.6	Ped Walking	5.0
14.2	Pass	0.022

### LOCATION 26

□ mean  
■ GEM

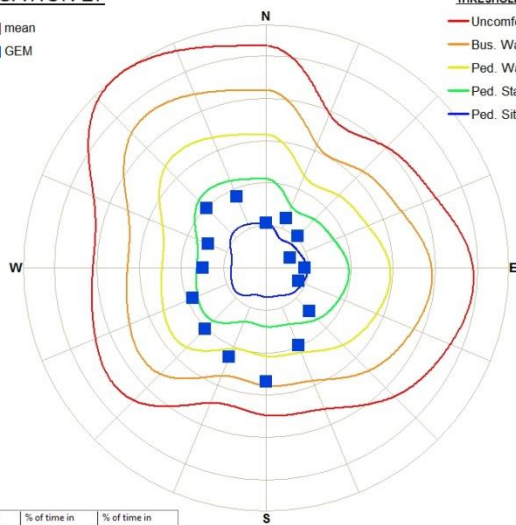
**THRESHOLD**  
— Uncomfortable  
— Bus. Walking  
— Ped. Walking  
— Ped. Standing  
— Ped. Sitting



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	40.2	40.0
4.0	14.3	11.5
6.0	3.0	1.7
8.0	0.3	0.2
10.0	0.0	0.0
5.4	5.0	Ped Standing
10.3	0.022	Pass
4.9	Ped Standing	5.0
9.5	Pass	0.022

### LOCATION 27

□ mean  
■ GEM

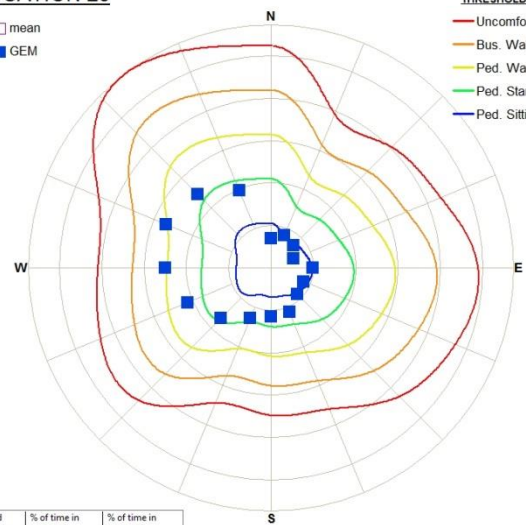


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	28.0	34.2
4.0	7.4	11.3
6.0	1.3	3.0
8.0	0.1	0.6
10.0	0.0	0.1
4.5	5.0	Ped Standing
9.4	0.022	Pass
5.2	Ped Standing	5.0
10.9	Pass	0.022

### LOCATION 28

□ mean  
■ GEM

**THRESHOLD**  
— Uncomfortable  
— Bus. Walking  
— Ped. Walking  
— Ped. Standing  
— Ped. Sitting

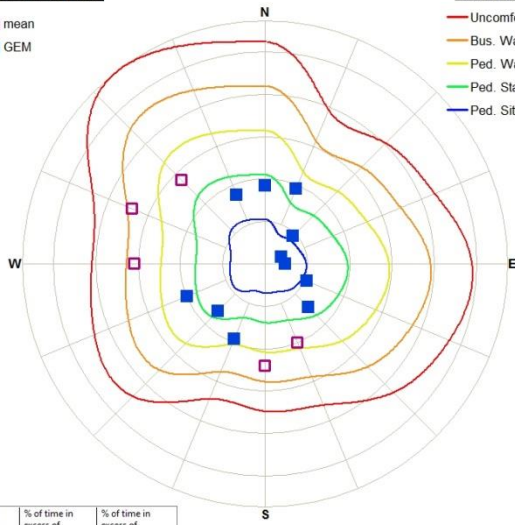


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	16.1	26.6
4.0	3.5	4.9
6.0	0.7	1.1
8.0	0.1	0.2
10.0	0.0	0.0
3.5	5.0	Ped Sitting
9.5	0.022	Pass
3.9	Ped Sitting	5.0
10.3	Pass	0.022



### LOCATION 29

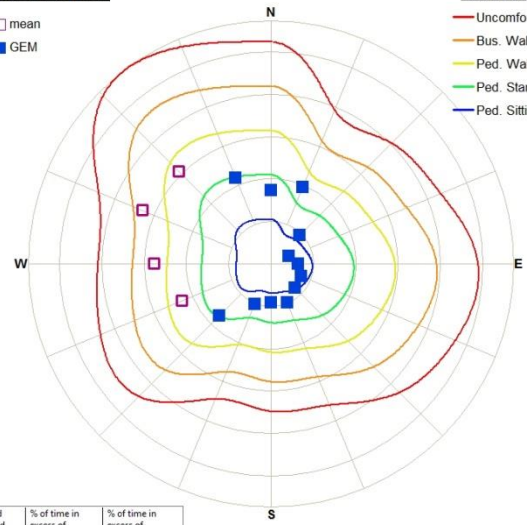
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	38.4	41.6
4.0	13.8	13.3
6.0	3.8	2.8
8.0	0.9	0.5
10.0	0.2	0.1
5.5	5.0	Ped Standing
12.8	0.022	Pass
5.2	Ped Standing	5.0
11.4	Pass	0.022

### LOCATION 30

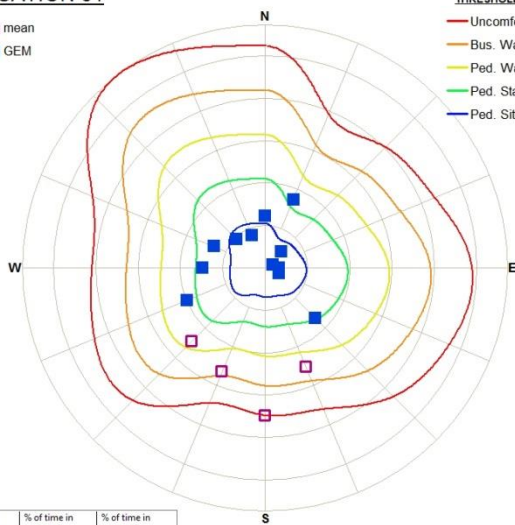
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	25.9	29.6
4.0	6.9	6.3
6.0	1.9	1.4
8.0	0.5	0.3
10.0	0.1	0.1
4.4	5.0	Ped Standing
12.4	0.022	Pass
4.3	Ped Standing	5.0
11.1	Pass	0.022

### LOCATION 31

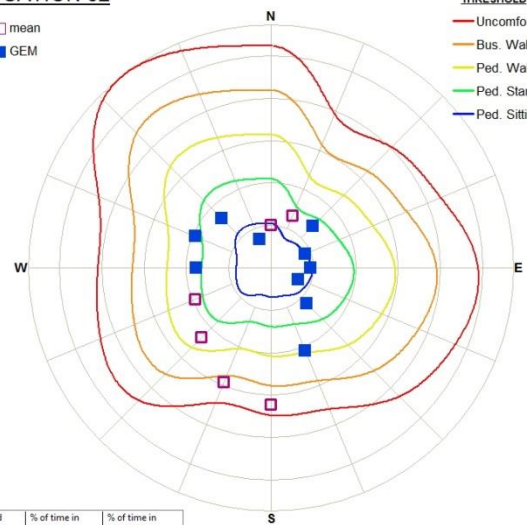
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	28.8	32.6
4.0	14.3	13.4
6.0	6.8	4.6
8.0	2.4	1.1
10.0	0.7	0.2
6.6	5.0	Ped Walking
14.1	0.022	Pass
5.8	Ped Standing	5.0
12.1	Pass	0.022

### LOCATION 32

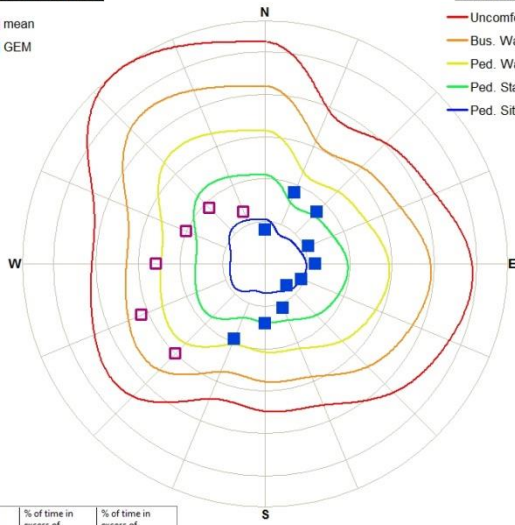
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	32.0	35.0
4.0	12.9	12.5
6.0	5.7	3.7
8.0	1.8	0.7
10.0	0.4	0.1
6.2	5.0	Ped Walking
13.5	0.022	Pass
5.5	Ped Standing	5.0
11.7	Pass	0.022

### LOCATION 33

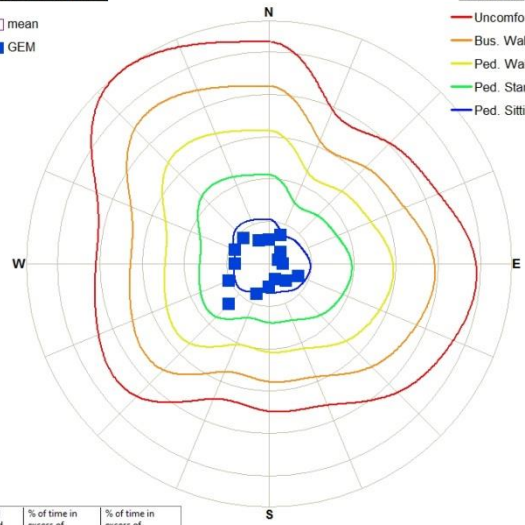
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	31.6	33.3
4.0	7.0	6.9
6.0	1.7	0.8
8.0	0.3	0.1
10.0	0.0	0.0
4.4	5.0	Ped Standing
10.6	0.022	Pass
4.3	Ped Standing	5.0
9.0	Pass	0.022

### LOCATION 34

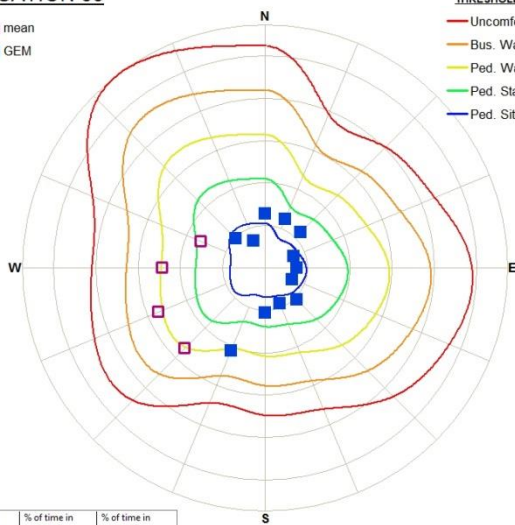
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	0.8	3.0
4.0	0.0	0.0
6.0	0.0	0.0
8.0	0.0	0.0
10.0	0.0	0.0
1.3	5.0	Outdoor Dining
3.3	0.022	Pass
1.8	Outdoor Dining	5.0
4.3	Pass	0.022

### LOCATION 35

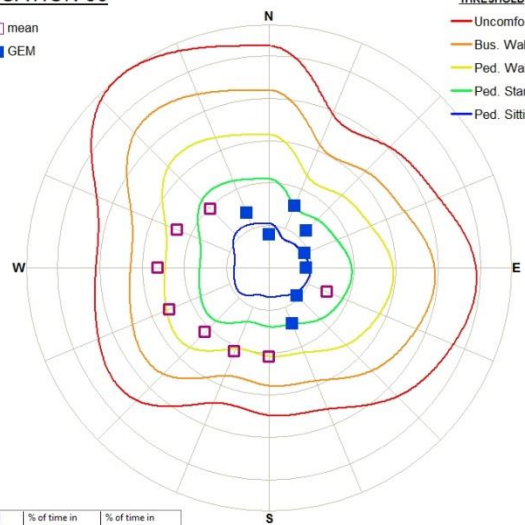
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	18.5	23.8
4.0	5.5	3.7
6.0	1.1	0.5
8.0	0.2	0.1
10.0	0.0	0.0
4.1	5.0	Ped Standing
9.6	0.022	Pass
3.6	Ped Sitting	5.0
8.7	Pass	0.022

### LOCATION 36

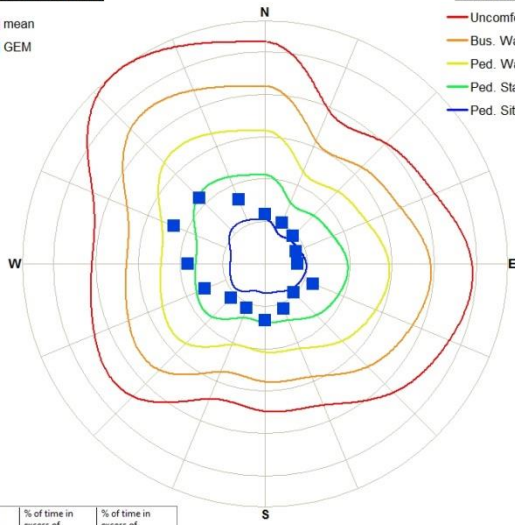
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	35.3	33.1
4.0	10.6	7.4
6.0	2.0	0.8
8.0	0.3	0.0
10.0	0.0	0.0
4.9	5.0	Ped Standing
10.2	0.022	Pass
4.4	Ped Standing	5.0
8.6	Pass	0.022

### LOCATION 37

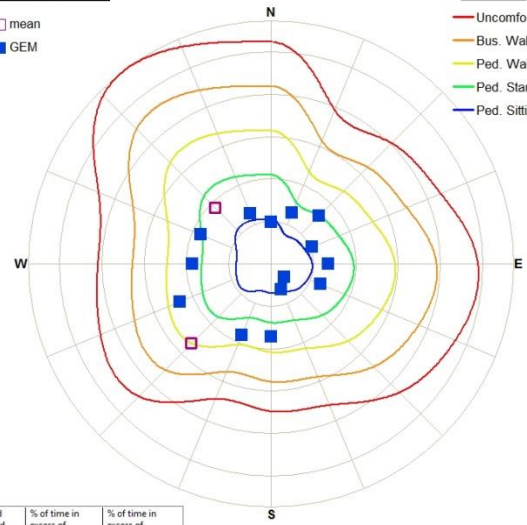
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	14.0	25.9
4.0	1.0	2.7
6.0	0.1	0.4
8.0	0.0	0.0
10.0	0.0	0.0
2.7	5.0	Ped Sitting
7.4	0.022	Pass
3.4	Ped Sitting	5.0
8.7	Pass	0.022

### LOCATION 38

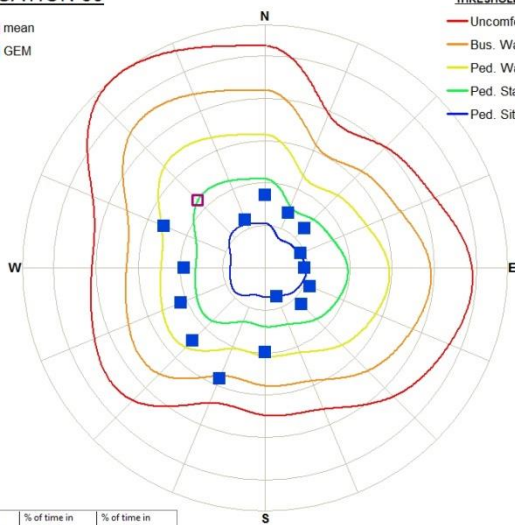
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	22.1	30.9
4.0	2.4	6.0
6.0	0.3	0.5
8.0	0.0	0.0
10.0	0.0	0.0
3.3	5.0	Ped Sitting
8.6	0.022	Pass
4.1	Ped Standing	5.0
8.4	Pass	0.022

### LOCATION 39

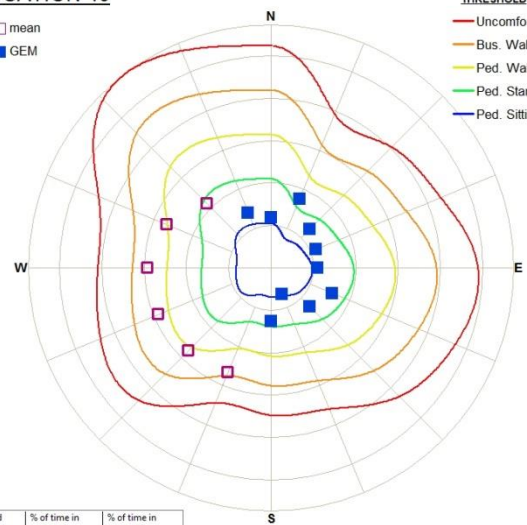
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	24.9	35.5
4.0	4.2	9.5
6.0	1.0	2.1
8.0	0.2	0.4
10.0	0.0	0.1
3.7	5.0	Ped Sitting
10.1	0.022	Pass
4.8	Ped Standing	5.0
11.4	Pass	0.022

### LOCATION 40

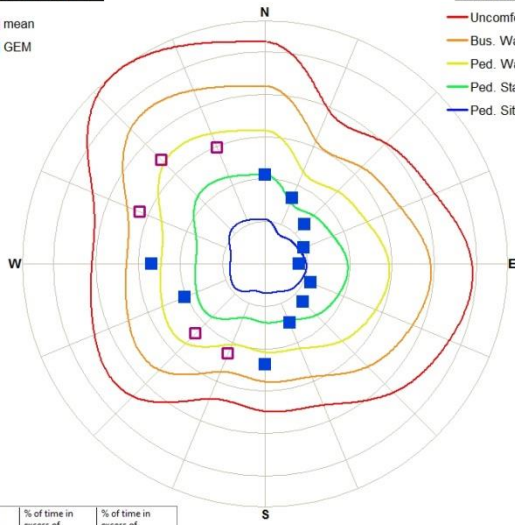
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	27.3	32.6
4.0	8.9	6.0
6.0	2.8	0.8
8.0	0.6	0.1
10.0	0.1	0.0
5.0	5.0	Ped Standing
11.6	0.022	Pass
4.2	Ped Standing	5.0
9.1	Pass	0.022

### LOCATION 41

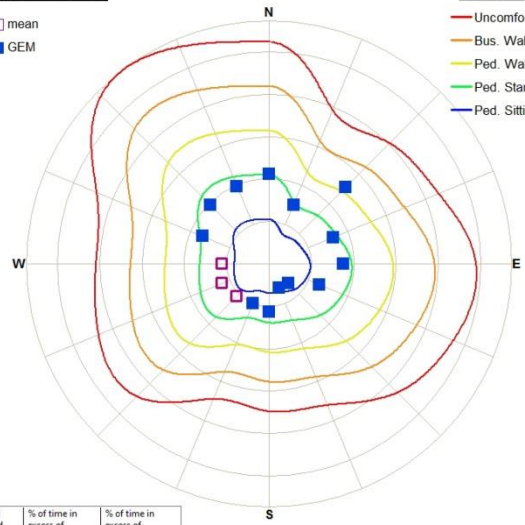
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	39.3	45.8
4.0	10.8	13.8
6.0	2.4	3.3
8.0	0.6	0.6
10.0	0.1	0.1
5.0	5.0	Ped Standing
12.6	0.022	Pass
5.4	Ped Standing	5.0
12.0	Pass	0.022

### LOCATION 42

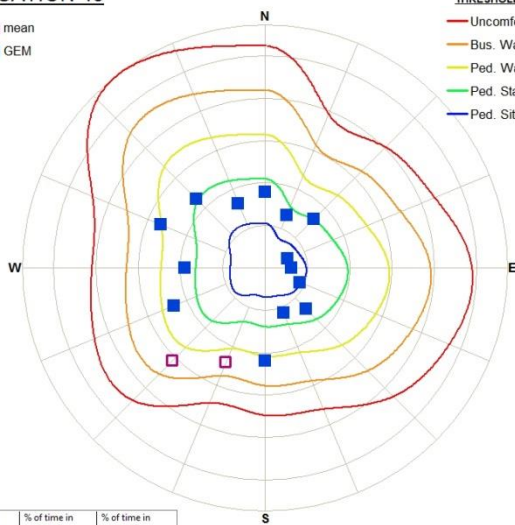
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	15.5	27.8
4.0	1.3	4.2
6.0	0.1	0.6
8.0	0.0	0.0
10.0	0.0	0.0
2.9	5.0	Ped Sitting
6.4	0.022	Pass
3.7	Ped Sitting	5.0
8.3	Pass	0.022

### LOCATION 43

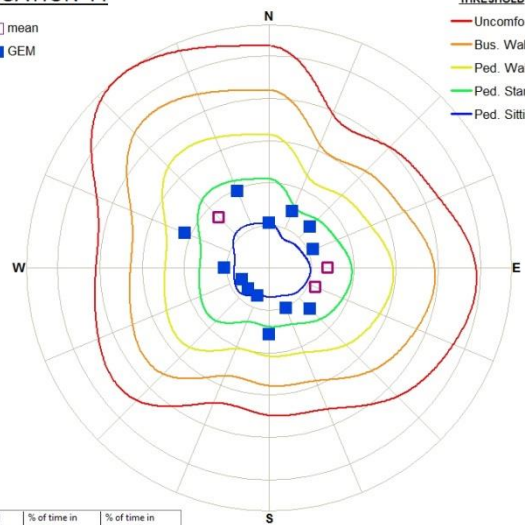
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	30.7	39.3
4.0	6.7	10.9
6.0	1.4	2.1
8.0	0.2	0.3
10.0	0.0	0.0
4.3	5.0	Ped Standing
10.6	0.022	Pass
4.9	Ped Standing	5.0
10.6	Pass	0.022

### LOCATION 44

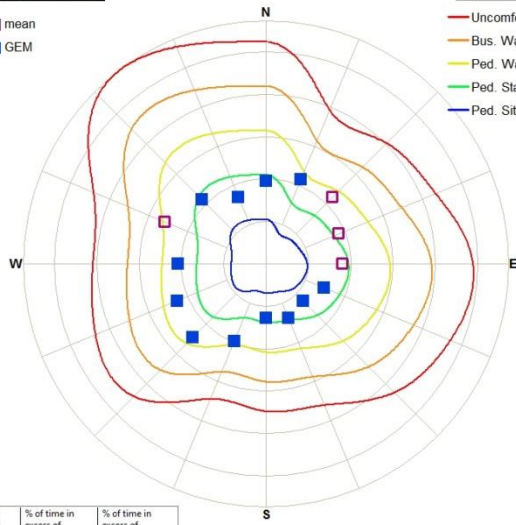
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	12.4	25.4
4.0	0.6	2.6
6.0	0.1	0.2
8.0	0.0	0.0
10.0	0.0	0.0
2.5	5.0	Ped Sitting
6.6	0.022	Pass
3.4	Ped Sitting	5.0
7.9	Pass	0.022

### LOCATION 45

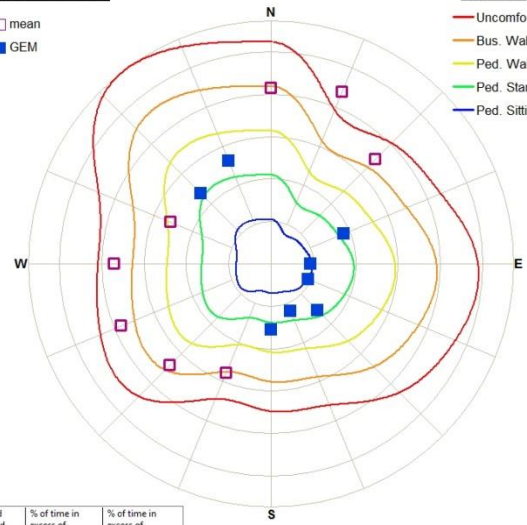
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	35.4	42.9
4.0	7.6	9.3
6.0	1.0	1.2
8.0	0.1	0.1
10.0	0.0	0.0
4.4	5.0	Ped Standing
9.6	0.022	Pass
4.6	Ped Standing	5.0
9.4	Pass	0.022

### LOCATION 46

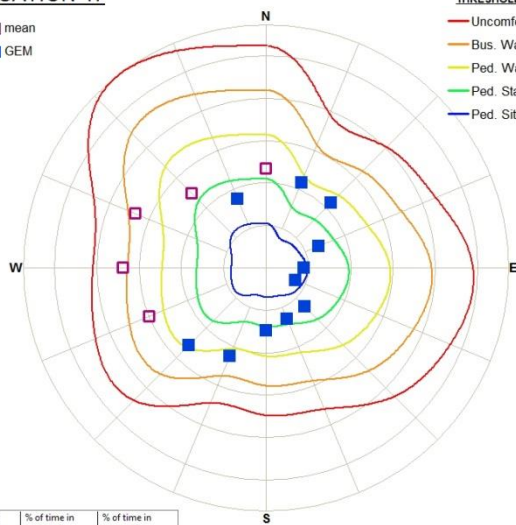
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	47.6	50.9
4.0	21.7	19.3
6.0	10.8	6.9
8.0	4.2	1.8
10.0	1.3	0.3
7.6	5.0	Ped Walking
14.9	0.022	Pass
6.5	Ped Walking	5.0
12.1	Pass	0.022

### LOCATION 47

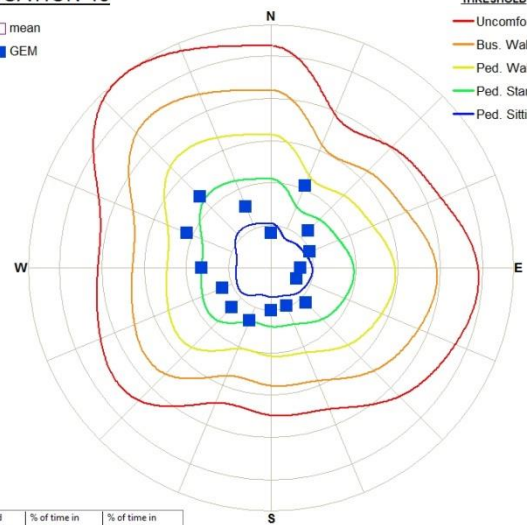
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	39.6	45.2
4.0	11.5	13.3
6.0	3.2	3.0
8.0	1.0	0.6
10.0	0.3	0.1
5.2	5.0	Ped Standing
13.2	0.022	Pass
5.3	Ped Standing	5.0
11.7	Pass	0.022

### LOCATION 48

□ mean  
■ GEM

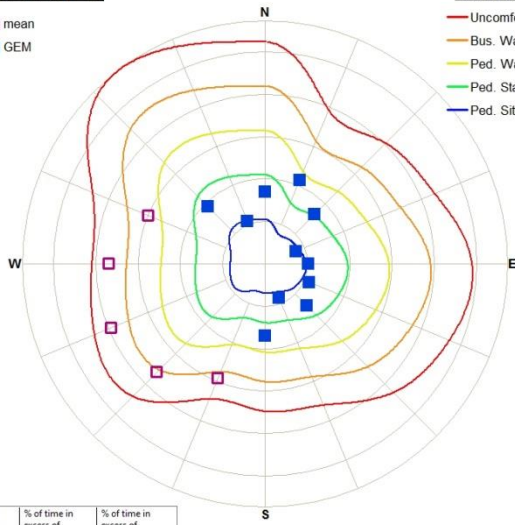


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	15.5	26.1
4.0	1.5	3.5
6.0	0.2	0.4
8.0	0.0	0.0
10.0	0.0	0.0
2.9	5.0	Ped Sitting
8.2	0.022	Pass
3.6	Ped Sitting	5.0
8.5	Pass	0.022



### LOCATION 49

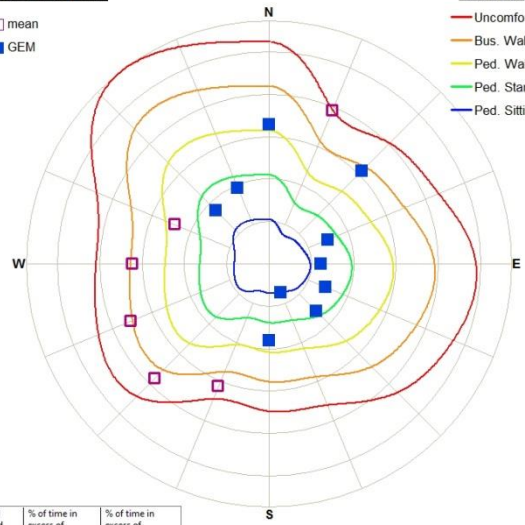
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	33.6	38.8
4.0	11.7	11.3
6.0	5.4	2.3
8.0	2.0	0.4
10.0	0.6	0.0
6.1	5.0	Ped Walking
14.2	0.022	Pass
5.0	Ped Standing	5.0
10.8	Pass	0.022

### LOCATION 50

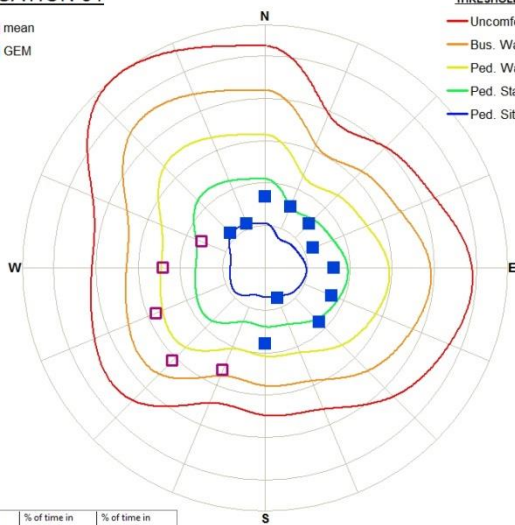
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	44.6	46.0
4.0	19.1	17.4
6.0	8.5	5.2
8.0	2.8	1.1
10.0	0.7	0.1
6.9	5.0	Ped Walking
14.1	0.022	Pass
6.0	Ped Standing	5.0
11.4	Pass	0.022

### LOCATION 51

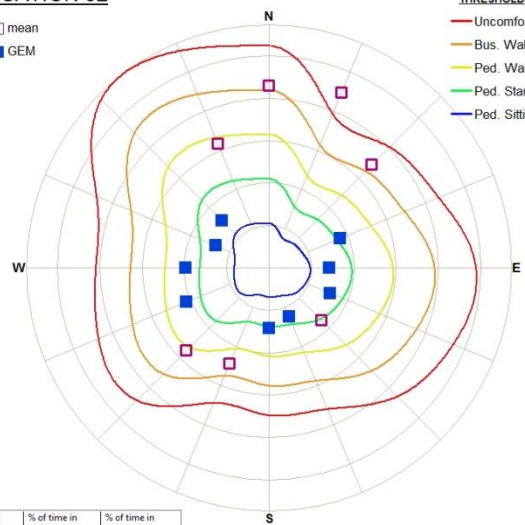
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	31.1	36.3
4.0	7.7	7.3
6.0	1.9	0.7
8.0	0.3	0.1
10.0	0.1	0.0
4.6	5.0	Ped Standing
11.1	0.022	Pass
4.3	Ped Standing	5.0
9.0	Pass	0.022

### LOCATION 52

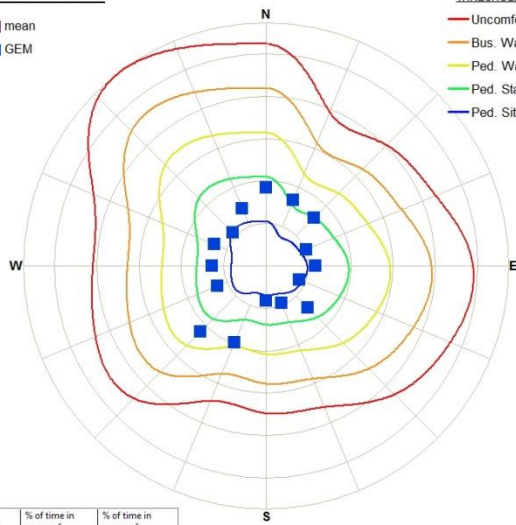
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	44.6	46.4
4.0	15.9	14.4
6.0	7.1	4.5
8.0	2.9	1.0
10.0	0.9	0.1
6.7	5.0	Ped Walking
14.6	0.022	Pass
5.8	Ped Standing	5.0
11.2	Pass	0.022

### LOCATION 53

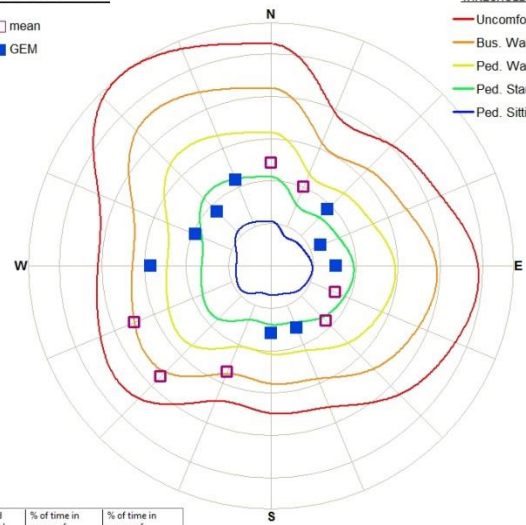
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	14.1	24.2
4.0	1.4	2.9
6.0	0.1	0.2
8.0	0.0	0.0
10.0	0.0	0.0
2.9	5.0	Ped Sitting
7.5	0.022	Pass
3.5	Ped Sitting	5.0
8.1	Pass	0.022

### LOCATION 54

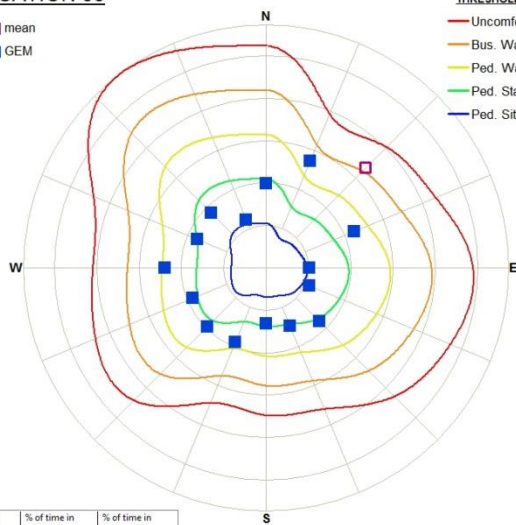
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	44.6	46.5
4.0	12.5	12.3
6.0	3.0	2.4
8.0	0.7	0.4
10.0	0.2	0.1
5.2	5.0	Ped Standing
12.5	0.022	Pass
5.0	Ped Standing	5.0
11.1	Pass	0.022

### LOCATION 55

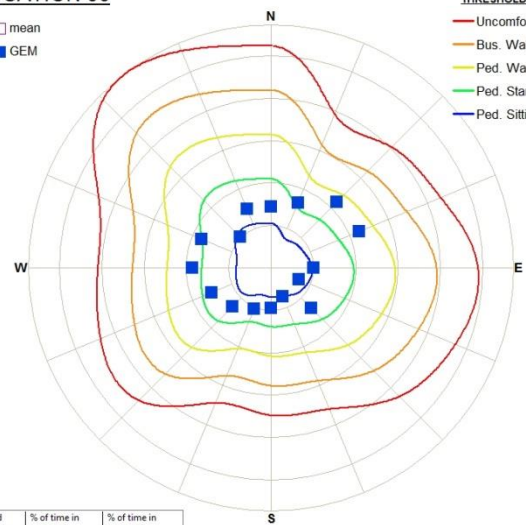
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	31.6	41.9
4.0	8.6	12.1
6.0	2.7	2.9
8.0	0.5	0.4
10.0	0.1	0.0
4.9	5.0	Ped Standing
10.7	0.022	Pass
5.2	Ped Standing	5.0
10.2	Pass	0.022

### LOCATION 56

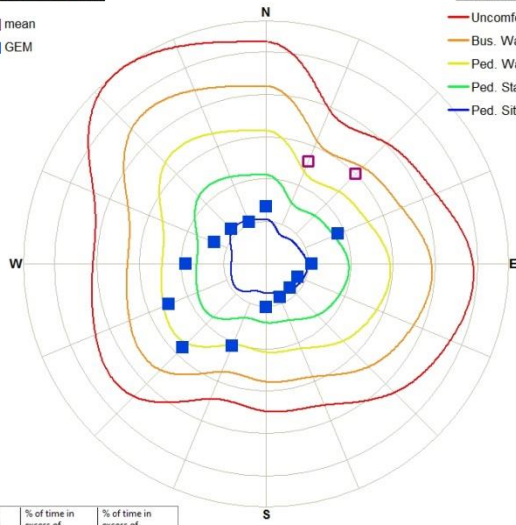
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	15.3	26.2
4.0	1.4	4.3
6.0	0.0	0.3
8.0	0.0	0.0
10.0	0.0	0.0
3.0	5.0	Ped Sitting
6.1	0.022	Pass
3.8	Ped Sitting	5.0
7.4	Pass	0.022

### LOCATION 57

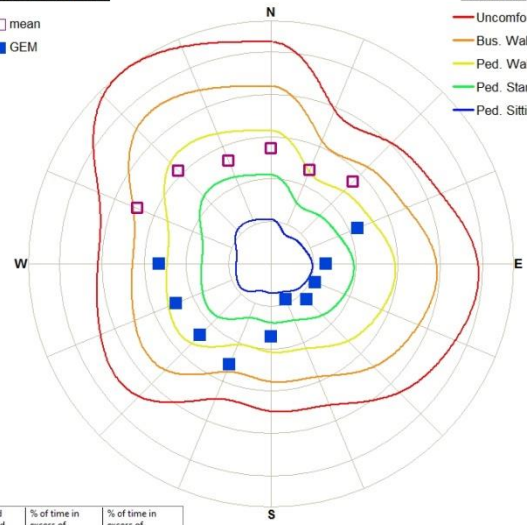
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	23.5	30.8
4.0	8.0	9.6
6.0	2.1	2.1
8.0	0.3	0.2
10.0	0.0	0.0
4.7	5.0	Ped. Standing
9.8	0.022	Pass
4.9	Ped. Standing	5.0
9.7	Pass	0.022

### LOCATION 58

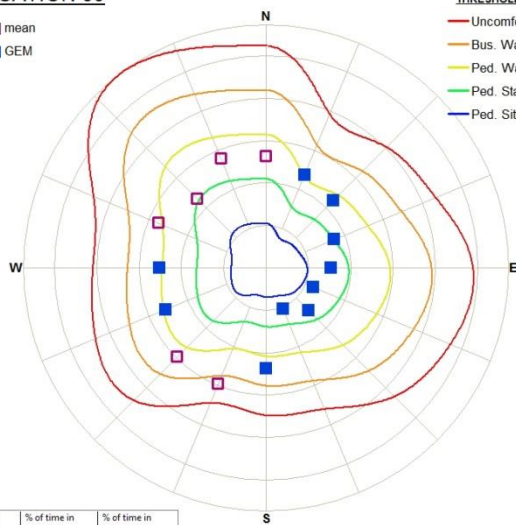
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	44.3	48.3
4.0	13.9	15.7
6.0	3.4	3.3
8.0	0.7	0.6
10.0	0.2	0.1
5.5	5.0	Ped. Standing
12.7	0.022	Pass
5.5	Ped. Standing	5.0
11.9	Pass	0.022

### LOCATION 59

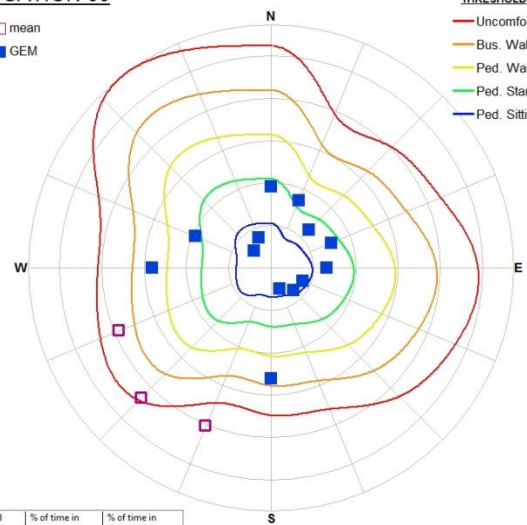
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	46.1	48.9
4.0	15.2	17.9
6.0	3.3	4.2
8.0	0.6	0.6
10.0	0.1	0.1
5.5	5.0	Ped. Standing
12.1	0.022	Pass
5.7	Ped. Standing	5.0
11.6	Pass	0.022

### LOCATION 60

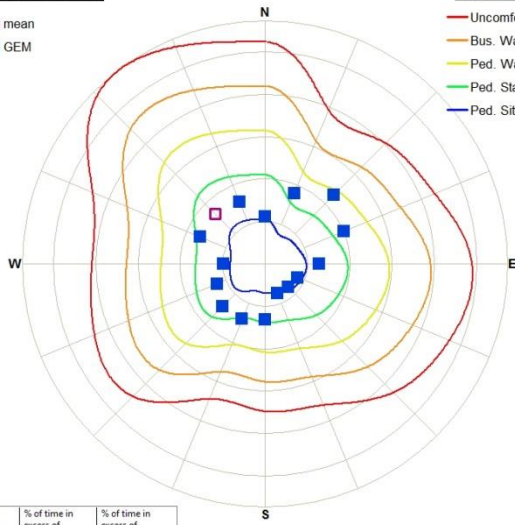
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	31.5	37.1
4.0	14.7	15.8
6.0	6.3	5.8
8.0	2.4	1.4
10.0	0.9	0.3
6.4	5.0	Ped. Walking
16.6	0.022	Able Body
6.2	Ped. Walking	5.0
13.3	Pass	0.022

### LOCATION 61

□ mean  
■ GEM

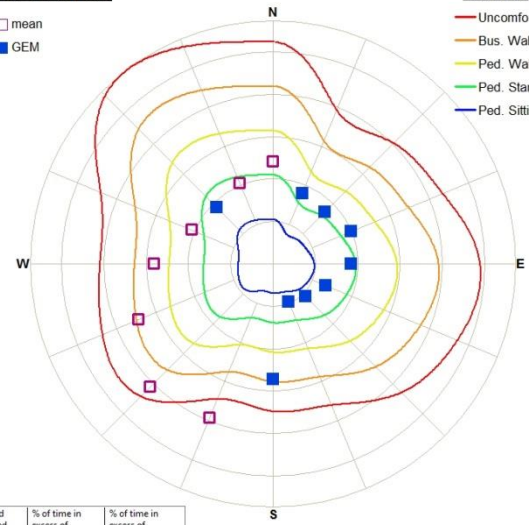


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	20.7	26.8
4.0	2.6	4.3
6.0	0.2	0.3
8.0	0.0	0.0
10.0	0.0	0.0
3.4	5.0	Ped Sitting
7.1	0.022	Pass
3.8	Ped Sitting	5.0
7.5	Pass	0.022

### LOCATION 62

□ mean  
■ GEM

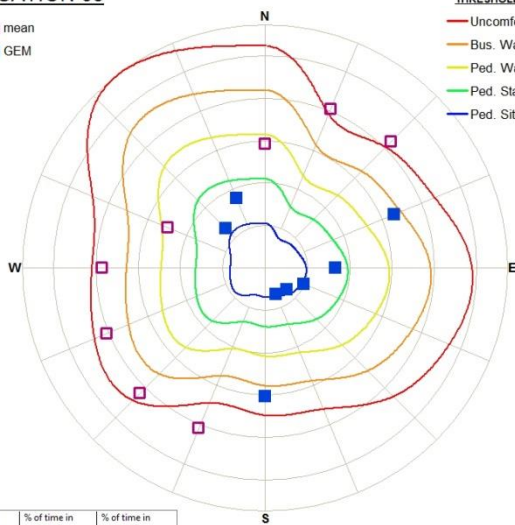
**THRESHOLD**  
 — Uncomfortable  
 — Bus. Walking  
 — Ped. Walking  
 — Ped. Standing  
 — Ped. Sitting



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	41.6	46.0
4.0	14.9	17.3
6.0	5.4	5.8
8.0	2.0	1.6
10.0	0.7	0.4
6.0	5.0	Ped Walking
16.0	0.022	Able Body
6.2	Ped Walking	5.0
14.6	Pass	0.022

### LOCATION 63

□ mean  
■ GEM

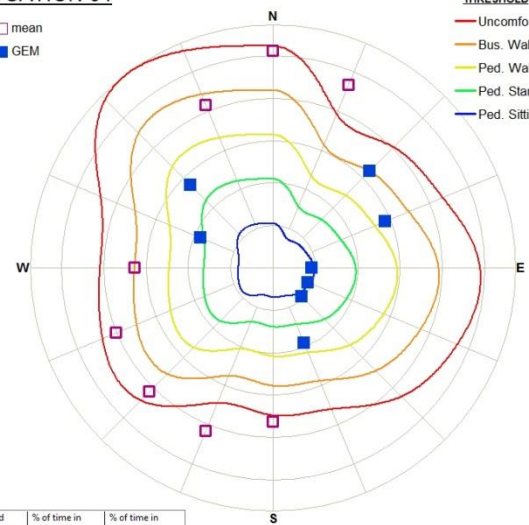


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	48.0	47.9
4.0	29.2	26.0
6.0	15.3	11.8
8.0	6.5	3.3
10.0	2.2	0.6
8.4	5.0	Bus Walking
16.9	0.022	Able Body
7.3	Ped Walking	5.0
13.8	Pass	0.022

### LOCATION 64

□ mean  
■ GEM

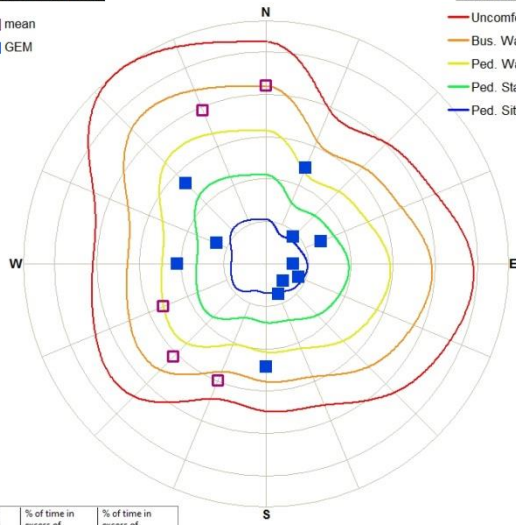
**THRESHOLD**  
 — Uncomfortable  
 — Bus. Walking  
 — Ped. Walking  
 — Ped. Standing  
 — Ped. Sitting



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	53.3	55.6
4.0	30.1	29.4
6.0	16.9	12.8
8.0	8.1	4.0
10.0	3.1	1.0
9.0	5.0	Bus Walking
17.7	0.022	Able Body
7.6	Ped Walking	5.0
14.5	Pass	0.022

LOCATION 65

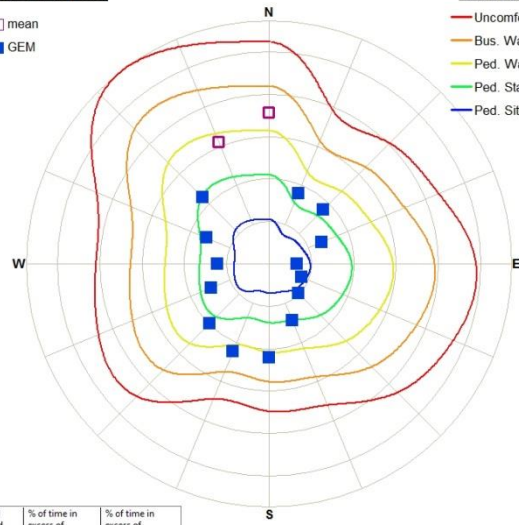
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	36.6	40.6
4.0	15.8	15.8
6.0	5.0	3.9
8.0	1.2	0.6
10.0	0.3	0.1
5.9	5.0	Ped Standing
13.2	0.022	Pass
5.6	Ped Standing	5.0
11.2	Pass	0.022

LOCATION 66

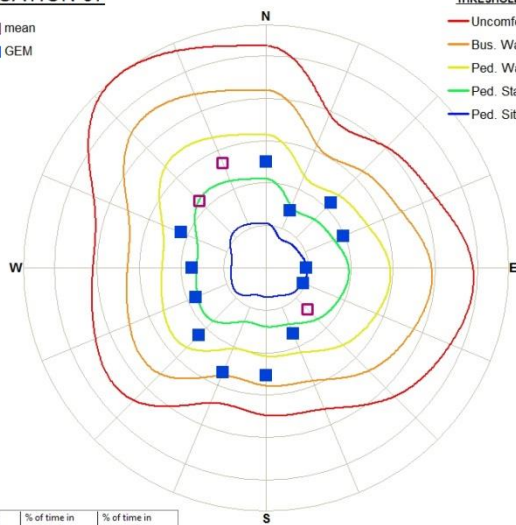
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	31.2	40.6
4.0	7.8	11.4
6.0	1.5	2.1
8.0	0.2	0.3
10.0	0.0	0.0
4.5	5.0	Ped Standing
10.3	0.022	Pass
5.0	Ped Standing	5.0
10.4	Pass	0.022

LOCATION 67

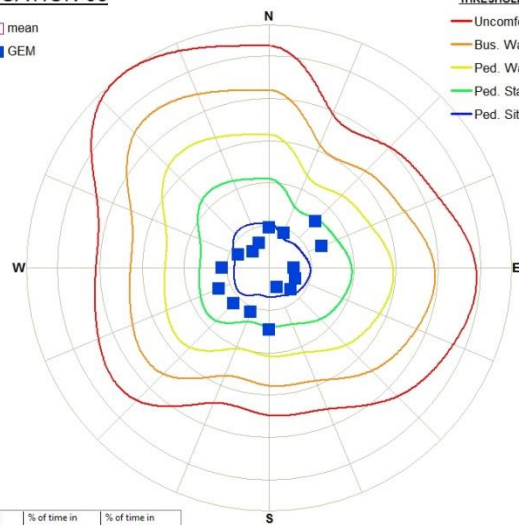
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	36.2	45.6
4.0	9.8	14.8
6.0	2.2	3.4
8.0	0.3	0.5
10.0	0.0	0.1
4.9	5.0	Ped Standing
10.6	0.022	Pass
5.5	Ped Standing	5.0
11.4	Pass	0.022

LOCATION 68

□ mean  
■ GEM

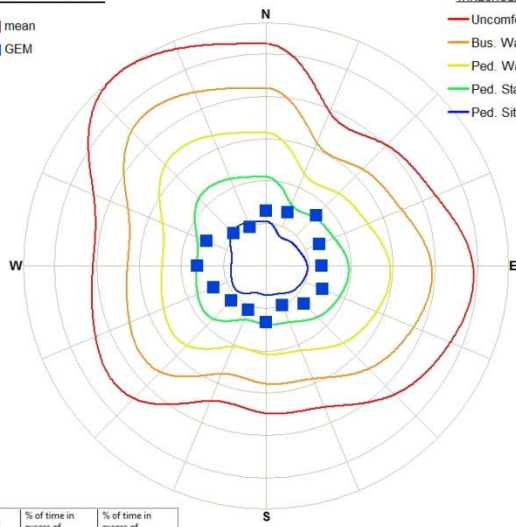


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	9.0	17.7
4.0	0.1	1.2
6.0	0.0	0.0
8.0	0.0	0.0
10.0	0.0	0.0
2.3	5.0	Ped Sitting
4.5	0.022	Pass
3.1	Ped Sitting	5.0
5.9	Pass	0.022



### LOCATION 69

□ mean  
■ GEM

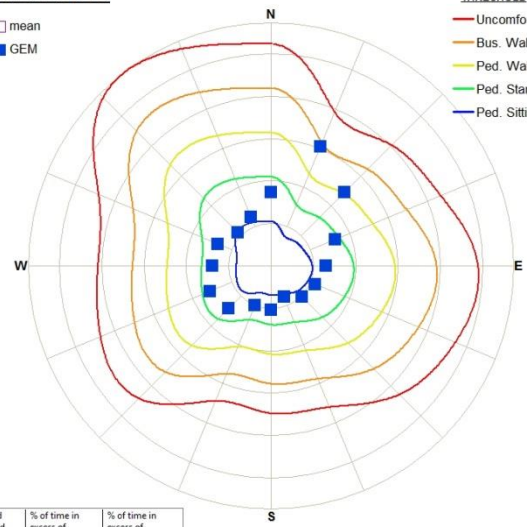


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	14.1	27.5
4.0	0.2	1.8
6.0	0.0	0.0
8.0	0.0	0.0
10.0	0.0	0.0
2.6	5.0	Ped Sitting
4.9	0.022	Pass
3.3	Ped Sitting	5.0
6.3	Pass	0.022

### LOCATION 70

□ mean  
■ GEM

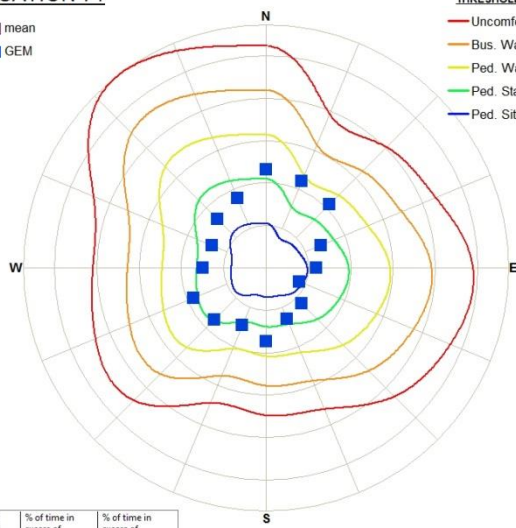
**THRESHOLD**  
— Uncomfortable  
— Bus. Walking  
— Ped. Walking  
— Ped. Standing  
— Ped. Sitting



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	17.3	27.7
4.0	4.5	6.0
6.0	0.9	1.7
8.0	0.1	0.3
10.0	0.0	0.0
3.7	5.0	Ped Sitting
8.5	0.022	Pass
4.2	Ped Standing	5.0
9.9	Pass	0.022

### LOCATION 71

□ mean  
■ GEM

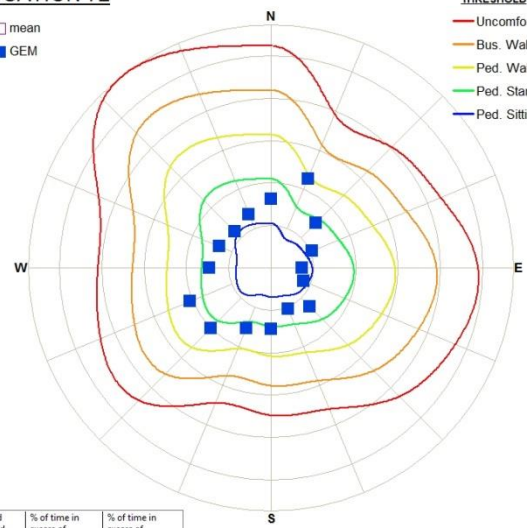


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	27.5	37.3
4.0	3.2	7.5
6.0	0.1	0.5
8.0	0.0	0.0
10.0	0.0	0.0
3.6	5.0	Ped Sitting
6.8	0.022	Pass
4.3	Ped Standing	5.0
7.8	Pass	0.022

### LOCATION 72

□ mean  
■ GEM

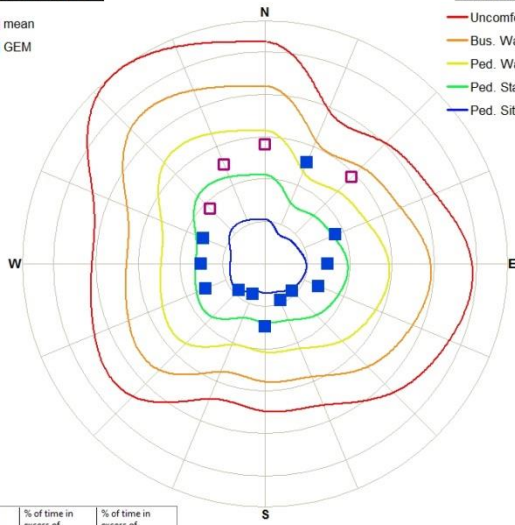
**THRESHOLD**  
— Uncomfortable  
— Bus. Walking  
— Ped. Walking  
— Ped. Standing  
— Ped. Sitting



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	19.0	30.8
4.0	1.8	4.6
6.0	0.1	0.4
8.0	0.0	0.0
10.0	0.0	0.0
3.1	5.0	Ped Sitting
6.7	0.022	Pass
3.9	Ped Sitting	5.0
7.7	Pass	0.022

### LOCATION 74

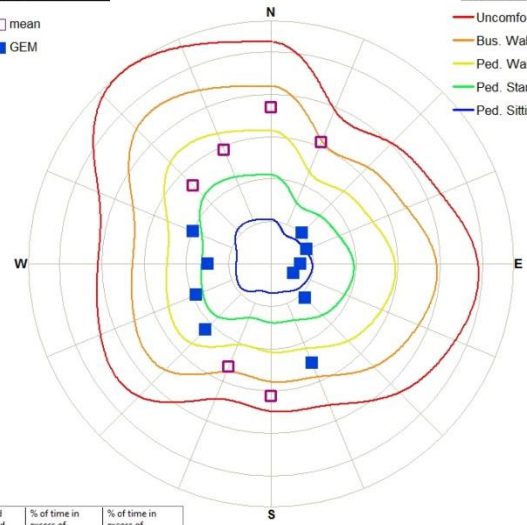
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	25.4	35.2
4.0	6.7	8.4
6.0	1.5	1.8
8.0	0.2	0.2
10.0	0.0	0.0
4.4	5.0	Ped Standing
9.4	0.022	Pass
4.7	Ped Standing	5.0
9.3	Pass	0.022

### LOCATION 75

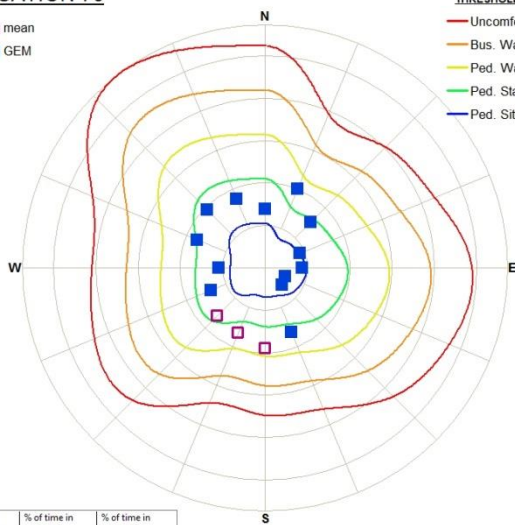
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	40.1	43.7
4.0	19.1	18.4
6.0	7.8	6.0
8.0	2.0	1.2
10.0	0.4	0.2
6.7	5.0	Ped Walking
12.9	0.022	Pass
6.2	Ped Walking	5.0
11.9	Pass	0.022

### LOCATION 76

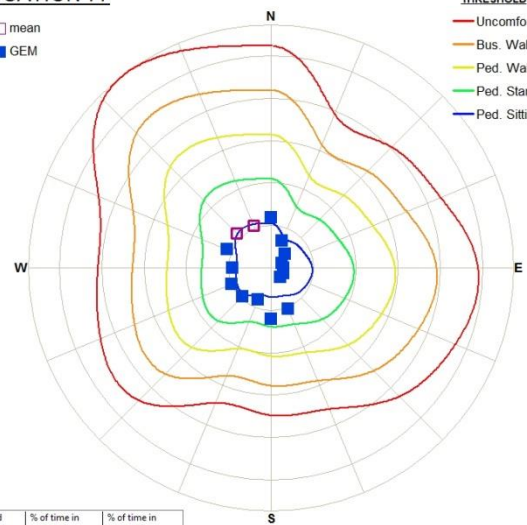
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	24.2	31.3
4.0	4.5	6.0
6.0	0.4	0.4
8.0	0.0	0.0
10.0	0.0	0.0
3.9	5.0	Ped Sitting
7.9	0.022	Pass
4.2	Ped Standing	5.0
7.9	Pass	0.022

### LOCATION 77

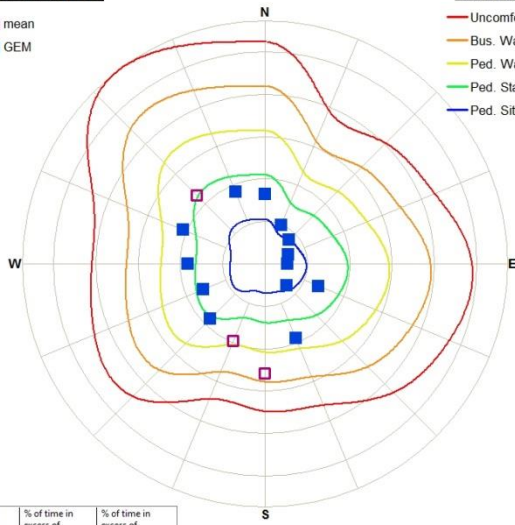
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	5.3	11.4
4.0	0.0	0.3
6.0	0.0	0.0
8.0	0.0	0.0
10.0	0.0	0.0
2.0	5.0	Ped Sitting
4.2	0.022	Pass
2.5	Ped Sitting	5.0
5.0	Pass	0.022

### LOCATION 78

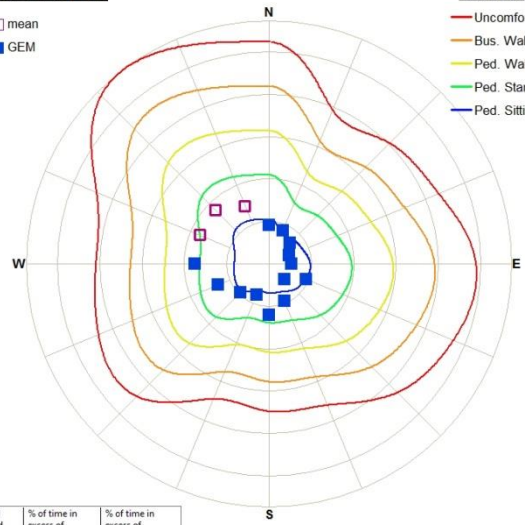
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	26.1	32.6
4.0	9.0	10.0
6.0	2.4	2.0
8.0	0.4	0.2
10.0	0.0	0.0
4.9	5.0	Ped Standing
10.5	0.022	Pass
4.9	Ped Standing	5.0
9.9	Pass	0.022

### LOCATION 79

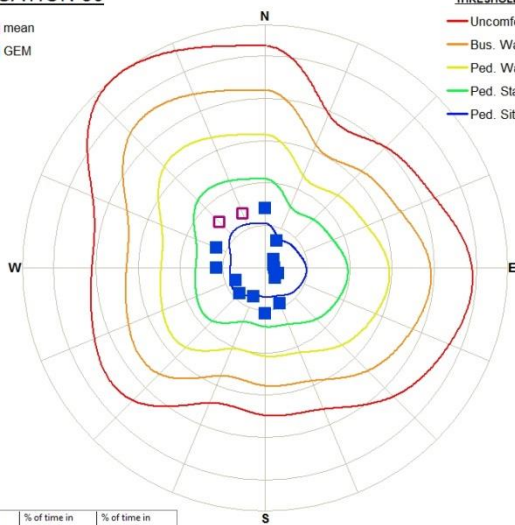
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	8.9	16.2
4.0	0.8	1.2
6.0	0.1	0.1
8.0	0.0	0.0
10.0	0.0	0.0
2.4	5.0	Ped Sitting
6.7	0.022	Pass
2.9	Ped Sitting	5.0
6.7	Pass	0.022

### LOCATION 80

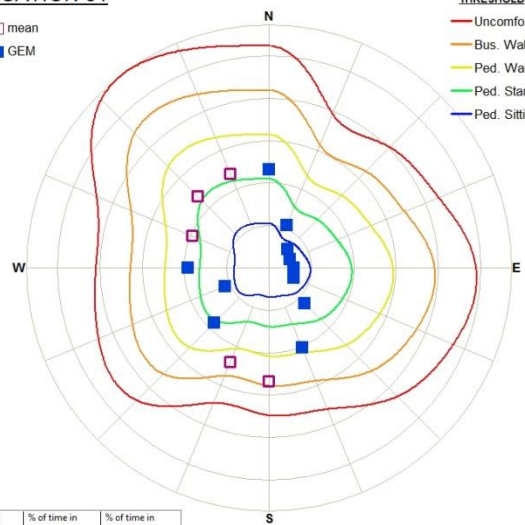
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	6.1	10.6
4.0	0.2	0.2
6.0	0.0	0.0
8.0	0.0	0.0
10.0	0.0	0.0
2.1	5.0	Ped Sitting
5.2	0.022	Pass
2.5	Ped Sitting	5.0
5.0	Pass	0.022

### LOCATION 81

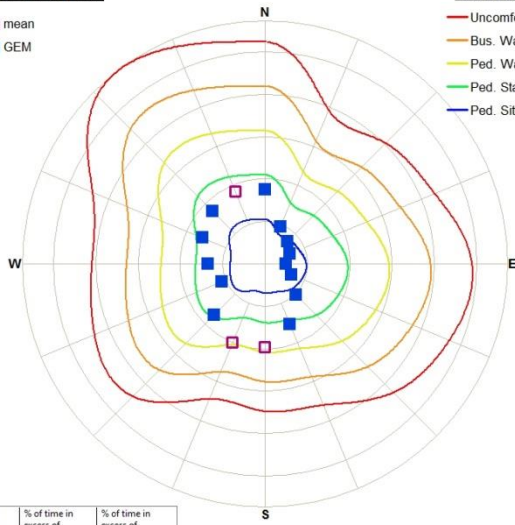
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	31.7	33.9
4.0	11.4	10.9
6.0	3.2	2.1
8.0	0.6	0.2
10.0	0.1	0.0
5.3	5.0	Ped Standing
11.3	0.022	Pass
5.0	Ped Standing	5.0
10.0	Pass	0.022

### LOCATION 82

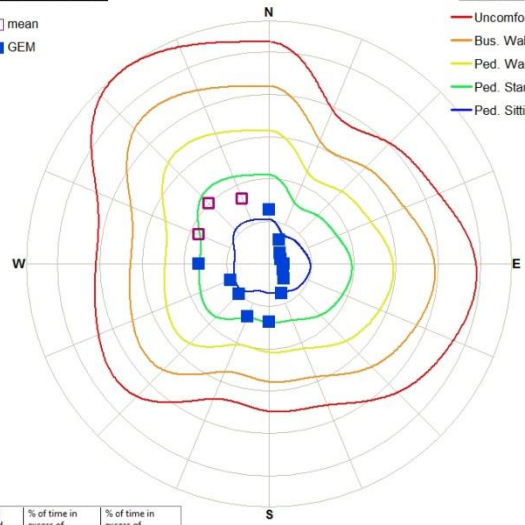
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	22.0	26.4
4.0	5.3	4.7
6.0	0.6	0.3
8.0	0.1	0.0
10.0	0.0	0.0
4.0	5.0	Ped Standing
8.7	0.022	Pass
3.9	Ped Sitting	5.0
8.0	Pass	0.022

### LOCATION 83

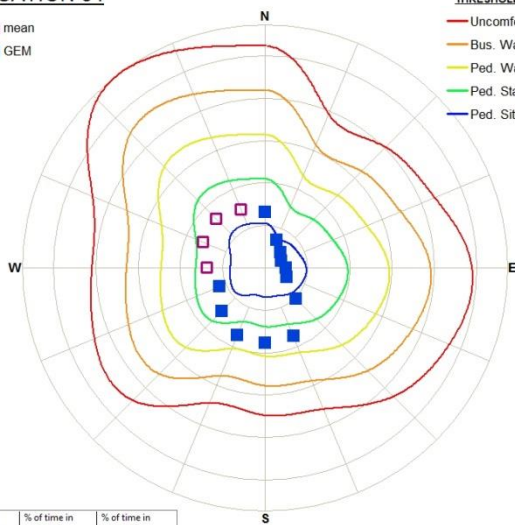
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	10.5	16.7
4.0	1.0	1.6
6.0	0.1	0.1
8.0	0.0	0.0
10.0	0.0	0.0
2.5	5.0	Ped Sitting
7.2	0.022	Pass
3.1	Ped Sitting	5.0
6.5	Pass	0.022

### LOCATION 84

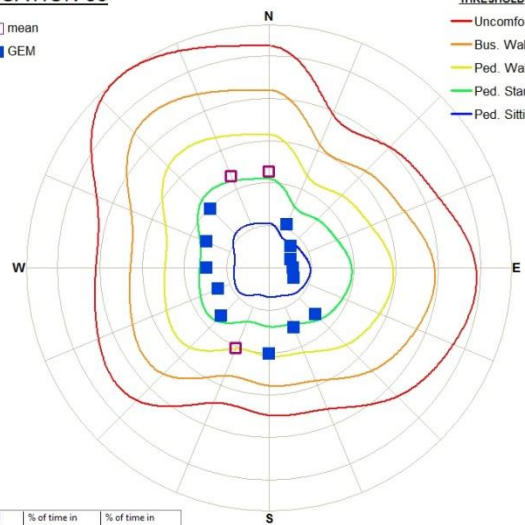
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	18.7	23.1
4.0	1.9	4.3
6.0	0.1	0.3
8.0	0.0	0.0
10.0	0.0	0.0
3.3	5.0	Ped Sitting
6.7	0.022	Pass
3.8	Ped Sitting	5.0
7.9	Pass	0.022

### LOCATION 85

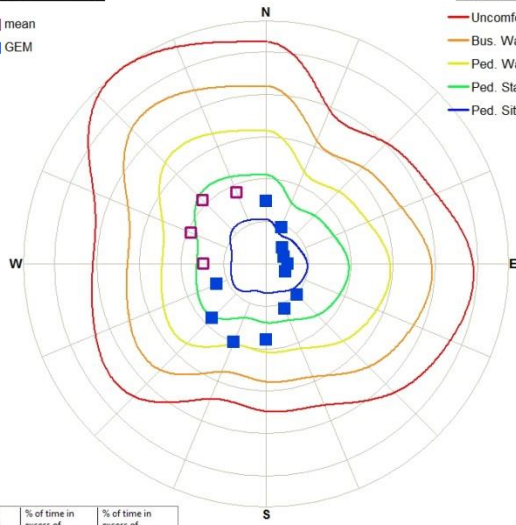
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	25.4	32.0
4.0	4.7	7.0
6.0	0.5	0.8
8.0	0.0	0.1
10.0	0.0	0.0
3.9	5.0	Ped Sitting
8.6	0.022	Pass
4.3	Ped Standing	5.0
8.9	Pass	0.022

### LOCATION 86

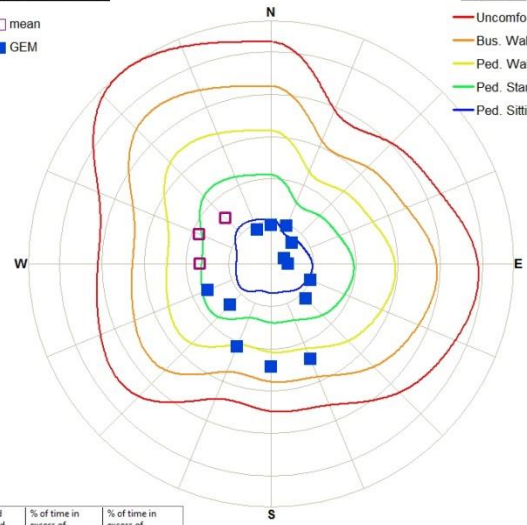
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	21.0	24.5
4.0	2.6	4.3
6.0	0.3	0.4
8.0	0.0	0.0
10.0	0.0	0.0
3.4	5.0	Ped Sitting
7.9	0.022	Pass
3.8	Ped Sitting	5.0
8.2	Pass	0.022

### LOCATION 87

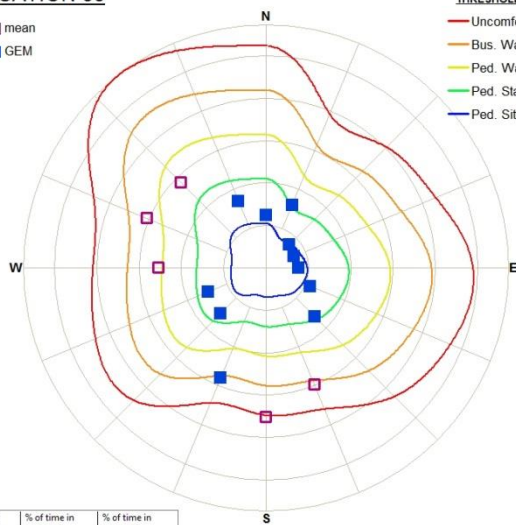
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	24.8	28.2
4.0	8.7	10.3
6.0	1.5	2.4
8.0	0.1	0.3
10.0	0.0	0.0
4.7	5.0	Ped Standing
9.7	0.022	Pass
5.1	Ped Standing	5.0
10.6	Pass	0.022

### LOCATION 88

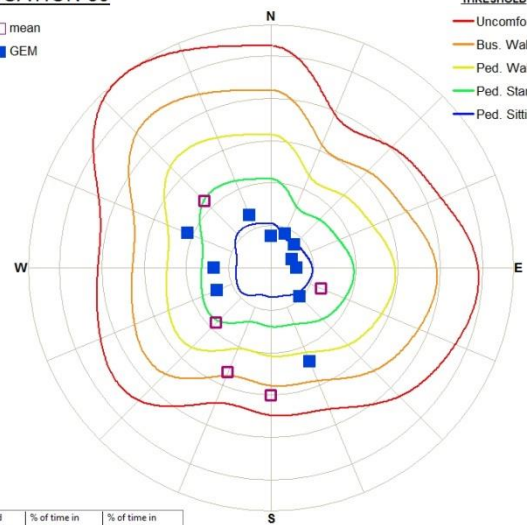
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	35.9	40.4
4.0	17.8	17.3
6.0	8.9	7.3
8.0	3.1	2.1
10.0	0.9	0.4
7.1	5.0	Ped Walking
14.5	0.022	Pass
6.6	Ped Walking	5.0
13.4	Pass	0.022

### LOCATION 89

□ mean  
■ GEM

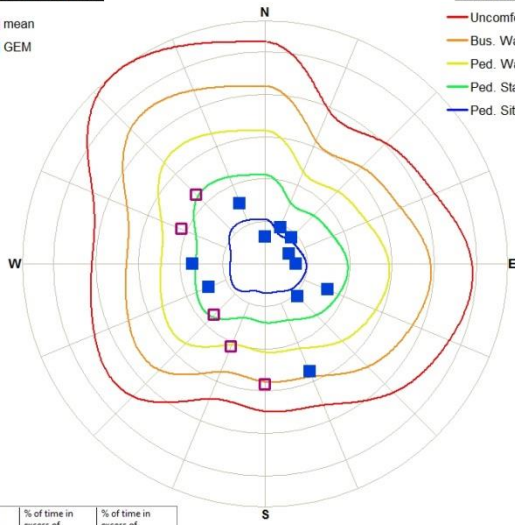


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	26.1	29.6
4.0	12.3	11.5
6.0	4.8	3.2
8.0	1.2	0.5
10.0	0.2	0.1
5.8	5.0	Ped Standing
12.5	0.022	Pass
5.3	Ped Standing	5.0
11.0	Pass	0.022



### LOCATION 90

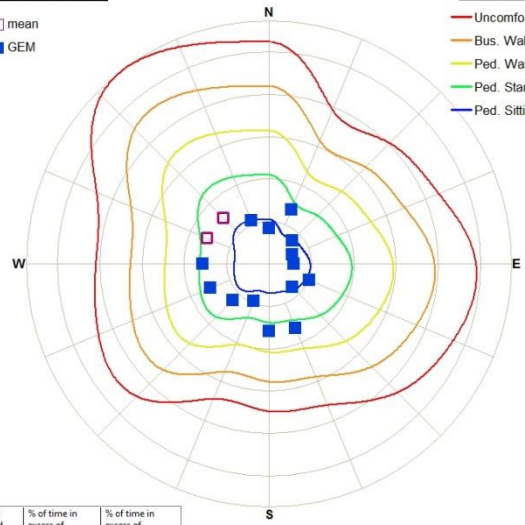
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	28.9	31.9
4.0	12.0	11.5
6.0	4.0	3.1
8.0	0.9	0.5
10.0	0.1	0.1
5.6	5.0	Ped Standing
11.7	0.022	Pass
5.3	Ped Standing	5.0
11.3	Pass	0.022

### LOCATION 91

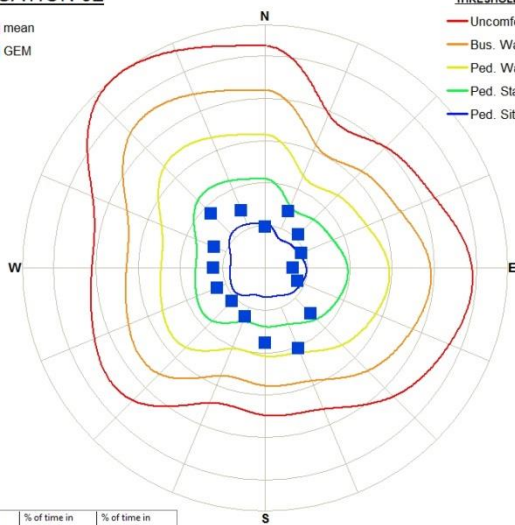
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	11.9	23.1
4.0	0.7	2.8
6.0	0.0	0.1
8.0	0.0	0.0
10.0	0.0	0.0
2.6	5.0	Ped Sitting
6.2	0.022	Pass
3.5	Ped Sitting	5.0
7.1	Pass	0.022

### LOCATION 92

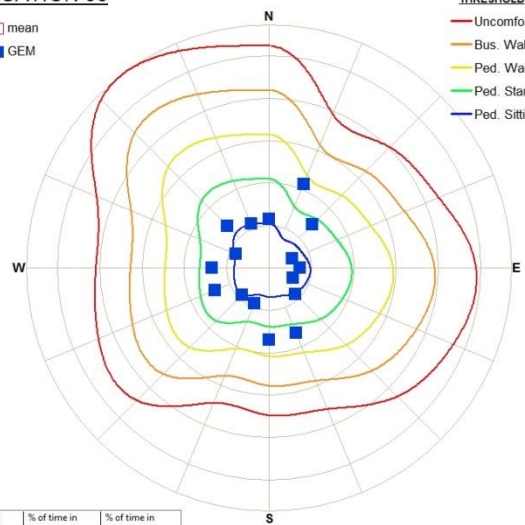
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	18.2	28.1
4.0	1.0	4.7
6.0	0.0	0.4
8.0	0.0	0.0
10.0	0.0	0.0
3.0	5.0	Ped Sitting
6.3	0.022	Pass
3.9	Ped Sitting	5.0
8.4	Pass	0.022

### LOCATION 93

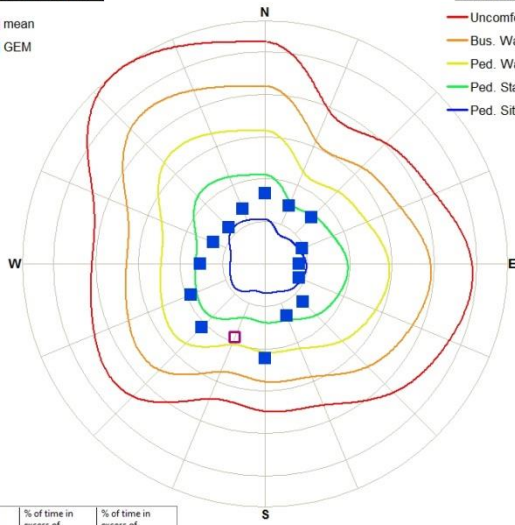
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	15.1	25.9
4.0	1.6	4.5
6.0	0.1	0.3
8.0	0.0	0.0
10.0	0.0	0.0
3.0	5.0	Ped Sitting
6.4	0.022	Pass
3.9	Ped Sitting	5.0
7.5	Pass	0.022

### LOCATION 94

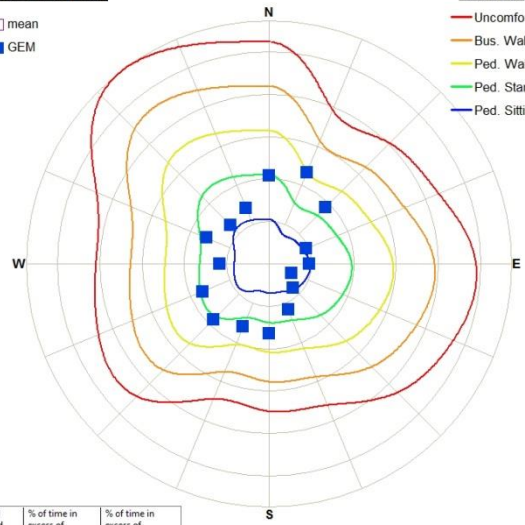
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	24.0	33.2
4.0	3.3	7.4
6.0	0.2	1.0
8.0	0.0	0.1
10.0	0.0	0.0
3.6	5.0	Ped Sitting
7.8	0.022	Pass
4.4	Ped Standing	5.0
9.1	Pass	0.022

### LOCATION 95

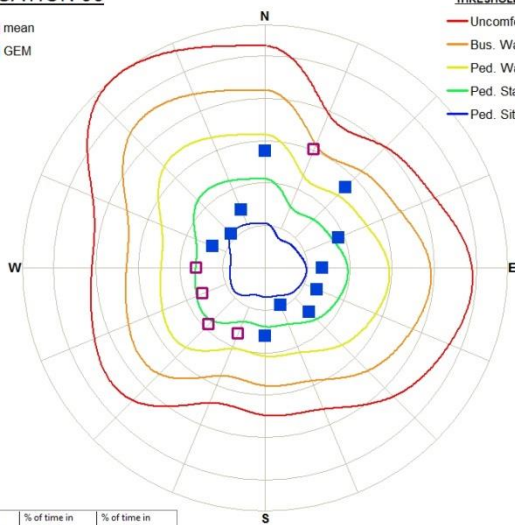
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	17.4	31.8
4.0	1.7	6.1
6.0	0.1	0.5
8.0	0.0	0.0
10.0	0.0	0.0
3.1	5.0	Ped Sitting
6.6	0.022	Pass
4.2	Ped Standing	5.0
7.9	Pass	0.022

### LOCATION 96

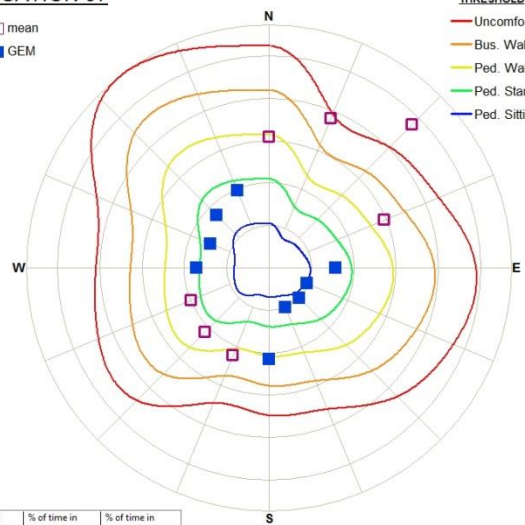
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	32.1	38.5
4.0	7.6	9.8
6.0	1.8	2.1
8.0	0.3	0.3
10.0	0.0	0.0
4.6	5.0	Ped Standing
9.9	0.022	Pass
4.9	Ped Standing	5.0
9.8	Pass	0.022

### LOCATION 97

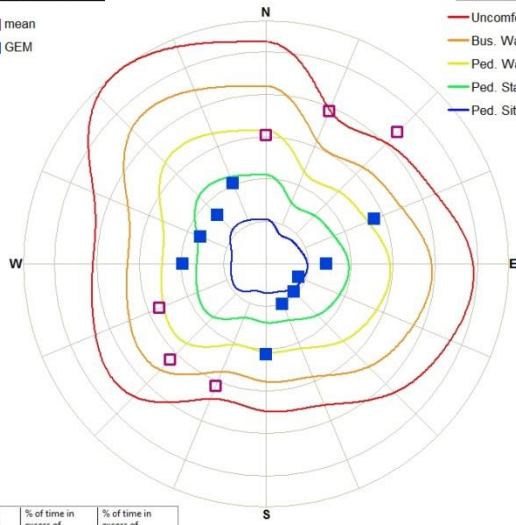
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	40.1	43.6
4.0	17.2	16.7
6.0	7.2	5.0
8.0	3.2	1.1
10.0	1.2	0.2
6.8	5.0	Ped Walking
15.4	0.022	Able Body
5.9	Ped Standing	5.0
11.8	Pass	0.022

### LOCATION 98

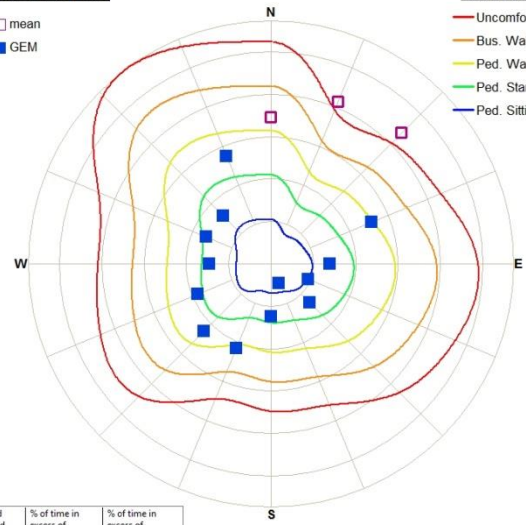
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	42.3	45.4
4.0	19.1	19.3
6.0	8.2	6.2
8.0	3.4	1.5
10.0	1.1	0.2
7.0	5.0	Ped Walking
14.5	0.022	Pass
6.3	Ped Walking	5.0
12.1	Pass	0.022

### LOCATION 99

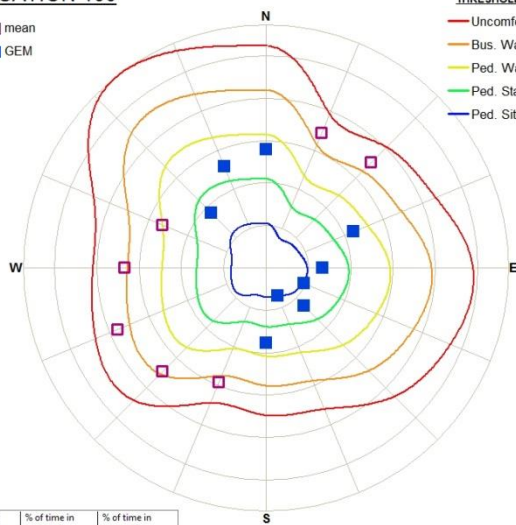
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	34.2	39.7
4.0	14.0	12.9
6.0	6.7	4.3
8.0	3.1	1.0
10.0	1.1	0.1
6.7	5.0	Ped Walking
14.3	0.022	Pass
5.7	Ped Standing	5.0
11.3	Pass	0.022

### LOCATION 100

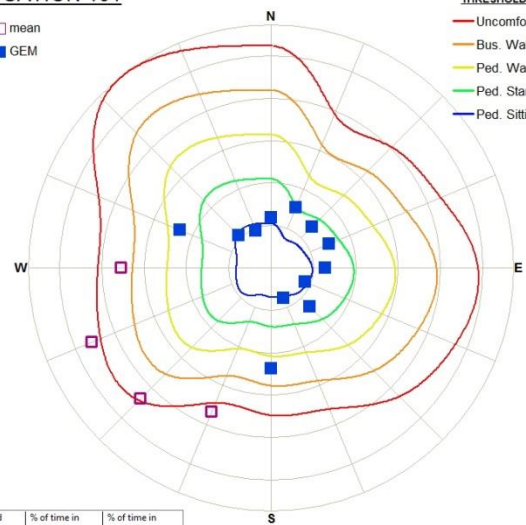
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	44.1	47.8
4.0	19.1	18.9
6.0	8.7	5.6
8.0	2.7	1.1
10.0	0.6	0.1
7.0	5.0	Ped Walking
13.5	0.022	Pass
6.1	Ped Walking	5.0
11.9	Pass	0.022

### LOCATION 101

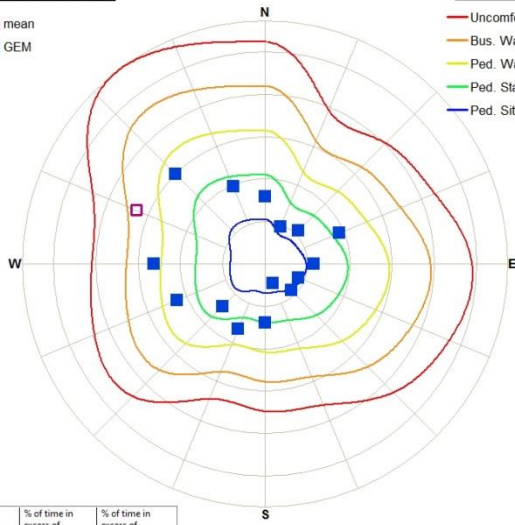
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	32.4	38.8
4.0	13.3	15.8
6.0	6.5	6.1
8.0	2.9	1.7
10.0	1.0	0.4
6.6	5.0	Ped Walking
16.1	0.022	Able Body
6.3	Ped Walking	5.0
13.7	Pass	0.022

### LOCATION 102

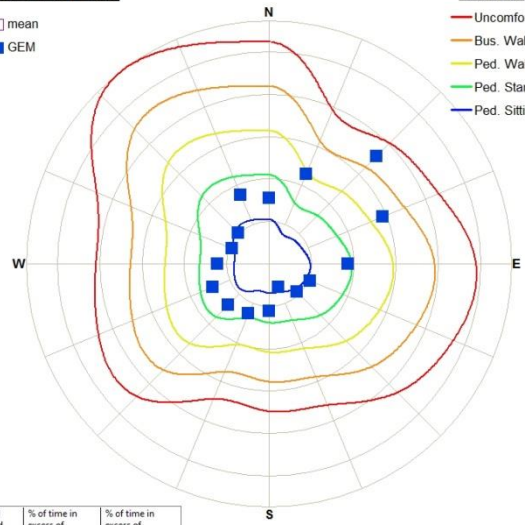
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	23.2	33.5
4.0	4.6	7.0
6.0	1.3	1.6
8.0	0.4	0.4
10.0	0.1	0.1
3.8	5.0	Ped Sitting
11.8	0.022	Pass
4.4	Ped Standing	5.0
11.7	Pass	0.022

### LOCATION 103

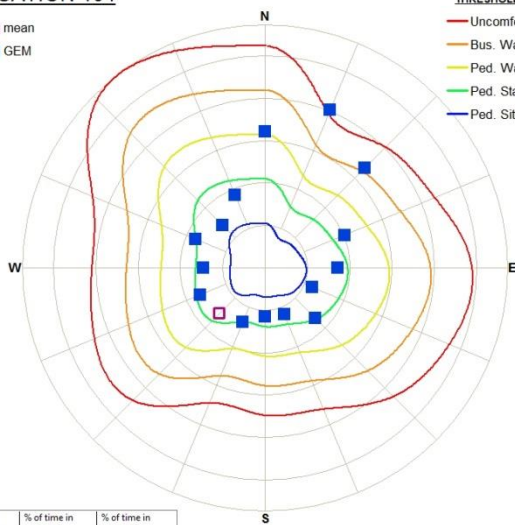
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	20.4	28.9
4.0	4.7	7.7
6.0	1.2	2.8
8.0	0.1	0.7
10.0	0.0	0.1
3.8	5.0	Ped Sitting
9.3	0.022	Pass
4.8	Ped Standing	5.0
11.5	Pass	0.022

### LOCATION 104

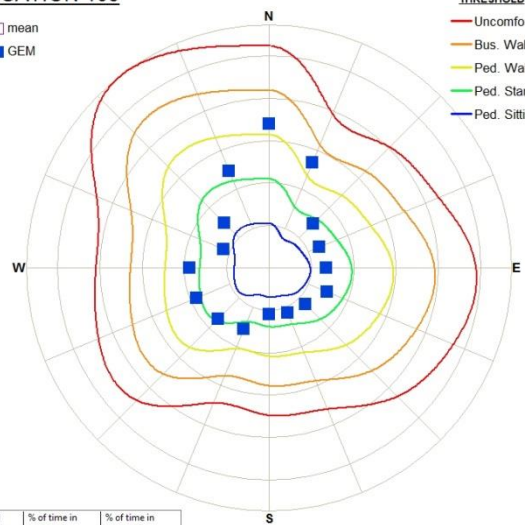
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	29.5	39.9
4.0	8.7	11.2
6.0	3.5	4.7
8.0	1.1	1.7
10.0	0.3	0.5
5.2	5.0	Ped Standing
12.3	0.022	Pass
5.8	Ped Standing	5.0
13.1	Pass	0.022

### LOCATION 105

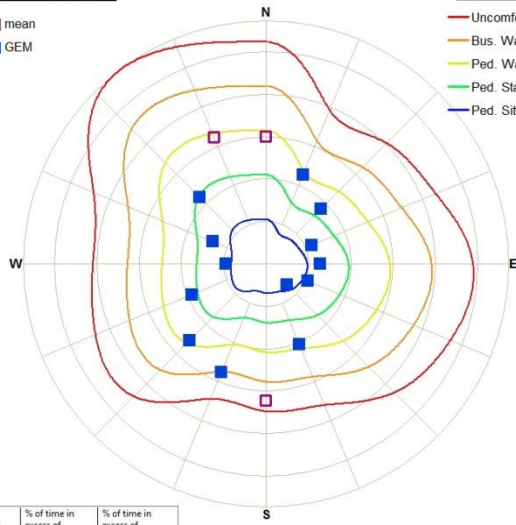
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	26.5	36.5
4.0	4.0	6.9
6.0	0.5	1.4
8.0	0.1	0.2
10.0	0.0	0.0
3.7	5.0	Ped Sitting
8.6	0.022	Pass
4.4	Ped Standing	5.0
9.5	Pass	0.022

### LOCATION 106

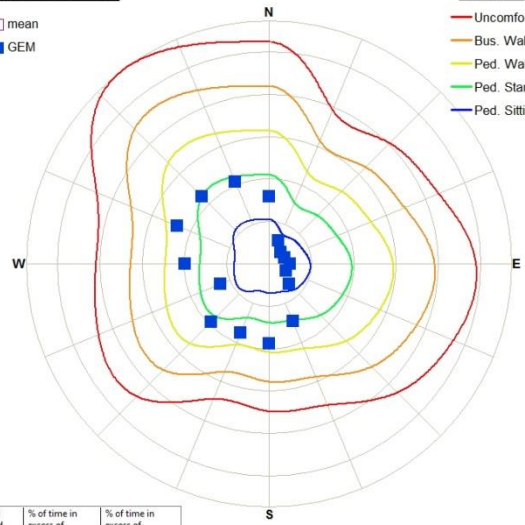
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	37.5	43.5
4.0	15.1	17.4
6.0	5.9	5.7
8.0	1.8	1.4
10.0	0.4	0.2
6.2	5.0	Ped Walking
13.2	0.022	Pass
6.1	Ped Walking	5.0
12.8	Pass	0.022

### LOCATION 107

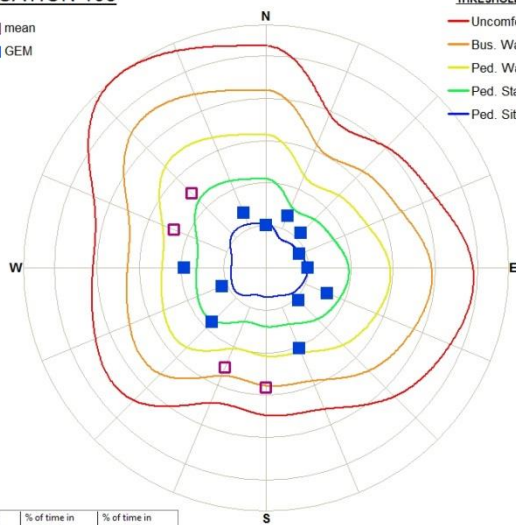
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	21.8	29.4
4.0	4.1	6.8
6.0	0.3	0.8
8.0	0.0	0.1
10.0	0.0	0.0
3.8	5.0	Ped Sitting
8.0	0.022	Pass
4.3	Ped Standing	5.0
9.2	Pass	0.022

### LOCATION 108

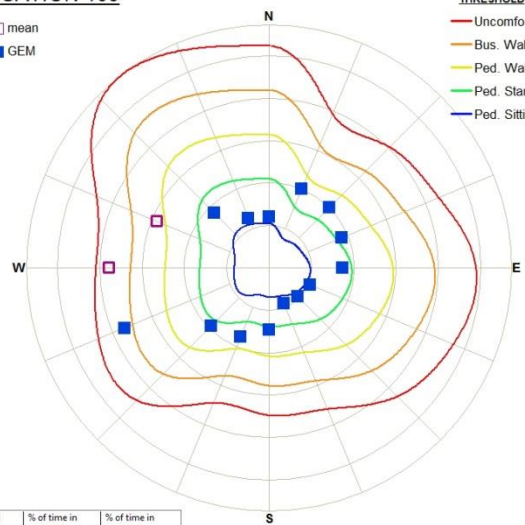
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	32.9	34.8
4.0	12.4	10.6
6.0	4.1	2.1
8.0	0.9	0.2
10.0	0.1	0.0
5.6	5.0	Ped Standing
11.9	0.022	Pass
5.0	Ped Standing	5.0
10.0	Pass	0.022

### LOCATION 109

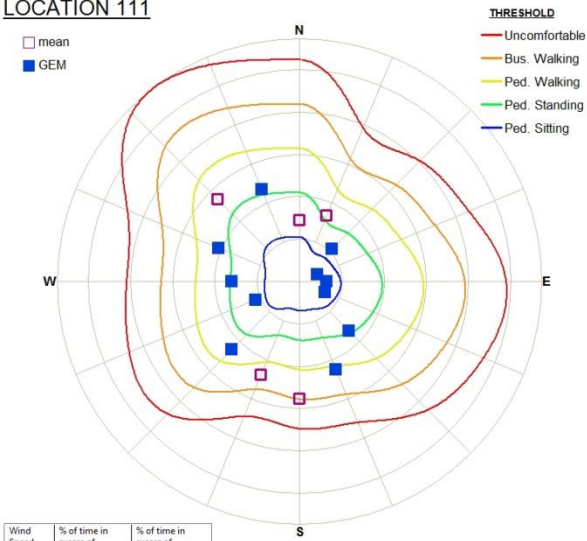
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	32.4	39.6
4.0	9.0	11.2
6.0	3.1	3.1
8.0	1.1	0.9
10.0	0.4	0.2
5.0	5.0	Ped Standing
13.6	0.022	Pass
5.1	Ped Standing	5.0
12.6	Pass	0.022



LOCATION 111



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
<b>2.0</b>	35.0	38.7
<b>4.0</b>	12.9	12.4
<b>6.0</b>	3.9	2.8
<b>8.0</b>	0.8	0.4
<b>10.0</b>	0.1	0.0
5.6	<b>5.0</b>	Ped Standing
11.5	<b>0.022</b>	Pass
5.3	Ped Standing	<b>5.0</b>
10.8	Pass	<b>0.022</b>

Appendix 3: Directional Wind Results, Autumn



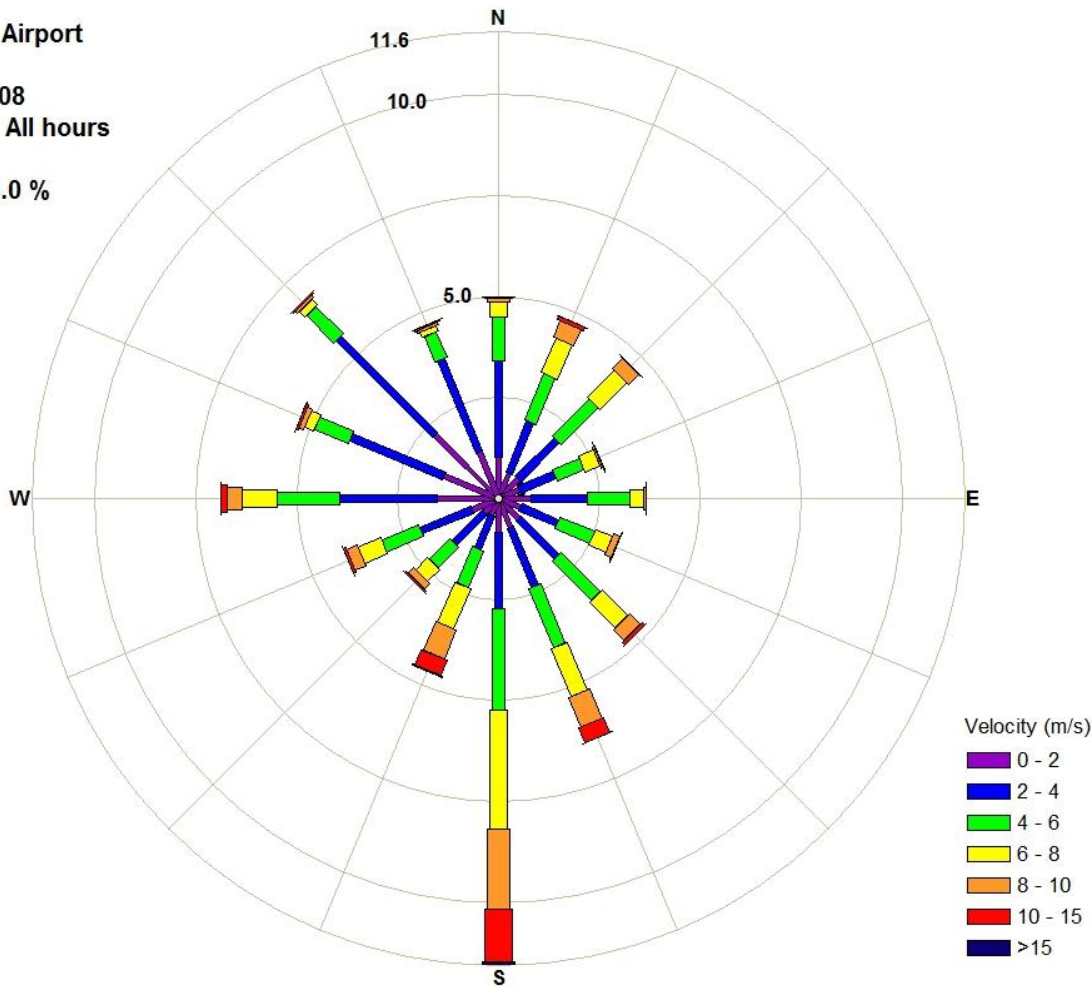
Figure 11: Pedestrian wind speed measurement locations – autumn

Sydney Airport

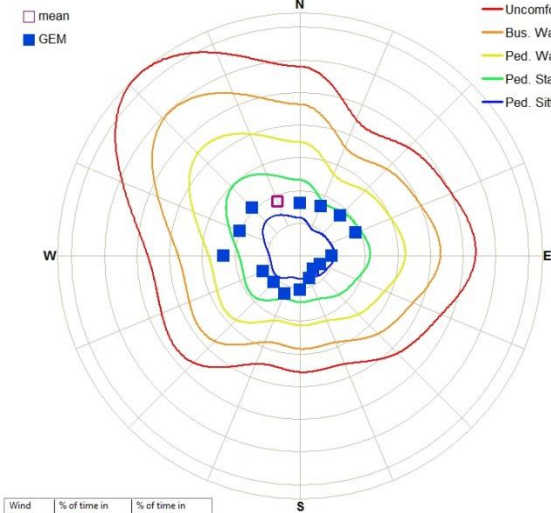
1974-2008

Autumn All hours

Calm 18.0 %

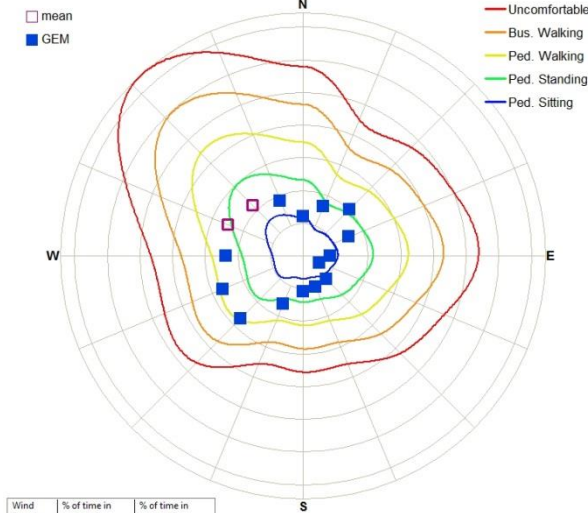


LOCATION 7



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	13.9	21.6
4.0	0.7	2.0
6.0	0.0	0.2
8.0	0.0	0.0
10.0	0.0	0.0
2.7	5.0	Ped Sitting
5.9	0.022	Pass
3.2	Ped Sitting	5.0
7.4	Pass	0.022

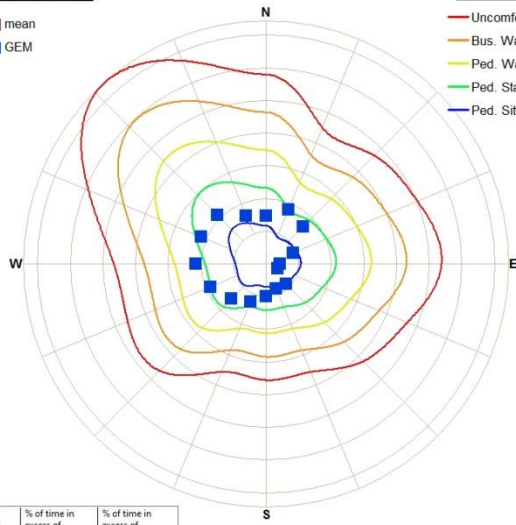
LOCATION 8



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	19.7	28.4
4.0	2.7	4.5
6.0	0.3	0.6
8.0	0.0	0.1
10.0	0.0	0.0
3.4	5.0	Ped Sitting
8.0	0.022	Pass
3.9	Ped Sitting	5.0
8.7	Pass	0.022

### LOCATION 9

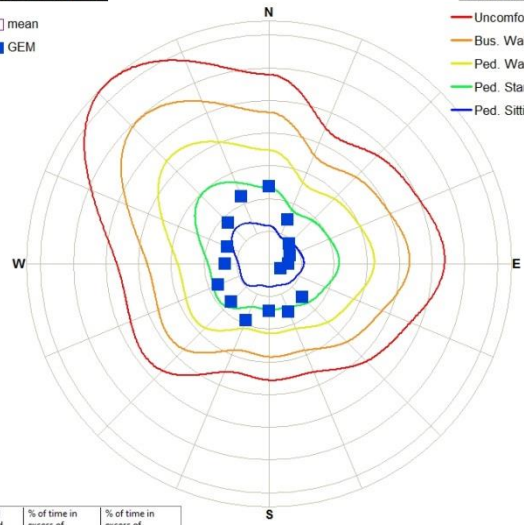
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	13.0	21.6
4.0	0.8	2.0
6.0	0.0	0.1
8.0	0.0	0.0
10.0	0.0	0.0
2.8	5.0	Ped Sitting
5.8	0.022	Pass
3.2	Ped Sitting	5.0
7.0	Pass	0.022

### LOCATION 10

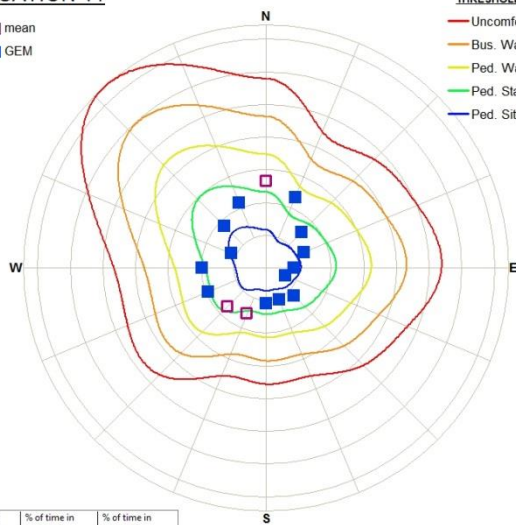
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	18.8	27.0
4.0	1.2	3.3
6.0	0.0	0.2
8.0	0.0	0.0
10.0	0.0	0.0
3.0	5.0	Ped Sitting
6.2	0.022	Pass
3.6	Ped Sitting	5.0
7.5	Pass	0.022

### LOCATION 11

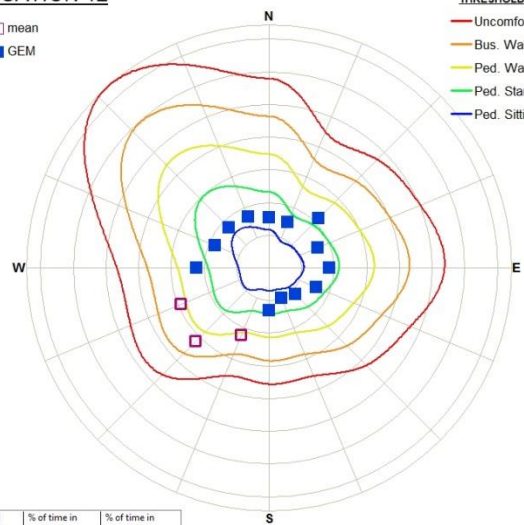
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	18.2	26.6
4.0	1.8	3.0
6.0	0.1	0.2
8.0	0.0	0.0
10.0	0.0	0.0
3.1	5.0	Ped Sitting
7.0	0.022	Pass
3.5	Ped Sitting	5.0
7.2	Pass	0.022

### LOCATION 12

□ mean  
■ GEM

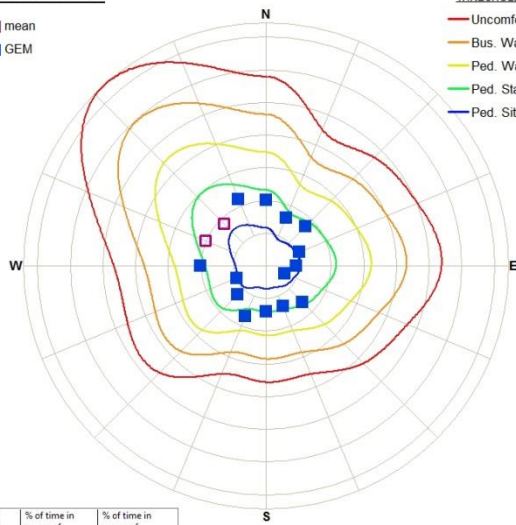


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	22.9	32.3
4.0	4.7	5.9
6.0	1.0	0.9
8.0	0.2	0.1
10.0	0.0	0.0
3.9	5.0	Ped Sitting
10.2	0.022	Pass
4.2	Ped Standing	5.0
9.4	Pass	0.022



### LOCATION 13

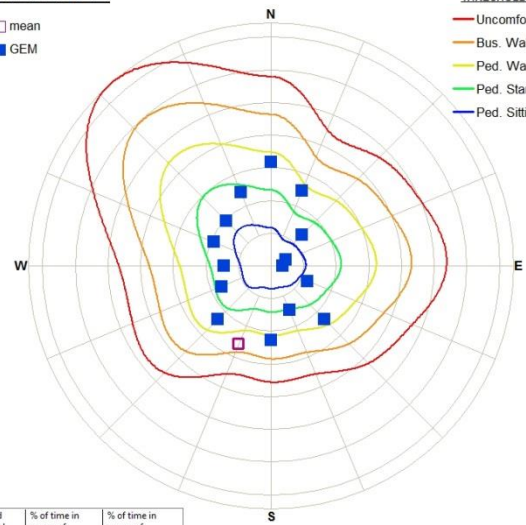
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	22.5	28.8
4.0	1.6	2.9
6.0	0.1	0.1
8.0	0.0	0.0
10.0	0.0	0.0
3.2	5.0	Ped Sitting
6.7	0.022	Pass
3.6	Ped Sitting	5.0
7.0	Pass	0.022

### LOCATION 14

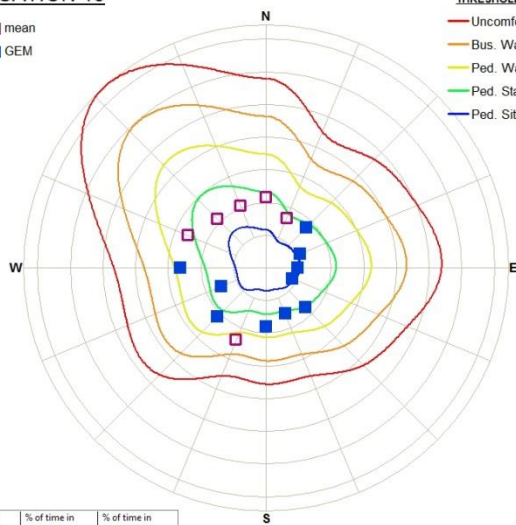
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	32.7	37.5
4.0	8.4	11.5
6.0	1.3	2.0
8.0	0.2	0.2
10.0	0.0	0.0
4.6	5.0	Ped Standing
10.3	0.022	Pass
5.0	Ped Standing	5.0
10.2	Pass	0.022

### LOCATION 15

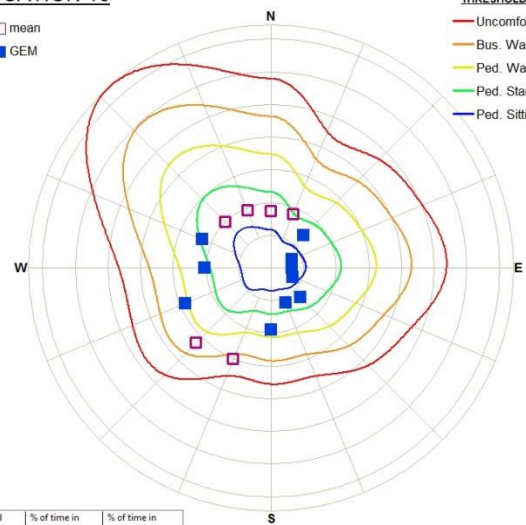
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	32.4	36.7
4.0	5.4	7.6
6.0	0.7	1.0
8.0	0.1	0.1
10.0	0.0	0.0
4.0	5.0	Ped Standing
9.6	0.022	Pass
4.4	Ped Standing	5.0
9.2	Pass	0.022

### LOCATION 16

□ mean  
■ GEM

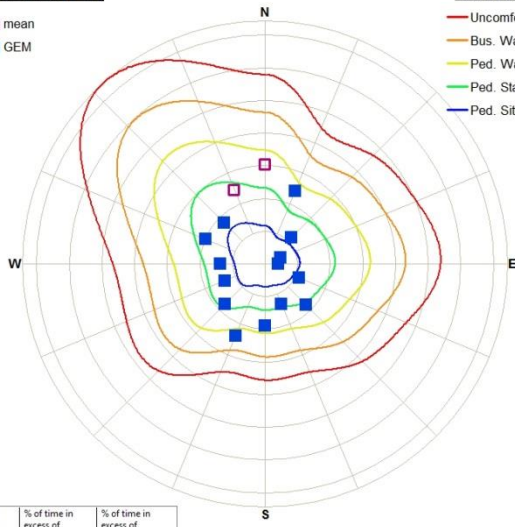


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	29.5	32.3
4.0	7.0	8.4
6.0	2.1	1.6
8.0	0.5	0.2
10.0	0.1	0.0
4.5	5.0	Ped Standing
12.0	0.022	Pass
4.7	Ped Standing	5.0
10.7	Pass	0.022



### LOCATION 17

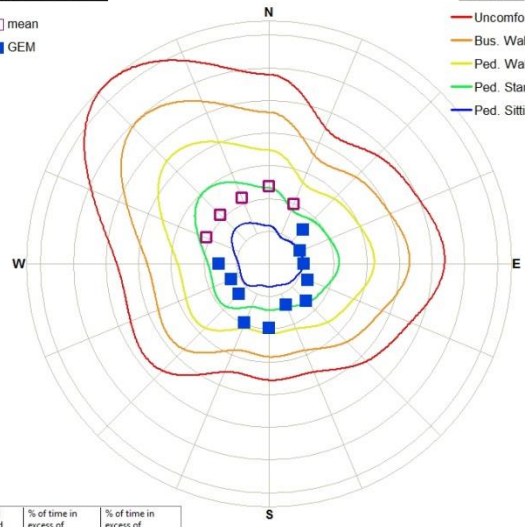
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	24.3	33.0
4.0	3.6	7.6
6.0	0.4	0.9
8.0	0.0	0.1
10.0	0.0	0.0
3.6	5.0	Ped Sitting
8.2	0.022	Pass
4.4	Ped Standing	5.0
9.4	Pass	0.022

### LOCATION 18

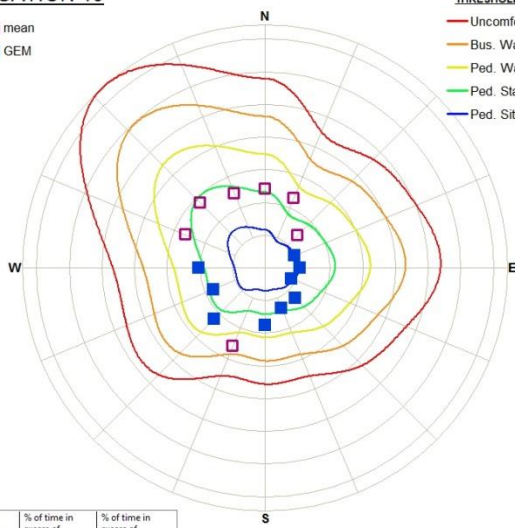
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	26.1	30.5
4.0	2.3	5.6
6.0	0.1	0.5
8.0	0.0	0.0
10.0	0.0	0.0
3.4	5.0	Ped Sitting
6.8	0.022	Pass
4.1	Ped Standing	5.0
8.6	Pass	0.022

### LOCATION 19

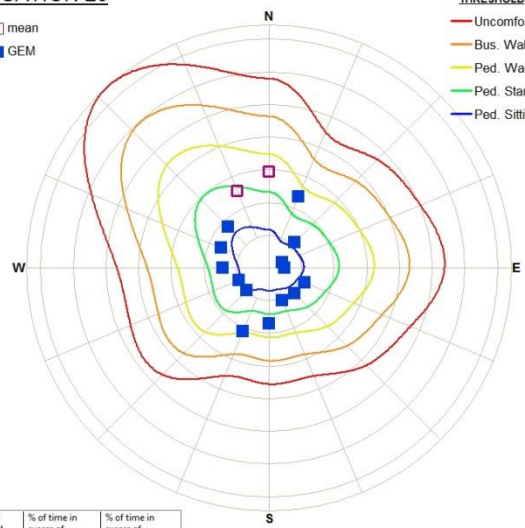
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	34.9	34.9
4.0	6.5	6.9
6.0	1.1	0.9
8.0	0.2	0.1
10.0	0.0	0.0
4.3	5.0	Ped Standing
10.3	0.022	Pass
4.3	Ped Standing	5.0
9.8	Pass	0.022

### LOCATION 20

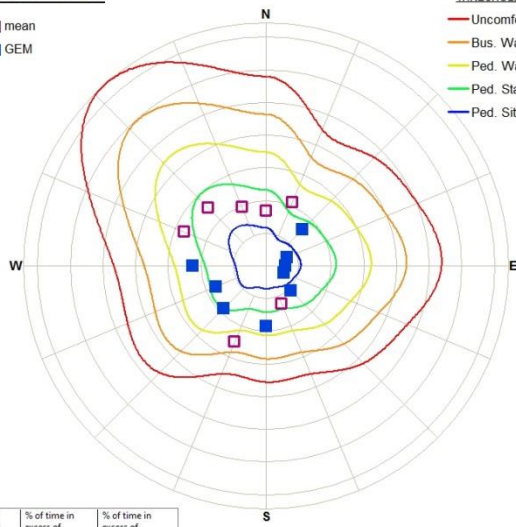
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	17.3	27.2
4.0	2.0	5.1
6.0	0.2	0.5
8.0	0.0	0.0
10.0	0.0	0.0
3.1	5.0	Ped Sitting
7.5	0.022	Pass
4.0	Ped Sitting	5.0
8.4	Pass	0.022

### LOCATION 21

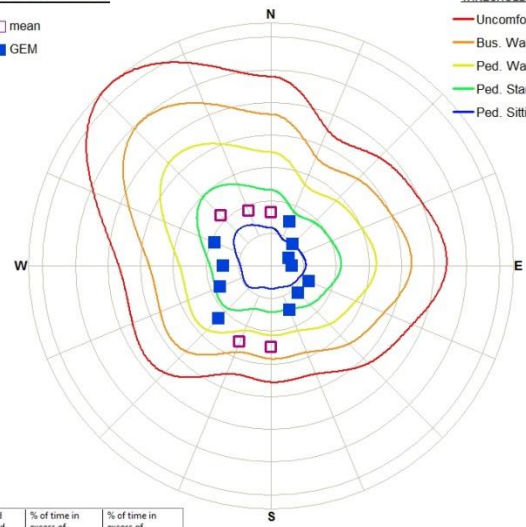
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	31.9	31.6
4.0	6.6	6.6
6.0	1.0	0.9
8.0	0.1	0.1
10.0	0.0	0.0
4.3	5.0	Ped Standing
10.0	0.022	Pass
4.3	Ped Standing	5.0
9.7	Pass	0.022

### LOCATION 22

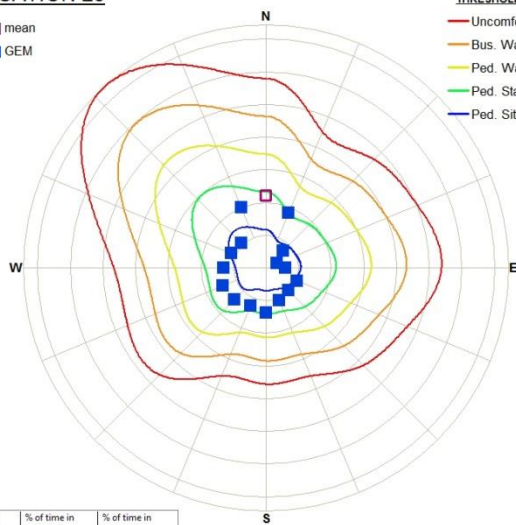
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	26.9	29.5
4.0	8.8	8.6
6.0	2.2	1.8
8.0	0.3	0.2
10.0	0.0	0.0
4.9	5.0	Ped Standing
10.9	0.022	Pass
4.7	Ped Standing	5.0
10.5	Pass	0.022

### LOCATION 23

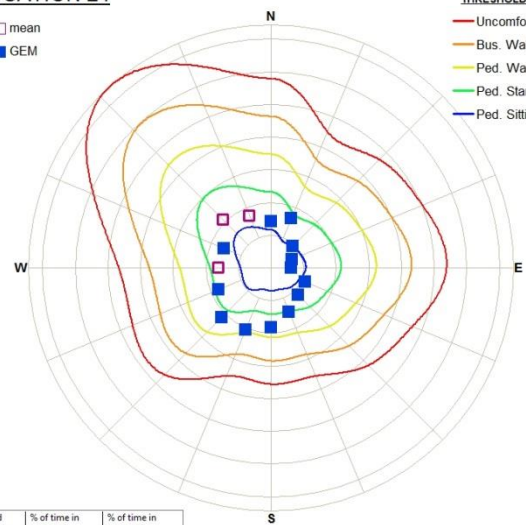
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	15.9	20.7
4.0	0.8	1.2
6.0	0.0	0.0
8.0	0.0	0.0
10.0	0.0	0.0
2.8	5.0	Ped Sitting
6.0	0.022	Pass
3.1	Ped Sitting	5.0
6.1	Pass	0.022

### LOCATION 24

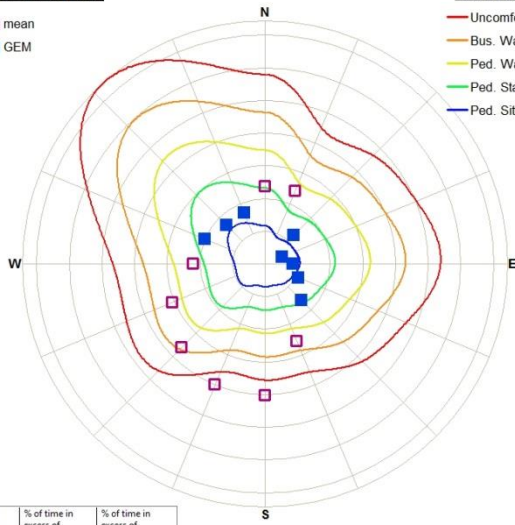
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	23.1	27.4
4.0	3.0	5.0
6.0	0.2	0.4
8.0	0.0	0.0
10.0	0.0	0.0
3.5	5.0	Ped Sitting
8.0	0.022	Pass
4.0	Ped Sitting	5.0
8.3	Pass	0.022

### LOCATION 25

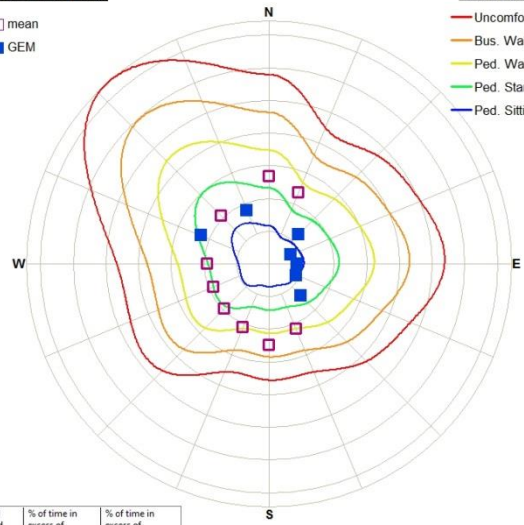
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	37.7	38.0
4.0	19.8	16.6
6.0	10.6	6.9
8.0	4.8	2.0
10.0	1.8	0.5
7.8	5.0	Ped Walking
17.5	0.022	Able Body
6.5	Ped Walking	5.0
14.2	Pass	0.022

### LOCATION 26

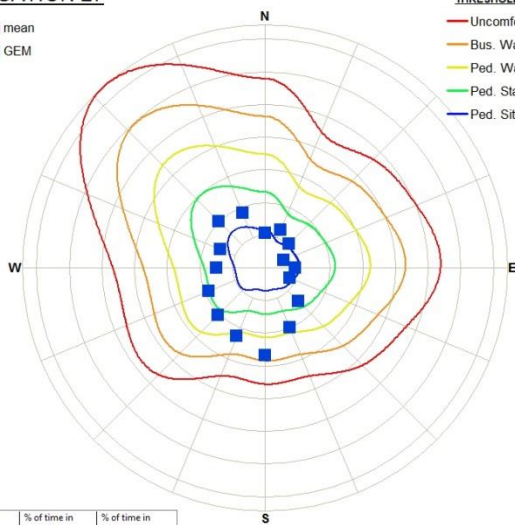
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	34.8	34.6
4.0	11.9	9.2
6.0	2.3	1.3
8.0	0.3	0.1
10.0	0.0	0.0
5.1	5.0	Ped Standing
10.2	0.022	Pass
4.7	Ped Standing	5.0
9.3	Pass	0.022

### LOCATION 27

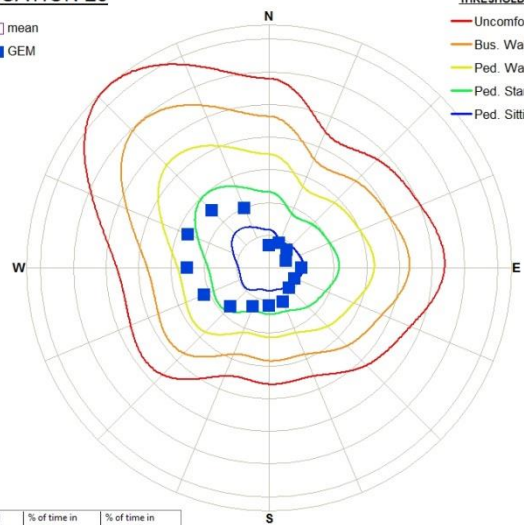
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	24.2	29.9
4.0	6.6	10.6
6.0	1.2	2.6
8.0	0.1	0.4
10.0	0.0	0.1
4.3	5.0	Ped Standing
9.5	0.022	Pass
5.1	Ped Standing	5.0
11.0	Pass	0.022

### LOCATION 28

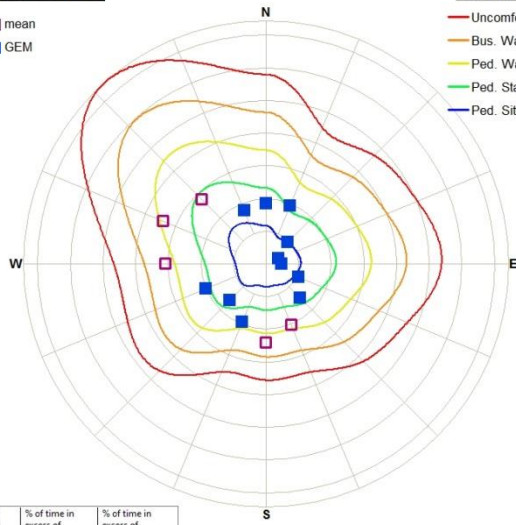
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	13.4	23.5
4.0	2.0	3.0
6.0	0.3	0.5
8.0	0.0	0.0
10.0	0.0	0.0
2.9	5.0	Ped Sitting
7.8	0.022	Pass
3.4	Ped Sitting	5.0
8.3	Pass	0.022

### LOCATION 29

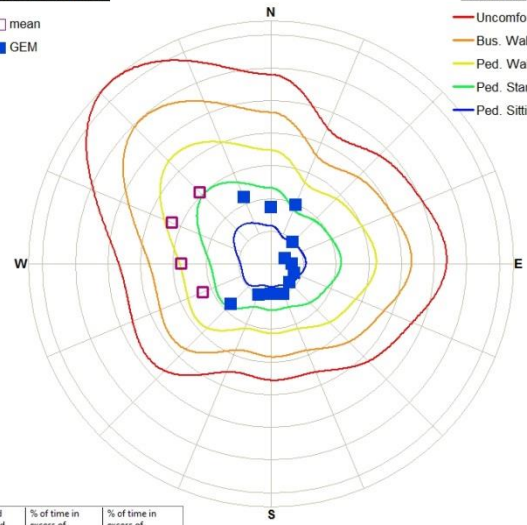
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	34.7	37.1
4.0	11.1	10.5
6.0	2.7	1.8
8.0	0.4	0.2
10.0	0.1	0.0
5.1	5.0	Ped Standing
10.9	0.022	Pass
4.8	Ped Standing	5.0
9.9	Pass	0.022

### LOCATION 30

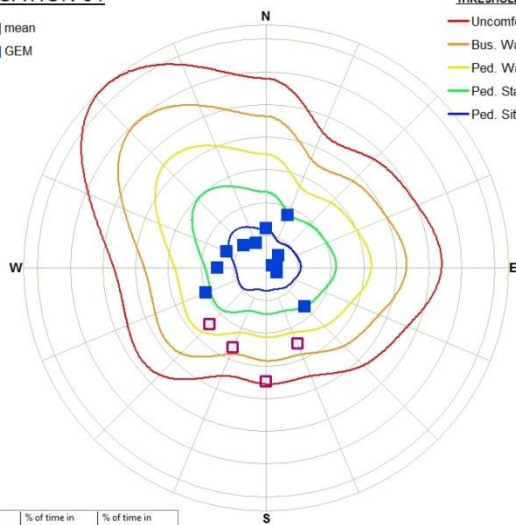
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	21.6	24.6
4.0	4.2	3.6
6.0	0.9	0.6
8.0	0.2	0.1
10.0	0.0	0.0
3.7	5.0	Ped Sitting
9.9	0.022	Pass
3.6	Ped Sitting	5.0
8.9	Pass	0.022

### LOCATION 31

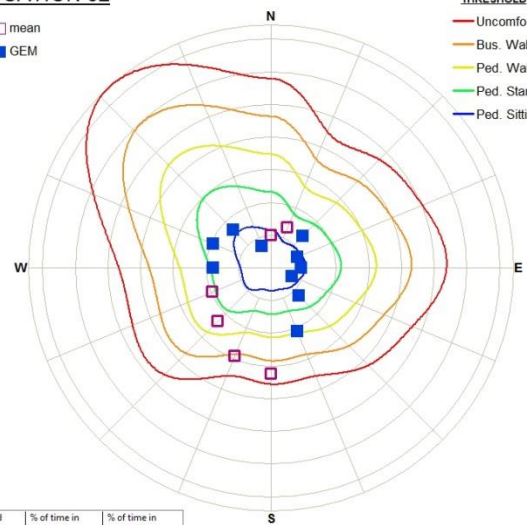
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	26.6	29.6
4.0	14.0	12.7
6.0	6.6	4.3
8.0	2.2	1.0
10.0	0.6	0.2
6.5	5.0	Ped Walking
14.2	0.022	Pass
5.7	Ped Standing	5.0
12.1	Pass	0.022

### LOCATION 32

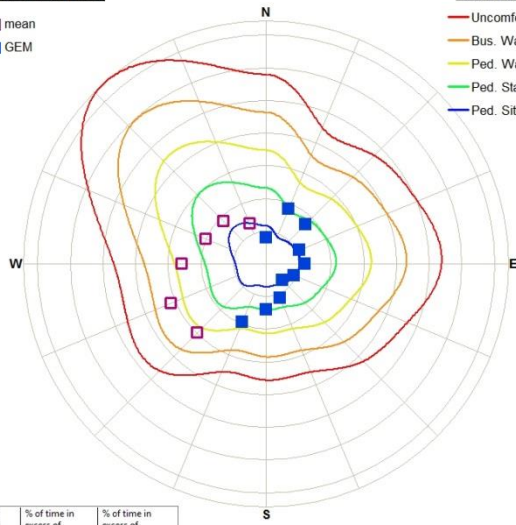
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	27.7	30.3
4.0	12.4	11.5
6.0	5.3	3.2
8.0	1.6	0.6
10.0	0.3	0.1
6.0	5.0	Ped Walking
13.5	0.022	Pass
5.4	Ped Standing	5.0
11.6	Pass	0.022

### LOCATION 33

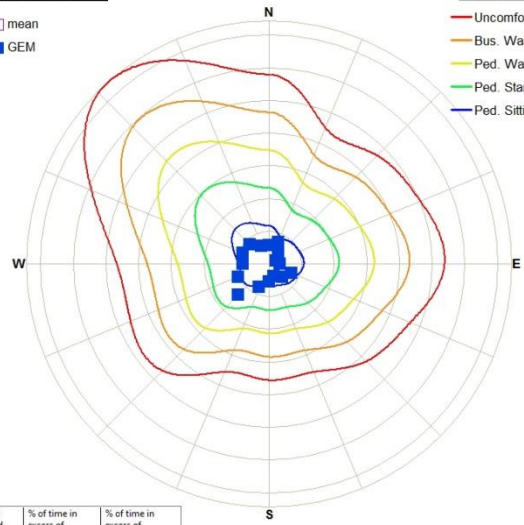
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	26.3	27.5
4.0	4.9	4.6
6.0	1.1	0.4
8.0	0.2	0.0
10.0	0.0	0.0
3.9	5.0	Ped Sitting
9.8	0.022	Pass
3.9	Ped Sitting	5.0
8.3	Pass	0.022

### LOCATION 34

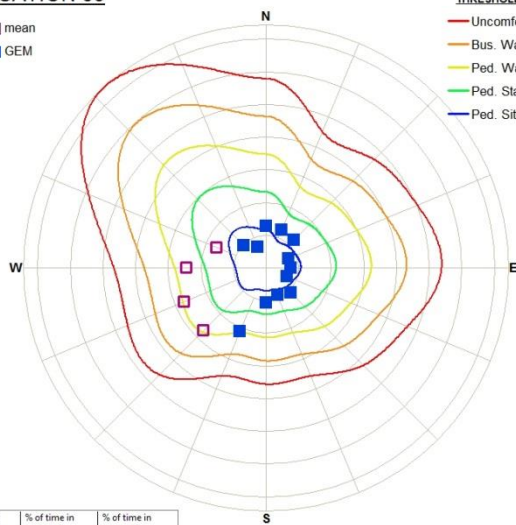
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	0.5	2.1
4.0	0.0	0.0
6.0	0.0	0.0
8.0	0.0	0.0
10.0	0.0	0.0
1.2	5.0	Outdoor Dining
3.2	0.022	Pass
1.6	Outdoor Dining	5.0
4.1	Pass	0.022

### LOCATION 35

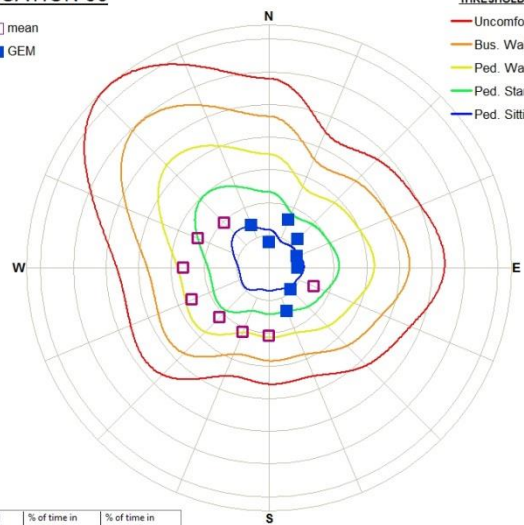
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	15.2	19.4
4.0	4.3	3.0
6.0	0.7	0.3
8.0	0.1	0.0
10.0	0.0	0.0
3.7	5.0	Ped Sitting
8.9	0.022	Pass
3.4	Ped Sitting	5.0
8.4	Pass	0.022

### LOCATION 36

□ mean  
■ GEM

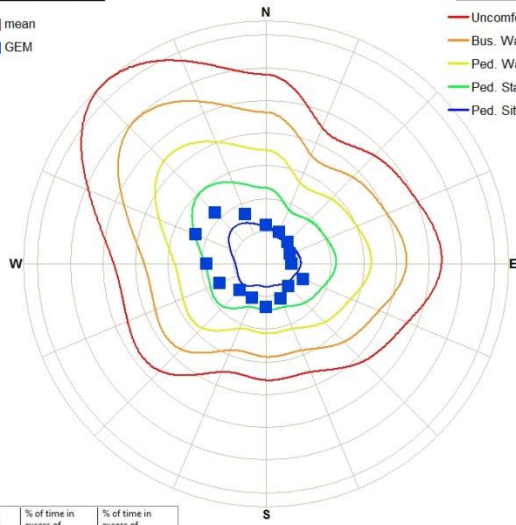


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	30.5	28.1
4.0	8.5	5.8
6.0	1.3	0.5
8.0	0.1	0.0
10.0	0.0	0.0
4.6	5.0	Ped Standing
9.5	0.022	Pass
4.1	Ped Standing	5.0
8.5	Pass	0.022



### LOCATION 37

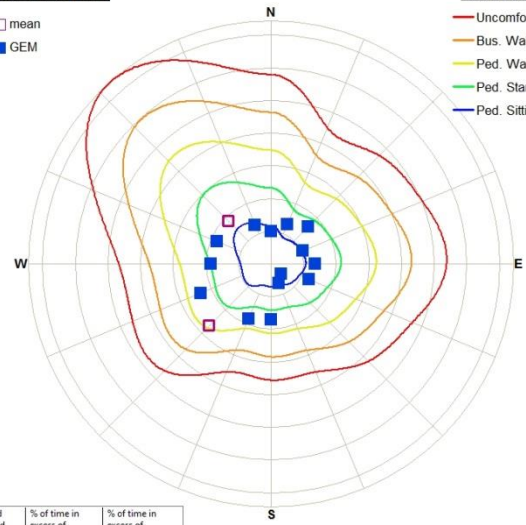
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	11.2	21.8
4.0	0.4	1.5
6.0	0.0	0.1
8.0	0.0	0.0
10.0	0.0	0.0
2.5	5.0	Ped Sitting
5.9	0.022	Pass
3.1	Ped Sitting	5.0
7.0	Pass	0.022

### LOCATION 38

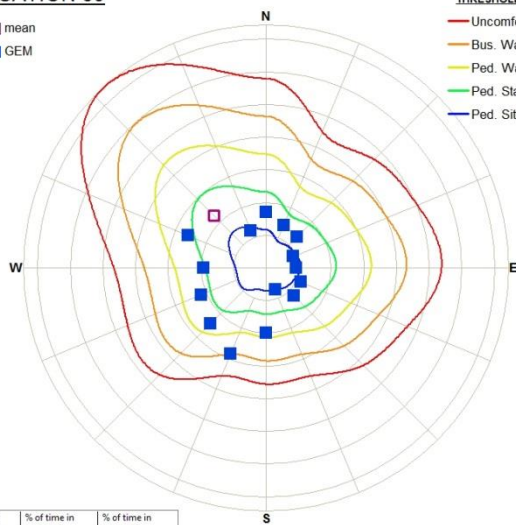
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	22.1	30.9
4.0	2.4	6.0
6.0	0.3	0.5
8.0	0.0	0.0
10.0	0.0	0.0
3.3	5.0	Ped Sitting
8.6	0.022	Pass
4.1	Ped Standing	5.0
8.4	Pass	0.022

### LOCATION 39

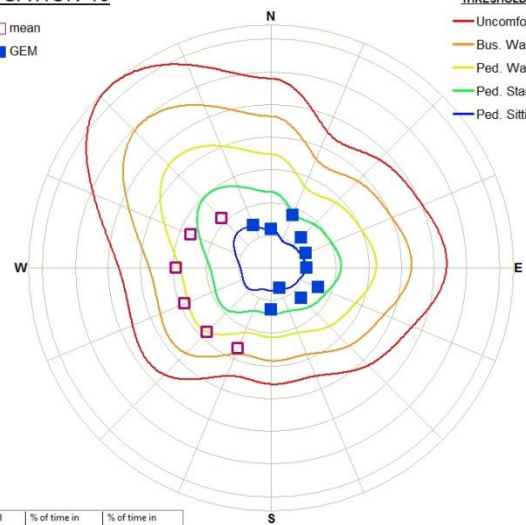
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	20.7	30.1
4.0	3.3	7.9
6.0	0.6	1.6
8.0	0.1	0.3
10.0	0.0	0.0
3.5	5.0	Ped Sitting
9.6	0.022	Pass
4.6	Ped Standing	5.0
11.2	Pass	0.022

### LOCATION 40

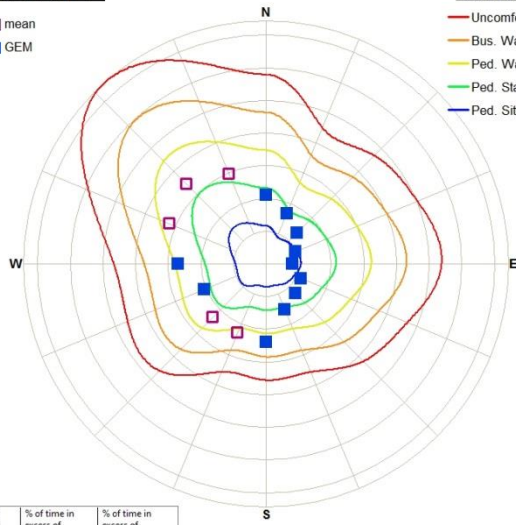
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	22.6	26.9
4.0	6.8	4.2
6.0	1.9	0.5
8.0	0.3	0.0
10.0	0.0	0.0
4.5	5.0	Ped Standing
10.8	0.022	Pass
3.8	Ped Sitting	5.0
8.6	Pass	0.022

### LOCATION 41

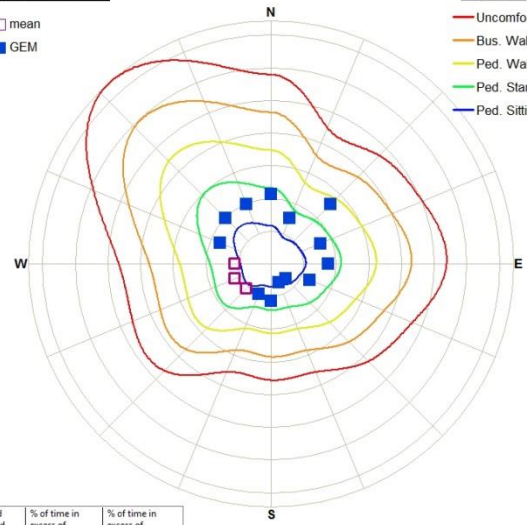
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	35.3	40.6
4.0	8.7	10.9
6.0	1.4	2.2
8.0	0.2	0.3
10.0	0.0	0.0
4.6	5.0	Ped Standing
10.4	0.022	Pass
4.9	Ped Standing	5.0
10.4	Pass	0.022

### LOCATION 42

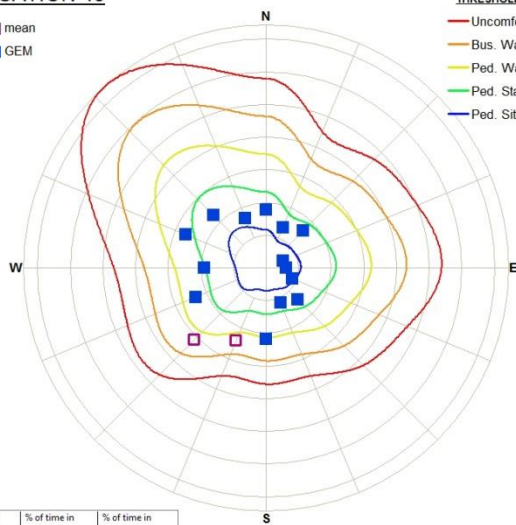
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	10.4	21.3
4.0	0.4	2.0
6.0	0.0	0.1
8.0	0.0	0.0
10.0	0.0	0.0
2.4	5.0	Ped Sitting
5.3	0.022	Pass
3.2	Ped Sitting	5.0
6.9	Pass	0.022

### LOCATION 43

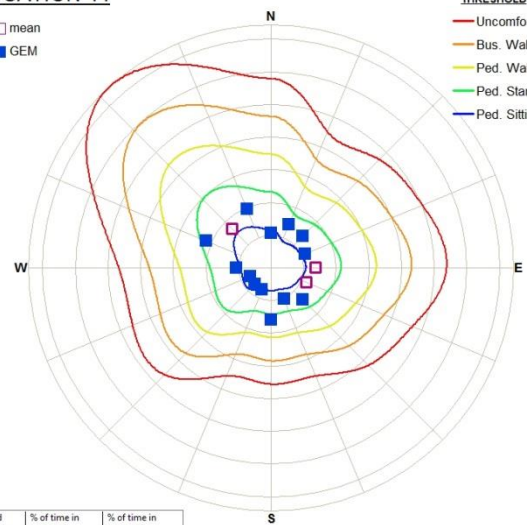
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	26.7	34.1
4.0	5.6	8.8
6.0	1.0	1.5
8.0	0.1	0.2
10.0	0.0	0.0
4.1	5.0	Ped Standing
10.0	0.022	Pass
4.7	Ped Standing	5.0
9.8	Pass	0.022

### LOCATION 44

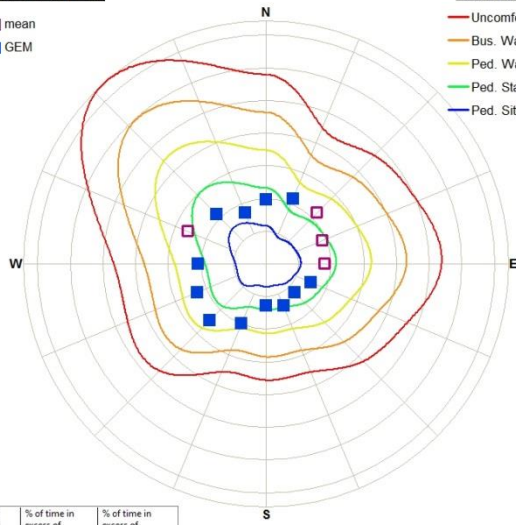
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	8.7	20.4
4.0	0.2	1.7
6.0	0.0	0.1
8.0	0.0	0.0
10.0	0.0	0.0
2.3	5.0	Ped Sitting
5.3	0.022	Pass
3.1	Ped Sitting	5.0
7.0	Pass	0.022

### LOCATION 45

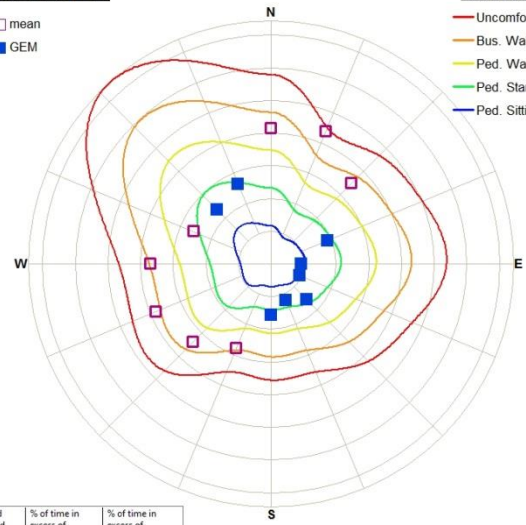
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	28.9	36.3
4.0	4.2	5.9
6.0	0.3	0.5
8.0	0.0	0.0
10.0	0.0	0.0
3.8	5.0	Ped Sitting
8.0	0.022	Pass
4.1	Ped Standing	5.0
8.4	Pass	0.022

### LOCATION 46

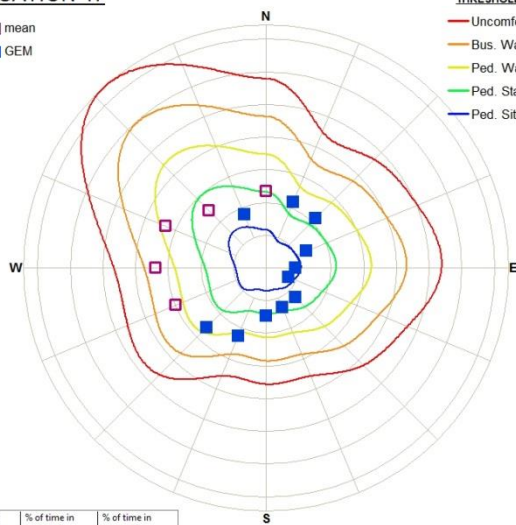
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	41.4	44.6
4.0	16.2	13.7
6.0	7.0	3.7
8.0	2.2	0.6
10.0	0.5	0.1
6.5	5.0	Ped Walking
13.3	0.022	Pass
5.5	Ped Standing	5.0
10.8	Pass	0.022

### LOCATION 47

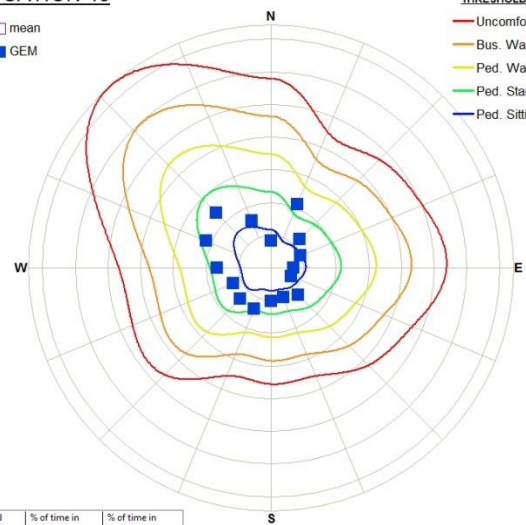
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	33.8	39.1
4.0	7.8	9.2
6.0	1.9	1.7
8.0	0.4	0.3
10.0	0.1	0.0
4.5	5.0	Ped Standing
11.0	0.022	Pass
4.7	Ped Standing	5.0
10.1	Pass	0.022

### LOCATION 48

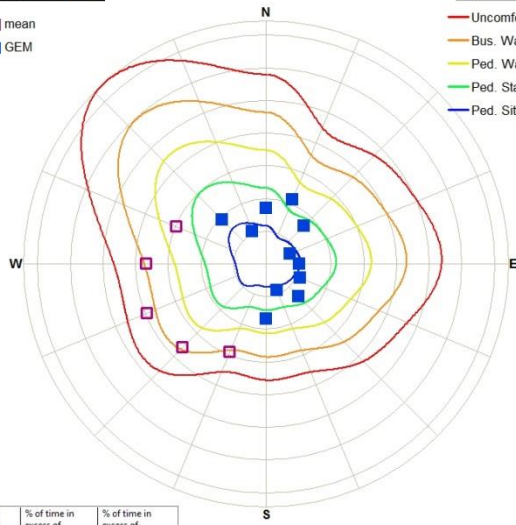
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	12.1	20.9
4.0	0.6	1.7
6.0	0.1	0.1
8.0	0.0	0.0
10.0	0.0	0.0
2.5	5.0	Ped Sitting
6.6	0.022	Pass
3.1	Ped Sitting	5.0
7.0	Pass	0.022

### LOCATION 49

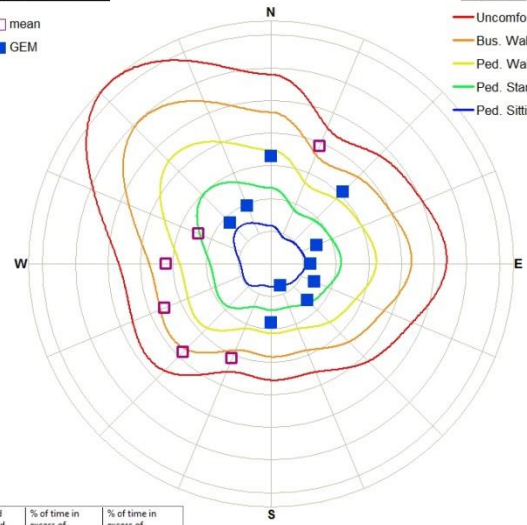
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	29.1	33.3
4.0	9.6	8.3
6.0	4.1	1.4
8.0	1.2	0.2
10.0	0.3	0.0
5.5	5.0	Ped Standing
12.8	0.022	Pass
4.6	Ped Standing	5.0
9.7	Pass	0.022

### LOCATION 50

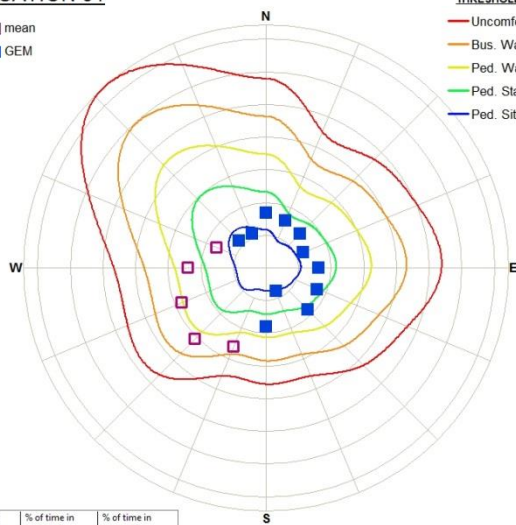
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	38.2	39.4
4.0	14.2	12.6
6.0	5.6	2.8
8.0	1.5	0.4
10.0	0.3	0.0
6.1	5.0	Ped Walking
13.1	0.022	Pass
5.3	Ped Standing	5.0
10.4	Pass	0.022

### LOCATION 51

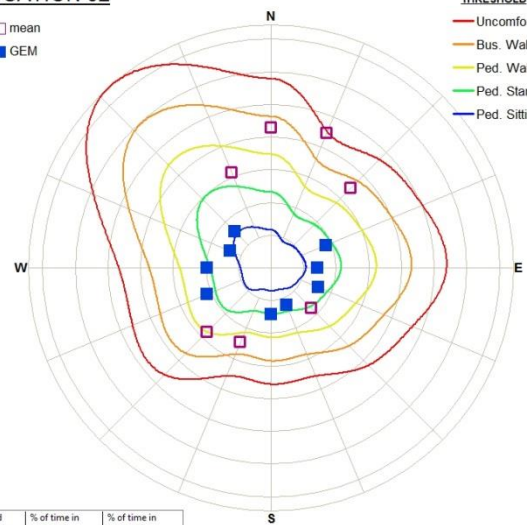
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	26.6	30.6
4.0	6.5	5.9
6.0	1.5	0.5
8.0	0.2	0.1
10.0	0.0	0.0
4.3	5.0	Ped Standing
10.6	0.022	Pass
4.1	Ped Standing	5.0
8.7	Pass	0.022

### LOCATION 52

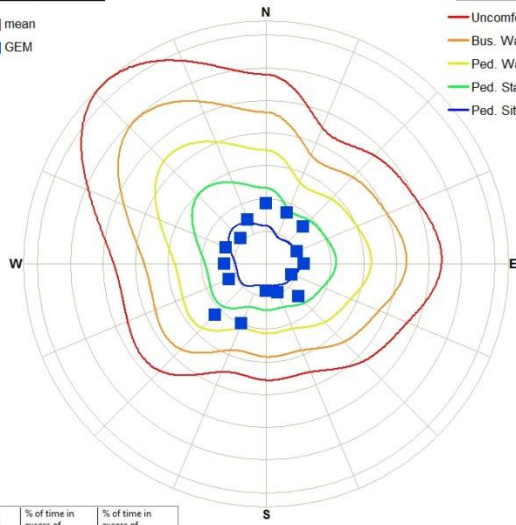
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	38.5	40.0
4.0	11.9	10.1
6.0	4.2	2.3
8.0	1.3	0.3
10.0	0.3	0.0
5.6	5.0	Ped Standing
12.8	0.022	Pass
4.9	Ped Standing	5.0
10.0	Pass	0.022

### LOCATION 53

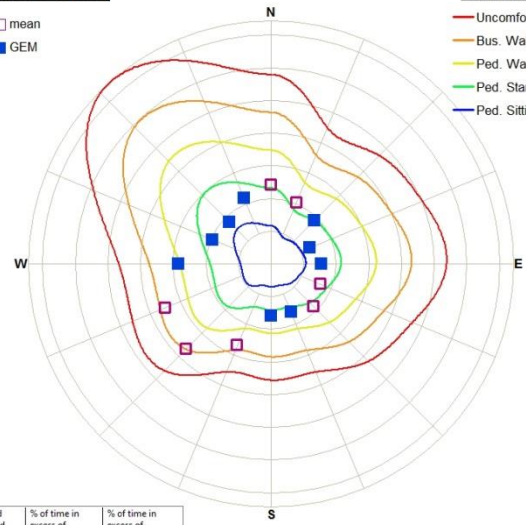
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	10.5	18.9
4.0	1.1	2.0
6.0	0.1	0.2
8.0	0.0	0.0
10.0	0.0	0.0
2.6	5.0	Ped Sitting
7.3	0.022	Pass
3.2	Ped Sitting	5.0
7.8	Pass	0.022

### LOCATION 54

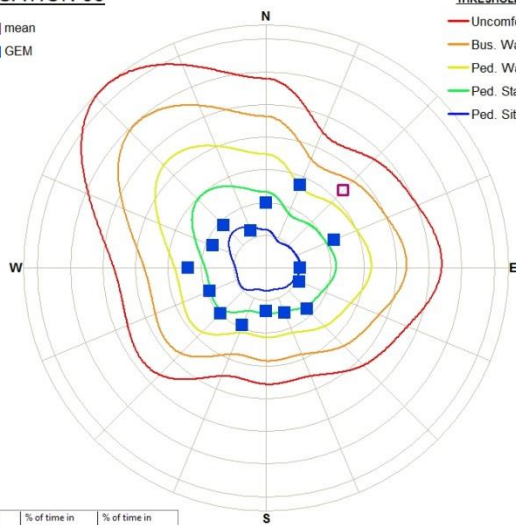
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	38.7	40.3
4.0	9.8	9.3
6.0	2.3	1.6
8.0	0.5	0.2
10.0	0.1	0.0
4.8	5.0	Ped Standing
11.9	0.022	Pass
4.7	Ped Standing	5.0
9.9	Pass	0.022

### LOCATION 55

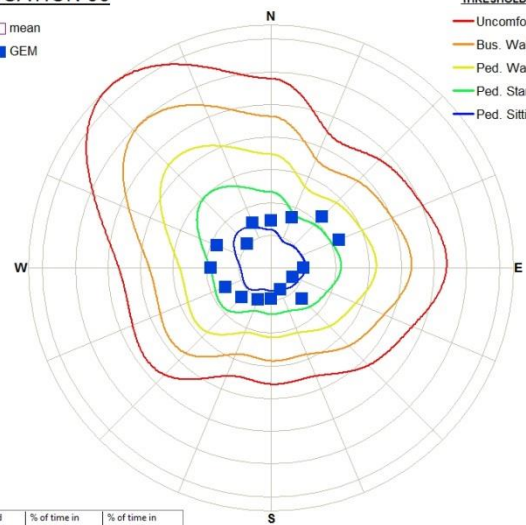
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	25.5	35.5
4.0	5.4	8.0
6.0	1.1	1.2
8.0	0.1	0.1
10.0	0.0	0.0
4.0	5.0	Ped Standing
9.0	0.022	Pass
4.5	Ped Standing	5.0
8.7	Pass	0.022

### LOCATION 56

□ mean  
■ GEM

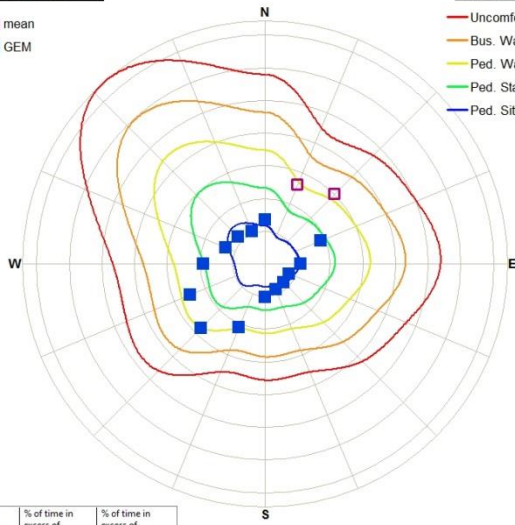


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	10.0	20.0
4.0	0.4	1.9
6.0	0.0	0.0
8.0	0.0	0.0
10.0	0.0	0.0
2.5	5.0	Ped Sitting
5.1	0.022	Pass
3.2	Ped Sitting	5.0
6.3	Pass	0.022



### LOCATION 57

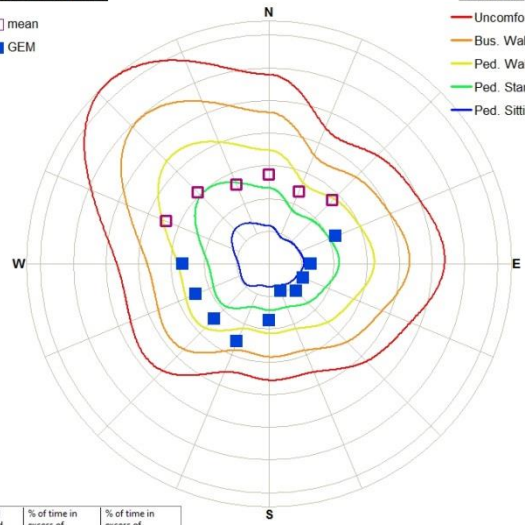
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	18.0	24.7
4.0	5.0	6.4
6.0	0.8	0.9
8.0	0.1	0.1
10.0	0.0	0.0
3.9	5.0	Ped Sitting
8.3	0.022	Pass
4.3	Ped Standing	5.0
9.0	Pass	0.022

### LOCATION 58

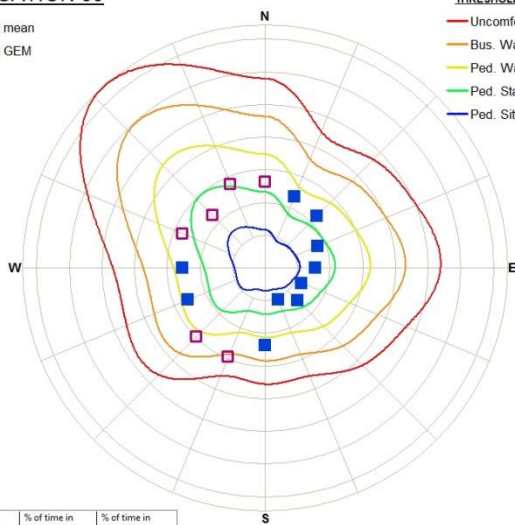
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	37.9	42.0
4.0	9.3	10.8
6.0	1.7	1.8
8.0	0.3	0.2
10.0	0.1	0.0
4.7	5.0	Ped Standing
10.8	0.022	Pass
4.9	Ped Standing	5.0
10.4	Pass	0.022

### LOCATION 59

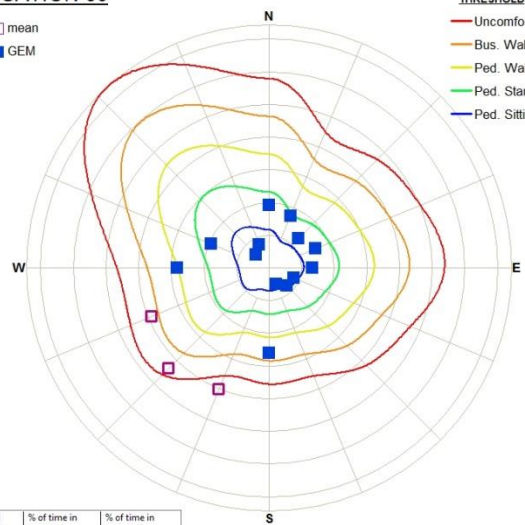
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	39.7	42.3
4.0	11.2	13.6
6.0	2.4	3.0
8.0	0.4	0.4
10.0	0.1	0.1
5.0	5.0	Ped Standing
11.7	0.022	Pass
5.3	Ped Standing	5.0
11.1	Pass	0.022

### LOCATION 60

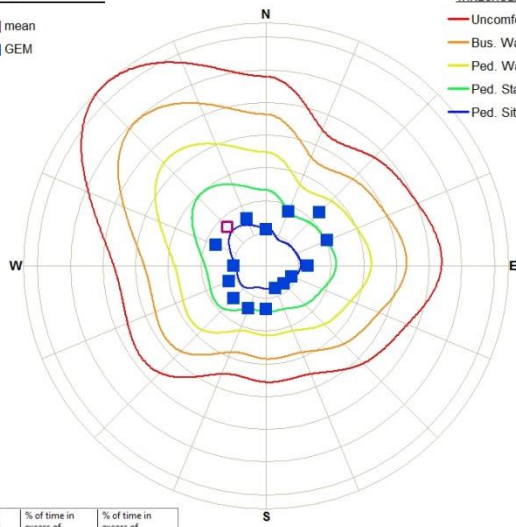
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	27.2	31.5
4.0	13.3	13.7
6.0	5.6	4.9
8.0	2.2	1.1
10.0	0.7	0.2
6.2	5.0	Ped Walking
16.1	0.022	Able Body
5.9	Ped Standing	5.0
12.8	Pass	0.022

### LOCATION 61

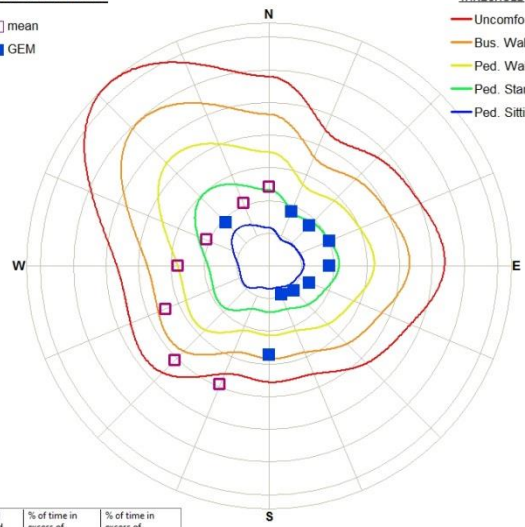
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	15.6	21.1
4.0	1.1	2.1
6.0	0.0	0.1
8.0	0.0	0.0
10.0	0.0	0.0
2.9	5.0	Ped Sitting
5.9	0.022	Pass
3.3	Ped Sitting	5.0
6.3	Pass	0.022

### LOCATION 62

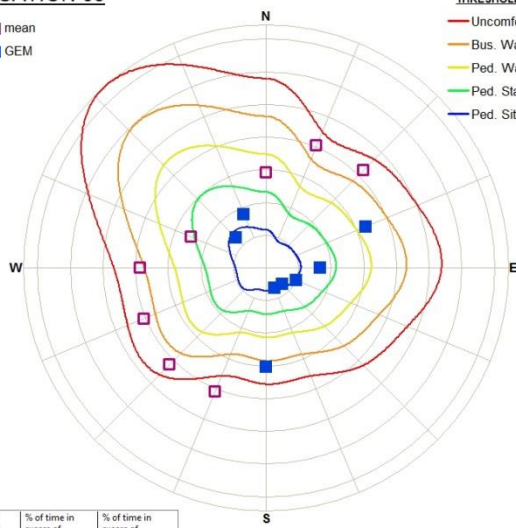
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	35.1	39.5
4.0	12.2	14.2
6.0	4.6	5.1
8.0	1.7	1.4
10.0	0.5	0.4
5.7	5.0	Ped Standing
15.6	0.022	Able Body
6.0	Ped Standing	5.0
14.4	Pass	0.022

### LOCATION 63

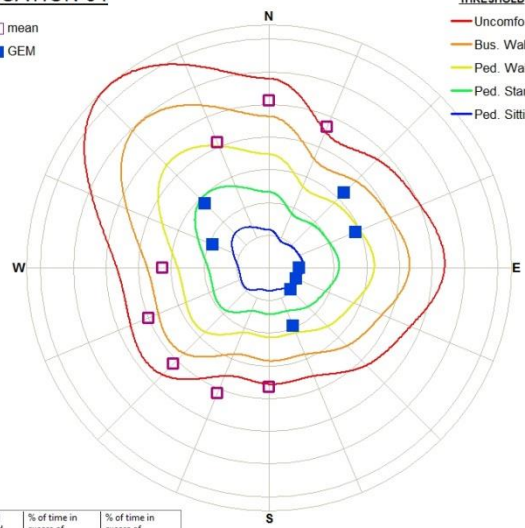
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	41.7	41.2
4.0	23.7	20.6
6.0	11.2	8.4
8.0	4.2	2.0
10.0	1.2	0.3
7.6	5.0	Ped Walking
16.3	0.022	Able Body
6.7	Ped Walking	5.0
13.6	Pass	0.022

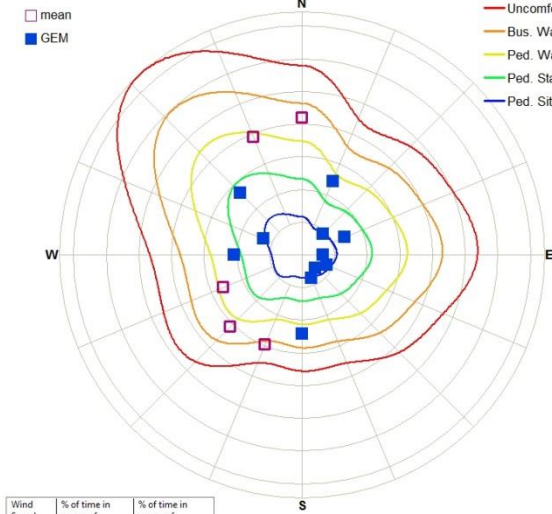
### LOCATION 64

□ mean  
■ GEM



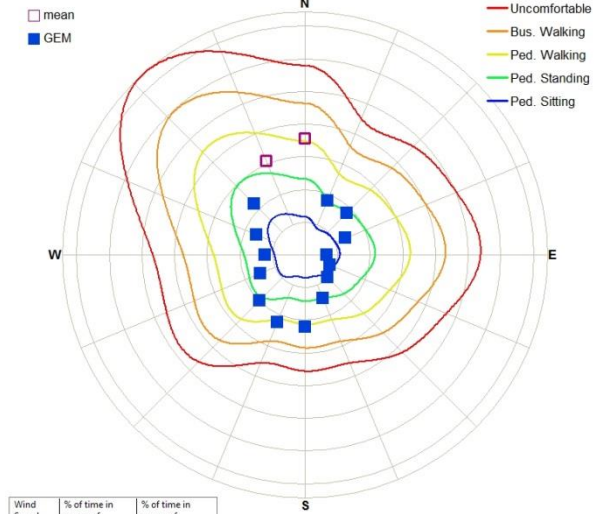
Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	47.4	49.6
4.0	25.6	23.6
6.0	13.8	9.0
8.0	6.1	2.3
10.0	2.1	0.4
8.3	5.0	Bus Walking
16.8	0.022	Able Body
6.9	Ped Walking	5.0
13.5	Pass	0.022

LOCATION 65



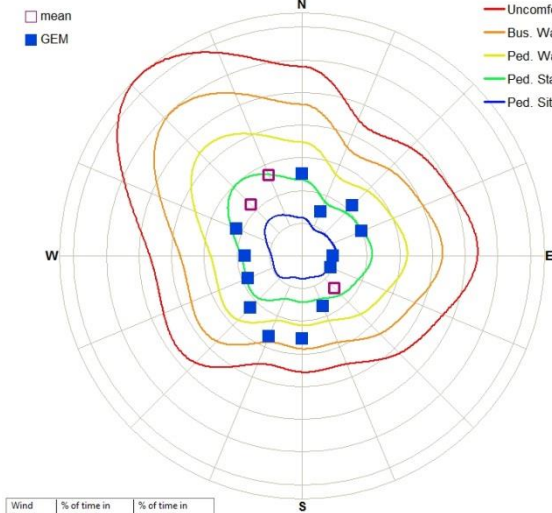
Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	32.9	35.4
4.0	13.6	12.6
6.0	4.0	2.7
8.0	0.8	0.4
10.0	0.2	0.0
5.6	5.0	Ped Standing
12.2	0.022	Pass
5.2	Ped Standing	5.0
10.8	Pass	0.022

LOCATION 66



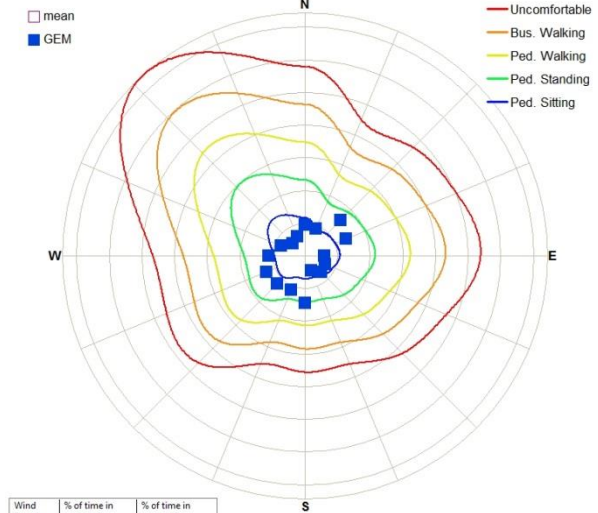
Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	26.9	35.0
4.0	6.5	9.0
6.0	1.0	1.5
8.0	0.1	0.2
10.0	0.0	0.0
4.2	5.0	Ped Standing
9.5	0.022	Pass
4.7	Ped Standing	5.0
9.9	Pass	0.022

LOCATION 67



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	31.4	39.6
4.0	8.7	11.9
6.0	1.8	2.7
8.0	0.2	0.4
10.0	0.0	0.1
4.7	5.0	Ped Standing
10.4	0.022	Pass
5.2	Ped Standing	5.0
11.3	Pass	0.022

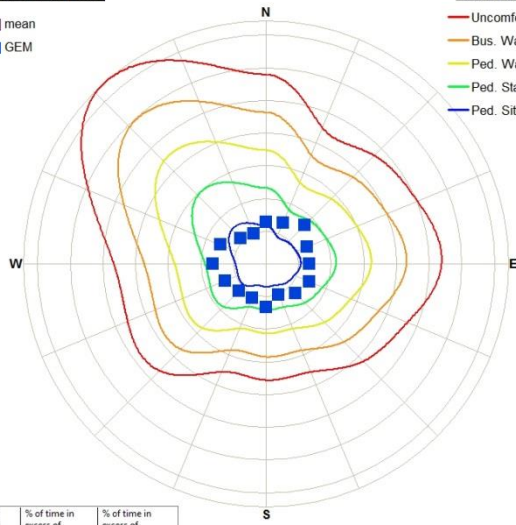
LOCATION 68



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	6.8	14.0
4.0	0.1	0.8
6.0	0.0	0.0
8.0	0.0	0.0
10.0	0.0	0.0
2.2	5.0	Ped Sitting
4.5	0.022	Pass
2.8	Ped Sitting	5.0
6.0	Pass	0.022

### LOCATION 69

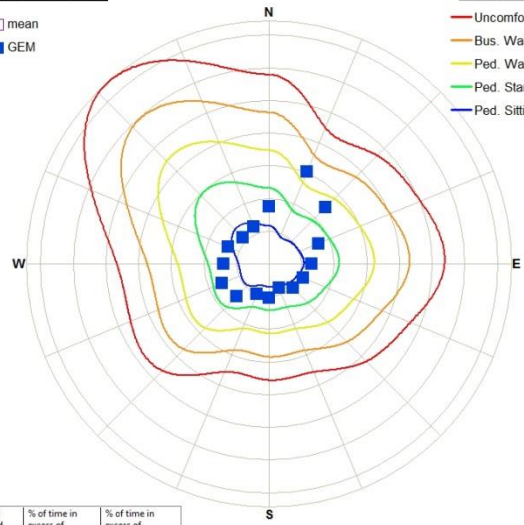
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	10.3	22.0
4.0	0.1	0.8
6.0	0.0	0.0
8.0	0.0	0.0
10.0	0.0	0.0
2.4	5.0	Ped Sitting
4.5	0.022	Pass
3.0	Ped Sitting	5.0
5.8	Pass	0.022

### LOCATION 70

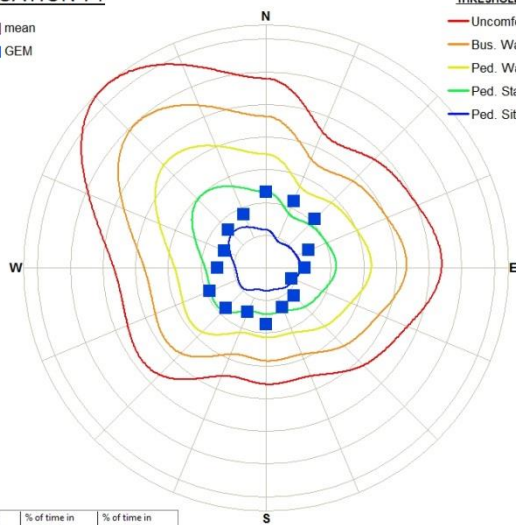
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	11.8	21.3
4.0	2.3	3.3
6.0	0.2	0.6
8.0	0.0	0.1
10.0	0.0	0.0
2.9	5.0	Ped Sitting
7.4	0.022	Pass
3.4	Ped Sitting	5.0
8.6	Pass	0.022

### LOCATION 71

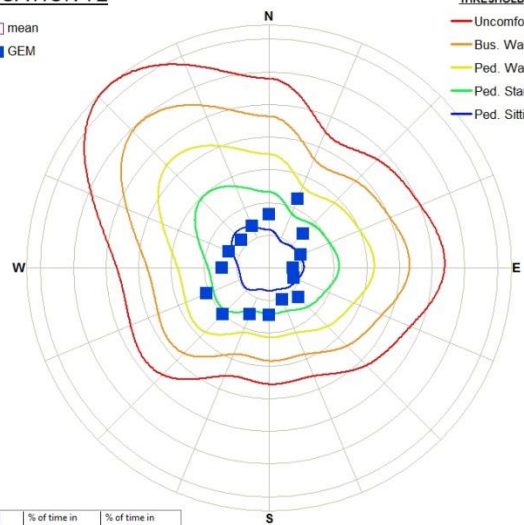
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	21.7	30.8
4.0	1.6	4.7
6.0	0.0	0.2
8.0	0.0	0.0
10.0	0.0	0.0
3.2	5.0	Ped Sitting
6.1	0.022	Pass
3.9	Ped Sitting	5.0
7.4	Pass	0.022

### LOCATION 72

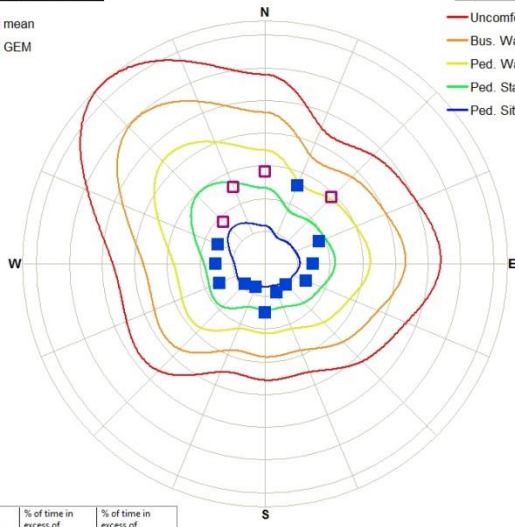
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	14.5	25.3
4.0	1.0	2.9
6.0	0.0	0.1
8.0	0.0	0.0
10.0	0.0	0.0
2.8	5.0	Ped Sitting
6.3	0.022	Pass
3.5	Ped Sitting	5.0
7.1	Pass	0.022

### LOCATION 74

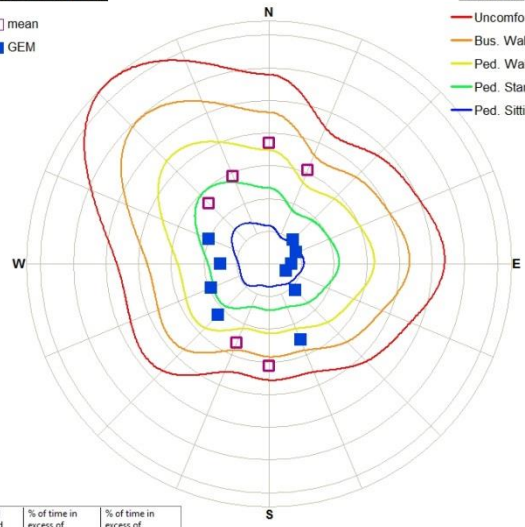
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	19.1	28.2
4.0	3.6	4.8
6.0	0.5	0.6
8.0	0.0	0.0
10.0	0.0	0.0
3.5	5.0	Ped Sitting
7.9	0.022	Pass
3.9	Ped Sitting	5.0
7.9	Pass	0.022

### LOCATION 75

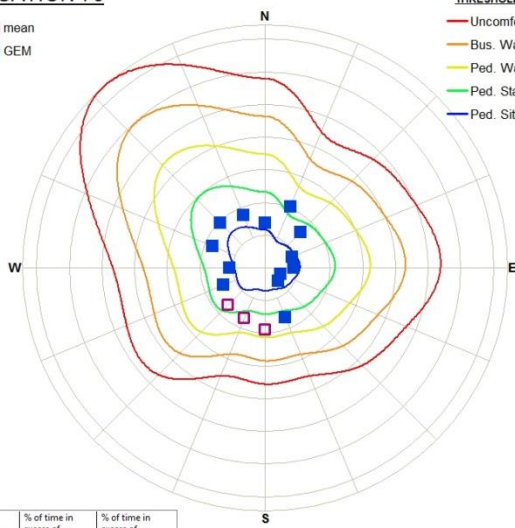
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	36.3	38.6
4.0	16.6	15.6
6.0	6.2	4.6
8.0	1.5	0.8
10.0	0.3	0.1
6.3	5.0	Ped Walking
12.9	0.022	Pass
5.8	Ped Standing	5.0
11.5	Pass	0.022

### LOCATION 76

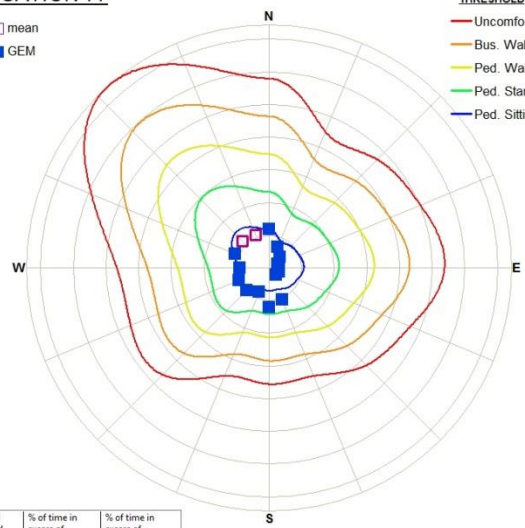
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	20.5	26.0
4.0	3.7	4.4
6.0	0.3	0.3
8.0	0.0	0.0
10.0	0.0	0.0
3.7	5.0	Ped Sitting
7.9	0.022	Pass
3.9	Ped Sitting	5.0
7.6	Pass	0.022

### LOCATION 77

□ mean  
■ GEM

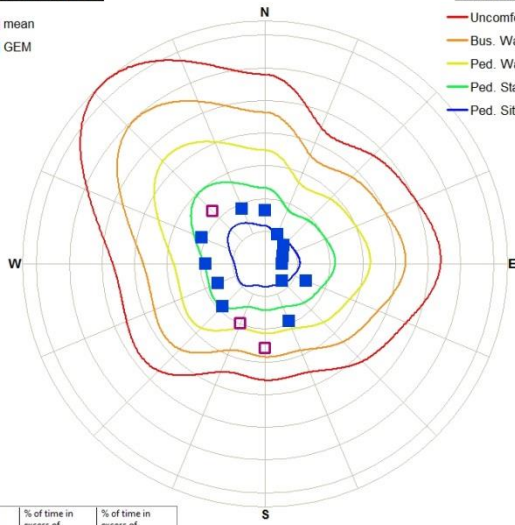


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	4.2	9.6
4.0	0.0	0.2
6.0	0.0	0.0
8.0	0.0	0.0
10.0	0.0	0.0
1.9	5.0	Outdoor Dining
3.9	0.022	Pass
2.4	Ped Sitting	5.0
5.0	Pass	0.022



### LOCATION 78

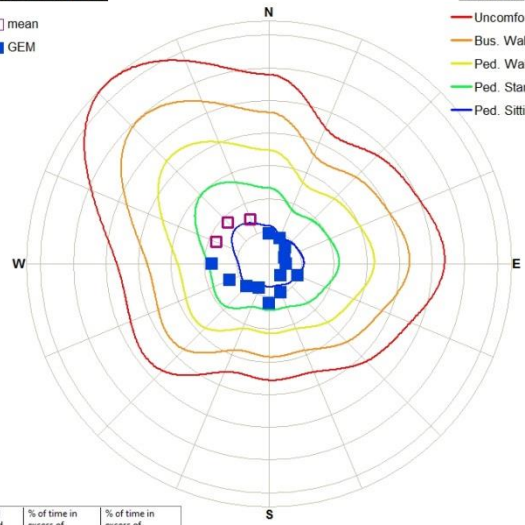
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	23.8	28.9
4.0	8.2	8.7
6.0	2.0	1.6
8.0	0.3	0.2
10.0	0.0	0.0
4.7	5.0	Ped Standing
10.5	0.022	Pass
4.7	Ped Standing	5.0
9.9	Pass	0.022

### LOCATION 79

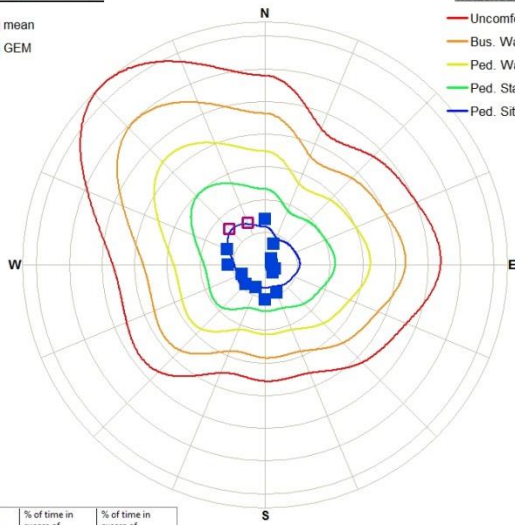
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	6.5	12.9
4.0	0.3	0.6
6.0	0.0	0.0
8.0	0.0	0.0
10.0	0.0	0.0
2.1	5.0	Ped Sitting
5.4	0.022	Pass
2.6	Ped Sitting	5.0
5.7	Pass	0.022

### LOCATION 80

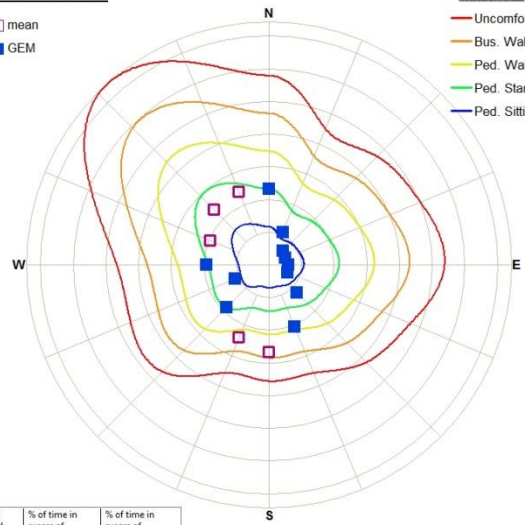
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	4.2	8.2
4.0	0.1	0.1
6.0	0.0	0.0
8.0	0.0	0.0
10.0	0.0	0.0
1.9	5.0	Outdoor Dining
4.3	0.022	Pass
2.3	Ped Sitting	5.0
4.5	Pass	0.022

### LOCATION 81

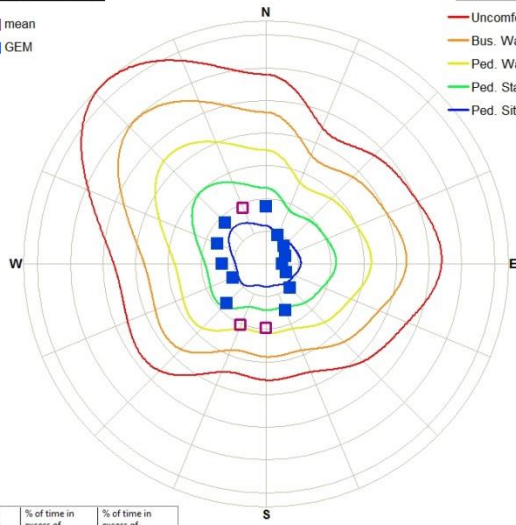
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	28.6	30.2
4.0	10.2	9.6
6.0	2.7	1.7
8.0	0.5	0.2
10.0	0.1	0.0
5.1	5.0	Ped Standing
11.2	0.022	Pass
4.8	Ped Standing	5.0
9.8	Pass	0.022

### LOCATION 82

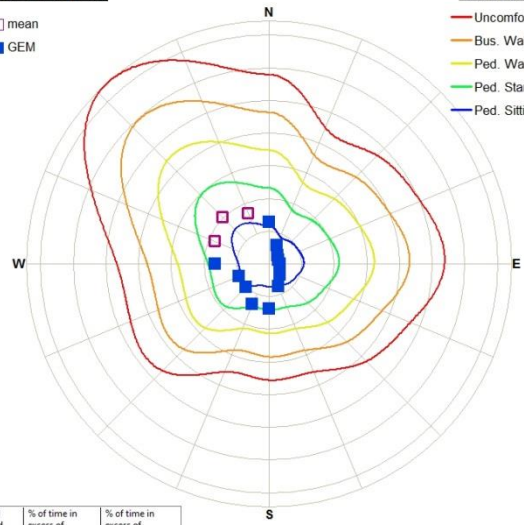
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	19.8	23.1
4.0	4.8	3.9
6.0	0.5	0.3
8.0	0.0	0.0
10.0	0.0	0.0
3.9	5.0	Ped Sitting
8.7	0.022	Pass
3.8	Ped Sitting	5.0
7.8	Pass	0.022

### LOCATION 83

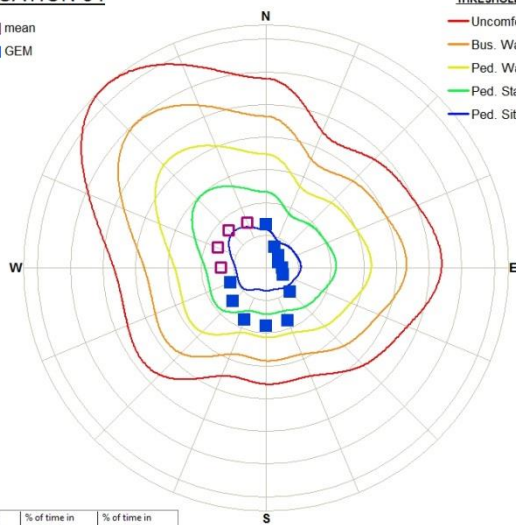
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	7.9	14.1
4.0	0.4	0.9
6.0	0.0	0.0
8.0	0.0	0.0
10.0	0.0	0.0
2.2	5.0	Ped Sitting
5.8	0.022	Pass
2.9	Ped Sitting	5.0
6.1	Pass	0.022

### LOCATION 84

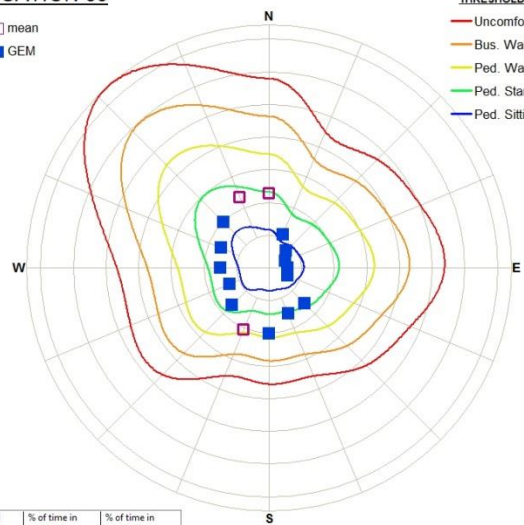
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	16.4	20.8
4.0	1.4	3.8
6.0	0.0	0.2
8.0	0.0	0.0
10.0	0.0	0.0
3.1	5.0	Ped Sitting
6.5	0.022	Pass
3.7	Ped Sitting	5.0
7.6	Pass	0.022

### LOCATION 85

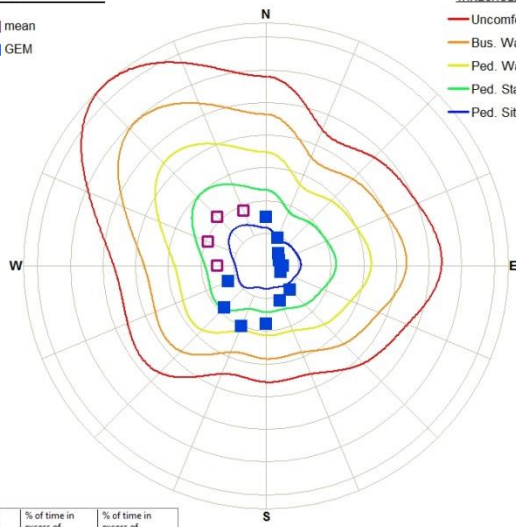
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	23.0	28.2
4.0	4.0	5.9
6.0	0.3	0.6
8.0	0.0	0.0
10.0	0.0	0.0
3.7	5.0	Ped Sitting
8.3	0.022	Pass
4.1	Ped Standing	5.0
8.7	Pass	0.022

### LOCATION 86

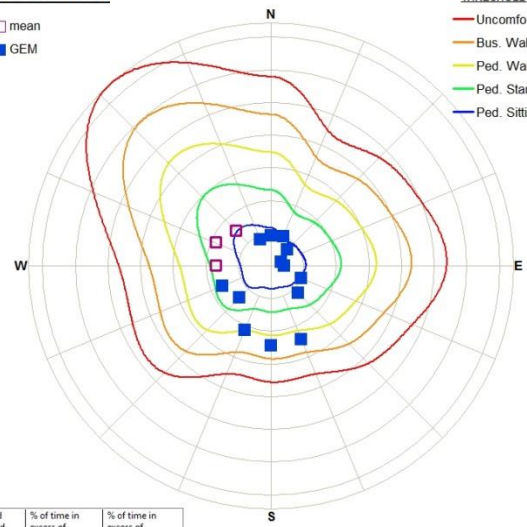
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	18.2	21.4
4.0	1.8	3.7
6.0	0.1	0.3
8.0	0.0	0.0
10.0	0.0	0.0
3.1	5.0	Ped Sitting
7.3	0.022	Pass
3.7	Ped Sitting	5.0
8.1	Pass	0.022

### LOCATION 87

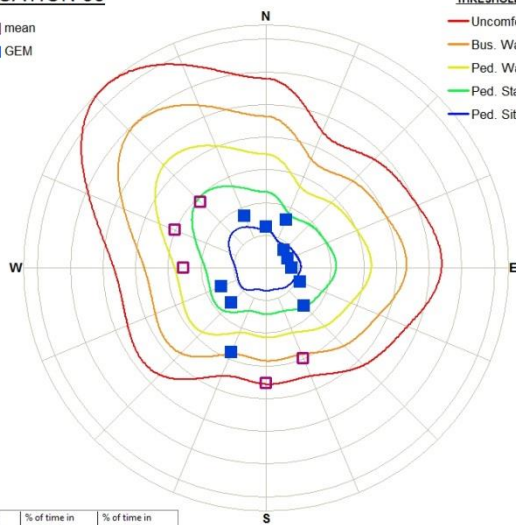
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	22.6	25.5
4.0	7.8	9.7
6.0	1.4	2.3
8.0	0.1	0.3
10.0	0.0	0.0
4.5	5.0	Ped Standing
9.4	0.022	Pass
5.0	Ped Standing	5.0
10.3	Pass	0.022

### LOCATION 88

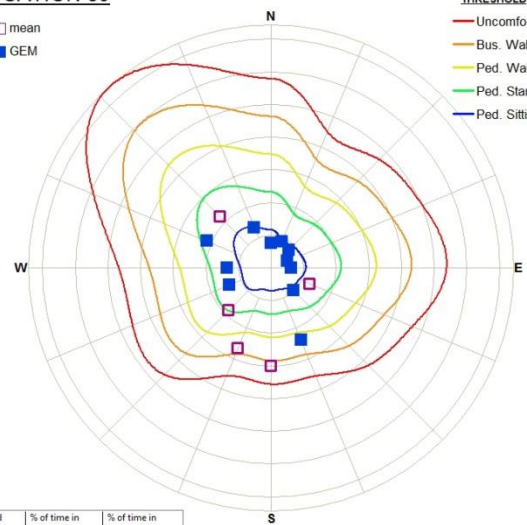
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	33.2	36.7
4.0	16.3	15.5
6.0	8.0	6.5
8.0	2.7	1.8
10.0	0.7	0.3
6.8	5.0	Ped Walking
14.3	0.022	Pass
6.4	Ped Walking	5.0
13.0	Pass	0.022

### LOCATION 89

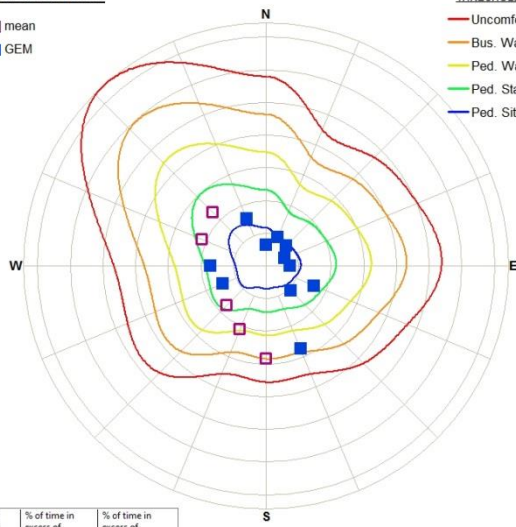
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	24.5	26.9
4.0	11.8	10.7
6.0	4.3	2.9
8.0	1.1	0.4
10.0	0.2	0.1
5.7	5.0	Ped Standing
12.5	0.022	Pass
5.2	Ped Standing	5.0
10.8	Pass	0.022

### LOCATION 90

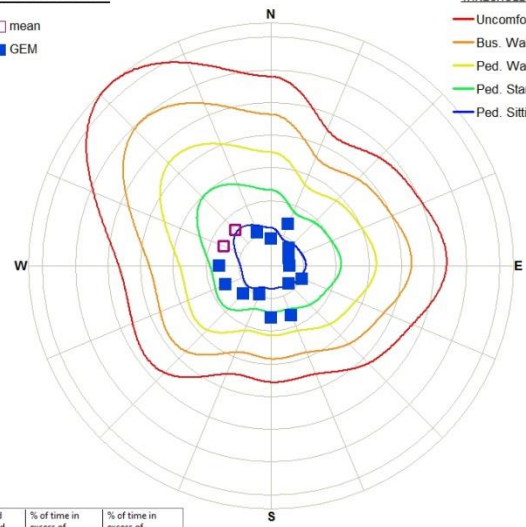
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	26.6	28.8
4.0	11.2	10.5
6.0	3.6	2.8
8.0	0.8	0.5
10.0	0.1	0.1
5.5	5.0	Ped Standing
11.6	0.022	Pass
5.1	Ped Standing	5.0
11.1	Pass	0.022

### LOCATION 91

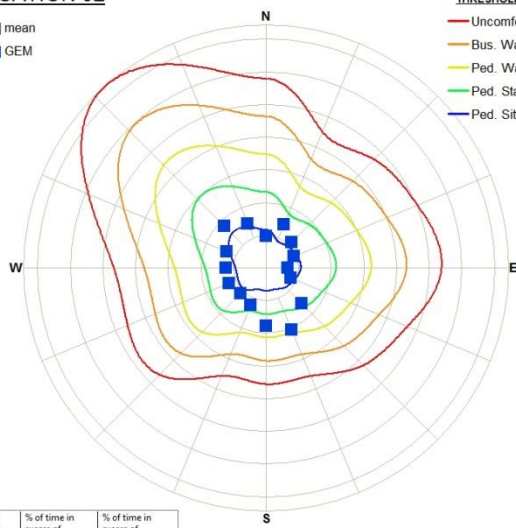
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	8.8	19.4
4.0	0.3	2.3
6.0	0.0	0.1
8.0	0.0	0.0
10.0	0.0	0.0
2.3	5.0	Ped Sitting
5.1	0.022	Pass
3.4	Ped Sitting	5.0
6.8	Pass	0.022

### LOCATION 92

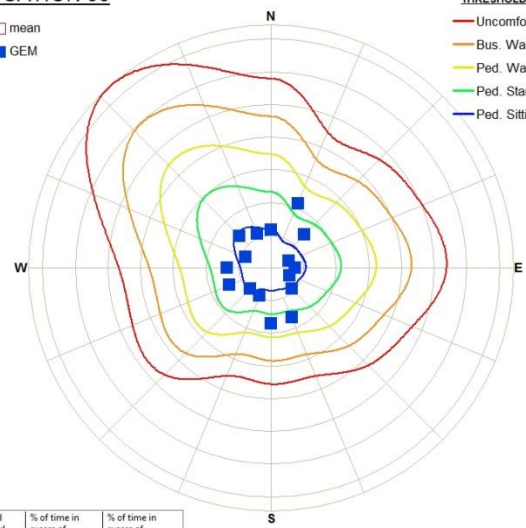
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	15.3	23.8
4.0	0.9	4.1
6.0	0.0	0.4
8.0	0.0	0.0
10.0	0.0	0.0
2.8	5.0	Ped Sitting
6.0	0.022	Pass
3.8	Ped Sitting	5.0
8.1	Pass	0.022

### LOCATION 93

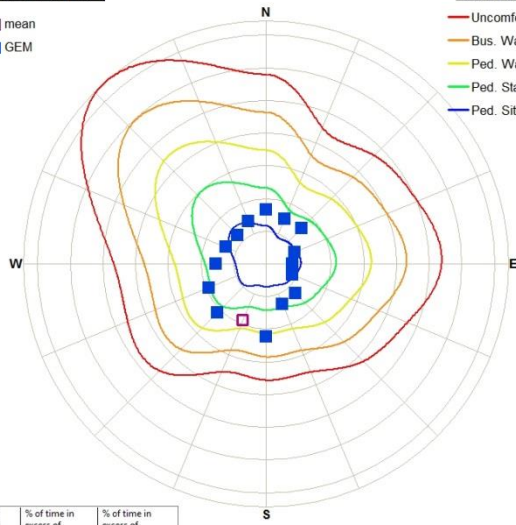
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	12.3	21.2
4.0	0.9	3.3
6.0	0.0	0.1
8.0	0.0	0.0
10.0	0.0	0.0
2.8	5.0	Ped Sitting
5.8	0.022	Pass
3.6	Ped Sitting	5.0
7.1	Pass	0.022

### LOCATION 94

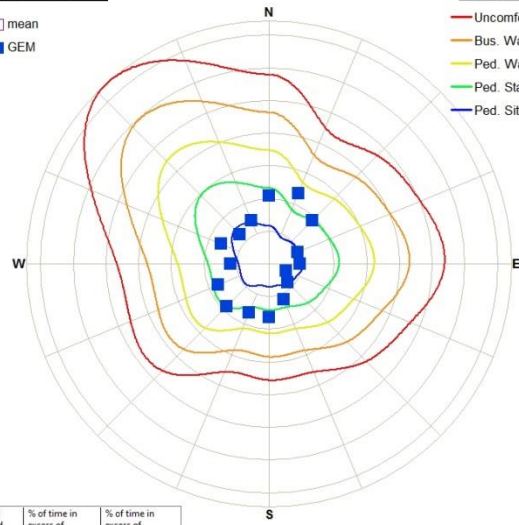
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	20.1	28.0
4.0	2.9	6.2
6.0	0.2	0.9
8.0	0.0	0.1
10.0	0.0	0.0
3.5	5.0	Ped Sitting
7.7	0.022	Pass
4.2	Ped Standing	5.0
9.1	Pass	0.022

### LOCATION 95

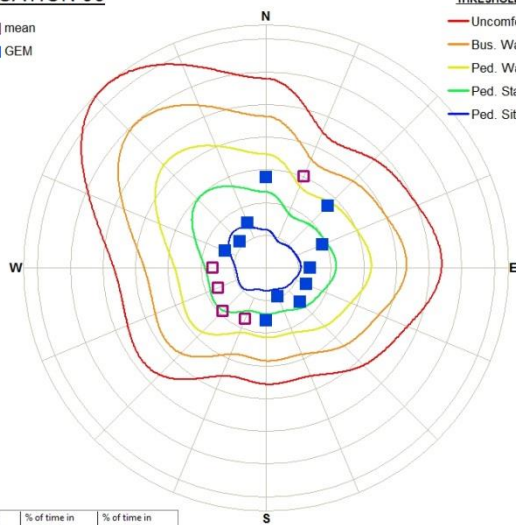
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	13.1	26.1
4.0	0.9	3.8
6.0	0.0	0.2
8.0	0.0	0.0
10.0	0.0	0.0
2.7	5.0	Ped Sitting
6.1	0.022	Pass
3.8	Ped Sitting	5.0
7.4	Pass	0.022

### LOCATION 96

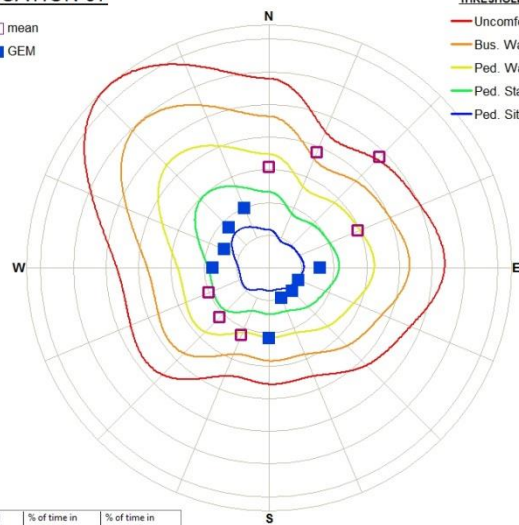
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	25.9	32.1
4.0	4.5	6.2
6.0	0.7	0.8
8.0	0.1	0.0
10.0	0.0	0.0
3.8	5.0	Ped Sitting
8.6	0.022	Pass
4.2	Ped Standing	5.0
8.5	Pass	0.022

### LOCATION 97

□ mean  
■ GEM

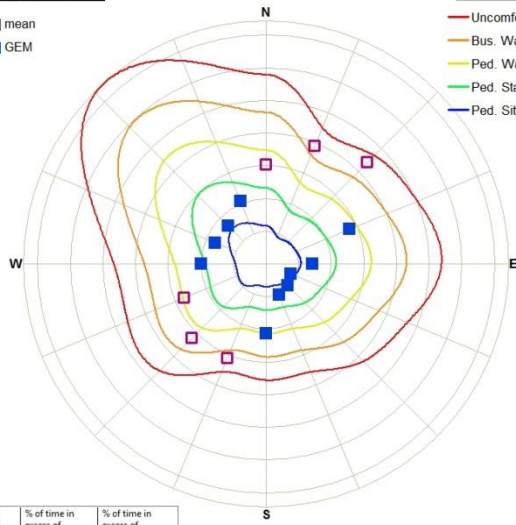


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	33.6	36.9
4.0	12.8	12.2
6.0	4.2	2.7
8.0	1.5	0.4
10.0	0.4	0.0
5.6	5.0	Ped Standing
12.8	0.022	Pass
5.2	Ped Standing	5.0
10.0	Pass	0.022



### LOCATION 98

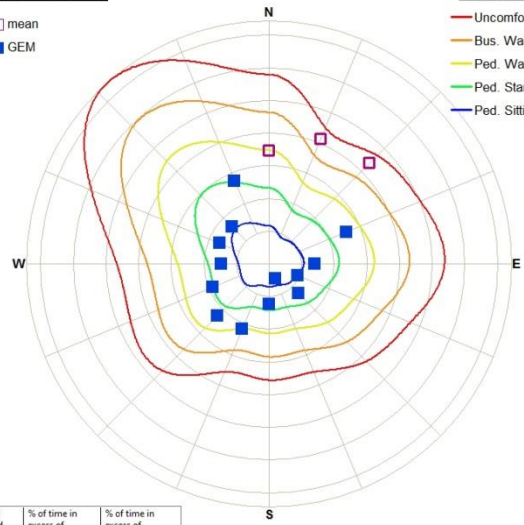
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	35.5	38.7
4.0	14.4	14.4
6.0	5.4	3.6
8.0	1.7	0.6
10.0	0.3	0.1
6.1	5.0	Ped Walking
12.8	0.022	Pass
5.6	Ped Standing	5.0
10.8	Pass	0.022

### LOCATION 99

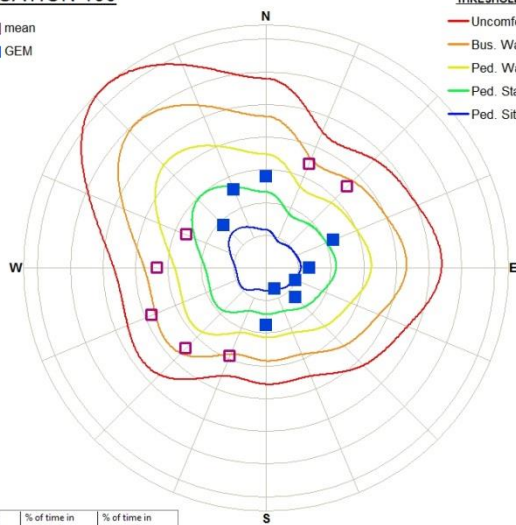
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	27.8	33.0
4.0	9.8	8.6
6.0	3.9	2.1
8.0	1.4	0.3
10.0	0.3	0.0
5.3	5.0	Ped Standing
12.2	0.022	Pass
4.8	Ped Standing	5.0
9.9	Pass	0.022

### LOCATION 100

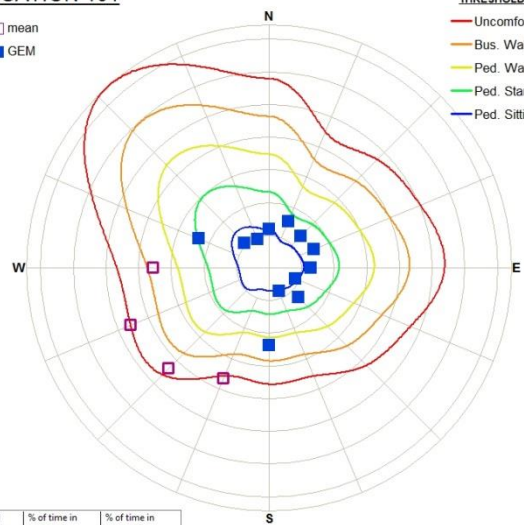
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	37.5	41.2
4.0	14.1	13.4
6.0	5.5	3.1
8.0	1.3	0.4
10.0	0.2	0.0
6.1	5.0	Ped Walking
12.4	0.022	Pass
5.4	Ped Standing	5.0
10.7	Pass	0.022

### LOCATION 101

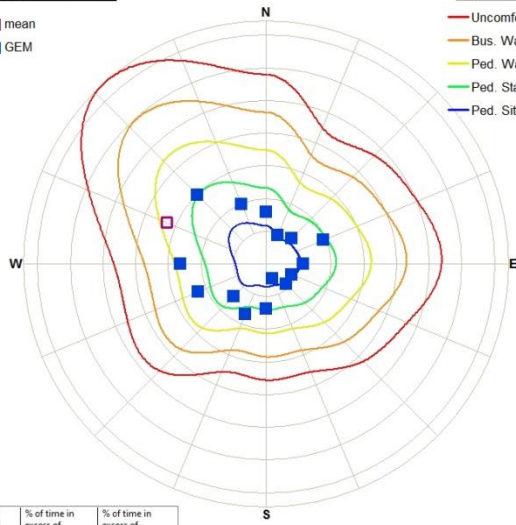
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	28.1	33.5
4.0	11.6	13.6
6.0	5.5	4.9
8.0	2.3	1.2
10.0	0.7	0.2
6.1	5.0	Ped Walking
15.2	0.022	Able Body
5.9	Ped Standing	5.0
12.7	Pass	0.022

### LOCATION 102

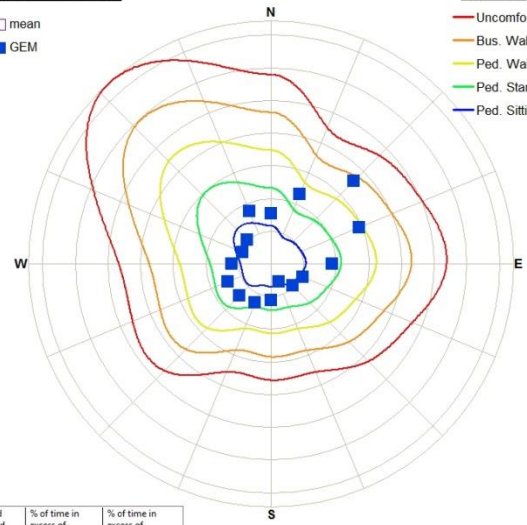
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	19.6	28.4
4.0	2.8	4.5
6.0	0.6	0.8
8.0	0.1	0.1
10.0	0.0	0.0
3.3	5.0	Ped Sitting
9.6	0.022	Pass
3.9	Ped Sitting	5.0
9.3	Pass	0.022

### LOCATION 103

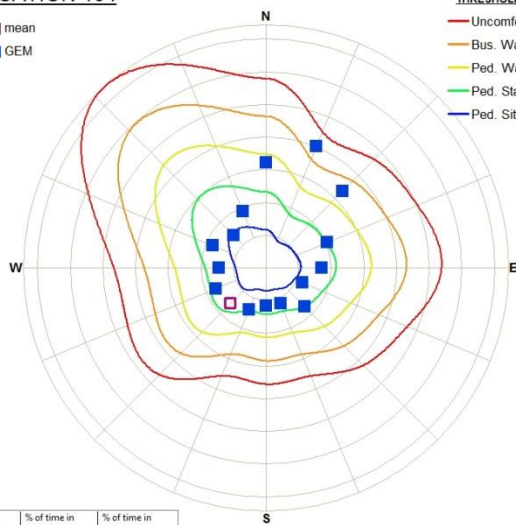
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	15.2	22.9
4.0	2.5	4.5
6.0	0.4	1.2
8.0	0.0	0.2
10.0	0.0	0.0
3.1	5.0	Ped Sitting
7.8	0.022	Pass
3.8	Ped Sitting	5.0
9.6	Pass	0.022

### LOCATION 104

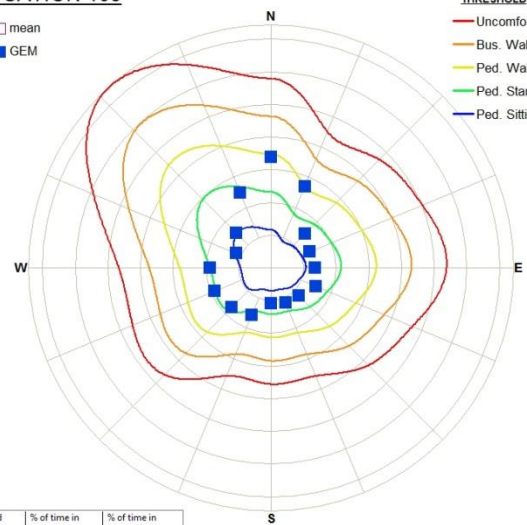
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	23.1	33.2
4.0	5.2	7.2
6.0	1.7	2.4
8.0	0.4	0.6
10.0	0.1	0.1
4.0	5.0	Ped Sitting
10.7	0.022	Pass
4.5	Ped Standing	5.0
11.5	Pass	0.022

### LOCATION 105

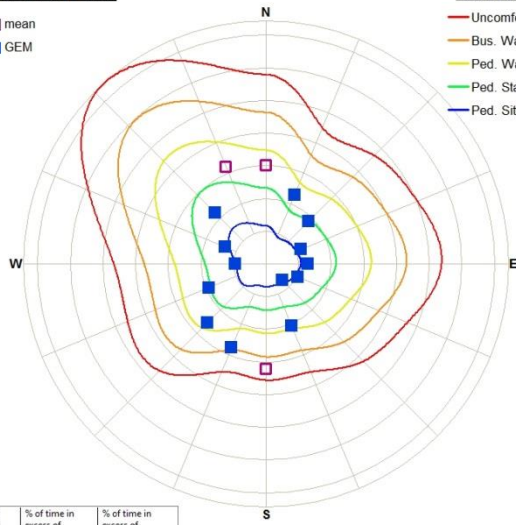
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	21.2	30.1
4.0	2.2	4.3
6.0	0.2	0.6
8.0	0.0	0.1
10.0	0.0	0.0
3.2	5.0	Ped Sitting
7.9	0.022	Pass
3.8	Ped Sitting	5.0
8.7	Pass	0.022

### LOCATION 106

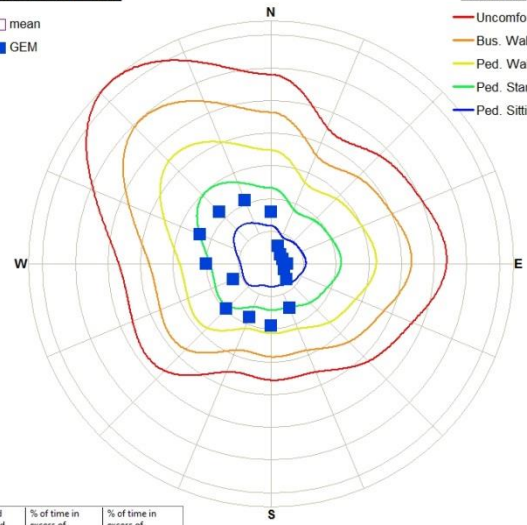
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	33.1	38.0
4.0	13.1	14.9
6.0	5.2	4.8
8.0	1.5	1.2
10.0	0.3	0.2
6.0	5.0	Ped Standing
13.3	0.022	Pass
5.9	Ped Standing	5.0
12.7	Pass	0.022

### LOCATION 107

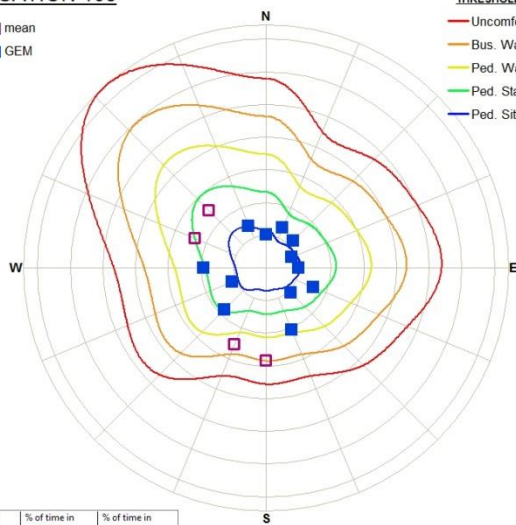
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	19.4	26.6
4.0	3.0	5.2
6.0	0.2	0.4
8.0	0.0	0.0
10.0	0.0	0.0
3.5	5.0	Ped Sitting
7.6	0.022	Pass
4.0	Ped Standing	5.0
8.3	Pass	0.022

### LOCATION 108

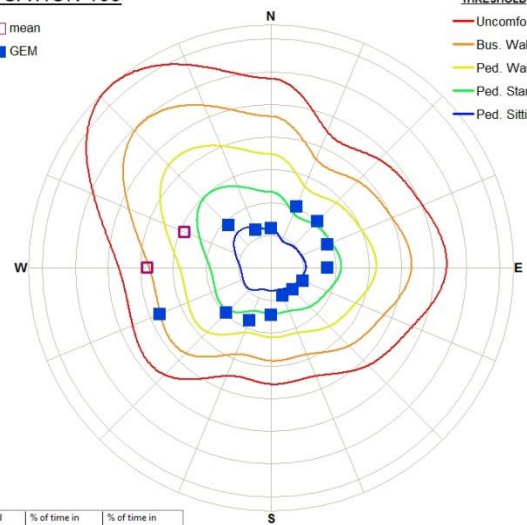
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	29.2	30.3
4.0	11.4	9.4
6.0	3.5	1.8
8.0	0.7	0.2
10.0	0.1	0.0
5.4	5.0	Ped Standing
11.8	0.022	Pass
4.8	Ped Standing	5.0
9.8	Pass	0.022

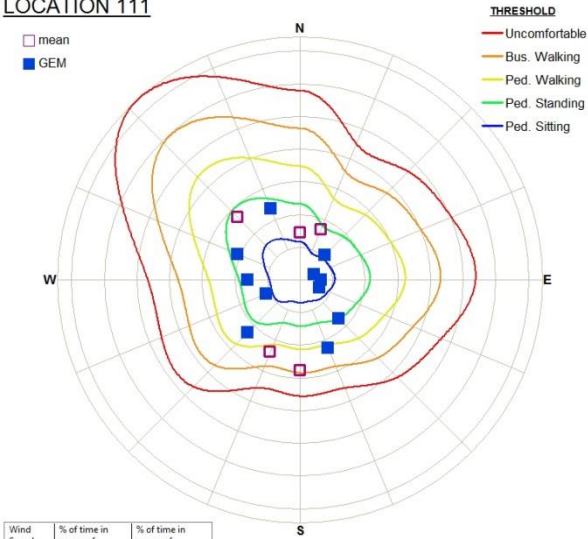
### LOCATION 109

□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	26.2	33.5
4.0	5.8	7.3
6.0	1.9	1.9
8.0	0.6	0.5
10.0	0.1	0.1
4.2	5.0	Ped Standing
11.9	0.022	Pass
4.4	Ped Standing	5.0
11.3	Pass	0.022

LOCATION 111



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	35.0	38.7
4.0	12.9	12.4
6.0	3.9	2.8
8.0	0.8	0.4
10.0	0.1	0.0
5.6	5.0	Ped. Standing
11.5	0.022	Pass
5.3	Ped. Standing	5.0
10.8	Pass	0.022



# Appendix 4: Directional Wind Results, Winter



Figure 12: Pedestrian wind speed measurement locations – winter

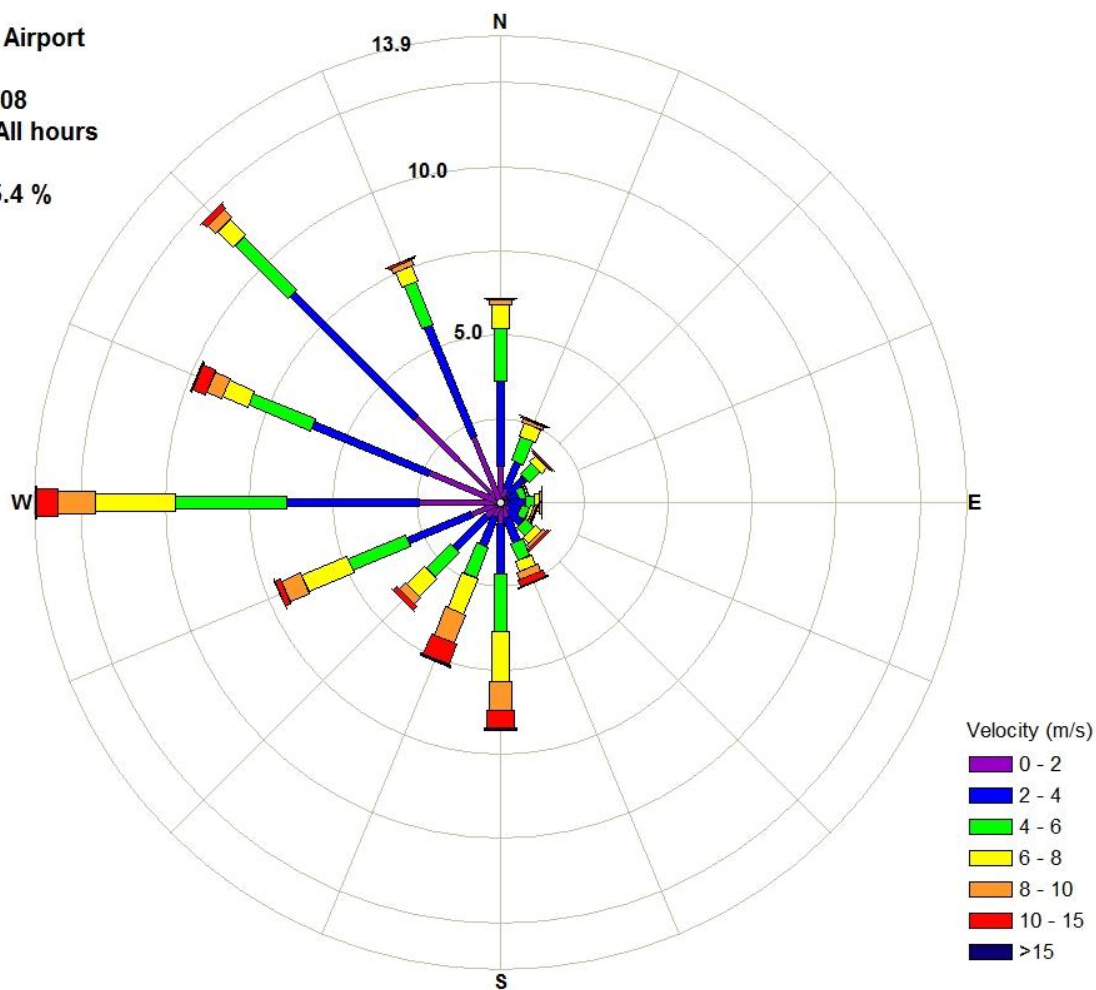


# Sydney Airport

1974-2008

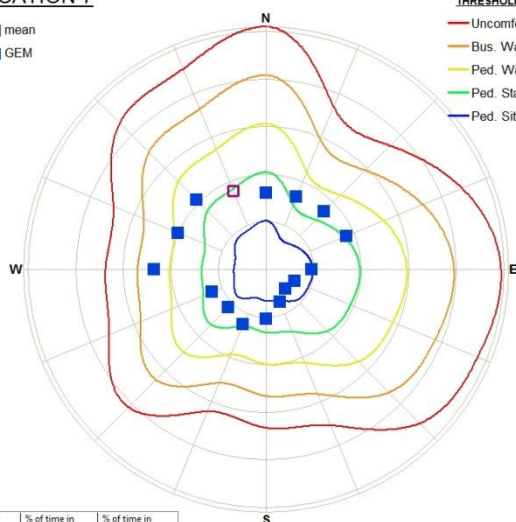
Winter All hours

Calm 15.4 %



## LOCATION 7

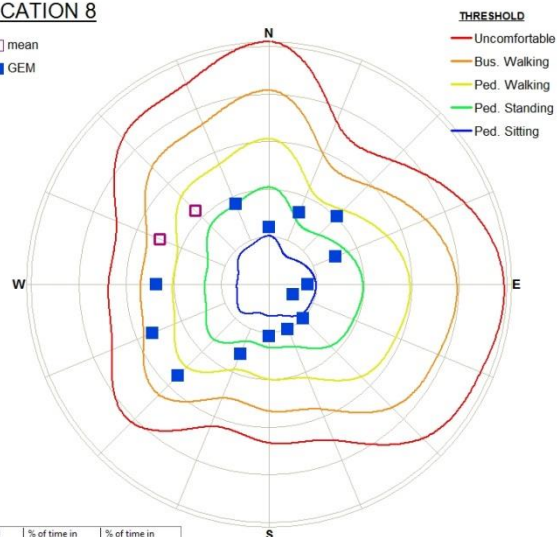
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	26.4	34.6
4.0	3.4	6.1
6.0	0.5	1.1
8.0	0.0	0.2
10.0	0.0	0.0
3.6	5.0	Ped Sitting
3.5	0.022	Pass
4.2	Ped Standing	5.0
10.3	Pass	0.022

## LOCATION 8

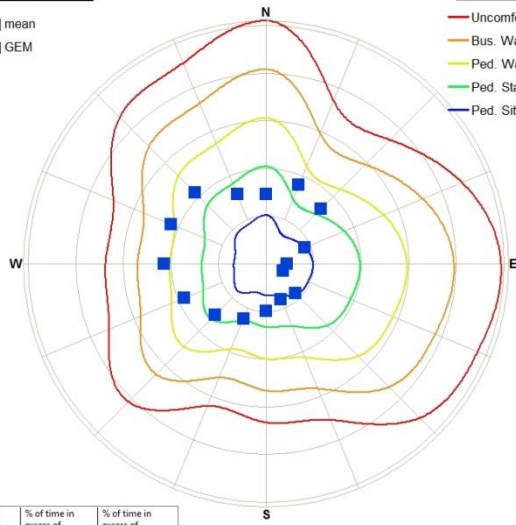
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	32.5	42.2
4.0	7.9	10.9
6.0	1.9	2.7
8.0	0.4	0.6
10.0	0.1	0.1
4.6	5.0	Ped Standing
11.3	0.022	Pass
5.2	Ped Standing	5.0
11.5	Pass	0.022

### LOCATION 9

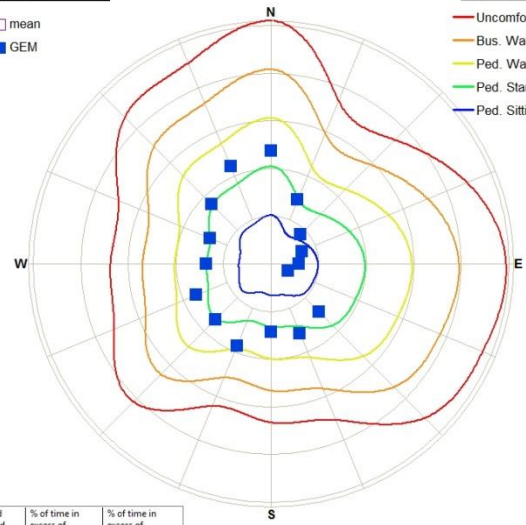
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	24.5	34.6
4.0	4.1	6.9
6.0	0.4	1.2
8.0	0.0	0.2
10.0	0.0	0.0
3.7	5.0	Ped Sitting
8.2	0.022	Pass
4.3	Ped Standing	5.0
10.1	Pass	0.022

### LOCATION 10

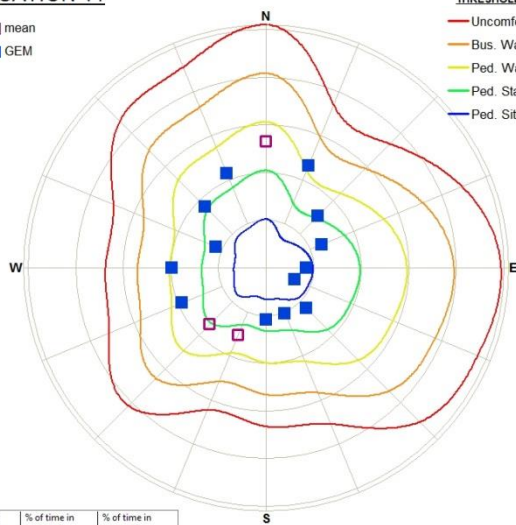
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	28.0	38.0
4.0	2.8	6.8
6.0	0.2	0.7
8.0	0.0	0.1
10.0	0.0	0.0
3.5	5.0	Ped Sitting
7.9	0.022	Pass
4.2	Ped Standing	5.0
8.8	Pass	0.022

### LOCATION 11

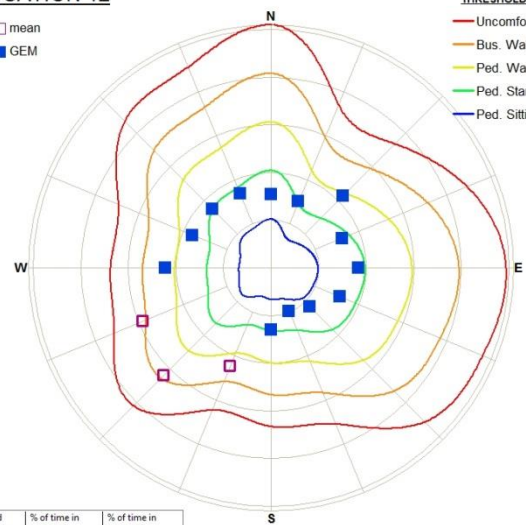
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	28.9	40.0
4.0	5.1	8.0
6.0	0.5	1.2
8.0	0.0	0.1
10.0	0.0	0.0
4.0	5.0	Ped Sitting
8.4	0.022	Pass
4.5	Ped Standing	5.0
9.1	Pass	0.022

### LOCATION 12

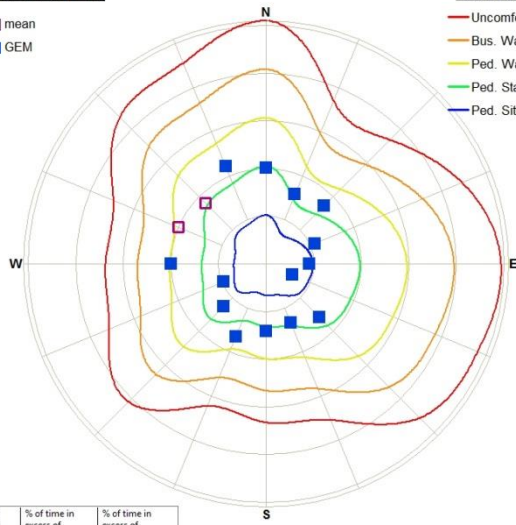
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	33.1	44.8
4.0	9.2	12.5
6.0	2.8	3.2
8.0	0.6	0.6
10.0	0.1	0.1
5.0	5.0	Ped Standing
12.0	0.022	Pass
5.3	Ped Standing	5.0
11.6	Pass	0.022

### LOCATION 13

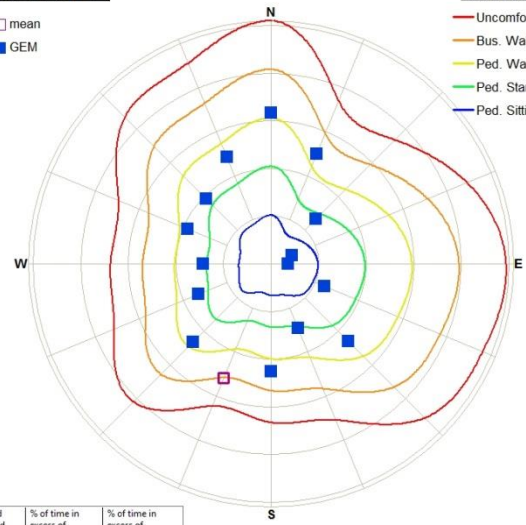
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	34.5	41.5
4.0	5.1	7.3
6.0	0.8	0.9
8.0	0.1	0.1
10.0	0.0	0.0
4.0	5.0	Ped Sitting
9.2	0.022	Pass
4.3	Ped Standing	5.0
9.2	Pass	0.022

### LOCATION 14

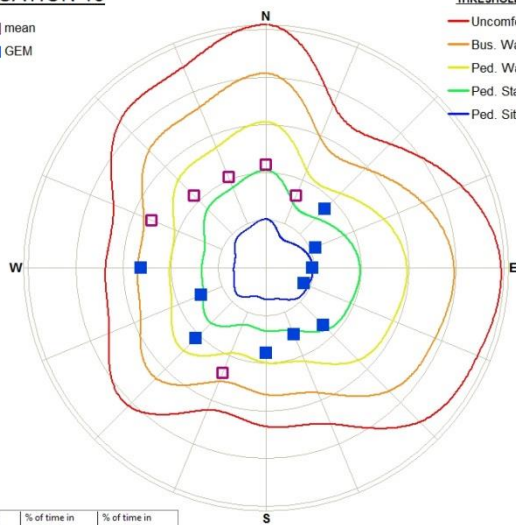
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	45.0	50.7
4.0	12.9	16.9
6.0	3.0	4.1
8.0	0.5	0.6
10.0	0.1	0.1
5.3	5.0	Ped Standing
11.3	0.022	Pass
5.7	Ped Standing	5.0
11.0	Pass	0.022

### LOCATION 15

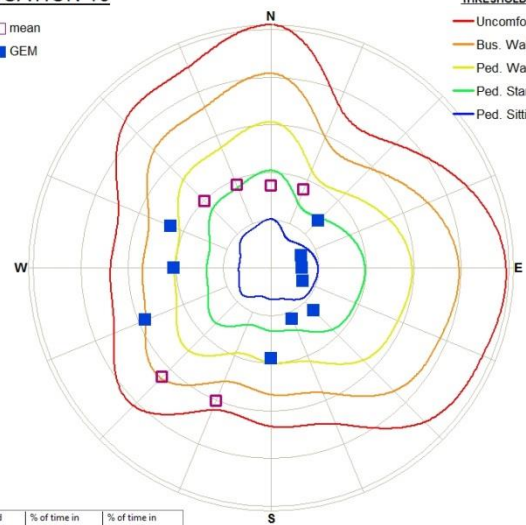
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	45.8	50.1
4.0	10.7	13.3
6.0	2.3	2.9
8.0	0.5	0.7
10.0	0.1	0.2
4.9	5.0	Ped Standing
11.7	0.022	Pass
5.3	Ped Standing	5.0
11.9	Pass	0.022

### LOCATION 16

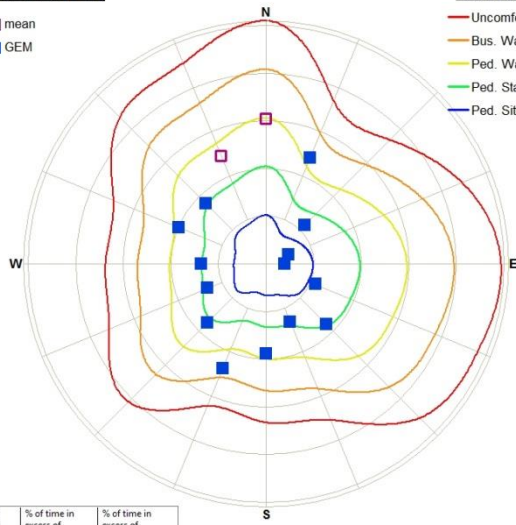
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	42.4	44.3
4.0	12.9	14.5
6.0	4.6	4.2
8.0	1.4	1.0
10.0	0.3	0.2
5.8	5.0	Ped Standing
13.4	0.022	Pass
5.7	Ped Standing	5.0
12.2	Pass	0.022

### LOCATION 17

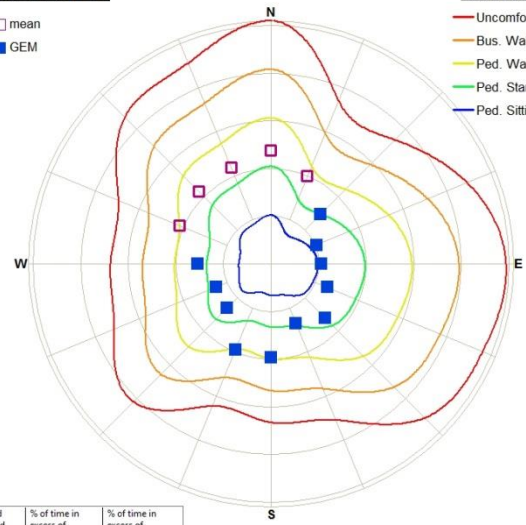
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	35.5	45.4
4.0	7.4	12.3
6.0	1.5	2.6
8.0	0.2	0.3
10.0	0.0	0.0
4.5	5.0	Ped Standing
9.5	0.022	Pass
5.2	Ped Standing	5.0
10.4	Pass	0.022

### LOCATION 18

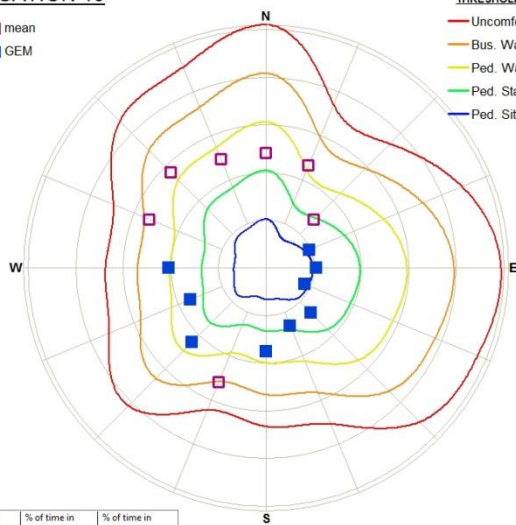
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	38.6	42.9
4.0	6.0	9.5
6.0	0.9	1.2
8.0	0.1	0.1
10.0	0.0	0.0
4.2	5.0	Ped Standing
9.6	0.022	Pass
4.6	Ped Standing	5.0
8.9	Pass	0.022

### LOCATION 19

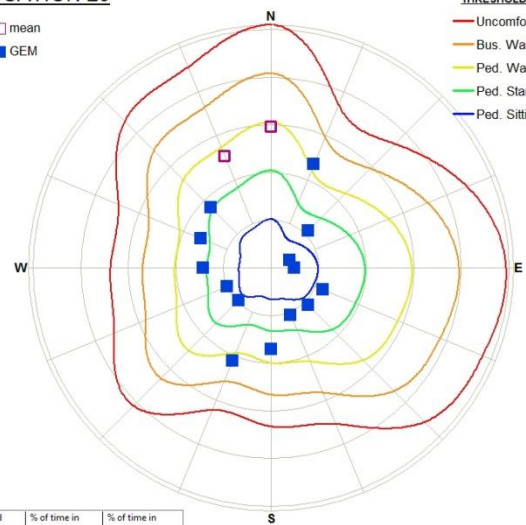
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	48.6	48.7
4.0	13.1	13.0
6.0	3.7	2.9
8.0	0.9	0.6
10.0	0.2	0.1
5.5	5.0	Ped Standing
12.5	0.022	Pass
5.2	Ped Standing	5.0
11.3	Pass	0.022

### LOCATION 20

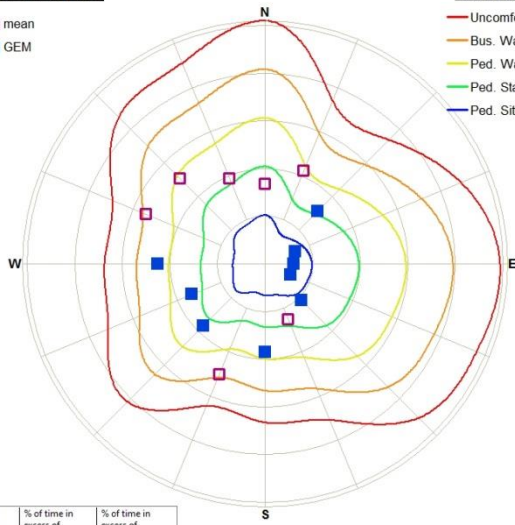
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	25.3	38.2
4.0	4.5	9.3
6.0	0.8	1.6
8.0	0.1	0.1
10.0	0.0	0.0
3.8	5.0	Ped Sitting
9.3	0.022	Pass
4.7	Ped Standing	5.0
9.4	Pass	0.022

### LOCATION 21

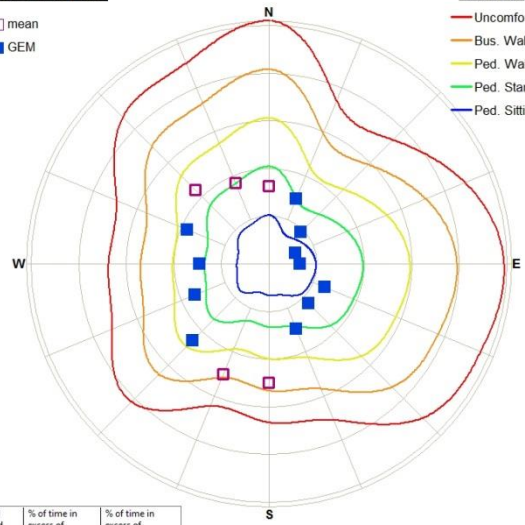
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	44.9	44.1
4.0	12.6	12.4
6.0	3.3	2.7
8.0	0.8	0.6
10.0	0.2	0.1
5.3	5.0	Ped Standing
12.3	0.022	Pass
5.2	Ped Standing	5.0
11.3	Pass	0.022

### LOCATION 22

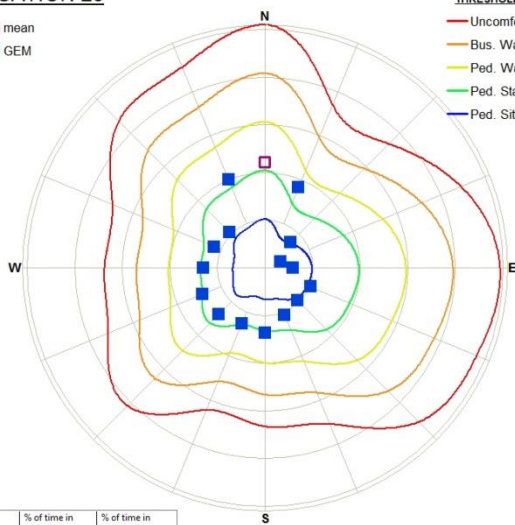
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	37.3	40.9
4.0	11.7	12.2
6.0	3.4	3.0
8.0	0.6	0.5
10.0	0.1	0.1
5.4	5.0	Ped Standing
11.3	0.022	Pass
5.3	Ped Standing	5.0
10.8	Pass	0.022

### LOCATION 23

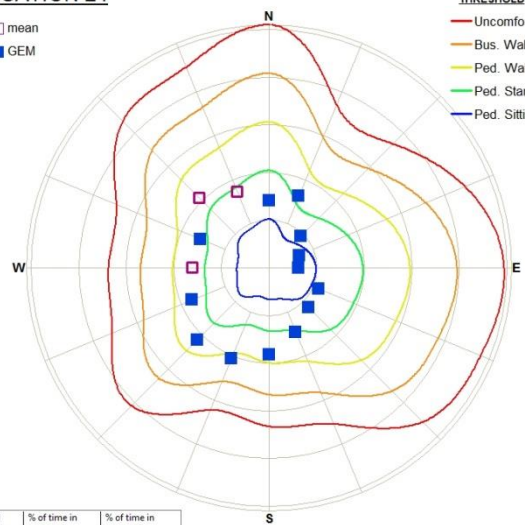
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	23.1	29.4
4.0	1.7	3.6
6.0	0.1	0.2
8.0	0.0	0.0
10.0	0.0	0.0
3.3	5.0	Ped Sitting
6.7	0.022	Pass
3.7	Ped Sitting	5.0
7.3	Pass	0.022

### LOCATION 24

□ mean  
■ GEM

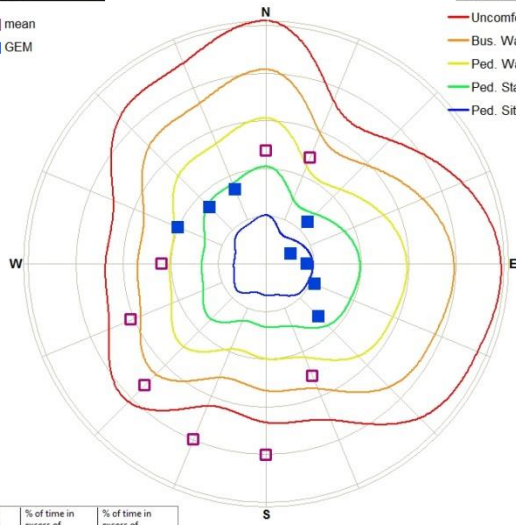


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	32.8	38.4
4.0	6.1	9.0
6.0	0.8	1.2
8.0	0.1	0.1
10.0	0.0	0.0
4.2	5.0	Ped Standing
9.2	0.022	Pass
4.6	Ped Standing	5.0
9.3	Pass	0.022



### LOCATION 25

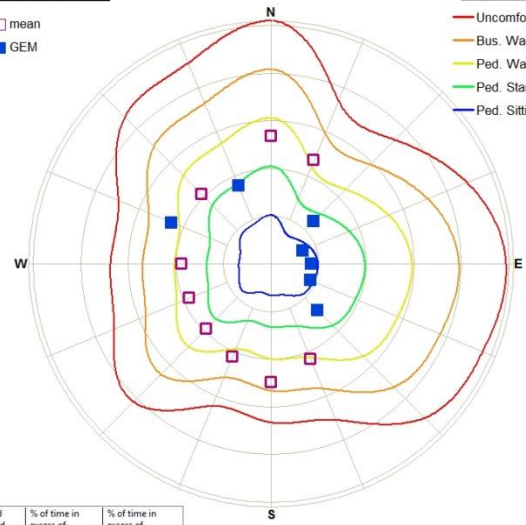
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	47.1	49.5
4.0	25.4	22.2
6.0	13.8	9.5
8.0	6.4	3.1
10.0	2.7	0.8
8.5	5.0	Bus Walking
17.7	0.022	Able Body
7.1	Ped Walking	5.0
14.4	Pass	0.022

### LOCATION 26

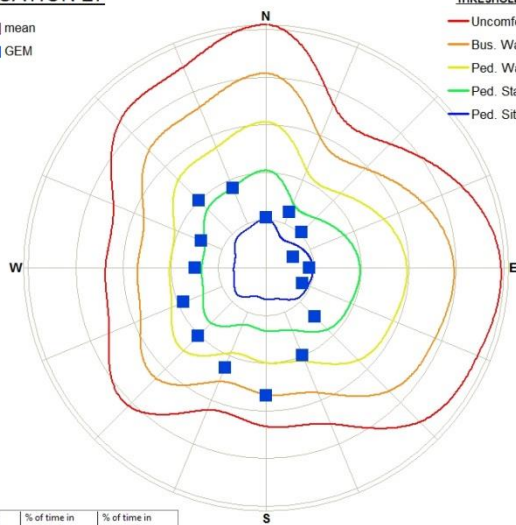
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	46.8	47.6
4.0	17.5	14.5
6.0	4.1	2.7
8.0	0.6	0.4
10.0	0.0	0.0
5.7	5.0	Ped Standing
10.6	0.022	Pass
5.3	Ped Standing	5.0
10.4	Pass	0.022

### LOCATION 27

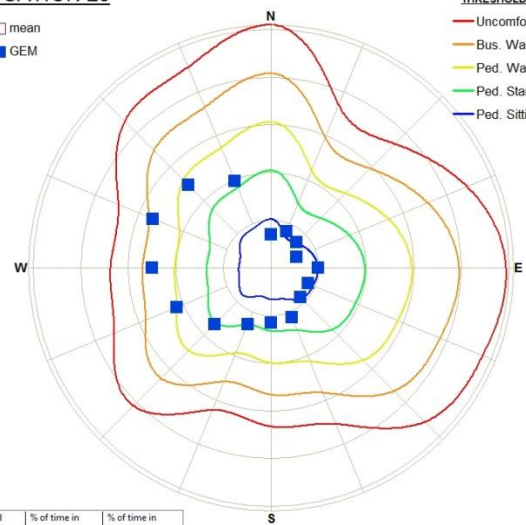
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	33.1	41.0
4.0	9.3	14.0
6.0	1.7	3.7
8.0	0.2	0.7
10.0	0.0	0.1
4.7	5.0	Ped Standing
9.7	0.022	Pass
5.5	Ped Standing	5.0
11.2	Pass	0.022

### LOCATION 28

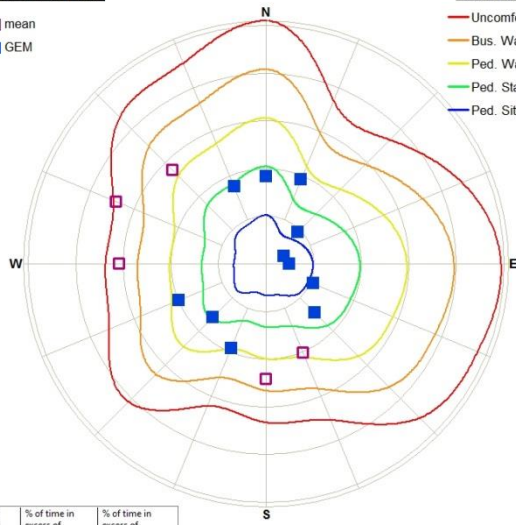
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	21.8	34.0
4.0	5.5	7.5
6.0	1.5	2.2
8.0	0.4	0.7
10.0	0.1	0.2
4.1	5.0	Ped Standing
11.2	0.022	Pass
4.6	Ped Standing	5.0
12.3	Pass	0.022

### LOCATION 29

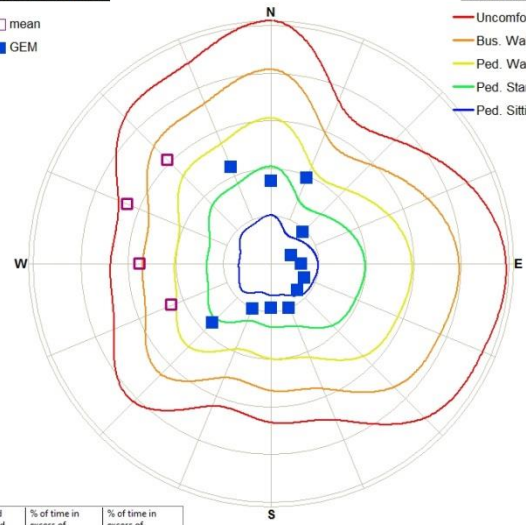
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	43.6	48.6
4.0	16.8	16.6
6.0	5.2	4.2
8.0	1.6	1.2
10.0	0.6	0.3
6.0	5.0	Ped Standing
15.4	0.022	Able Body
5.7	Ped Standing	5.0
13.4	Pass	0.022

### LOCATION 30

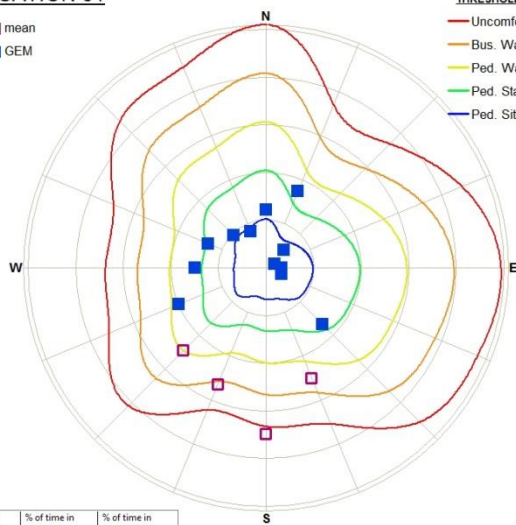
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	31.6	36.9
4.0	9.9	9.1
6.0	3.4	2.7
8.0	1.3	0.9
10.0	0.5	0.3
5.2	5.0	Ped Standing
14.8	0.022	Pass
4.9	Ped Standing	5.0
13.4	Pass	0.022

### LOCATION 31

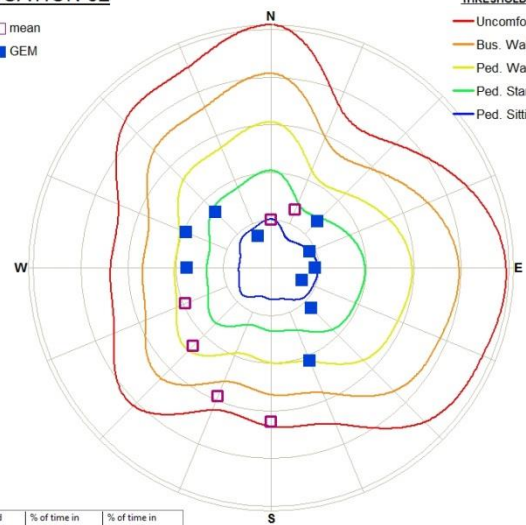
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	32.5	36.7
4.0	16.5	16.2
6.0	7.6	5.3
8.0	2.7	1.3
10.0	0.8	0.2
6.8	5.0	Ped Walking
14.3	0.022	Pass
6.0	Ped Walking	5.0
12.2	Pass	0.022

### LOCATION 32

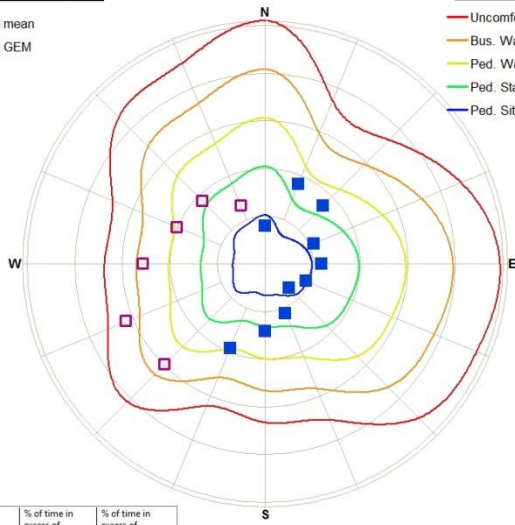
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	36.4	40.5
4.0	15.2	15.4
6.0	6.4	4.7
8.0	2.2	1.0
10.0	0.6	0.1
6.4	5.0	Ped Walking
13.7	0.022	Pass
5.8	Ped Standing	5.0
11.7	Pass	0.022

### LOCATION 33

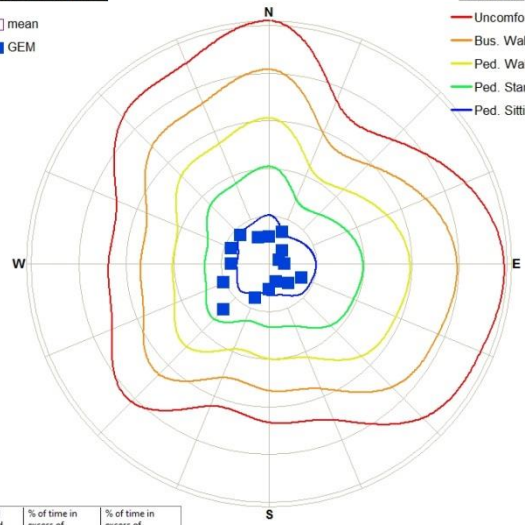
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	37.4	39.3
4.0	10.0	10.7
6.0	3.4	1.9
8.0	0.9	0.3
10.0	0.2	0.0
5.2	5.0	Ped Standing
12.8	0.022	Pass
4.9	Ped Standing	5.0
10.4	Pass	0.022

### LOCATION 34

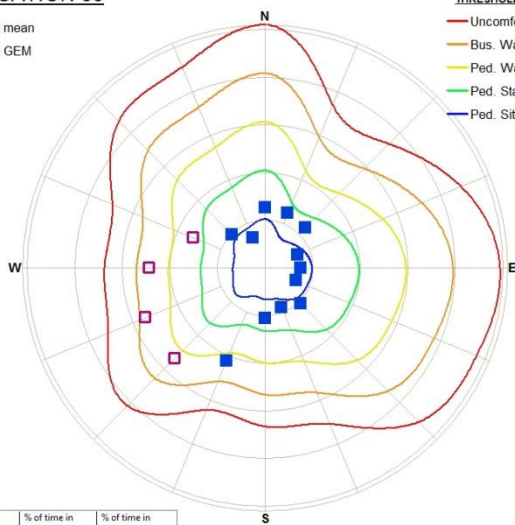
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	1.8	5.5
4.0	0.0	0.1
6.0	0.0	0.0
8.0	0.0	0.0
10.0	0.0	0.0
1.6	5.0	Outdoor Dining
3.7	0.022	Pass
2.0	Ped Sitting	5.0
4.8	Pass	0.022

### LOCATION 35

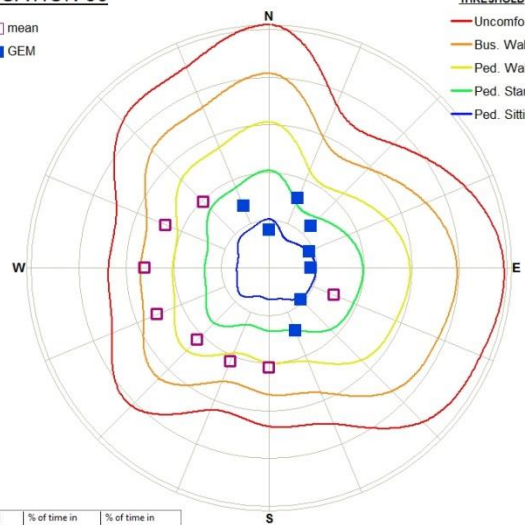
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	22.6	28.8
4.0	8.0	6.5
6.0	2.4	1.2
8.0	0.5	0.1
10.0	0.1	0.0
4.9	5.0	Ped Standing
11.4	0.022	Pass
4.3	Ped Standing	5.0
9.5	Pass	0.022

### LOCATION 36

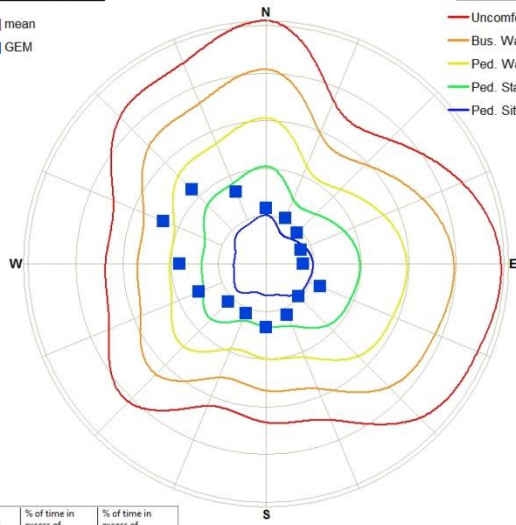
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	41.1	39.1
4.0	13.4	10.1
6.0	3.6	1.5
8.0	0.7	0.1
10.0	0.1	0.0
5.5	5.0	Ped Standing
11.7	0.022	Pass
4.7	Ped Standing	5.0
9.3	Pass	0.022

### LOCATION 37

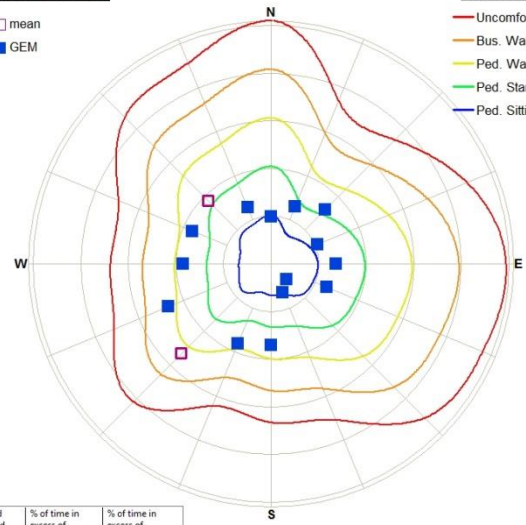
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	19.3	32.9
4.0	2.0	4.4
6.0	0.4	1.0
8.0	0.1	0.2
10.0	0.0	0.0
3.0	5.0	Ped Sitting
8.9	0.022	Pass
3.8	Ped Sitting	5.0
10.6	Pass	0.022

### LOCATION 38

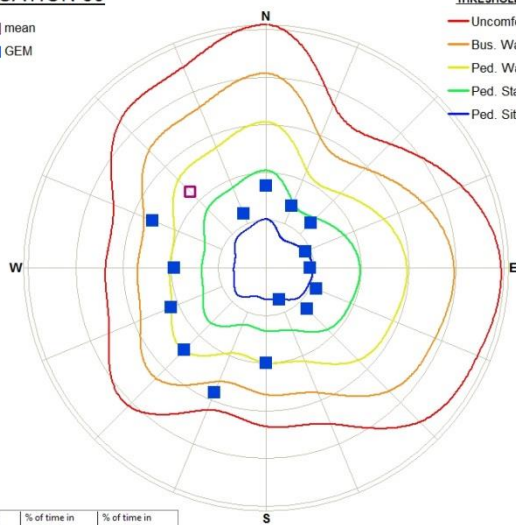
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	22.1	30.9
4.0	2.4	6.0
6.0	0.3	0.5
8.0	0.0	0.0
10.0	0.0	0.0
3.3	5.0	Ped Sitting
8.6	0.022	Pass
4.1	Ped Standing	5.0
8.4	Pass	0.022

### LOCATION 39

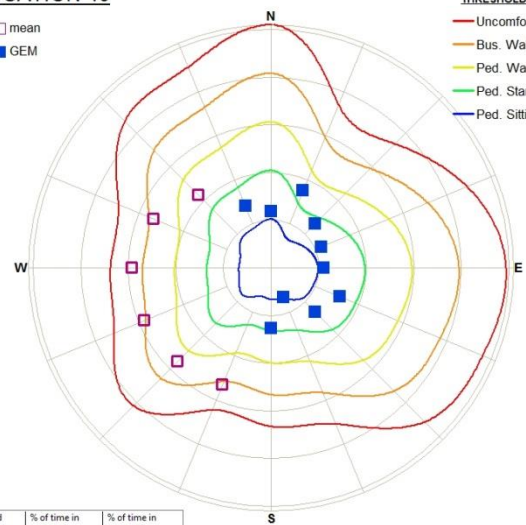
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	31.5	41.6
4.0	7.1	13.1
6.0	2.0	3.8
8.0	0.5	0.9
10.0	0.1	0.2
4.5	5.0	Ped Standing
11.4	0.022	Pass
5.5	Ped Standing	5.0
12.4	Pass	0.022

### LOCATION 40

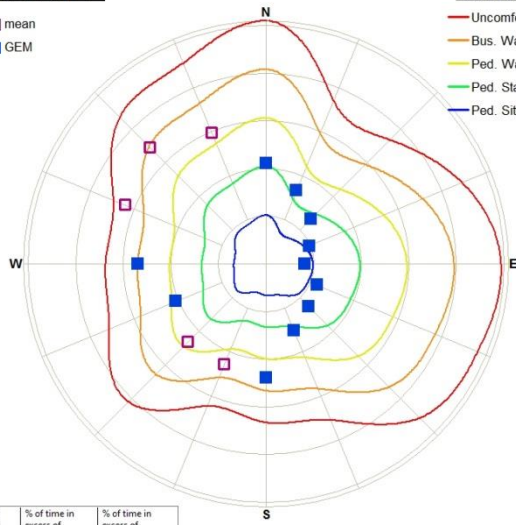
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	33.9	39.0
4.0	12.4	9.7
6.0	5.2	2.0
8.0	1.6	0.3
10.0	0.4	0.0
6.0	5.0	Ped Standing
13.2	0.022	Pass
4.8	Ped Standing	5.0
10.3	Pass	0.022

### LOCATION 41

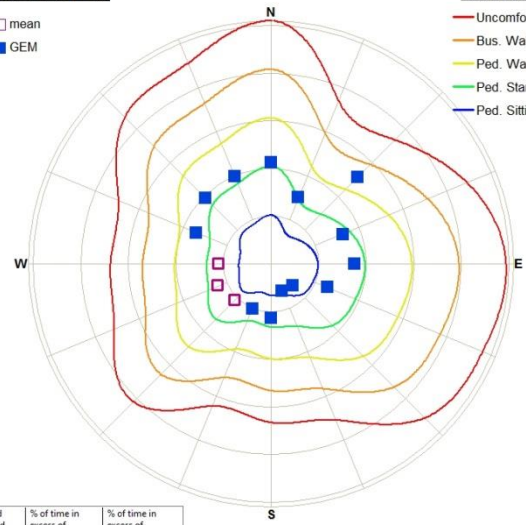
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	46.0	52.5
4.0	15.1	17.4
6.0	4.3	5.0
8.0	1.3	1.4
10.0	0.5	0.4
5.7	5.0	Ped Standing
14.9	0.022	Pass
5.9	Ped Standing	5.0
14.2	Pass	0.022

### LOCATION 42

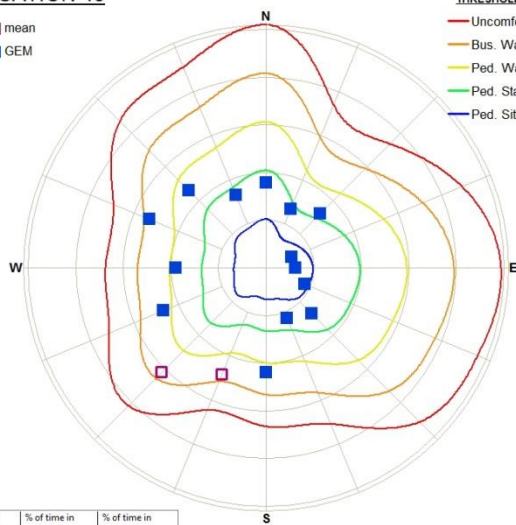
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	20.1	34.3
4.0	2.2	5.8
6.0	0.2	1.2
8.0	0.0	0.1
10.0	0.0	0.0
3.2	5.0	Ped Sitting
7.0	0.022	Pass
4.1	Ped Standing	5.0
9.1	Pass	0.022

### LOCATION 43

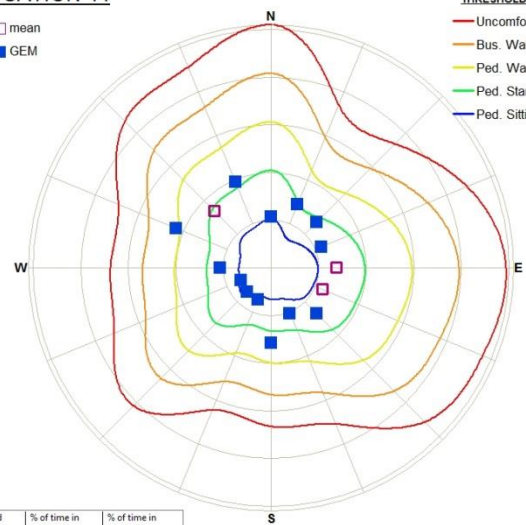
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	38.1	46.6
4.0	9.9	14.6
6.0	2.6	3.6
8.0	0.6	0.7
10.0	0.1	0.1
5.0	5.0	Ped Standing
11.7	0.022	Pass
5.5	Ped Standing	5.0
12.1	Pass	0.022

### LOCATION 44

□ mean  
■ GEM

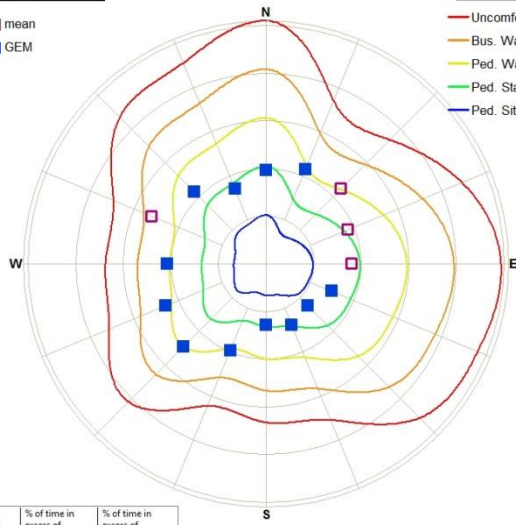


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	16.3	30.3
4.0	1.3	3.8
6.0	0.2	0.6
8.0	0.0	0.1
10.0	0.0	0.0
2.8	5.0	Ped Sitting
8.0	0.022	Pass
3.7	Ped Sitting	5.0
9.6	Pass	0.022



### LOCATION 45

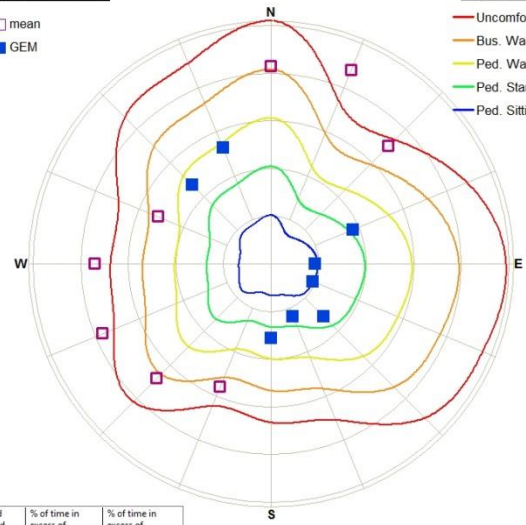
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	43.3	51.1
4.0	11.0	13.5
6.0	2.1	2.6
8.0	0.4	0.4
10.0	0.1	0.1
5.0	5.0	Ped Standing
11.6	0.022	Pass
5.2	Ped Standing	5.0
11.0	Pass	0.022

### LOCATION 46

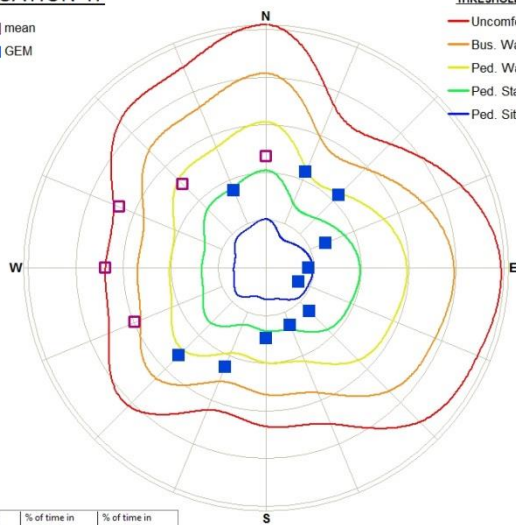
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	55.2	58.7
4.0	26.4	23.7
6.0	14.1	9.8
8.0	6.3	3.2
10.0	2.5	0.7
8.4	5.0	Bus Walking
16.7	0.022	Able Body
7.1	Ped Walking	5.0
13.3	Pass	0.022

### LOCATION 47

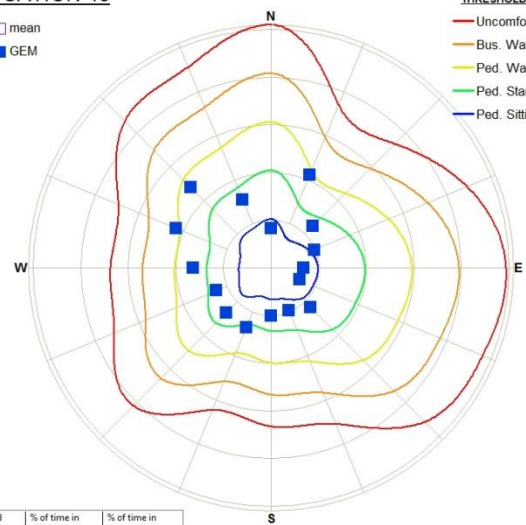
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	46.9	52.9
4.0	15.5	17.6
6.0	5.5	5.6
8.0	1.9	1.6
10.0	0.7	0.4
6.1	5.0	Ped Walking
15.4	0.022	Able Body
6.1	Ped Walking	5.0
13.6	Pass	0.022

### LOCATION 48

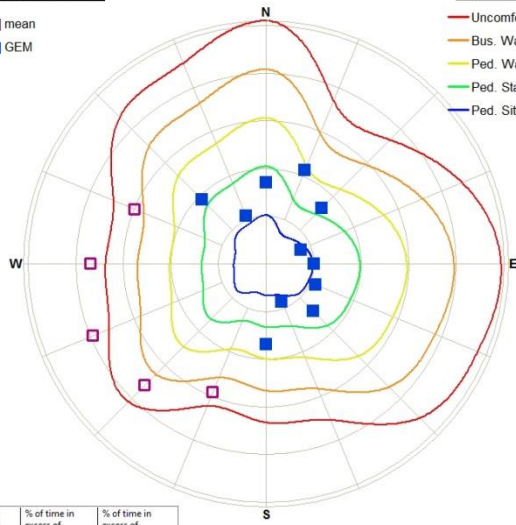
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	22.4	34.0
4.0	2.8	5.3
6.0	0.6	1.1
8.0	0.1	0.2
10.0	0.0	0.0
3.3	5.0	Ped Sitting
9.9	0.022	Pass
4.0	Ped Standing	5.0
10.2	Pass	0.022

### LOCATION 49

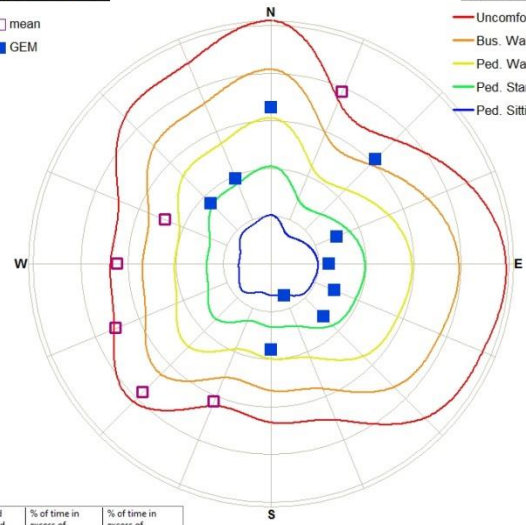
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	38.5	44.8
4.0	15.7	14.9
6.0	8.0	4.3
8.0	3.8	1.0
10.0	1.4	0.2
7.3	5.0	Ped Walking
16.6	0.022	Able Body
5.8	Ped Standing	5.0
12.3	Pass	0.022

### LOCATION 50

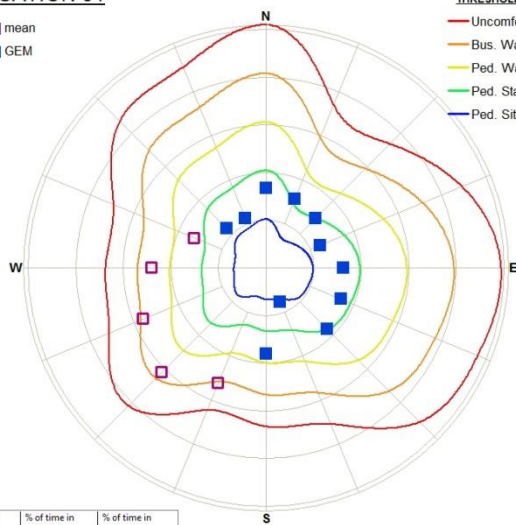
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	50.2	52.3
4.0	23.7	21.6
6.0	12.0	7.5
8.0	4.7	2.1
10.0	1.5	0.4
7.8	5.0	Ped Walking
15.4	0.022	Able Body
6.6	Ped Walking	5.0
12.3	Pass	0.022

### LOCATION 51

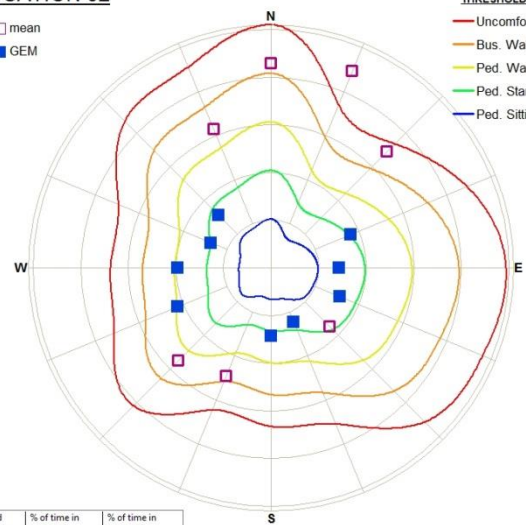
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	34.6	40.9
4.0	10.7	10.5
6.0	3.7	1.5
8.0	0.9	0.2
10.0	0.2	0.0
5.4	5.0	Ped Standing
12.3	0.022	Pass
4.8	Ped Standing	5.0
9.8	Pass	0.022

### LOCATION 52

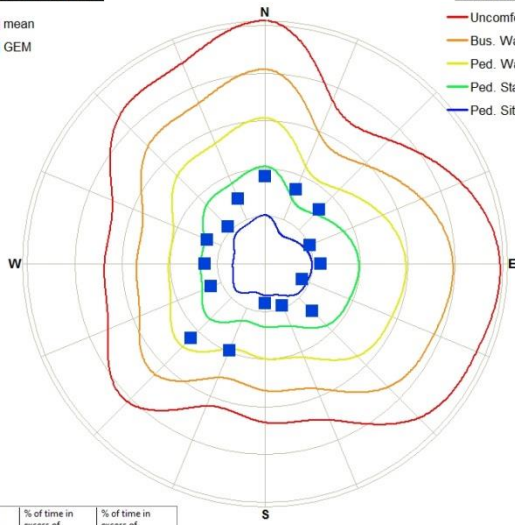
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	51.7	53.2
4.0	20.4	18.8
6.0	9.0	6.2
8.0	3.6	1.8
10.0	1.5	0.3
7.2	5.0	Ped Walking
15.4	0.022	Able Body
6.3	Ped Walking	5.0
12.1	Pass	0.022

### LOCATION 53

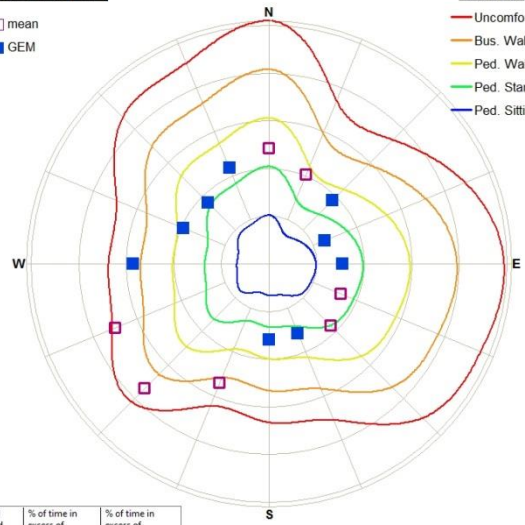
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	18.5	30.0
4.0	2.6	5.1
6.0	0.3	0.5
8.0	0.0	0.1
10.0	0.0	0.0
3.4	5.0	Ped Sitting
8.0	0.022	Pass
4.0	Ped Sitting	5.0
8.7	Pass	0.022

### LOCATION 54

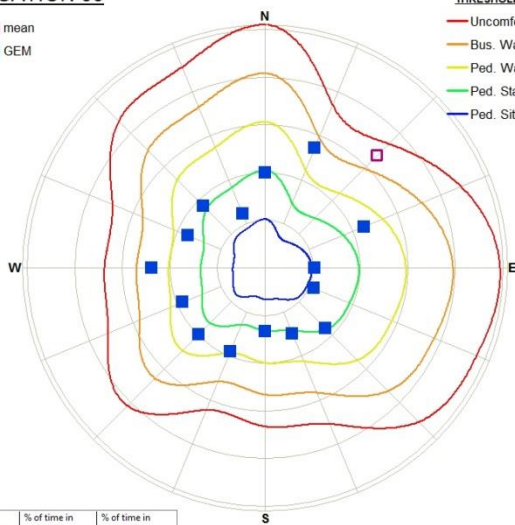
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	51.3	53.5
4.0	17.0	16.4
6.0	5.5	4.5
8.0	1.7	1.1
10.0	0.5	0.3
6.1	5.0	Ped Walking
14.2	0.022	Pass
5.8	Ped Standing	5.0
12.8	Pass	0.022

### LOCATION 55

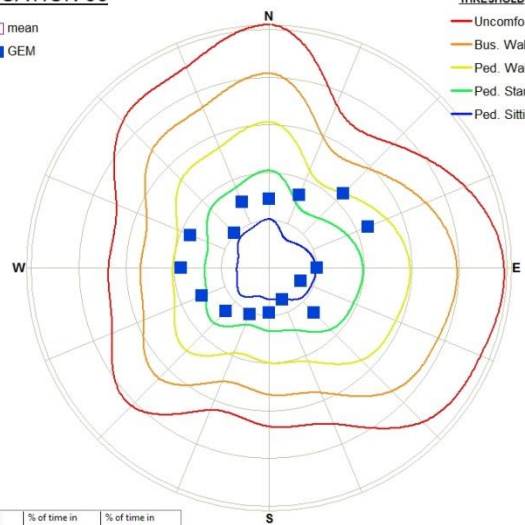
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	37.4	49.1
4.0	11.3	15.7
6.0	3.8	4.4
8.0	0.9	1.0
10.0	0.2	0.1
5.4	5.0	Ped Standing
11.5	0.022	Pass
5.7	Ped Standing	5.0
11.1	Pass	0.022

### LOCATION 56

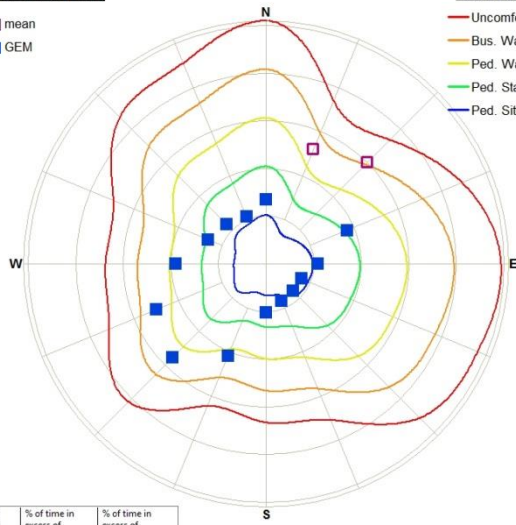
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	19.0	31.5
4.0	2.5	6.3
6.0	0.1	0.8
8.0	0.0	0.1
10.0	0.0	0.0
3.4	5.0	Ped Sitting
6.8	0.022	Pass
4.2	Ped Standing	5.0
8.4	Pass	0.022

### LOCATION 57

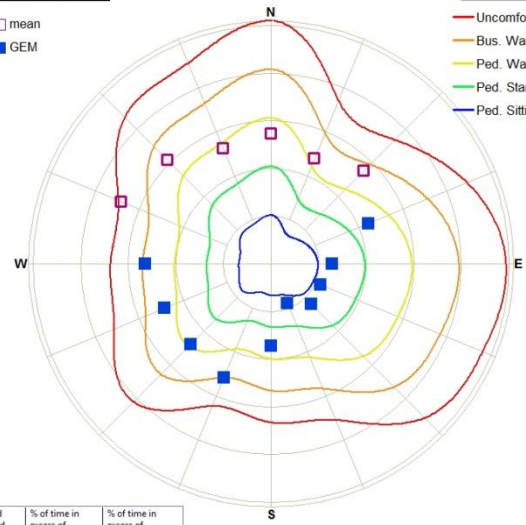
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	28.8	36.2
4.0	11.0	13.2
6.0	3.2	3.6
8.0	0.6	0.6
10.0	0.1	0.0
5.2	5.0	Ped Standing
10.6	0.022	Pass
5.5	Ped Standing	5.0
10.6	Pass	0.022

### LOCATION 58

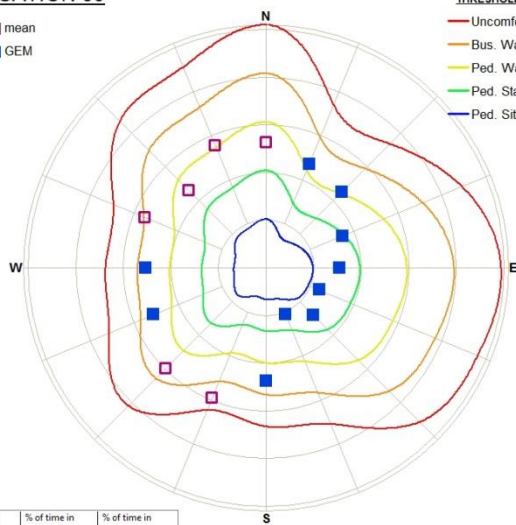
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	51.3	55.4
4.0	19.4	20.4
6.0	6.0	5.9
8.0	1.6	1.5
10.0	0.5	0.4
6.2	5.0	Ped Walking
15.4	0.022	Able Body
6.2	Ped Walking	5.0
13.8	Pass	0.022

### LOCATION 59

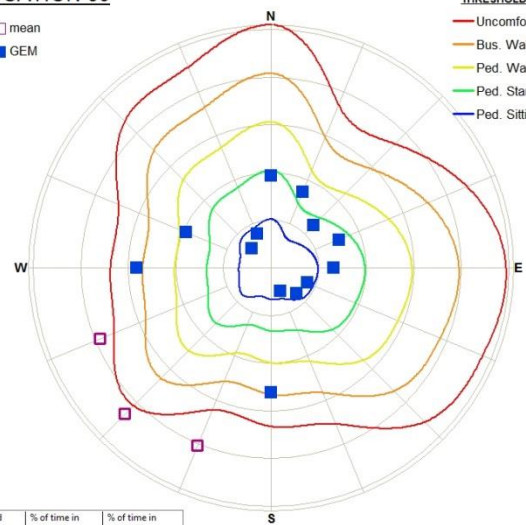
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	52.8	55.6
4.0	19.8	21.6
6.0	6.0	6.7
8.0	1.5	1.4
10.0	0.4	0.2
6.2	5.0	Ped Walking
13.3	0.022	Pass
6.3	Ped Walking	5.0
12.7	Pass	0.022

### LOCATION 60

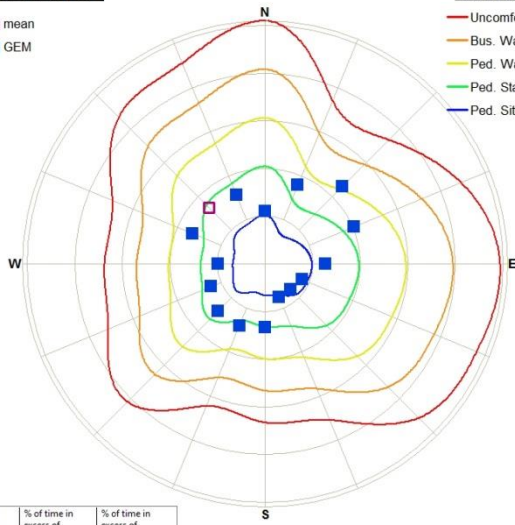
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	33.3	39.6
4.0	17.7	18.7
6.0	9.1	8.5
8.0	4.5	2.7
10.0	1.8	0.7
7.6	5.0	Ped Walking
18.0	0.022	Able Body
6.9	Ped Walking	5.0
14.7	Pass	0.022

### LOCATION 61

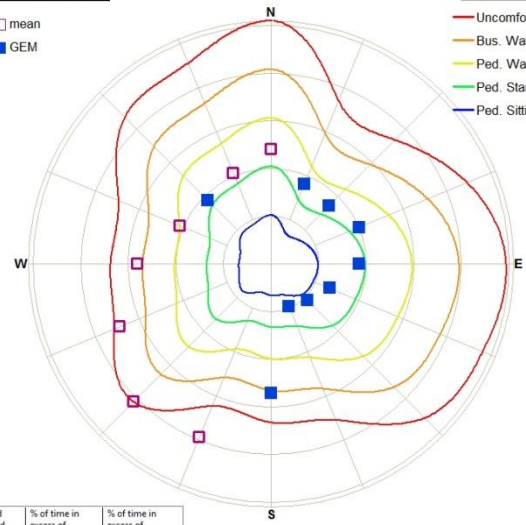
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	25.8	32.4
4.0	3.9	6.2
6.0	0.4	0.7
8.0	0.0	0.0
10.0	0.0	0.0
3.7	5.0	Ped Sitting
7.7	0.022	Pass
4.2	Ped Standing	5.0
8.1	Pass	0.022

### LOCATION 62

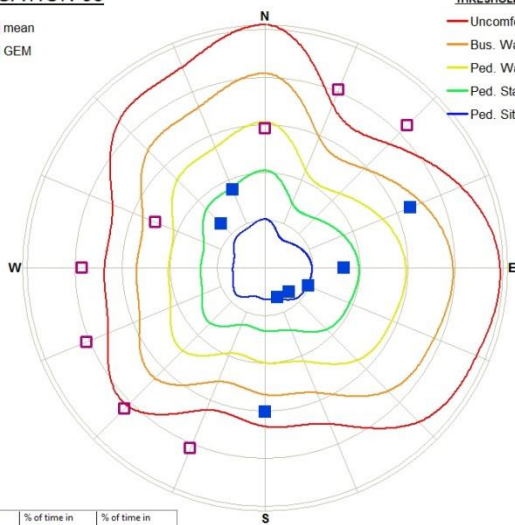
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	46.9	51.9
4.0	19.0	20.9
6.0	8.6	8.4
8.0	3.8	2.9
10.0	1.5	0.9
7.2	5.0	Ped Walking
17.3	0.022	Able Body
6.9	Ped Walking	5.0
15.7	Able Body	0.022

### LOCATION 63

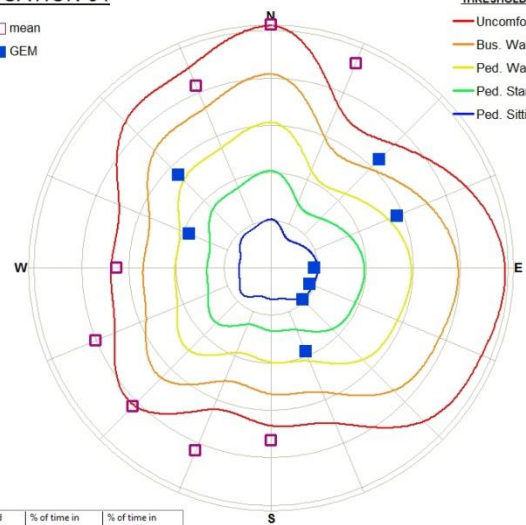
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	51.9	52.2
4.0	33.1	29.4
6.0	18.9	15.1
8.0	9.7	5.1
10.0	3.9	1.2
9.4	5.0	Bus Walking
18.6	0.022	Able Body
8.0	Ped Walking	5.0
14.8	Pass	0.022

### LOCATION 64

□ mean  
■ GEM

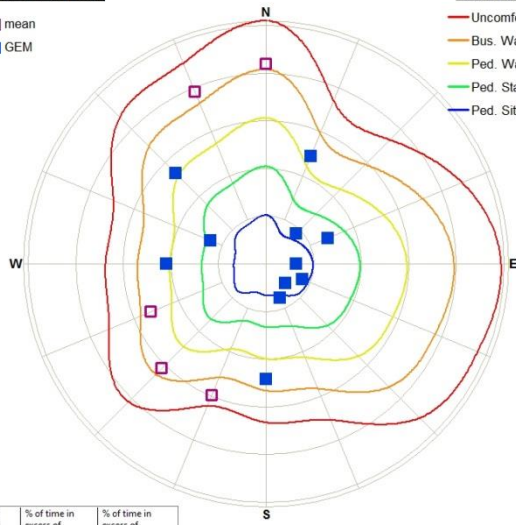


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	59.0	62.6
4.0	34.5	34.4
6.0	20.0	16.4
8.0	10.7	5.8
10.0	4.7	1.8
9.7	5.0	Bus Walking
18.7	0.022	Able Body
8.2	Bus Walking	5.0
15.3	Able Body	0.022



LOCATION 65

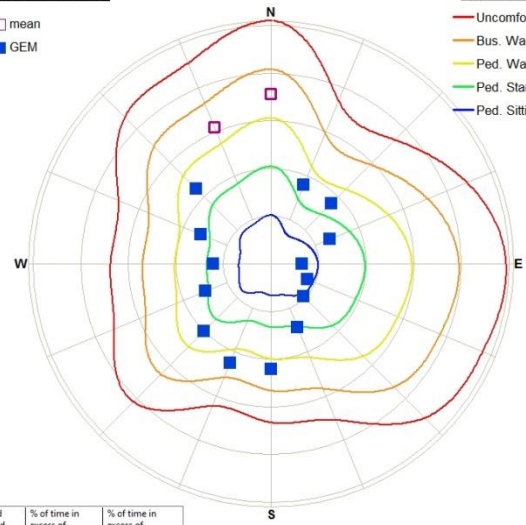
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	41.1	46.2
4.0	19.6	19.4
6.0	7.2	5.7
8.0	2.1	1.1
10.0	0.5	0.2
6.5	5.0	Ped Walking
14.4	0.022	Pass
6.1	Ped Walking	5.0
12.4	Pass	0.022

LOCATION 66

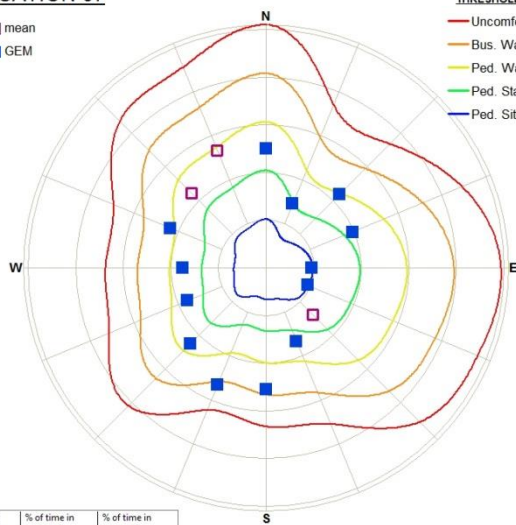
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	37.3	47.8
4.0	9.7	14.3
6.0	2.1	3.0
8.0	0.4	0.4
10.0	0.1	0.1
4.8	5.0	Ped Standing
11.4	0.022	Pass
5.3	Ped Standing	5.0
11.3	Pass	0.022

LOCATION 67

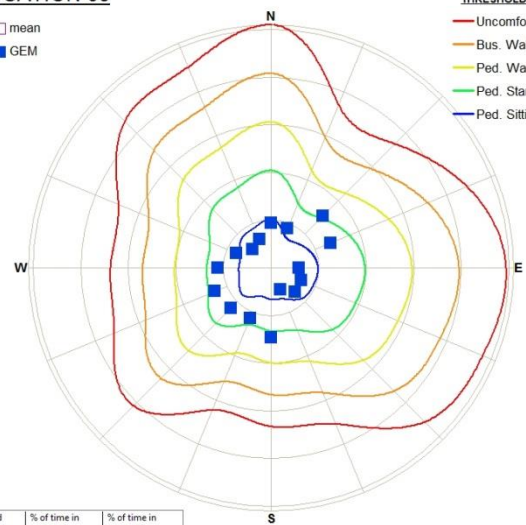
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	43.8	53.2
4.0	12.3	18.4
6.0	3.2	5.0
8.0	0.6	1.0
10.0	0.1	0.1
5.3	5.0	Ped Standing
11.1	0.022	Pass
5.9	Ped Standing	5.0
11.9	Pass	0.022

LOCATION 68

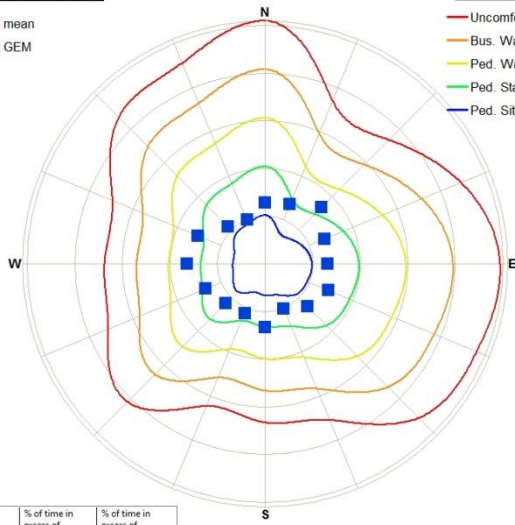
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	10.8	20.7
4.0	0.1	1.8
6.0	0.0	0.0
8.0	0.0	0.0
10.0	0.0	0.0
2.5	5.0	Ped Sitting
4.6	0.022	Pass
3.2	Ped Sitting	5.0
6.1	Pass	0.022

### LOCATION 69

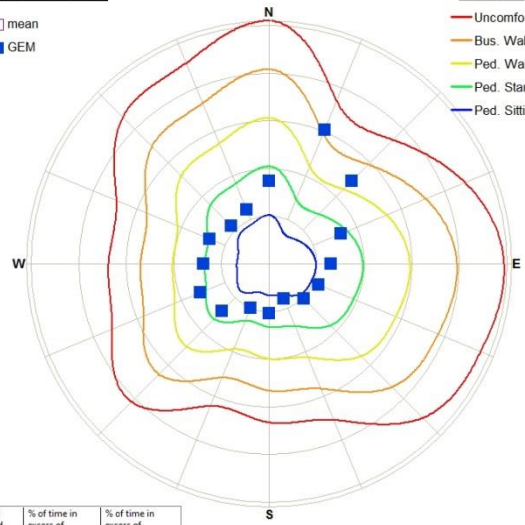
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	17.5	32.0
4.0	0.6	3.0
6.0	0.0	0.2
8.0	0.0	0.0
10.0	0.0	0.0
2.8	5.0	Ped Sitting
5.6	0.022	Pass
3.6	Ped Sitting	5.0
7.2	Pass	0.022

### LOCATION 70

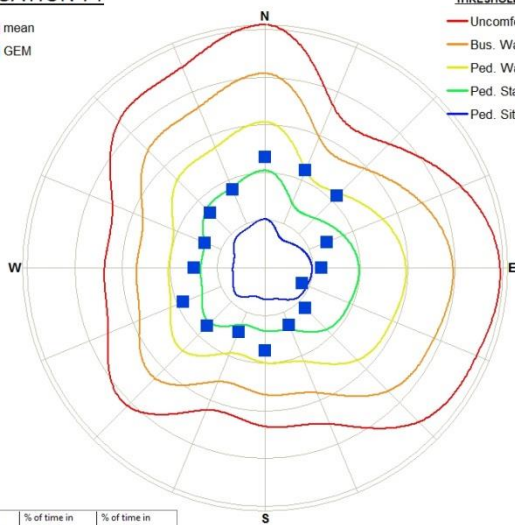
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	21.1	32.3
4.0	5.7	7.8
6.0	1.5	2.2
8.0	0.1	0.5
10.0	0.0	0.0
4.1	5.0	Ped Standing
9.0	0.022	Pass
4.7	Ped Standing	5.0
10.5	Pass	0.022

### LOCATION 71

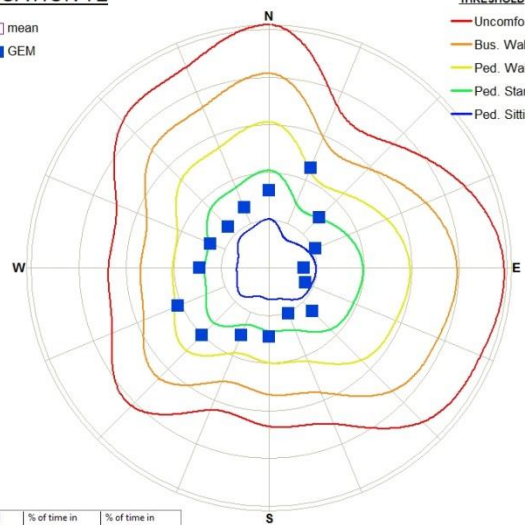
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	32.8	43.3
4.0	5.0	10.0
6.0	0.3	1.1
8.0	0.0	0.0
10.0	0.0	0.0
4.0	5.0	Ped Sitting
7.3	0.022	Pass
4.7	Ped Standing	5.0
8.4	Pass	0.022

### LOCATION 72

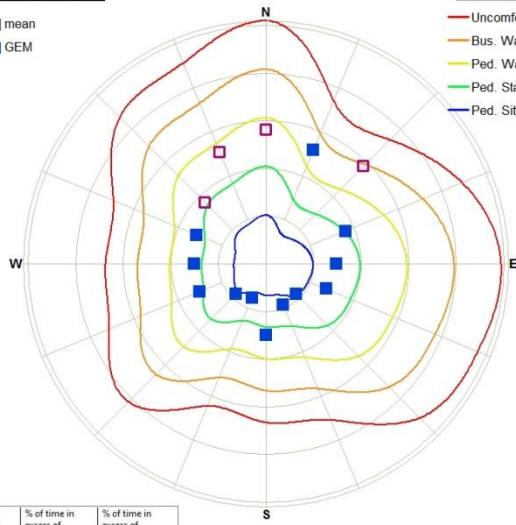
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	23.9	36.2
4.0	3.1	7.2
6.0	0.2	0.8
8.0	0.0	0.0
10.0	0.0	0.0
3.5	5.0	Ped Sitting
7.3	0.022	Pass
4.3	Ped Standing	5.0
8.5	Pass	0.022

### LOCATION 74

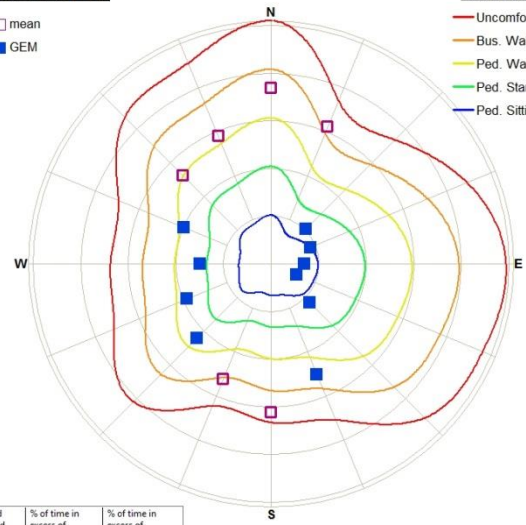
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	30.2	40.0
4.0	8.2	10.5
6.0	2.3	2.6
8.0	0.4	0.4
10.0	0.0	0.0
4.8	5.0	Ped. Standing
10.2	0.022	Pass
5.0	Ped. Standing	5.0
10.0	Pass	0.022

### LOCATION 75

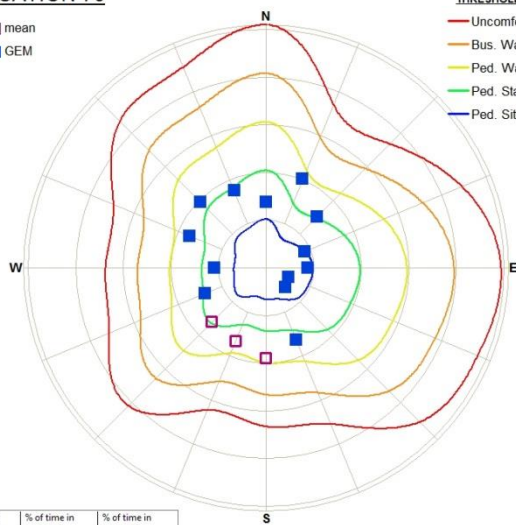
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	47.5	51.3
4.0	22.0	22.1
6.0	9.2	7.6
8.0	2.7	1.8
10.0	0.5	0.2
7.0	5.0	Ped. Walking
13.4	0.022	Pass
6.6	Ped. Walking	5.0
12.0	Pass	0.022

### LOCATION 76

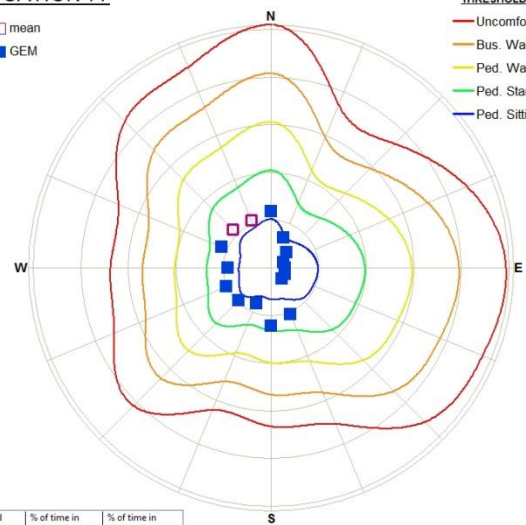
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	29.2	38.5
4.0	5.8	8.1
6.0	0.5	0.9
8.0	0.0	0.0
10.0	0.0	0.0
4.1	5.0	Ped. Standing
8.2	0.022	Pass
4.5	Ped. Standing	5.0
8.5	Pass	0.022

### LOCATION 77

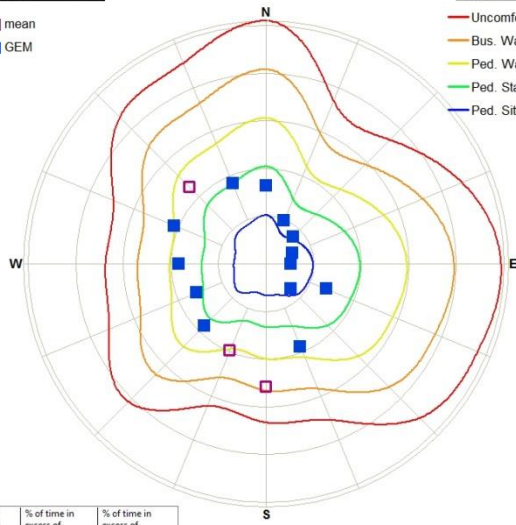
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	7.2	14.4
4.0	0.1	0.5
6.0	0.0	0.0
8.0	0.0	0.0
10.0	0.0	0.0
2.2	5.0	Ped. Sitting
4.8	0.022	Pass
2.7	Ped. Sitting	5.0
5.3	Pass	0.022

### LOCATION 78

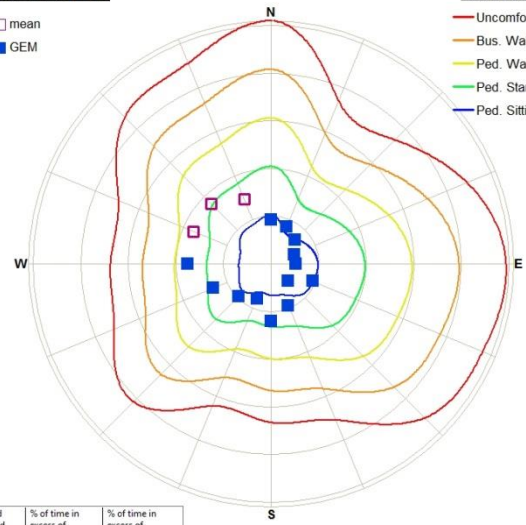
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	32.3	39.4
4.0	10.5	12.4
6.0	2.9	2.7
8.0	0.5	0.4
10.0	0.1	0.0
5.2	5.0	Ped Standing
11.0	0.022	Pass
5.2	Ped Standing	5.0
10.4	Pass	0.022

### LOCATION 79

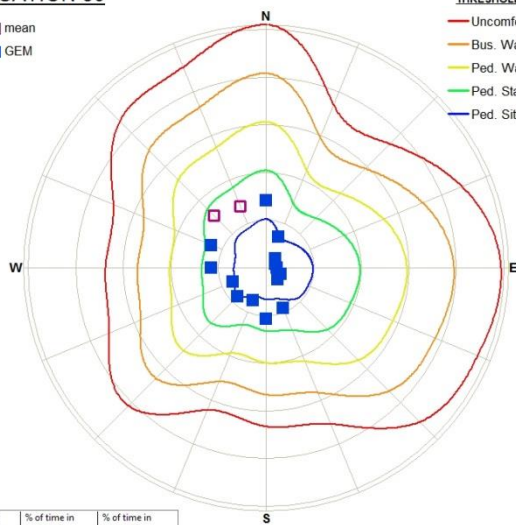
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	12.6	19.9
4.0	1.7	2.2
6.0	0.3	0.3
8.0	0.0	0.0
10.0	0.0	0.0
2.7	5.0	Ped Sitting
8.0	0.022	Pass
3.2	Ped Sitting	5.0
7.8	Pass	0.022

### LOCATION 80

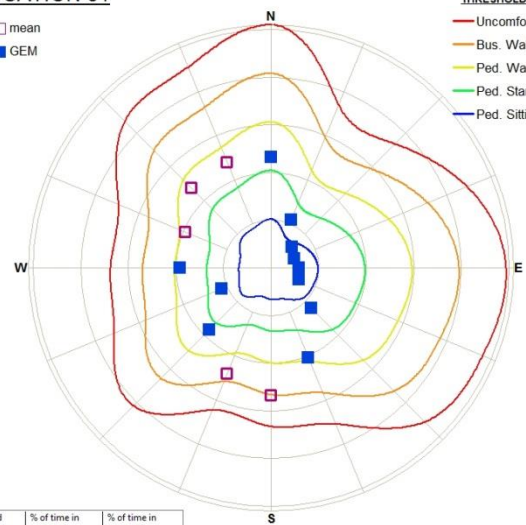
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	8.1	13.1
4.0	0.6	0.6
6.0	0.0	0.0
8.0	0.0	0.0
10.0	0.0	0.0
2.3	5.0	Ped Sitting
6.4	0.022	Pass
2.6	Ped Sitting	5.0
5.9	Pass	0.022

### LOCATION 81

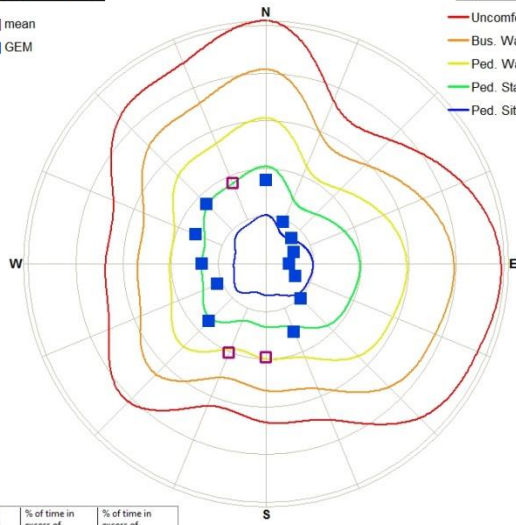
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	37.3	40.1
4.0	13.4	13.4
6.0	4.1	2.9
8.0	0.9	0.4
10.0	0.1	0.0
5.7	5.0	Ped Standing
11.6	0.022	Pass
5.3	Ped Standing	5.0
10.2	Pass	0.022

### LOCATION 82

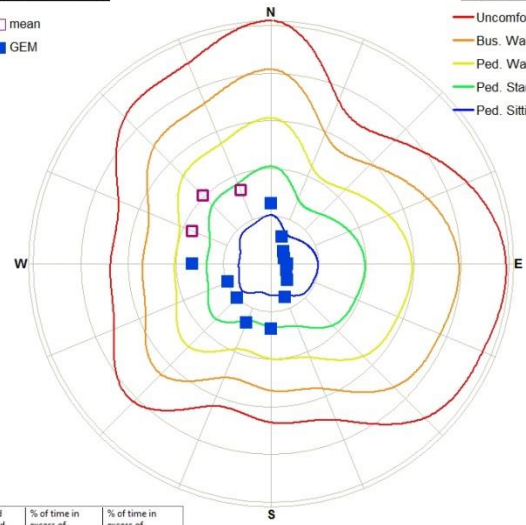
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	26.5	32.3
4.0	6.7	6.5
6.0	1.0	0.7
8.0	0.1	0.0
10.0	0.0	0.0
4.3	5.0	Ped Standing
9.1	0.022	Pass
4.2	Ped Standing	5.0
8.3	Pass	0.022

### LOCATION 83

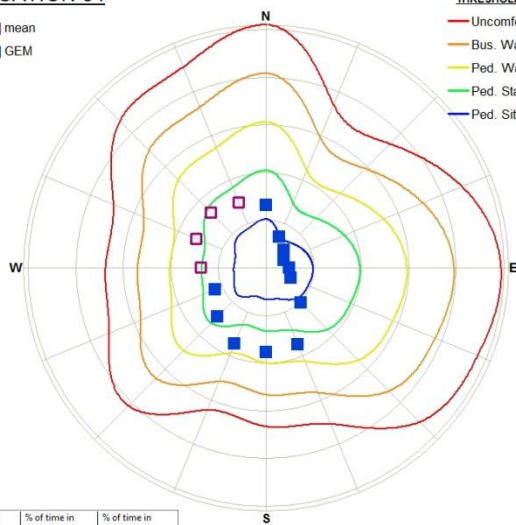
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	14.9	19.9
4.0	2.0	2.6
6.0	0.4	0.2
8.0	0.1	0.0
10.0	0.0	0.0
2.9	5.0	Ped Sitting
8.6	0.022	Pass
3.4	Ped Sitting	5.0
7.5	Pass	0.022

### LOCATION 84

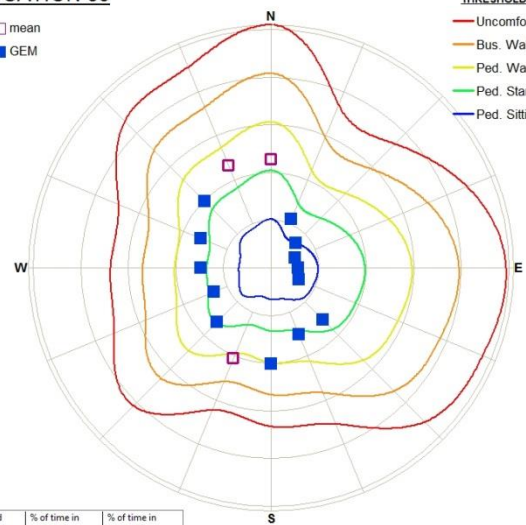
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	22.9	27.2
4.0	3.2	5.9
6.0	0.2	0.5
8.0	0.0	0.0
10.0	0.0	0.0
3.5	5.0	Ped Sitting
7.4	0.022	Pass
4.1	Ped Standing	5.0
8.0	Pass	0.022

### LOCATION 85

□ mean  
■ GEM

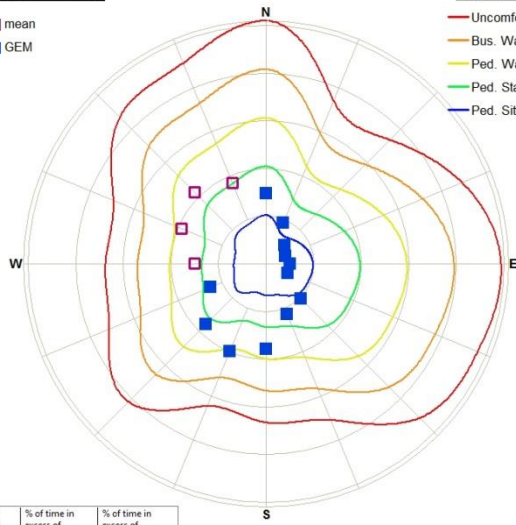


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	31.1	38.2
4.0	6.4	8.9
6.0	0.9	1.3
8.0	0.1	0.1
10.0	0.0	0.0
4.2	5.0	Ped Standing
9.4	0.022	Pass
4.6	Ped Standing	5.0
9.2	Pass	0.022



### LOCATION 86

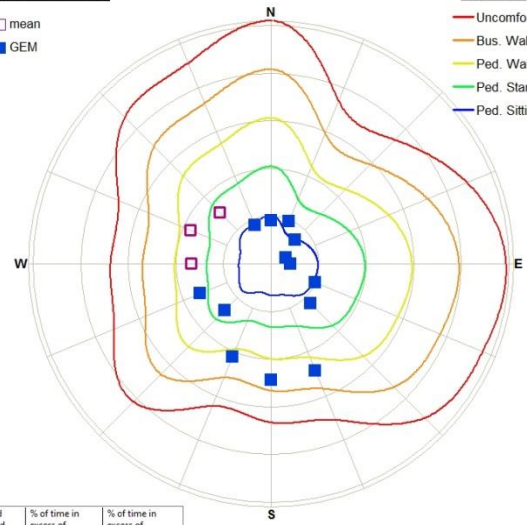
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	27.4	29.1
4.0	4.6	6.3
6.0	0.7	0.7
8.0	0.1	0.1
10.0	0.0	0.0
3.9	5.0	Ped Sitting
9.2	0.022	Pass
4.2	Ped Standing	5.0
8.7	Pass	0.022

### LOCATION 87

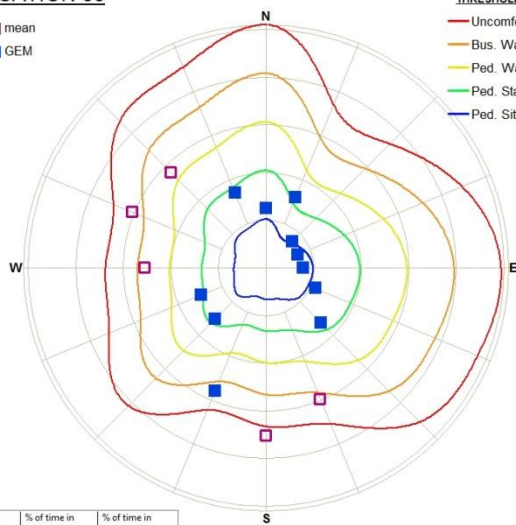
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	28.7	32.5
4.0	10.6	12.6
6.0	2.1	3.2
8.0	0.2	0.4
10.0	0.0	0.0
5.0	5.0	Ped Standing
9.8	0.022	Pass
5.4	Ped Standing	5.0
10.6	Pass	0.022

### LOCATION 88

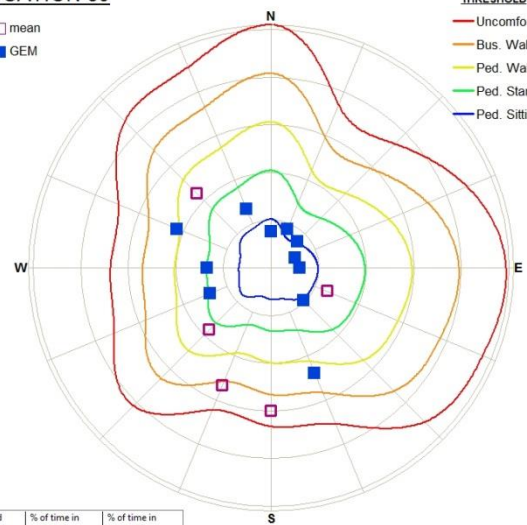
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	40.9	47.1
4.0	20.4	20.3
6.0	10.7	9.2
8.0	4.0	2.9
10.0	1.2	0.7
7.5	5.0	Ped Walking
15.0	0.022	Pass
7.1	Ped Walking	5.0
13.6	Pass	0.022

### LOCATION 89

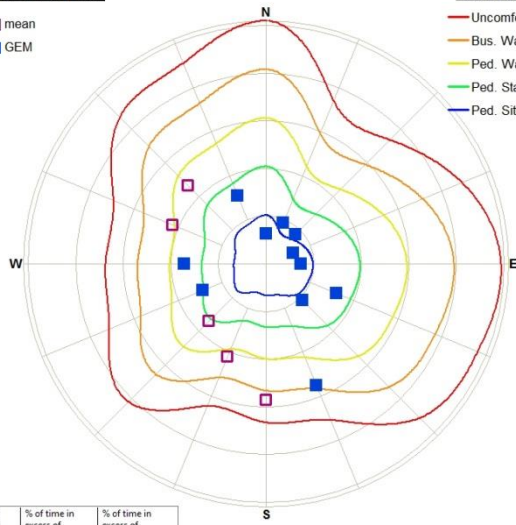
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	32.1	35.8
4.0	14.1	14.0
6.0	5.6	4.3
8.0	1.6	0.8
10.0	0.3	0.1
6.1	5.0	Ped Walking
12.7	0.022	Pass
5.7	Ped Standing	5.0
11.1	Pass	0.022

### LOCATION 90

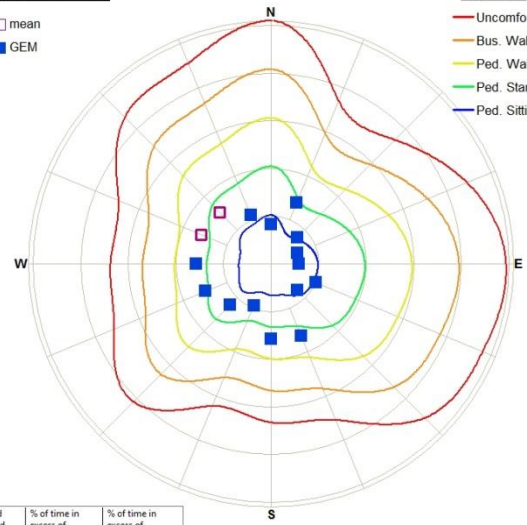
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	35.0	38.4
4.0	14.1	14.1
6.0	4.9	4.2
8.0	1.1	0.7
10.0	0.2	0.1
5.9	5.0	Ped Standing
12.0	0.022	Pass
5.7	Ped Standing	5.0
11.6	Pass	0.022

### LOCATION 91

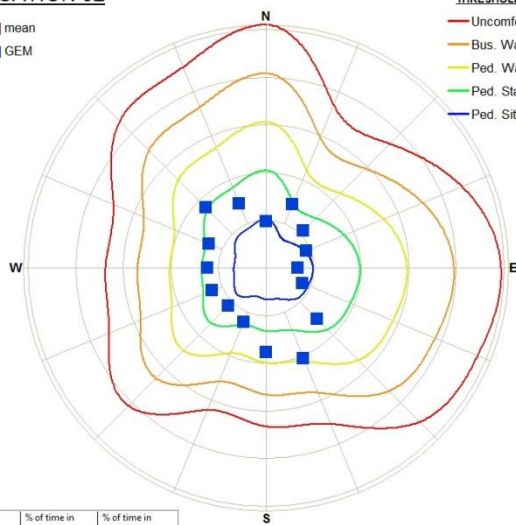
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	15.8	27.2
4.0	1.6	4.2
6.0	0.2	0.2
8.0	0.0	0.0
10.0	0.0	0.0
2.9	5.0	Ped Sitting
7.3	0.022	Pass
3.8	Ped Sitting	5.0
7.5	Pass	0.022

### LOCATION 92

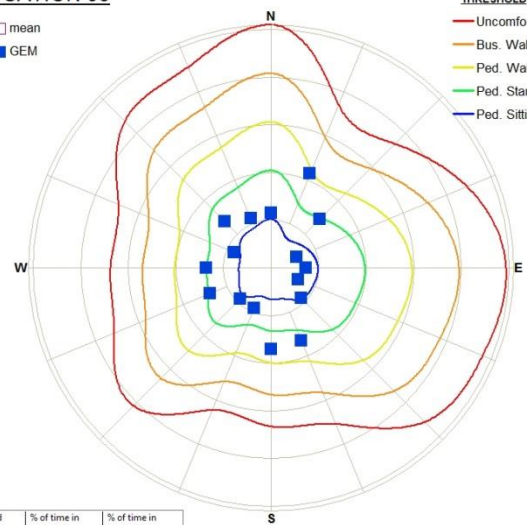
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	23.0	33.8
4.0	1.5	6.2
6.0	0.1	0.6
8.0	0.0	0.1
10.0	0.0	0.0
3.2	5.0	Ped Sitting
6.8	0.022	Pass
4.2	Ped Standing	5.0
8.8	Pass	0.022

### LOCATION 93

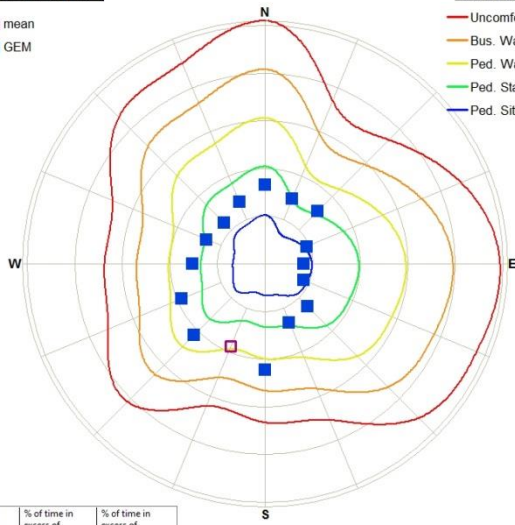
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	17.9	29.8
4.0	1.9	5.8
6.0	0.1	0.5
8.0	0.0	0.0
10.0	0.0	0.0
3.1	5.0	Ped Sitting
6.7	0.022	Pass
4.1	Ped Standing	5.0
7.7	Pass	0.022

### LOCATION 94

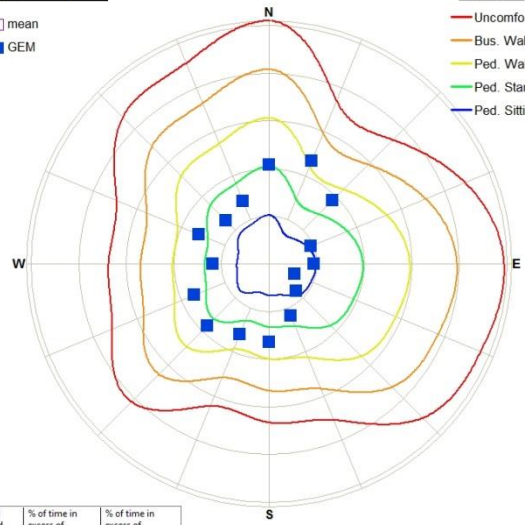
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	28.3	38.0
4.0	4.7	9.5
6.0	0.4	1.4
8.0	0.0	0.1
10.0	0.0	0.0
3.9	5.0	Ped Sitting
8.2	0.022	Pass
4.7	Ped Standing	5.0
9.3	Pass	0.022

### LOCATION 95

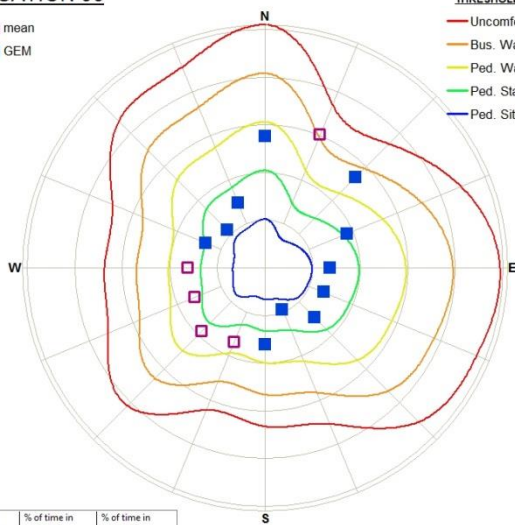
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	22.5	37.4
4.0	2.7	8.4
6.0	0.2	1.0
8.0	0.0	0.0
10.0	0.0	0.0
3.5	5.0	Ped Sitting
6.9	0.022	Pass
4.5	Ped Standing	5.0
8.3	Pass	0.022

### LOCATION 96

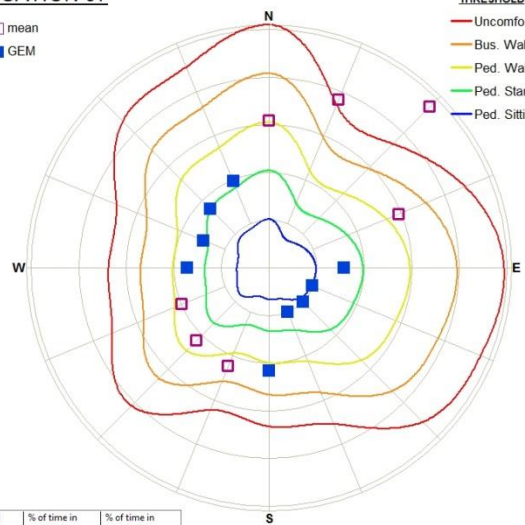
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	36.7	43.4
4.0	10.0	12.0
6.0	2.5	2.8
8.0	0.5	0.5
10.0	0.0	0.0
5.0	5.0	Ped Standing
10.4	0.022	Pass
5.2	Ped Standing	5.0
10.2	Pass	0.022

### LOCATION 97

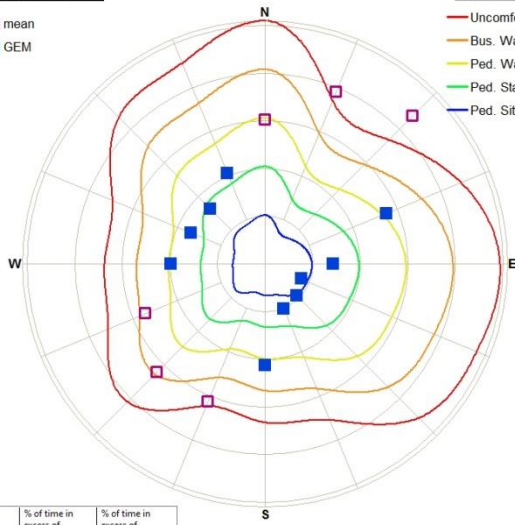
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	45.2	49.9
4.0	20.7	20.2
6.0	8.6	6.3
8.0	4.1	1.7
10.0	1.8	0.4
7.3	5.0	Ped Walking
16.5	0.022	Able Body
6.3	Ped Walking	5.0
12.6	Pass	0.022

### LOCATION 98

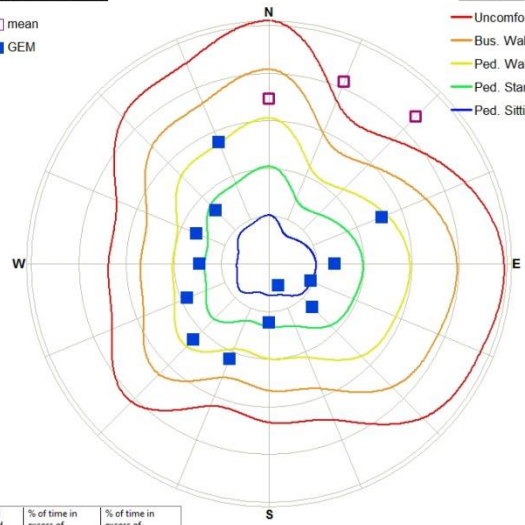
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	47.5	51.4
4.0	23.6	23.5
6.0	11.0	8.6
8.0	4.8	2.4
10.0	1.7	0.5
7.8	5.0	Ped Walking
15.3	0.022	Able Body
6.8	Ped Walking	5.0
12.7	Pass	0.022

### LOCATION 99

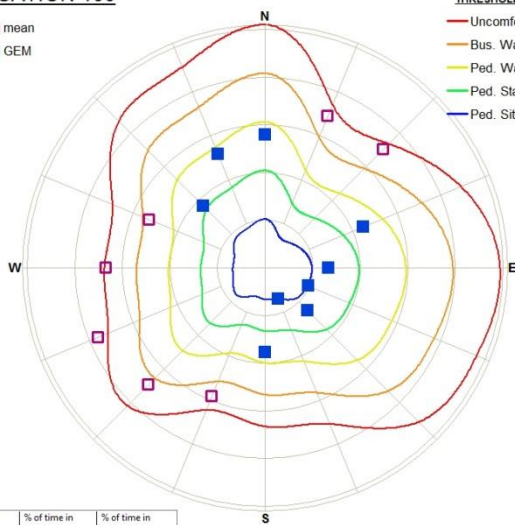
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	40.3	46.3
4.0	17.7	16.9
6.0	8.2	5.8
8.0	3.9	1.7
10.0	1.6	0.3
7.2	5.0	Ped Walking
15.3	0.022	Able Body
6.2	Ped Walking	5.0
12.1	Pass	0.022

### LOCATION 100

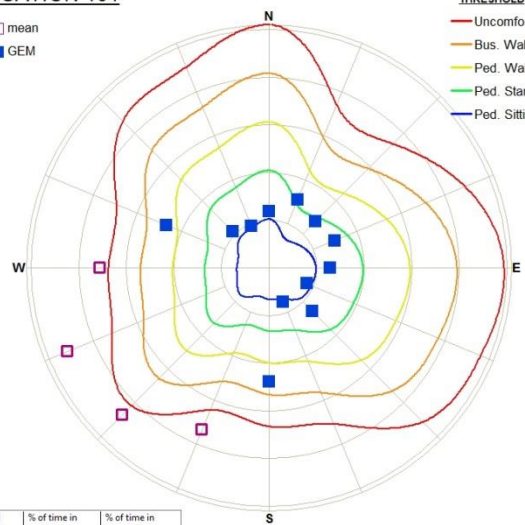
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	49.9	53.9
4.0	23.8	23.2
6.0	12.2	8.6
8.0	4.9	2.3
10.0	1.4	0.5
7.9	5.0	Ped Walking
15.6	0.022	Able Body
6.8	Ped Walking	5.0
13.7	Pass	0.022

### LOCATION 101

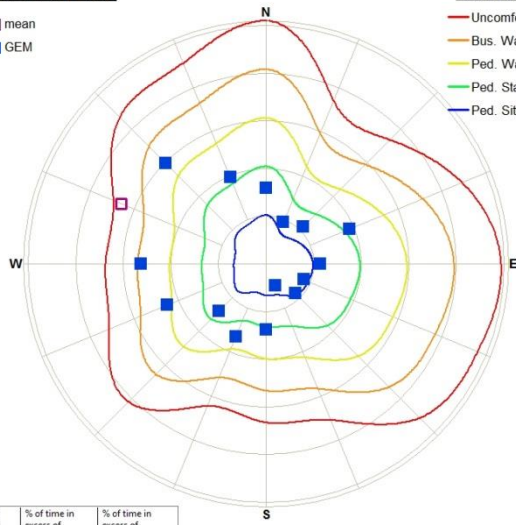
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	35.6	42.4
4.0	16.5	18.9
6.0	9.4	8.8
8.0	5.2	3.3
10.0	2.3	1.0
8.0	5.0	Ped Walking
18.5	0.022	Able Body
7.1	Ped Walking	5.0
15.6	Able Body	0.022

### LOCATION 102

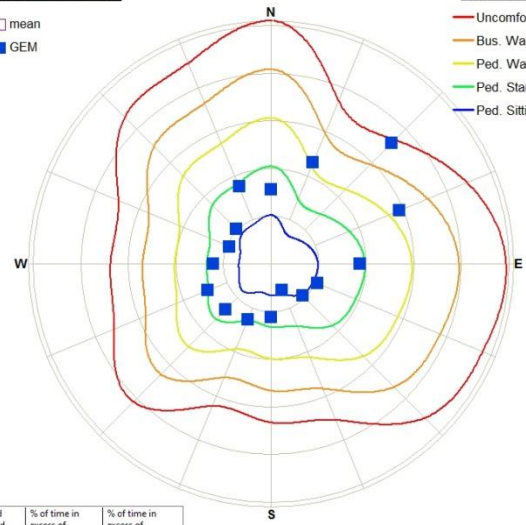
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	28.4	39.5
4.0	6.9	10.2
6.0	2.3	3.0
8.0	0.9	1.1
10.0	0.3	0.4
4.5	5.0	Ped Standing
14.6	0.022	Pass
5.1	Ped Standing	5.0
13.9	Pass	0.022

### LOCATION 103

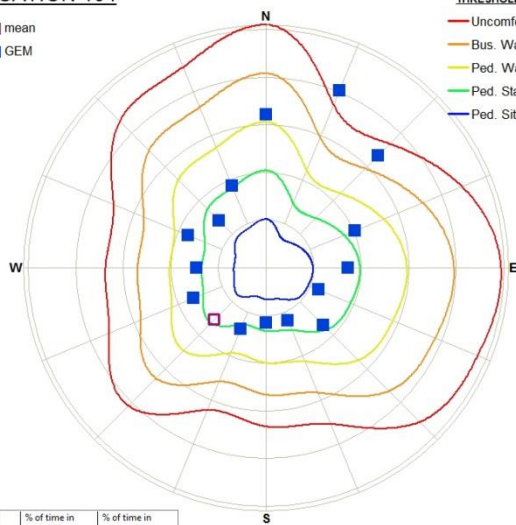
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	24.9	33.8
4.0	6.0	9.2
6.0	1.5	3.5
8.0	0.3	1.0
10.0	0.0	0.3
4.2	5.0	Ped Standing
10.0	0.022	Pass
5.2	Ped Standing	5.0
12.4	Pass	0.022

### LOCATION 104

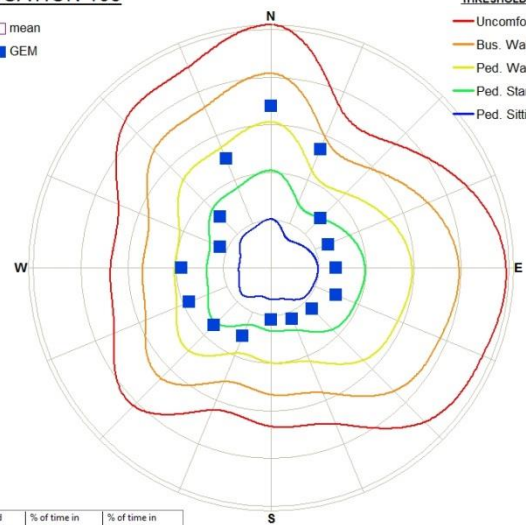
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	35.2	47.3
4.0	10.7	13.8
6.0	4.3	5.8
8.0	1.6	2.2
10.0	0.5	0.8
5.6	5.0	Ped Standing
13.0	0.022	Pass
6.2	Ped Walking	5.0
13.9	Pass	0.022

### LOCATION 105

□ mean  
■ GEM

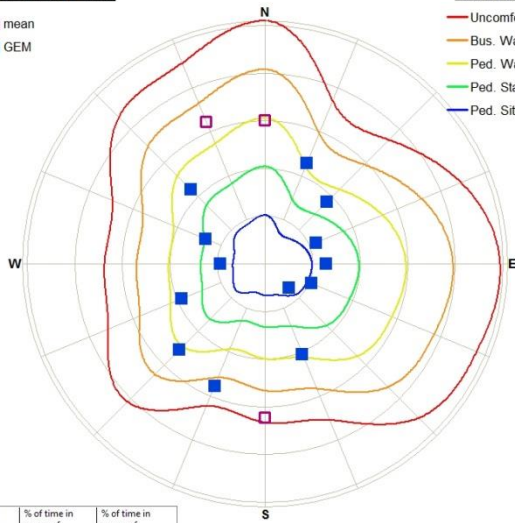


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	32.1	42.9
4.0	5.3	9.3
6.0	0.8	2.1
8.0	0.1	0.3
10.0	0.0	0.0
4.0	5.0	Ped Standing
9.4	0.022	Pass
4.8	Ped Standing	5.0
10.2	Pass	0.022



### LOCATION 106

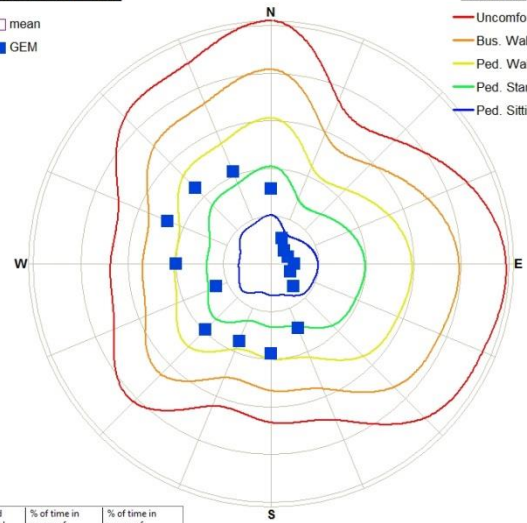
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	43.5	50.7
4.0	17.1	20.8
6.0	6.7	7.1
8.0	2.2	1.9
10.0	0.5	0.4
6.5	5.0	Ped Walking
13.6	0.022	Pass
6.5	Ped Walking	5.0
13.0	Pass	0.022

### LOCATION 107

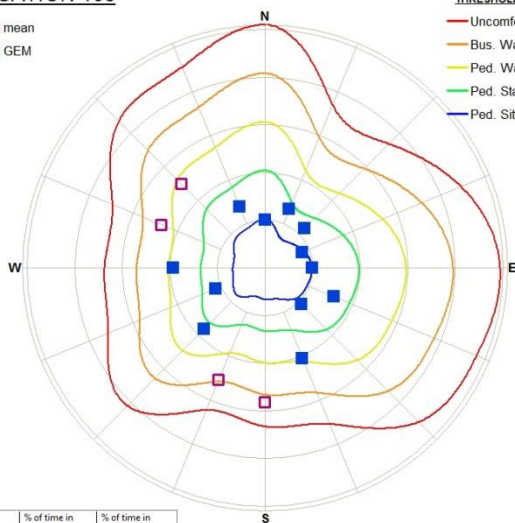
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	27.2	35.8
4.0	5.8	9.1
6.0	0.8	1.7
8.0	0.1	0.3
10.0	0.0	0.1
4.1	5.0	Ped Standing
9.0	0.022	Pass
4.7	Ped Standing	5.0
10.8	Pass	0.022

### LOCATION 108

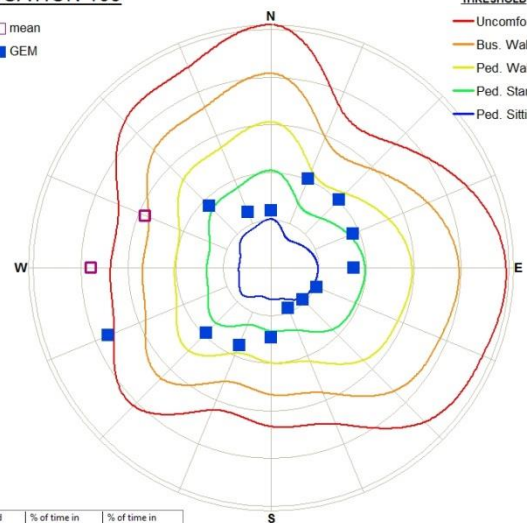
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	38.8	41.4
4.0	14.7	13.2
6.0	5.2	3.0
8.0	1.4	0.4
10.0	0.2	0.0
6.0	5.0	Ped Standing
12.3	0.022	Pass
5.3	Ped Standing	5.0
10.4	Pass	0.022

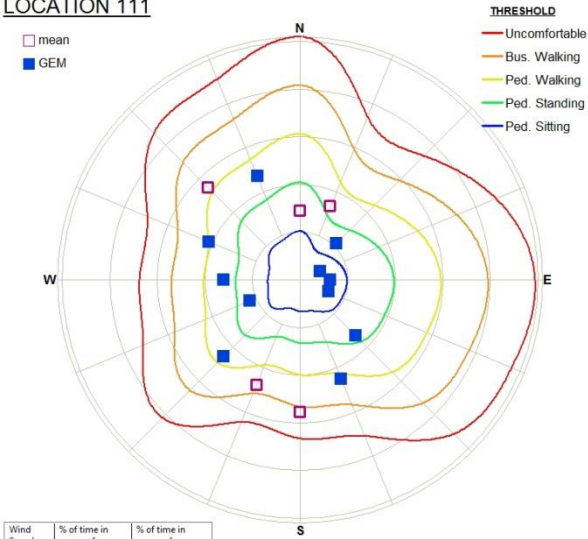
### LOCATION 109

□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	37.4	45.0
4.0	11.8	14.4
6.0	4.6	5.1
8.0	2.0	1.9
10.0	0.8	0.7
5.7	5.0	Ped Standing
16.1	0.022	Able Body
5.9	Ped Standing	5.0
15.0	Able Body	0.022

LOCATION 111



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	35.0	38.7
4.0	12.9	12.4
6.0	3.9	2.8
8.0	0.8	0.4
10.0	0.1	0.0
5.6	5.0	Ped Standing
11.5	0.022	Pass
5.3	Ped Standing	5.0
10.8	Pass	0.022

# Appendix 5: Directional Wind Results, Spring



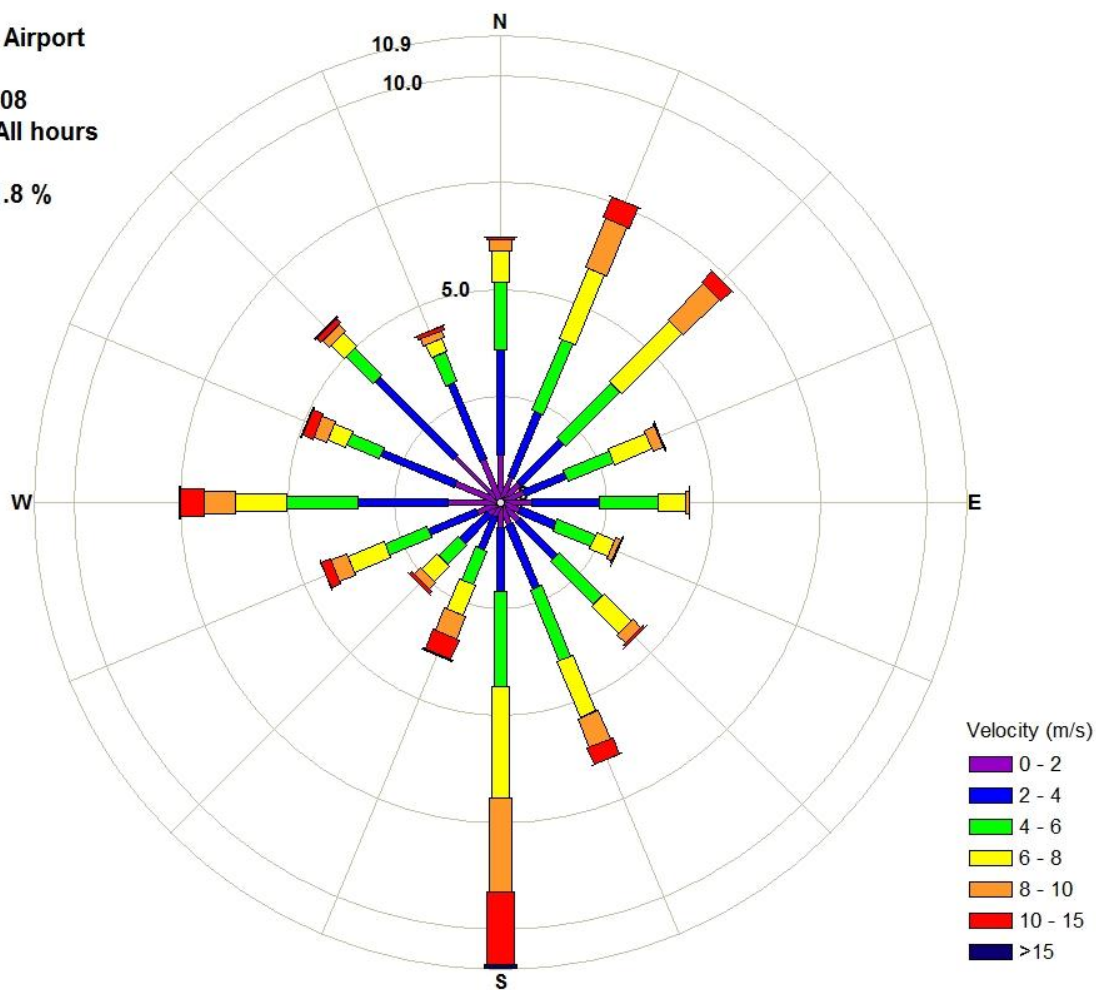
Figure 13: Pedestrian wind speed measurement locations – spring

# Sydney Airport

1974-2008

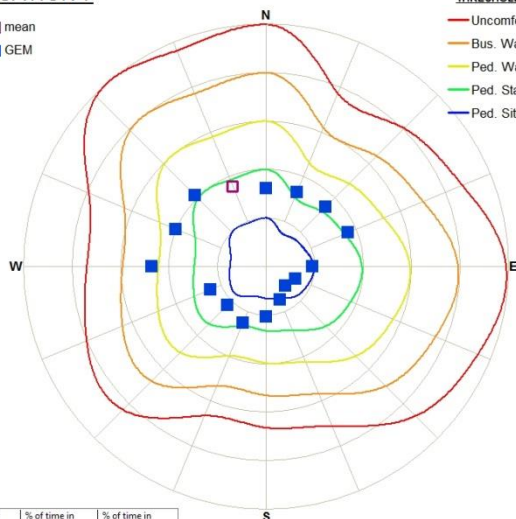
Spring All hours

Calm 11.8 %



## LOCATION 7

□ mean  
■ GEM

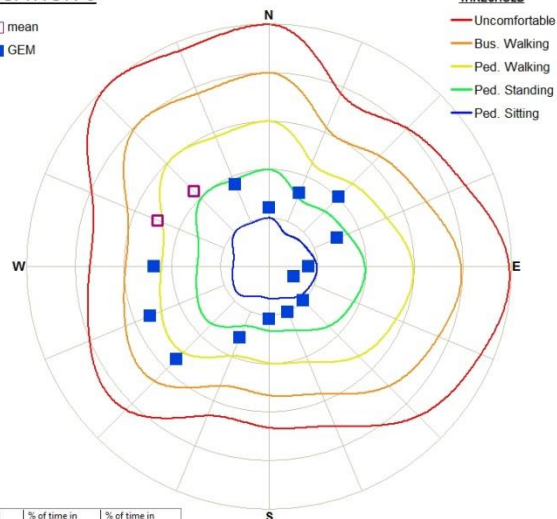


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	23.5	32.1
4.0	2.5	5.3
6.0	0.2	0.8
8.0	0.0	0.1
10.0	0.0	0.0
3.4	5.0	Ped Sitting
7.7	0.022	Pass
4.0	Ped Standing	5.0
9.4	Pass	0.022

## LOCATION 8

□ mean  
■ GEM

THRESHOLD  
— Uncomfortable  
— Bus. Walking  
— Ped. Walking  
— Ped. Standing  
— Ped. Sitting

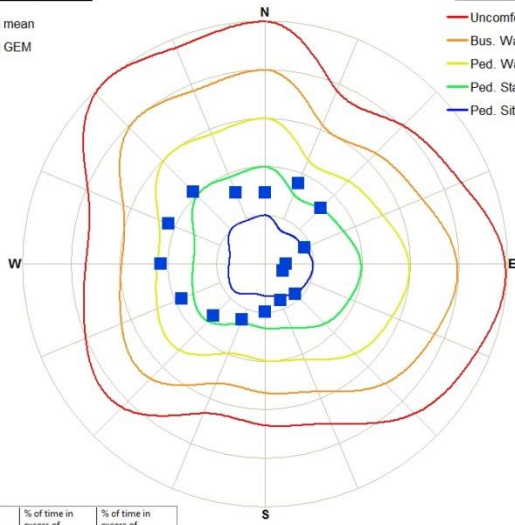


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	28.5	37.9
4.0	6.3	9.1
6.0	1.1	1.7
8.0	0.2	0.3
10.0	0.0	0.0
4.2	5.0	Ped Standing
9.8	0.022	Pass
4.7	Ped Standing	5.0
10.4	Pass	0.022



### LOCATION 9

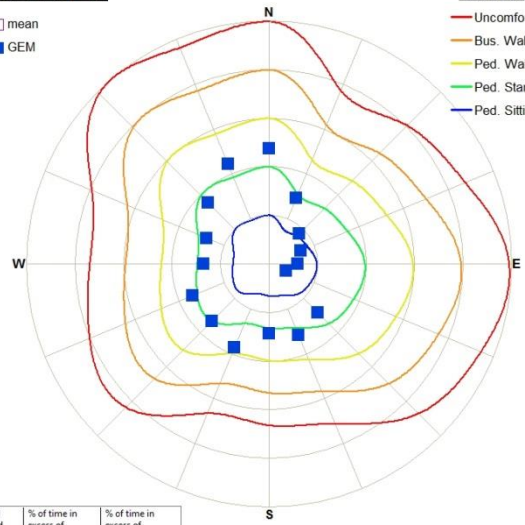
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	22.2	30.9
4.0	2.9	5.3
6.0	0.2	0.7
8.0	0.0	0.1
10.0	0.0	0.0
3.5	5.0	Ped Sitting
7.3	0.022	Pass
4.0	Ped Standing	5.0
8.9	Pass	0.022

### LOCATION 10

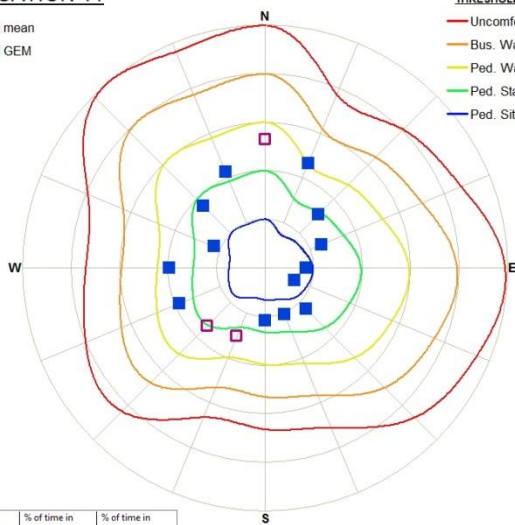
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	24.4	34.2
4.0	2.1	5.2
6.0	0.1	0.4
8.0	0.0	0.0
10.0	0.0	0.0
3.3	5.0	Ped Sitting
7.1	0.022	Pass
4.0	Ped Sitting	5.0
7.9	Pass	0.022

### LOCATION 11

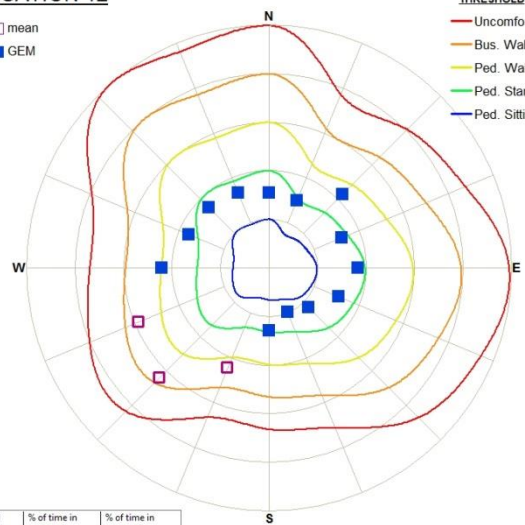
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	26.8	37.0
4.0	4.1	7.2
6.0	0.3	0.9
8.0	0.0	0.0
10.0	0.0	0.0
3.8	5.0	Ped Sitting
7.8	0.022	Pass
4.4	Ped Standing	5.0
8.4	Pass	0.022

### LOCATION 12

□ mean  
■ GEM

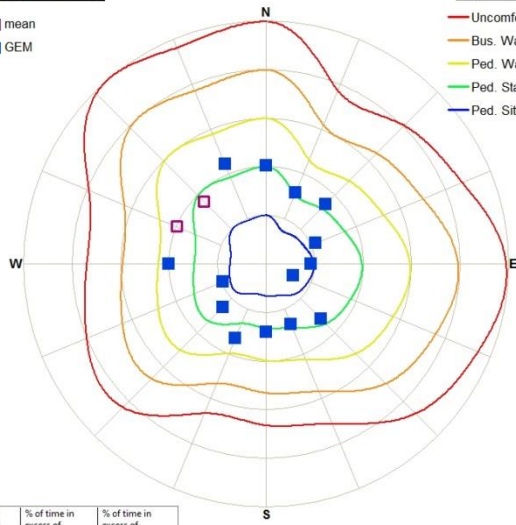


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	32.2	42.8
4.0	6.9	10.0
6.0	1.5	1.9
8.0	0.3	0.3
10.0	0.1	0.0
4.4	5.0	Ped Standing
10.9	0.022	Pass
4.8	Ped Standing	5.0
10.4	Pass	0.022



### LOCATION 13

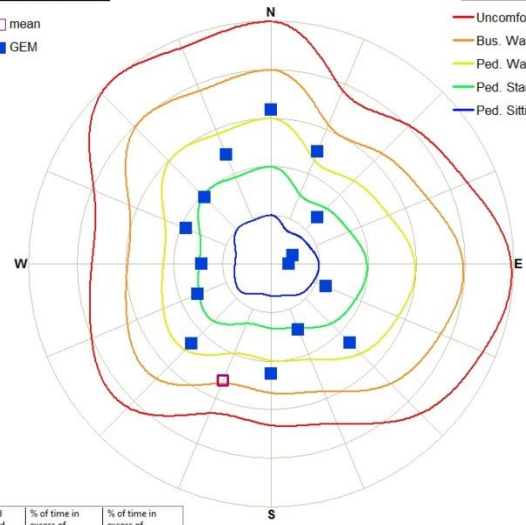
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	31.0	38.3
4.0	3.8	6.1
6.0	0.5	0.5
8.0	0.0	0.0
10.0	0.0	0.0
3.7	5.0	Ped Sitting
8.2	0.022	Pass
4.2	Ped Standing	5.0
8.3	Pass	0.022

### LOCATION 14

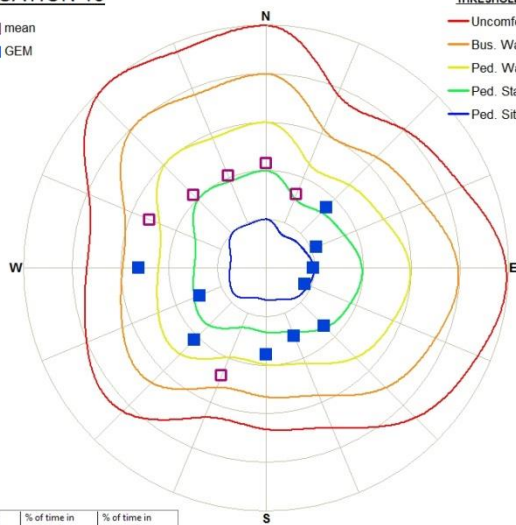
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	40.6	46.1
4.0	12.0	15.9
6.0	2.3	3.5
8.0	0.3	0.4
10.0	0.0	0.0
5.1	5.0	Ped Standing
10.4	0.022	Pass
5.5	Ped Standing	5.0
10.3	Pass	0.022

### LOCATION 15

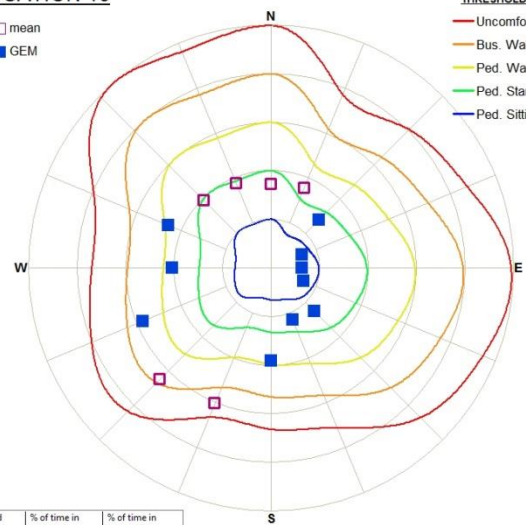
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	41.1	46.0
4.0	8.6	11.7
6.0	1.4	2.2
8.0	0.2	0.4
10.0	0.0	0.1
4.5	5.0	Ped Standing
10.3	0.022	Pass
5.0	Ped Standing	5.0
10.7	Pass	0.022

### LOCATION 16

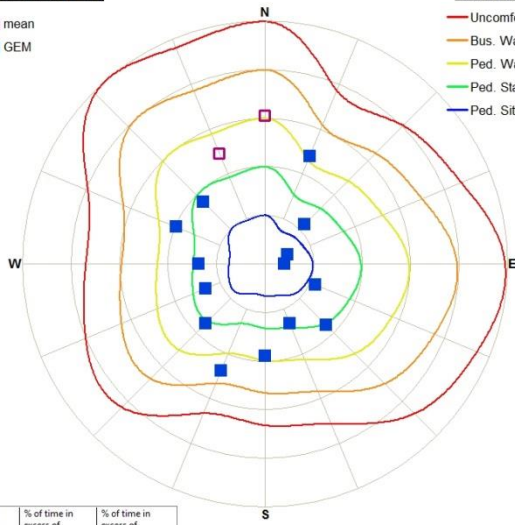
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	37.2	40.4
4.0	9.7	11.7
6.0	2.6	2.6
8.0	0.7	0.5
10.0	0.1	0.1
4.9	5.0	Ped Standing
12.2	0.022	Pass
5.1	Ped Standing	5.0
11.1	Pass	0.022

### LOCATION 17

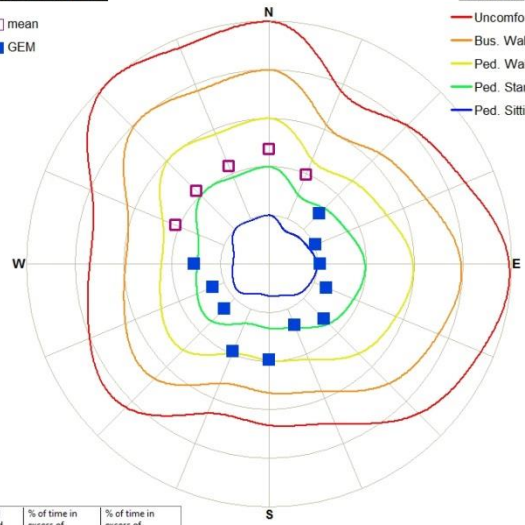
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	31.4	41.3
4.0	7.0	11.6
6.0	1.2	1.9
8.0	0.1	0.2
10.0	0.0	0.0
4.4	5.0	Ped Standing
9.0	0.022	Pass
5.0	Ped Standing	5.0
9.5	Pass	0.022

### LOCATION 18

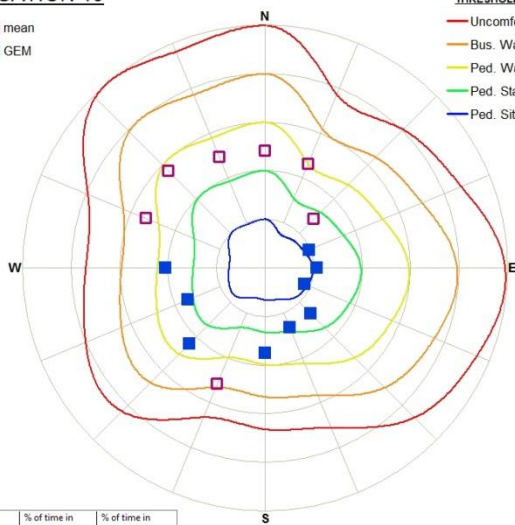
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	34.7	40.2
4.0	5.6	8.4
6.0	0.5	0.9
8.0	0.1	0.0
10.0	0.0	0.0
4.1	5.0	Ped Standing
8.5	0.022	Pass
4.5	Ped Standing	5.0
8.4	Pass	0.022

### LOCATION 19

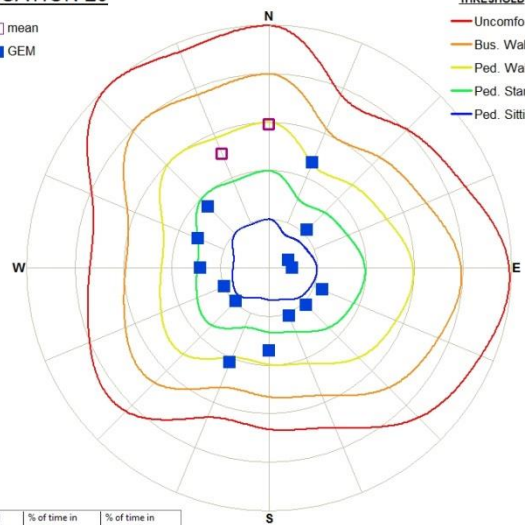
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	43.1	43.8
4.0	11.2	11.0
6.0	2.4	1.7
8.0	0.4	0.3
10.0	0.1	0.0
5.0	5.0	Ped Standing
11.2	0.022	Pass
4.9	Ped Standing	5.0
10.1	Pass	0.022

### LOCATION 20

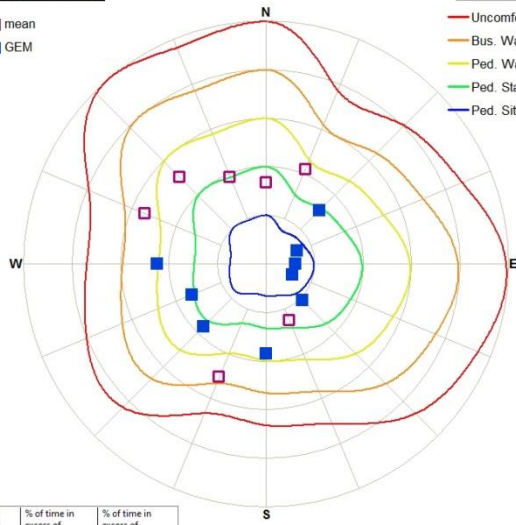
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	23.7	35.0
4.0	4.9	8.8
6.0	0.7	1.2
8.0	0.1	0.1
10.0	0.0	0.0
3.9	5.0	Ped Sitting
8.7	0.022	Pass
4.6	Ped Standing	5.0
8.6	Pass	0.022

### LOCATION 21

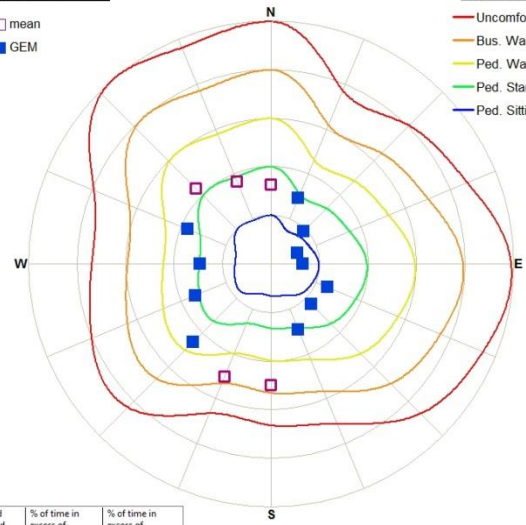
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	40.0	39.8
4.0	10.8	10.1
6.0	2.1	1.8
8.0	0.4	0.3
10.0	0.1	0.0
4.9	5.0	Ped Standing
10.9	0.022	Pass
4.8	Ped Standing	5.0
10.2	Pass	0.022

### LOCATION 22

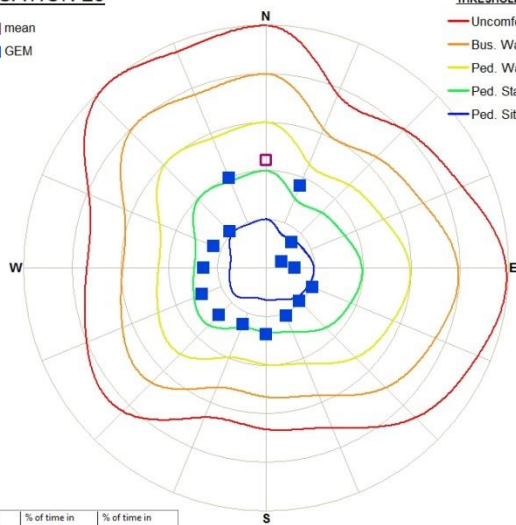
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	32.1	36.2
4.0	10.0	10.3
6.0	2.9	2.4
8.0	0.5	0.3
10.0	0.0	0.0
5.1	5.0	Ped Standing
10.6	0.022	Pass
5.0	Ped Standing	5.0
10.2	Pass	0.022

### LOCATION 23

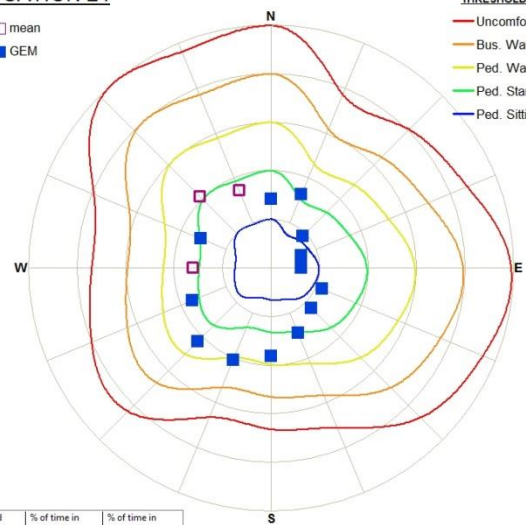
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	21.6	27.3
4.0	1.7	3.2
6.0	0.1	0.1
8.0	0.0	0.0
10.0	0.0	0.0
3.2	5.0	Ped Sitting
6.4	0.022	Pass
3.6	Ped Sitting	5.0
6.7	Pass	0.022

### LOCATION 24

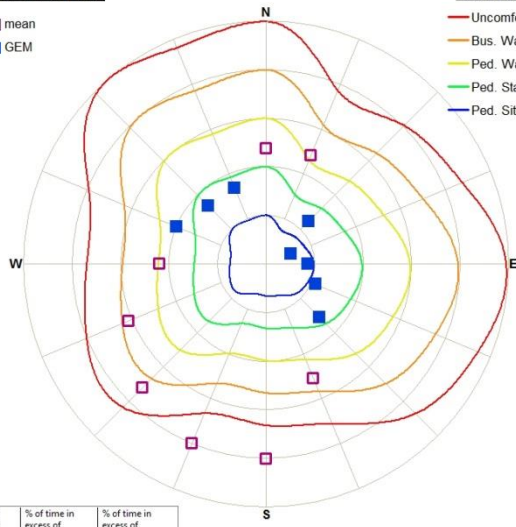
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	28.7	34.4
4.0	4.5	7.2
6.0	0.4	0.7
8.0	0.0	0.1
10.0	0.0	0.0
3.9	5.0	Ped Sitting
8.3	0.022	Pass
4.3	Ped Standing	5.0
8.4	Pass	0.022

### LOCATION 25

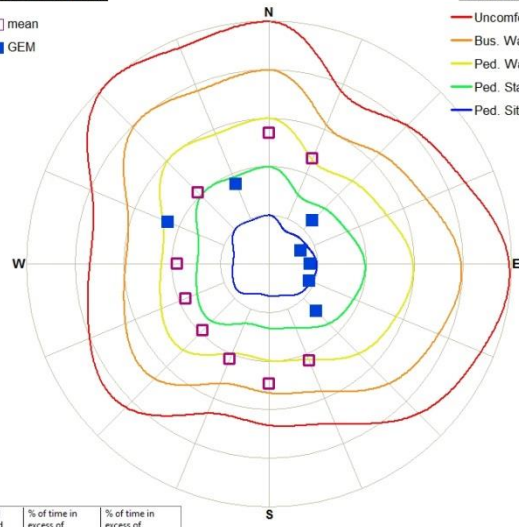
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	45.8	46.3
4.0	23.6	20.0
6.0	11.7	8.0
8.0	5.6	2.7
10.0	2.4	0.7
8.2	5.0	Bus Walking
16.9	0.022	Able Body
6.8	Ped Walking	5.0
13.7	Pass	0.022

### LOCATION 26

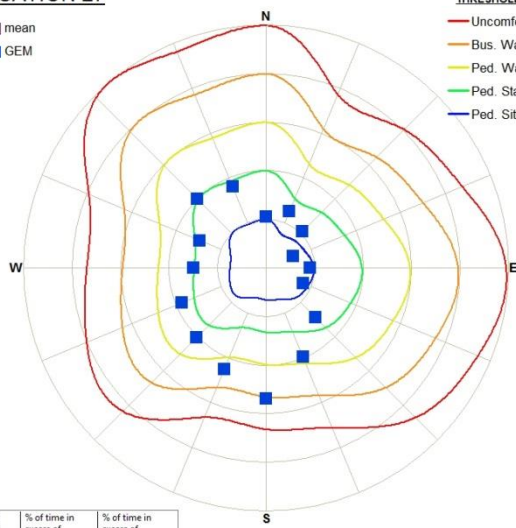
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	43.3	43.3
4.0	16.3	13.4
6.0	3.7	2.2
8.0	0.4	0.2
10.0	0.0	0.0
5.6	5.0	Ped Standing
10.1	0.022	Pass
5.2	Ped Standing	5.0
9.4	Pass	0.022

### LOCATION 27

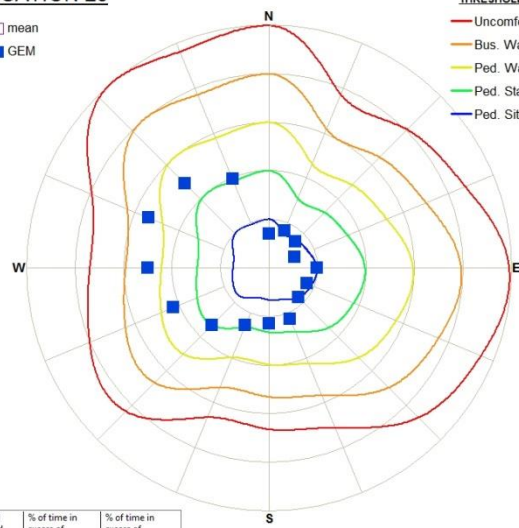
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	29.8	36.4
4.0	8.1	11.9
6.0	1.6	3.5
8.0	0.1	0.7
10.0	0.0	0.1
4.6	5.0	Ped Standing
9.4	0.022	Pass
5.4	Ped Standing	5.0
10.9	Pass	0.022

### LOCATION 28

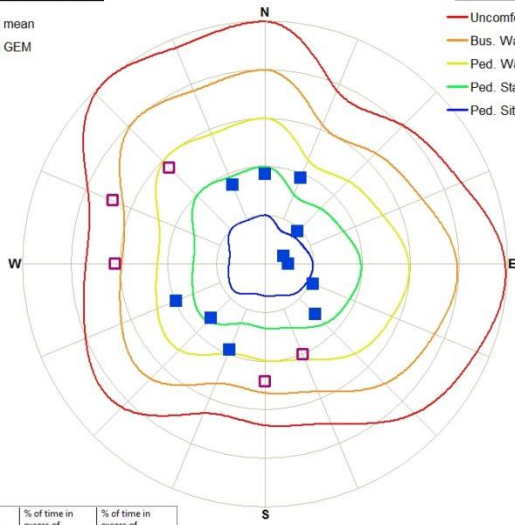
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	16.8	27.0
4.0	4.4	5.9
6.0	1.1	1.6
8.0	0.2	0.3
10.0	0.0	0.1
3.7	5.0	Ped Sitting
9.9	0.022	Pass
4.2	Ped Standing	5.0
10.9	Pass	0.022

### LOCATION 29

□ mean  
■ GEM



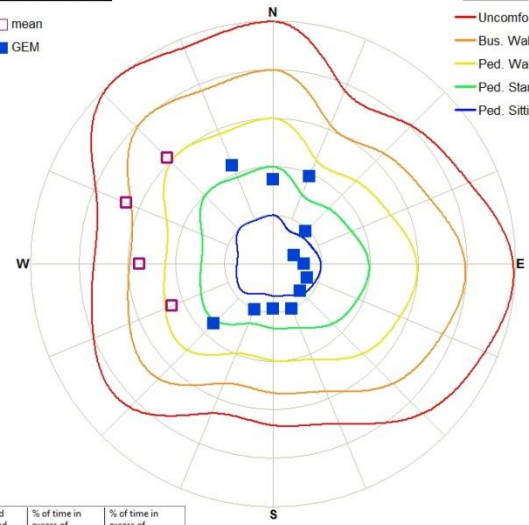
Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	39.7	43.7
4.0	15.1	15.0
6.0	4.7	3.6
8.0	1.3	0.8
10.0	0.3	0.1
5.8	5.0	Ped Standing
13.6	0.022	Pass
5.5	Ped Standing	5.0
11.9	Pass	0.022

### LOCATION 30

□ mean  
■ GEM

**THRESHOLD**  
 — Uncomfortable  
 — Bus. Walking  
 — Ped. Walking  
 — Ped. Standing  
 — Ped. Sitting

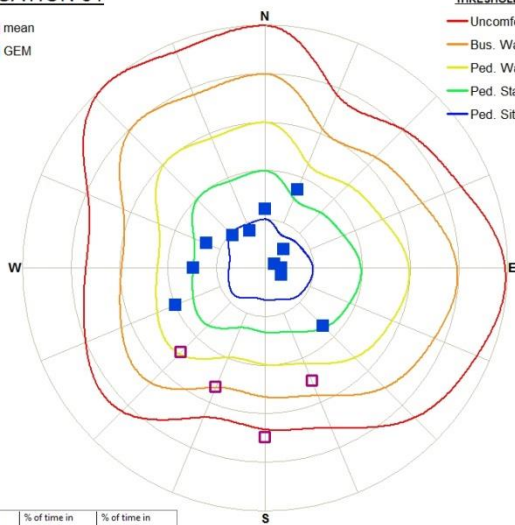
**THRESHOLD**  
 — Uncomfortable  
 — Bus. Walking  
 — Ped. Walking  
 — Ped. Standing  
 — Ped. Sitting



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	27.8	31.9
4.0	8.2	7.8
6.0	2.5	2.0
8.0	0.8	0.5
10.0	0.2	0.1
4.8	5.0	Ped Standing
13.0	0.022	Pass
4.6	Ped Standing	5.0
11.8	Pass	0.022

### LOCATION 31

□ mean  
■ GEM



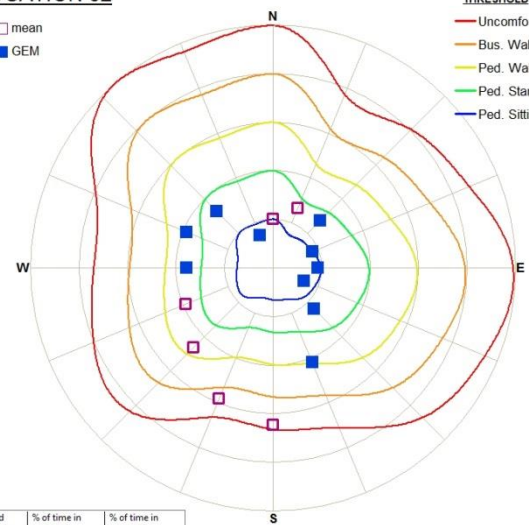
Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	30.4	34.9
4.0	14.4	14.0
6.0	7.2	5.0
8.0	2.8	1.3
10.0	0.9	0.2
6.7	5.0	Ped Walking
14.1	0.022	Pass
5.9	Ped Standing	5.0
12.0	Pass	0.022

### LOCATION 32

□ mean  
■ GEM

**THRESHOLD**  
 — Uncomfortable  
 — Bus. Walking  
 — Ped. Walking  
 — Ped. Standing  
 — Ped. Sitting

**THRESHOLD**  
 — Uncomfortable  
 — Bus. Walking  
 — Ped. Walking  
 — Ped. Standing  
 — Ped. Sitting

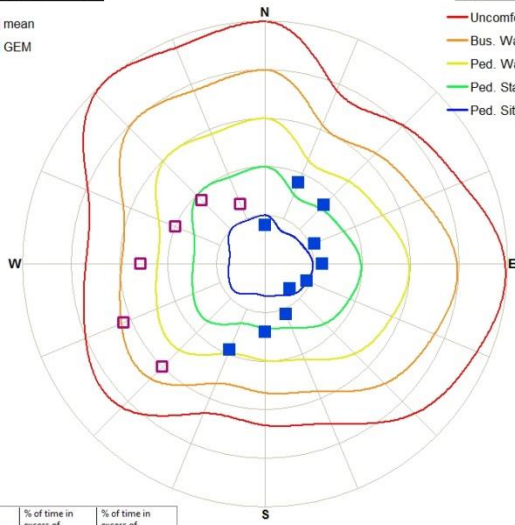


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	34.6	37.6
4.0	13.1	13.1
6.0	6.0	4.1
8.0	2.1	0.9
10.0	0.5	0.1
6.3	5.0	Ped Walking
13.3	0.022	Pass
5.7	Ped Standing	5.0
11.3	Pass	0.022



### LOCATION 33

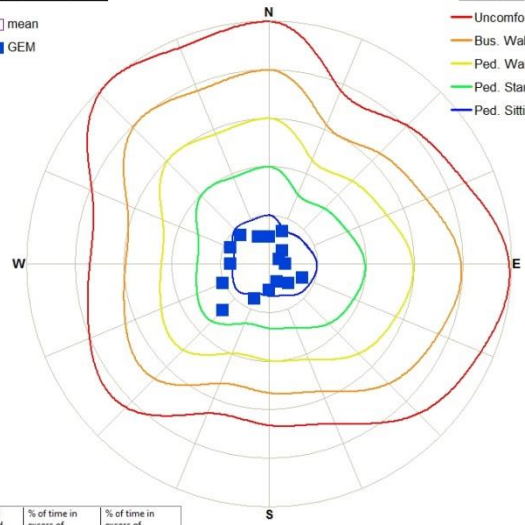
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	34.2	36.6
4.0	8.2	8.3
6.0	2.2	1.2
8.0	0.5	0.1
10.0	0.1	0.0
4.7	5.0	Ped Standing
11.6	0.022	Pass
4.5	Ped Standing	5.0
9.5	Pass	0.022

### LOCATION 34

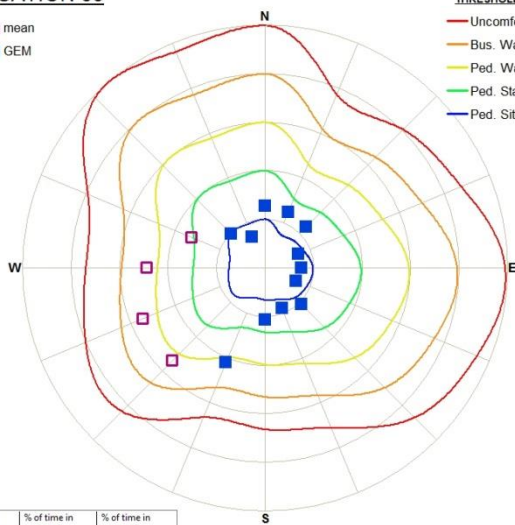
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	1.0	3.7
4.0	0.0	0.1
6.0	0.0	0.0
8.0	0.0	0.0
10.0	0.0	0.0
1.4	5.0	Outdoor Dining
3.5	0.022	Pass
1.9	Outdoor Dining	5.0
4.4	Pass	0.022

### LOCATION 35

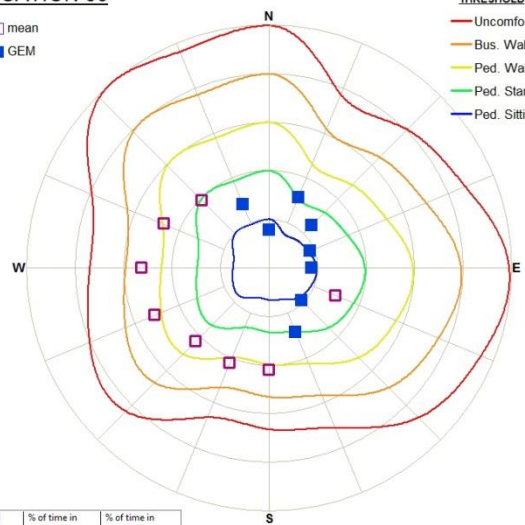
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	20.0	26.5
4.0	6.2	4.2
6.0	1.6	0.7
8.0	0.3	0.1
10.0	0.0	0.0
4.3	5.0	Ped Standing
10.4	0.022	Pass
3.8	Ped Sitting	5.0
8.8	Pass	0.022

### LOCATION 36

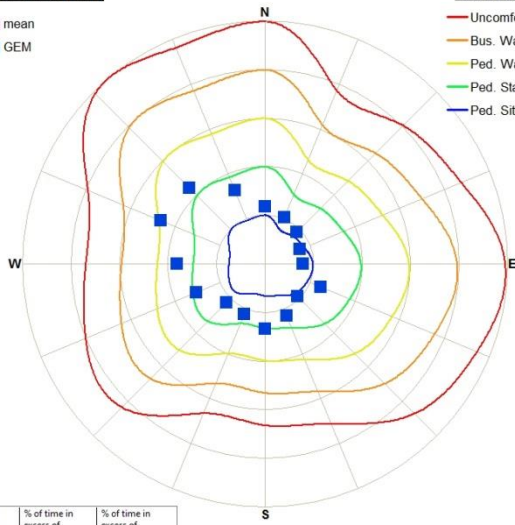
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	37.3	35.9
4.0	11.8	8.6
6.0	2.8	1.2
8.0	0.4	0.1
10.0	0.0	0.0
5.2	5.0	Ped Standing
10.6	0.022	Pass
4.6	Ped Standing	5.0
8.8	Pass	0.022

### LOCATION 37

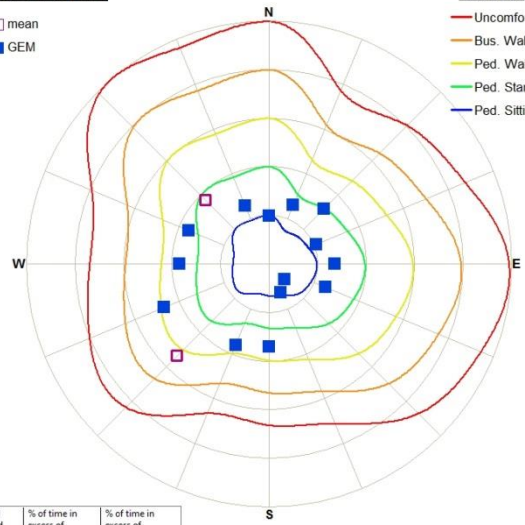
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	15.1	27.6
4.0	1.4	3.5
6.0	0.2	0.5
8.0	0.0	0.1
10.0	0.0	0.0
2.9	5.0	Ped Sitting
7.8	0.022	Pass
3.6	Ped Sitting	5.0
9.2	Pass	0.022

### LOCATION 38

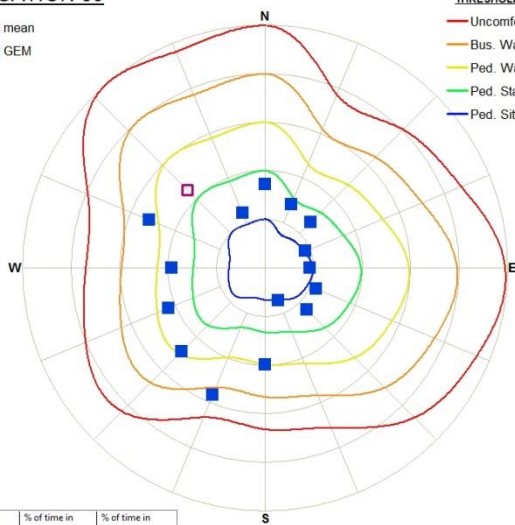
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	22.1	30.9
4.0	2.4	6.0
6.0	0.3	0.5
8.0	0.0	0.0
10.0	0.0	0.0
3.3	5.0	Ped Sitting
8.6	0.022	Pass
4.1	Ped Standing	5.0
8.4	Pass	0.022

### LOCATION 39

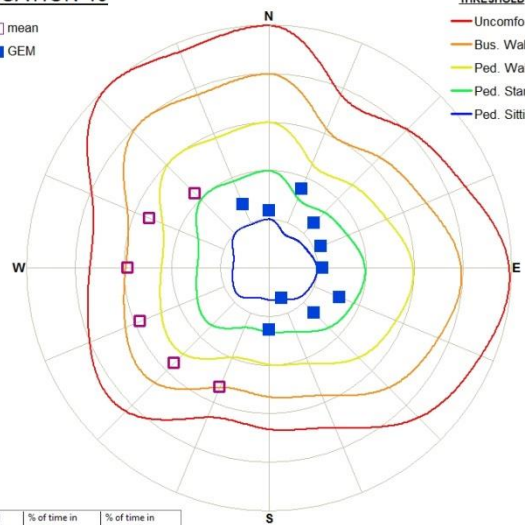
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	26.6	37.9
4.0	4.5	10.5
6.0	1.2	2.5
8.0	0.2	0.5
10.0	0.0	0.1
3.8	5.0	Ped Sitting
10.1	0.022	Pass
5.0	Ped Standing	5.0
11.3	Pass	0.022

### LOCATION 40

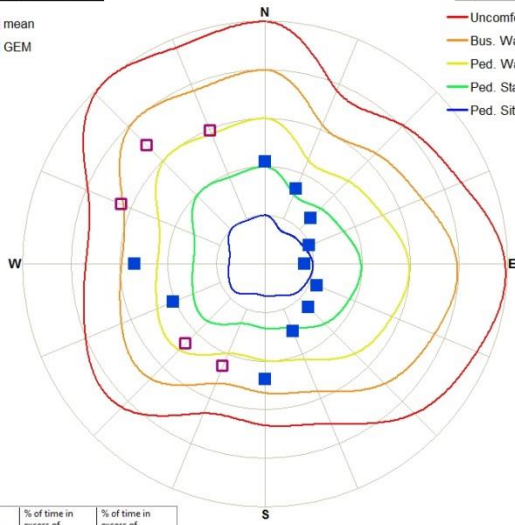
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	29.3	35.9
4.0	9.6	7.0
6.0	3.5	1.2
8.0	0.9	0.1
10.0	0.2	0.0
5.3	5.0	Ped Standing
12.2	0.022	Pass
4.3	Ped Standing	5.0
9.4	Pass	0.022

### LOCATION 41

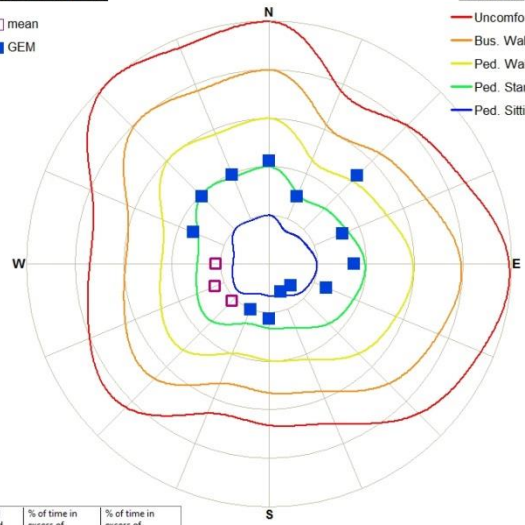
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	40.4	48.1
4.0	11.9	15.4
6.0	3.2	4.3
8.0	0.8	0.9
10.0	0.2	0.2
5.2	5.0	Ped Standing
13.2	0.022	Pass
5.7	Ped Standing	5.0
12.5	Pass	0.022

### LOCATION 42

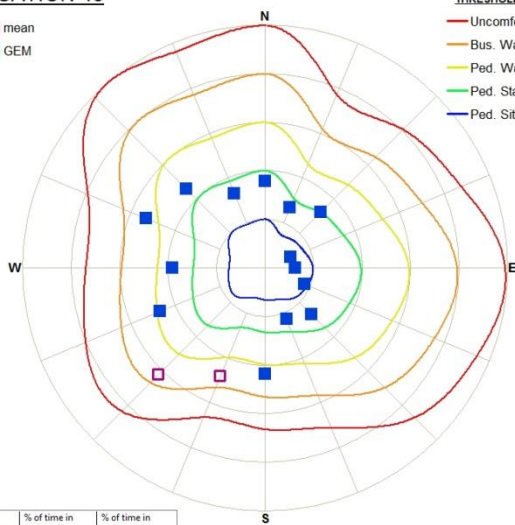
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	19.2	32.6
4.0	1.8	5.6
6.0	0.1	0.8
8.0	0.0	0.0
10.0	0.0	0.0
3.1	5.0	Ped Sitting
6.3	0.022	Pass
4.1	Ped Standing	5.0
8.3	Pass	0.022

### LOCATION 43

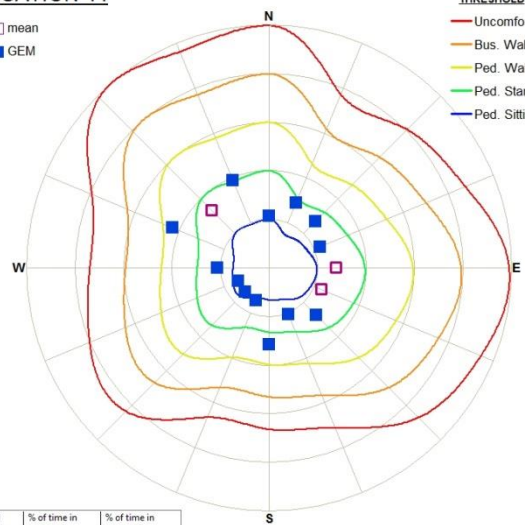
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	32.4	41.7
4.0	7.3	12.1
6.0	1.6	2.7
8.0	0.3	0.4
10.0	0.0	0.1
4.5	5.0	Ped Standing
10.7	0.022	Pass
5.2	Ped Standing	5.0
10.7	Pass	0.022

### LOCATION 44

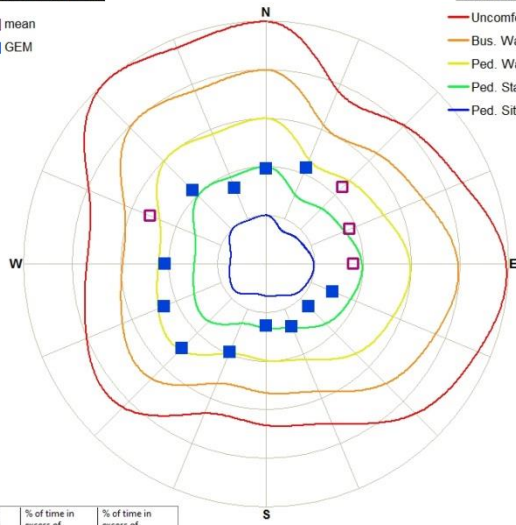
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	14.7	28.8
4.0	0.8	3.2
6.0	0.1	0.3
8.0	0.0	0.0
10.0	0.0	0.0
2.6	5.0	Ped Sitting
7.0	0.022	Pass
3.6	Ped Sitting	5.0
8.4	Pass	0.022

### LOCATION 45

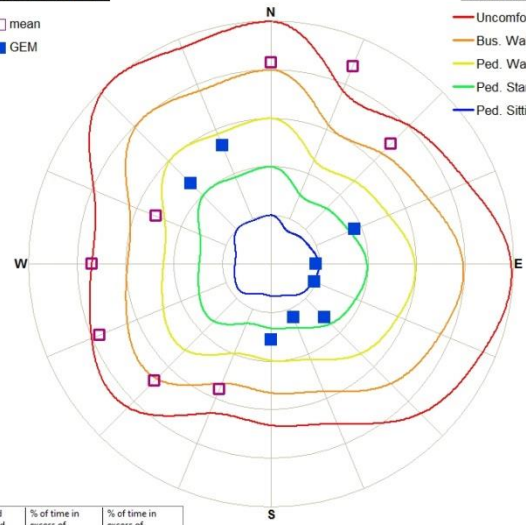
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	39.8	47.5
4.0	9.8	11.7
6.0	1.3	1.6
8.0	0.2	0.2
10.0	0.0	0.0
4.7	5.0	Ped Standing
10.2	0.022	Pass
4.9	Ped Standing	5.0
9.8	Pass	0.022

### LOCATION 46

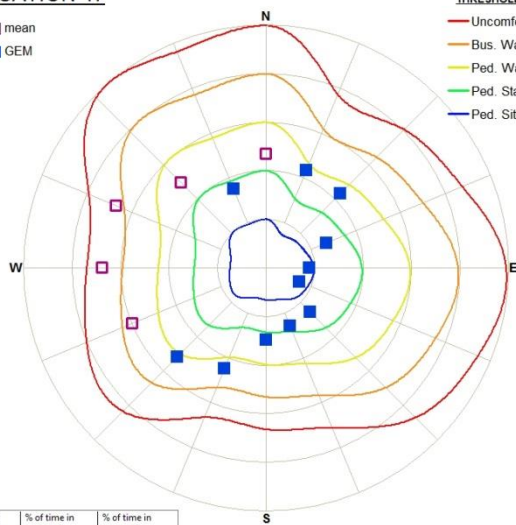
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	51.2	54.5
4.0	25.5	23.4
6.0	13.8	9.4
8.0	5.8	2.5
10.0	1.9	0.4
8.2	5.0	Bus Walking
15.4	0.022	Able Body
7.0	Ped Walking	5.0
12.3	Pass	0.022

### LOCATION 47

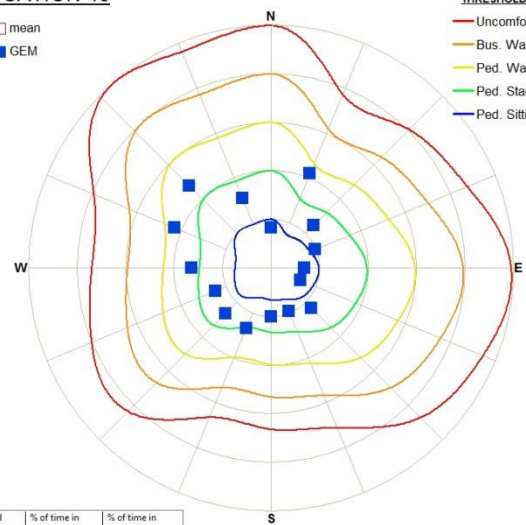
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	42.9	48.5
4.0	13.3	15.9
6.0	4.1	3.8
8.0	1.4	1.0
10.0	0.4	0.2
5.5	5.0	Ped Standing
13.7	0.022	Pass
5.6	Ped Standing	5.0
12.0	Pass	0.022

### LOCATION 48

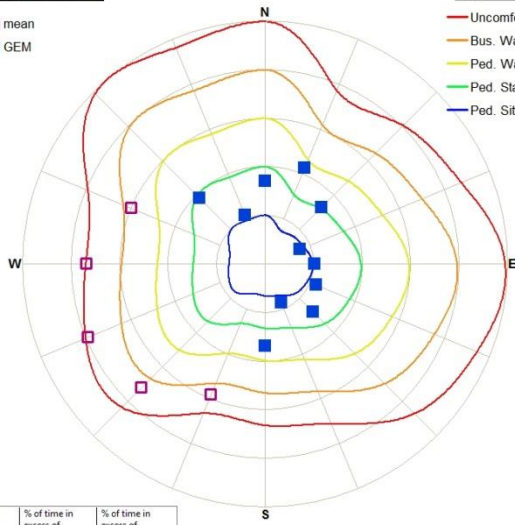
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	17.2	29.0
4.0	1.9	4.7
6.0	0.3	0.6
8.0	0.1	0.1
10.0	0.0	0.0
3.1	5.0	Ped Sitting
8.8	0.022	Pass
3.9	Ped Sitting	5.0
9.0	Pass	0.022

### LOCATION 49

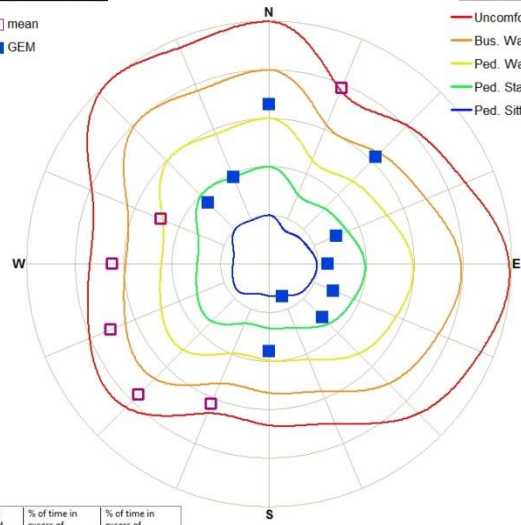
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	35.5	41.8
4.0	12.4	13.1
6.0	6.2	2.9
8.0	2.5	0.6
10.0	0.9	0.1
6.4	5.0	Ped Walking
15.2	0.022	Able Body
5.3	Ped Standing	5.0
11.3	Pass	0.022

### LOCATION 50

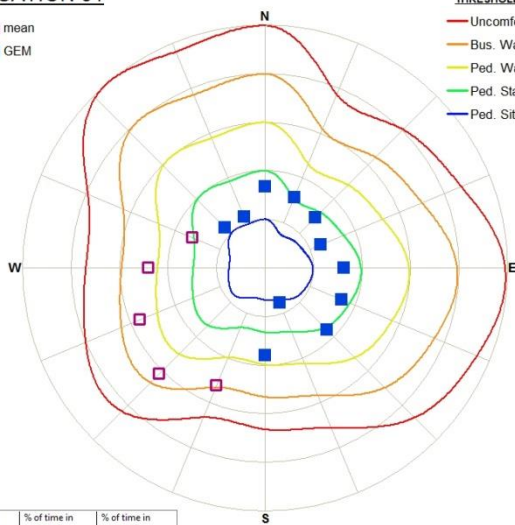
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	48.4	50.2
4.0	22.5	21.3
6.0	10.6	7.2
8.0	3.7	1.5
10.0	1.0	0.2
7.4	5.0	Ped Walking
14.6	0.022	Pass
6.5	Ped Walking	5.0
11.5	Pass	0.022

### LOCATION 51

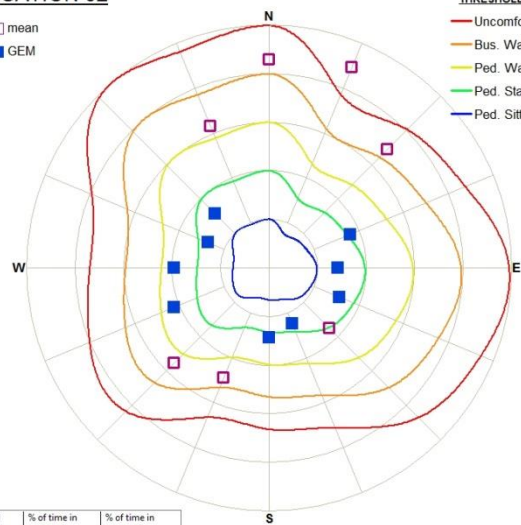
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	33.5	40.3
4.0	8.4	8.3
6.0	2.3	1.0
8.0	0.5	0.1
10.0	0.1	0.0
4.8	5.0	Ped Standing
11.2	0.022	Pass
4.5	Ped Standing	5.0
9.0	Pass	0.022

### LOCATION 52

□ mean  
■ GEM

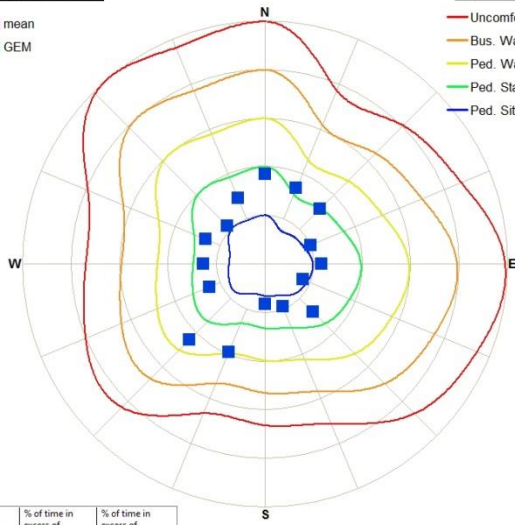


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	49.5	51.3
4.0	19.4	18.1
6.0	9.5	6.3
8.0	4.0	1.3
10.0	1.2	0.2
7.4	5.0	Ped Walking
14.9	0.022	Pass
6.3	Ped Walking	5.0
11.3	Pass	0.022



### LOCATION 53

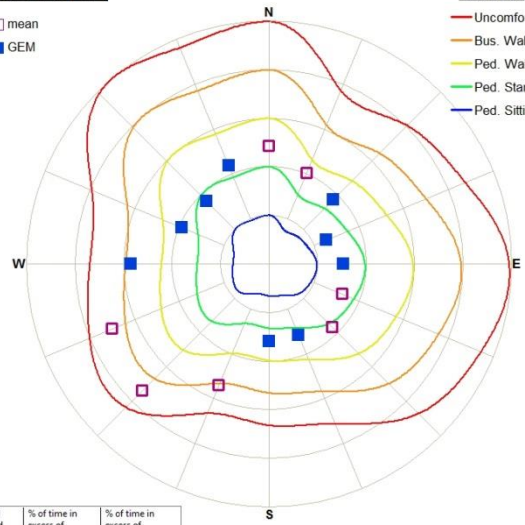
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	17.1	28.4
4.0	1.5	3.4
6.0	0.1	0.3
8.0	0.0	0.0
10.0	0.0	0.0
3.1	5.0	Ped Sitting
7.4	0.022	Pass
3.7	Ped Sitting	5.0
7.9	Pass	0.022

### LOCATION 54

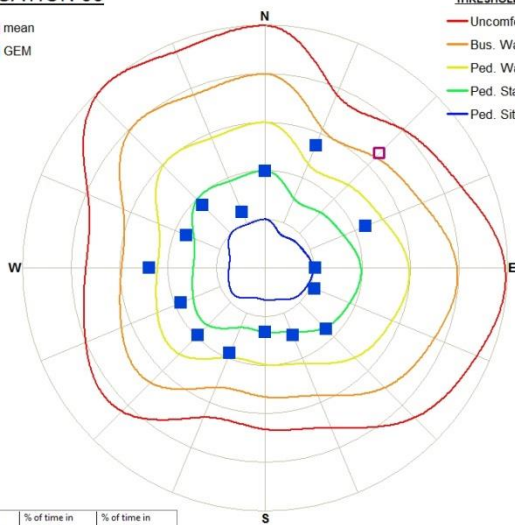
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	48.8	50.7
4.0	14.3	14.2
6.0	3.5	3.0
8.0	0.9	0.7
10.0	0.2	0.1
5.4	5.0	Ped Standing
12.9	0.022	Pass
5.3	Ped Standing	5.0
11.7	Pass	0.022

### LOCATION 55

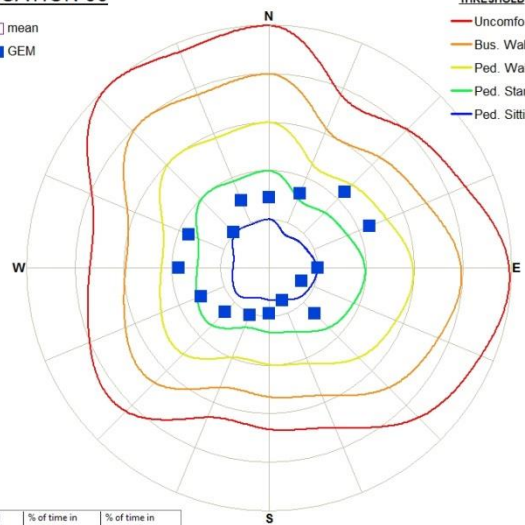
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	36.4	46.7
4.0	11.4	15.4
6.0	3.7	4.1
8.0	0.7	0.6
10.0	0.1	0.0
5.5	5.0	Ped Standing
10.6	0.022	Pass
5.7	Ped Standing	5.0
10.2	Pass	0.022

### LOCATION 56

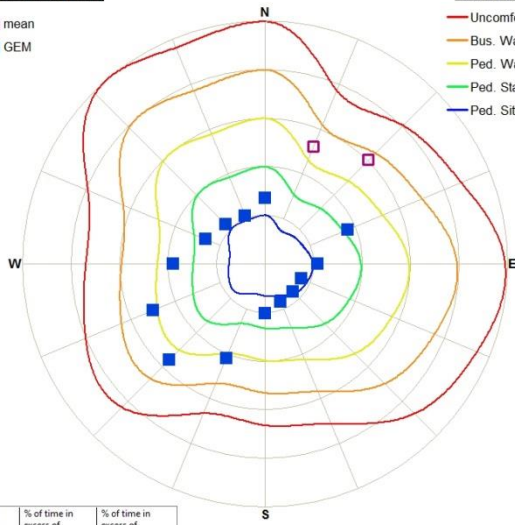
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	19.4	30.9
4.0	2.0	6.0
6.0	0.0	0.4
8.0	0.0	0.0
10.0	0.0	0.0
3.3	5.0	Ped Sitting
6.2	0.022	Pass
4.1	Ped Standing	5.0
7.6	Pass	0.022

### LOCATION 57

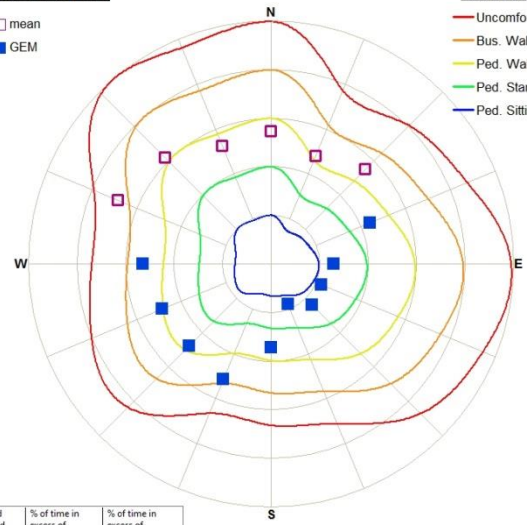
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	27.6	35.3
4.0	10.6	12.2
6.0	2.8	2.8
8.0	0.3	0.3
10.0	0.0	0.0
5.2	5.0	Ped Standing
9.8	0.022	Pass
5.3	Ped Standing	5.0
9.8	Pass	0.022

### LOCATION 58

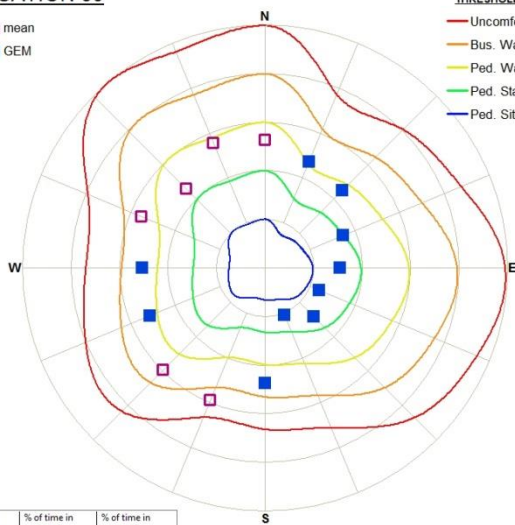
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	47.6	51.6
4.0	17.0	18.9
6.0	4.4	4.2
8.0	0.9	0.8
10.0	0.2	0.2
5.8	5.0	Ped Standing
13.4	0.022	Pass
5.7	Ped Standing	5.0
12.2	Pass	0.022

### LOCATION 59

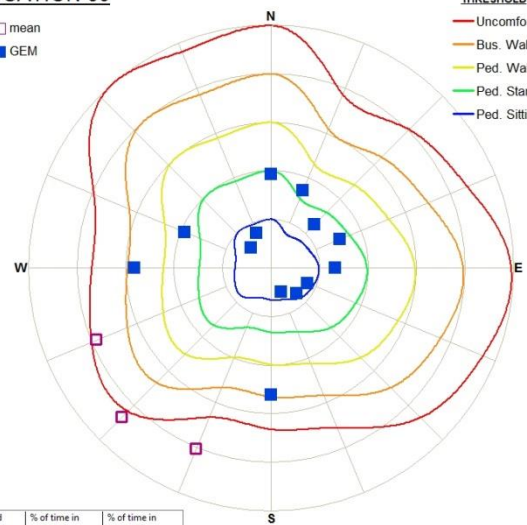
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	49.3	52.6
4.0	17.9	20.7
6.0	4.1	5.2
8.0	0.8	0.8
10.0	0.1	0.1
5.7	5.0	Ped Standing
12.0	0.022	Pass
6.0	Ped Standing	5.0
11.6	Pass	0.022

### LOCATION 60

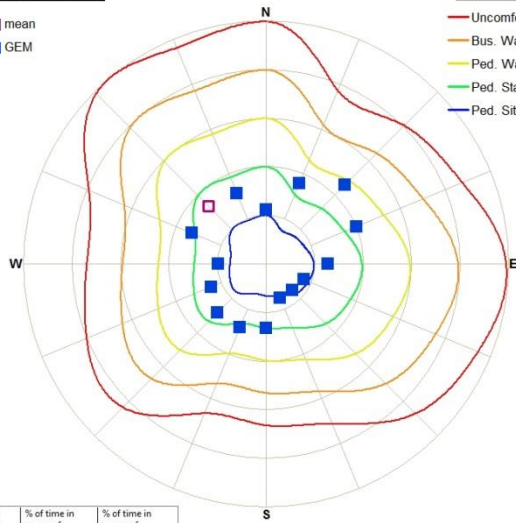
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	33.1	40.1
4.0	15.3	16.8
6.0	6.9	6.6
8.0	2.7	1.9
10.0	1.0	0.4
6.6	5.0	Ped Walking
16.4	0.022	Able Body
6.4	Ped Walking	5.0
13.3	Pass	0.022

### LOCATION 61

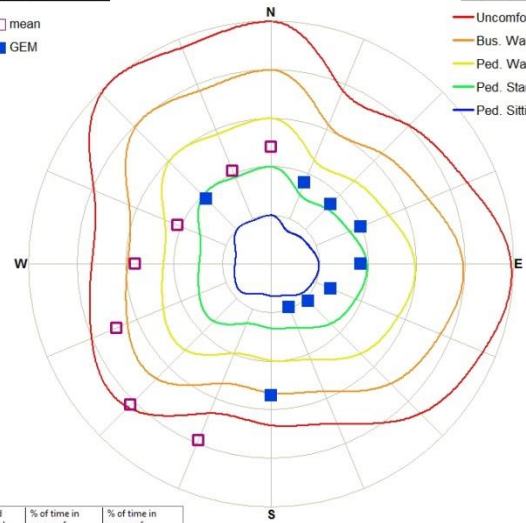
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	24.7	31.2
4.0	3.5	5.8
6.0	0.2	0.4
8.0	0.0	0.0
10.0	0.0	0.0
3.6	5.0	Ped Sitting
7.0	0.022	Pass
4.1	Ped Standing	5.0
7.4	Pass	0.022

### LOCATION 62

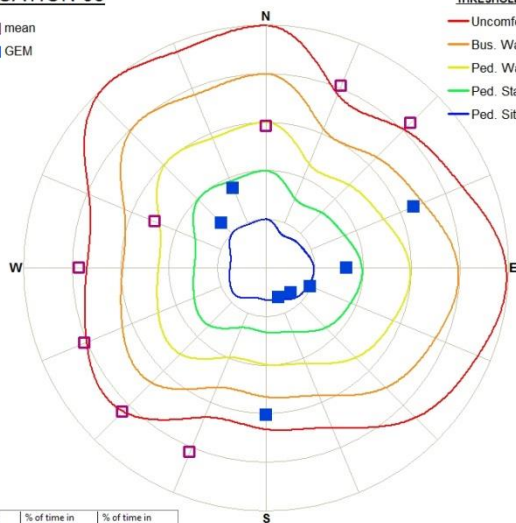
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	44.8	49.7
4.0	16.2	18.8
6.0	5.9	6.4
8.0	2.2	1.9
10.0	0.8	0.5
6.2	5.0	Ped Walking
15.8	0.022	Able Body
6.4	Ped Walking	5.0
14.5	Pass	0.022

### LOCATION 63

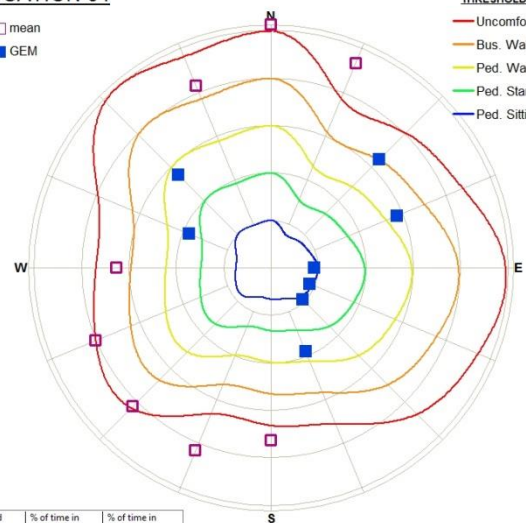
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	51.6	51.8
4.0	33.2	29.8
6.0	18.5	14.3
8.0	8.3	4.1
10.0	2.8	0.8
8.9	5.0	Bus Walking
17.1	0.022	Able Body
7.7	Ped Walking	5.0
13.8	Pass	0.022

### LOCATION 64

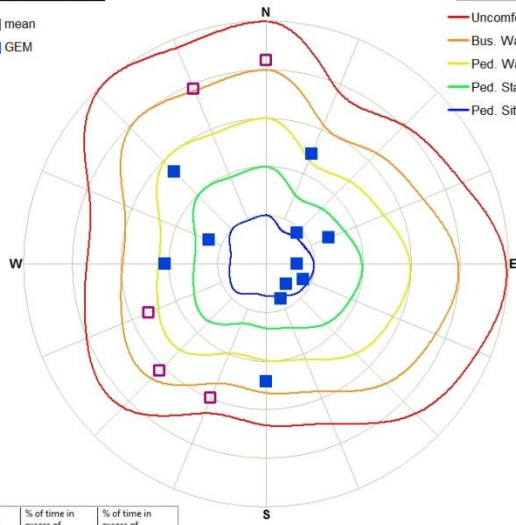
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	56.7	59.1
4.0	32.7	33.7
6.0	19.3	15.7
8.0	10.0	5.3
10.0	4.1	1.3
9.5	5.0	Bus Walking
17.4	0.022	Able Body
8.1	Bus Walking	5.0
14.4	Pass	0.022

LOCATION 65

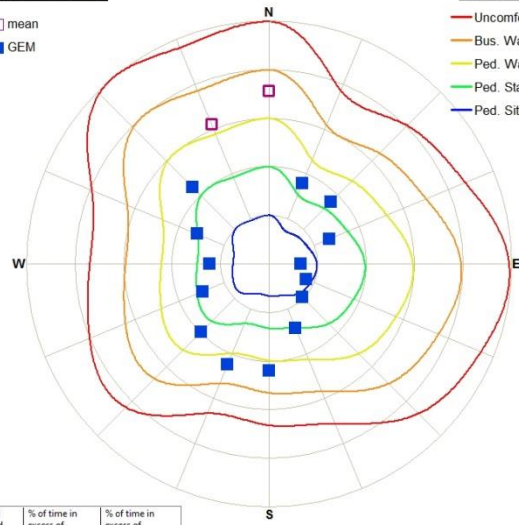
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	37.6	42.7
4.0	17.1	18.1
6.0	6.0	5.0
8.0	1.6	0.8
10.0	0.4	0.1
6.2	5.0	Ped Walking
13.4	0.022	Pass
6.0	Ped Standing	5.0
11.3	Pass	0.022

LOCATION 66

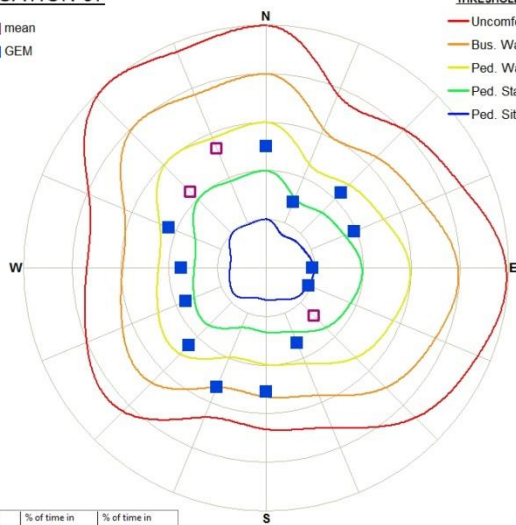
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	33.7	44.3
4.0	8.7	13.0
6.0	2.0	2.7
8.0	0.3	0.4
10.0	0.0	0.0
4.7	5.0	Ped Standing
10.6	0.022	Pass
5.2	Ped Standing	5.0
10.4	Pass	0.022

LOCATION 67

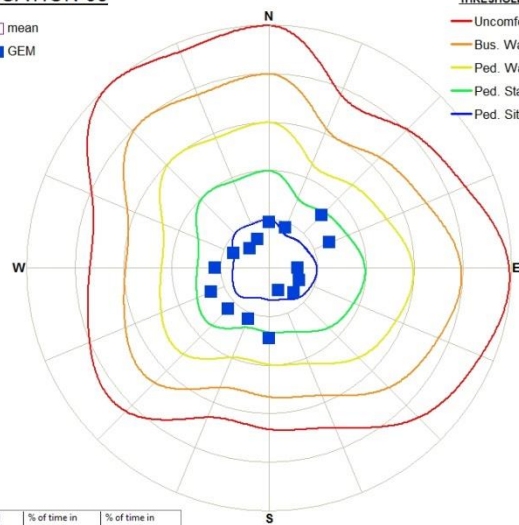
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	39.0	49.2
4.0	10.4	16.6
6.0	2.6	3.9
8.0	0.3	0.7
10.0	0.0	0.1
5.1	5.0	Ped Standing
10.4	0.022	Pass
5.6	Ped Standing	5.0
11.1	Pass	0.022

LOCATION 68

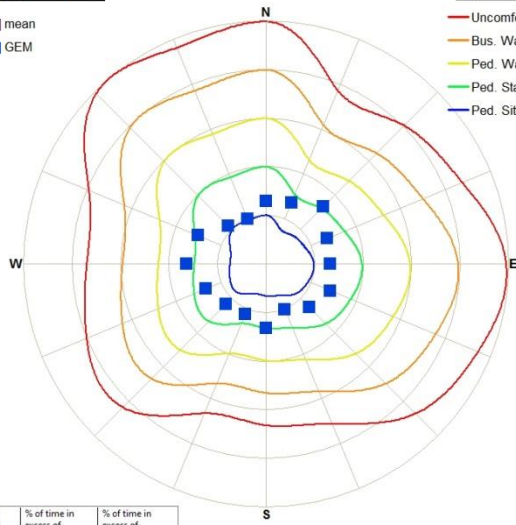
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	10.6	20.2
4.0	0.1	1.5
6.0	0.0	0.0
8.0	0.0	0.0
10.0	0.0	0.0
2.4	5.0	Ped Sitting
4.4	0.022	Pass
3.2	Ped Sitting	5.0
5.9	Pass	0.022

LOCATION 69

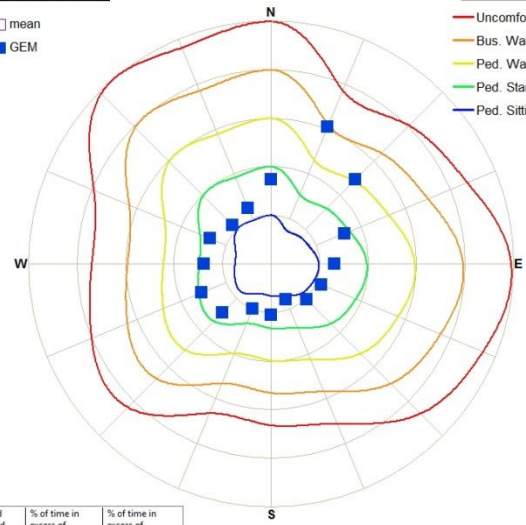
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	16.9	31.8
4.0	0.3	2.4
6.0	0.0	0.1
8.0	0.0	0.0
10.0	0.0	0.0
2.7	5.0	Ped Sitting
5.0	0.022	Pass
3.5	Ped Sitting	5.0
6.5	Pass	0.022

LOCATION 70

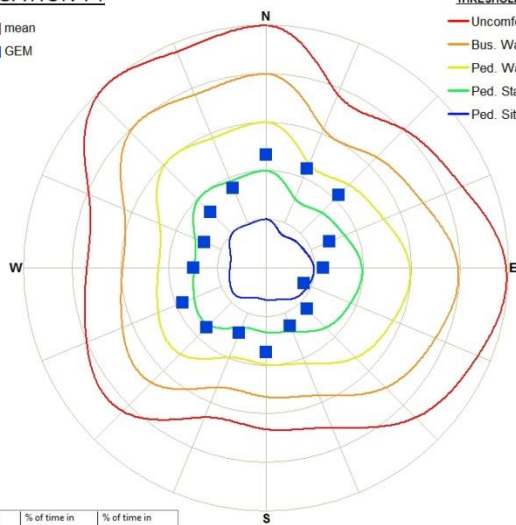
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	21.8	32.9
4.0	6.3	8.4
6.0	1.1	2.3
8.0	0.1	0.4
10.0	0.0	0.0
4.3	5.0	Ped Standing
8.6	0.022	Pass
4.8	Ped Standing	5.0
10.0	Pass	0.022

LOCATION 71

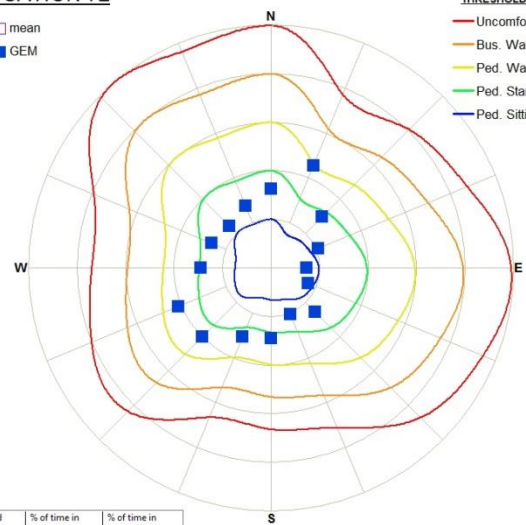
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	31.9	41.8
4.0	4.3	9.9
6.0	0.1	0.7
8.0	0.0	0.0
10.0	0.0	0.0
3.9	5.0	Ped Sitting
6.8	0.022	Pass
4.6	Ped Standing	5.0
7.8	Pass	0.022

LOCATION 72

□ mean  
■ GEM

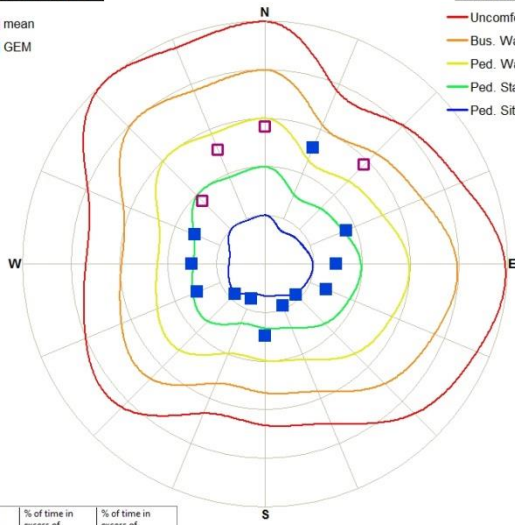


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	22.4	34.8
4.0	2.5	6.1
6.0	0.1	0.5
8.0	0.0	0.0
10.0	0.0	0.0
3.4	5.0	Ped Sitting
6.8	0.022	Pass
4.2	Ped Standing	5.0
7.8	Pass	0.022



### LOCATION 74

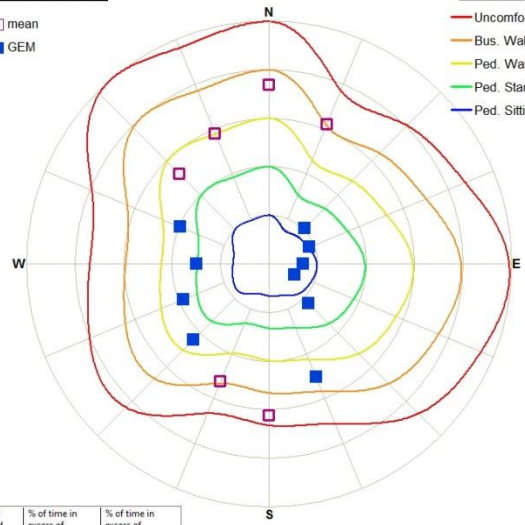
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	30.3	40.3
4.0	9.1	11.5
6.0	2.1	2.4
8.0	0.2	0.2
10.0	0.0	0.0
4.9	5.0	Ped. Standing
9.3	0.022	Pass
5.1	Ped. Standing	5.0
9.2	Pass	0.022

### LOCATION 75

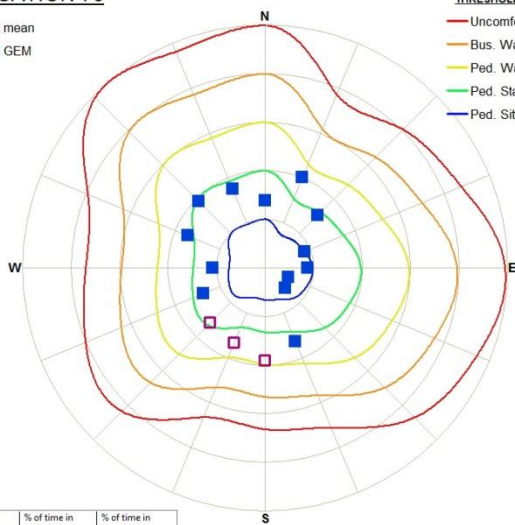
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	42.1	46.4
4.0	21.1	20.8
6.0	9.1	7.4
8.0	2.6	1.6
10.0	0.4	0.2
6.9	5.0	Ped. Walking
12.8	0.022	Pass
6.5	Ped. Walking	5.0
11.6	Pass	0.022

### LOCATION 76

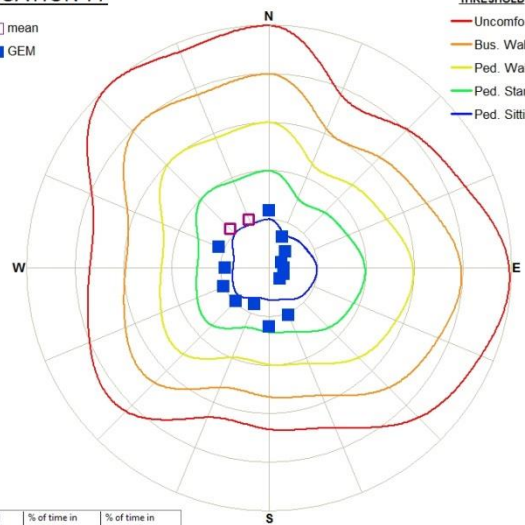
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	27.0	34.9
4.0	5.1	7.4
6.0	0.5	0.6
8.0	0.0	0.0
10.0	0.0	0.0
4.0	5.0	Ped. Sitting
7.9	0.022	Pass
4.3	Ped. Standing	5.0
8.0	Pass	0.022

### LOCATION 77

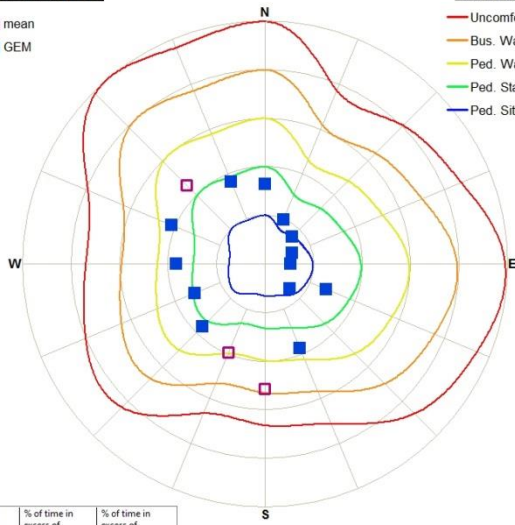
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	6.4	12.8
4.0	0.1	0.3
6.0	0.0	0.0
8.0	0.0	0.0
10.0	0.0	0.0
2.1	5.0	Ped. Sitting
4.4	0.022	Pass
2.6	Ped. Sitting	5.0
5.0	Pass	0.022

LOCATION 78

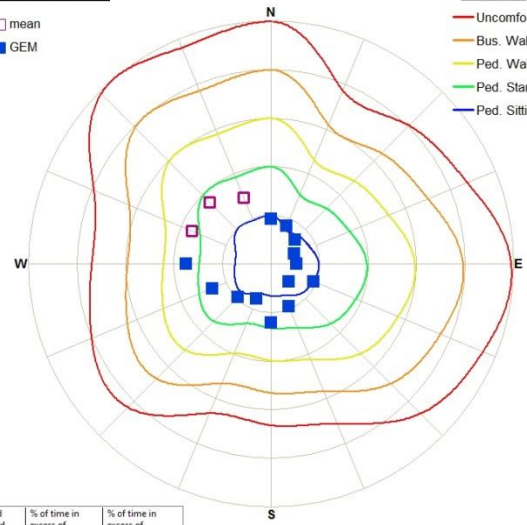
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	26.6	34.0
4.0	9.5	11.0
6.0	2.7	2.4
8.0	0.5	0.3
10.0	0.0	0.0
5.1	5.0	Ped Standing
10.5	0.022	Pass
5.1	Ped Standing	5.0
9.9	Pass	0.022

LOCATION 79

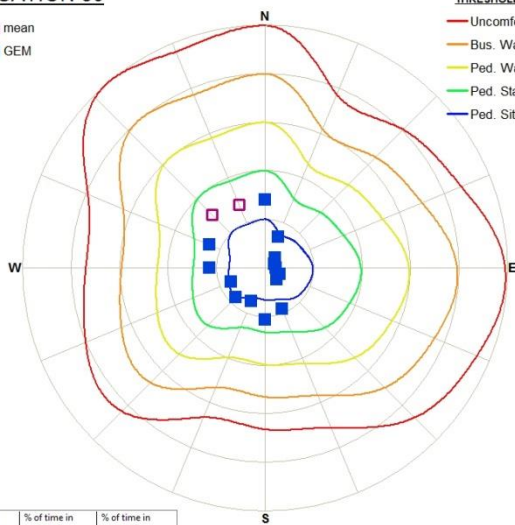
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	10.0	17.8
4.0	1.1	1.7
6.0	0.1	0.1
8.0	0.0	0.0
10.0	0.0	0.0
2.5	5.0	Ped Sitting
7.1	0.022	Pass
3.1	Ped Sitting	5.0
7.1	Pass	0.022

LOCATION 80

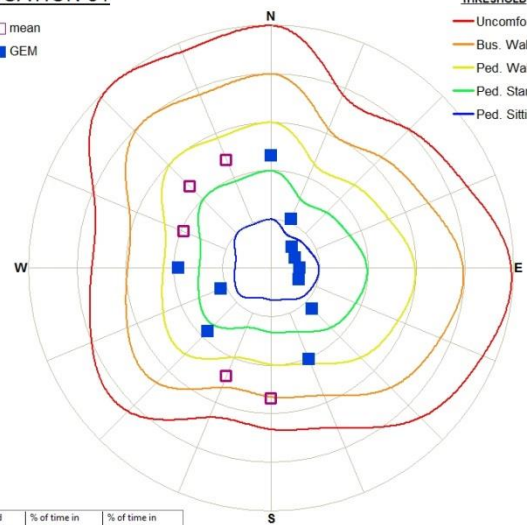
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	7.4	12.3
4.0	0.3	0.3
6.0	0.0	0.0
8.0	0.0	0.0
10.0	0.0	0.0
2.2	5.0	Ped Sitting
5.8	0.022	Pass
2.6	Ped Sitting	5.0
5.2	Pass	0.022

LOCATION 81

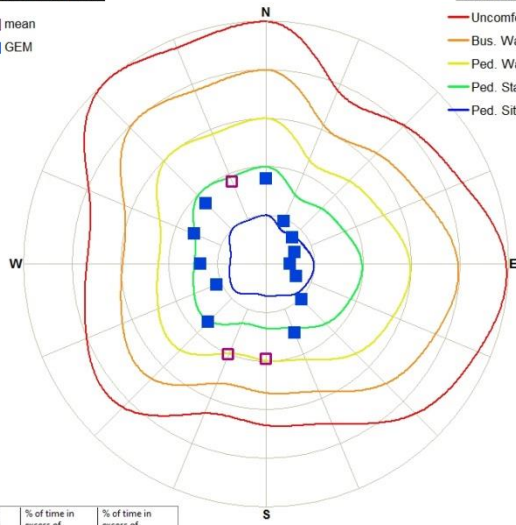
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	32.4	35.5
4.0	12.1	12.0
6.0	3.7	2.6
8.0	0.8	0.2
10.0	0.1	0.0
5.5	5.0	Ped Standing
11.1	0.022	Pass
5.2	Ped Standing	5.0
9.8	Pass	0.022

### LOCATION 82

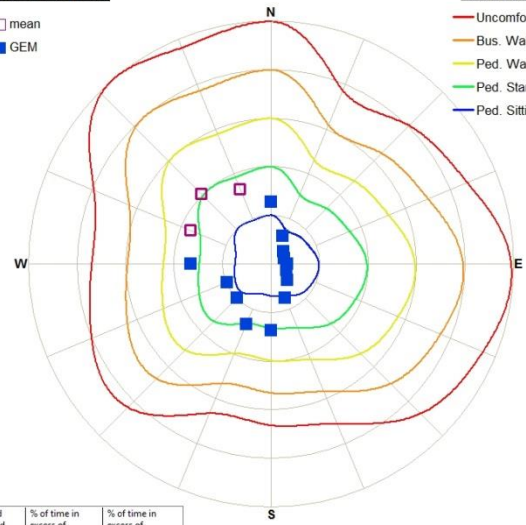
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	23.2	28.0
4.0	5.8	5.5
6.0	0.8	0.4
8.0	0.0	0.0
10.0	0.0	0.0
4.1	5.0	Ped. Standing
8.5	0.022	Pass
4.1	Ped. Standing	5.0
7.9	Pass	0.022

### LOCATION 83

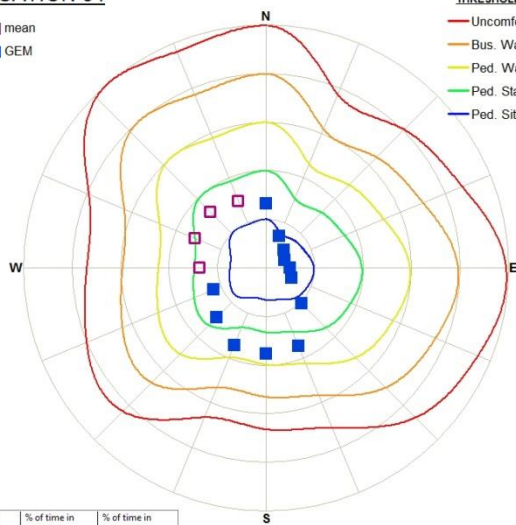
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	11.4	17.8
4.0	1.5	2.1
6.0	0.2	0.1
8.0	0.0	0.0
10.0	0.0	0.0
2.7	5.0	Ped. Sitting
7.7	0.022	Pass
3.3	Ped. Sitting	5.0
6.8	Pass	0.022

### LOCATION 84

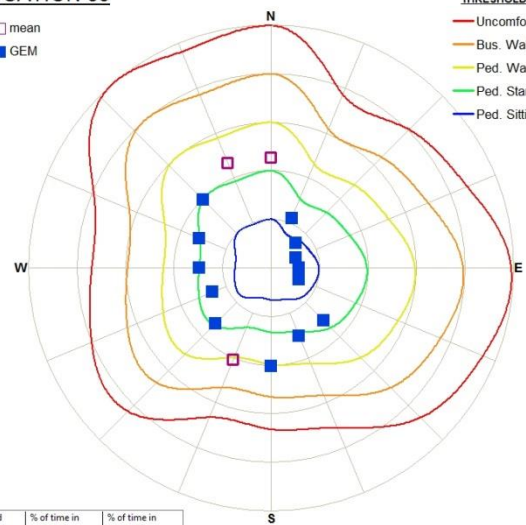
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	19.8	24.5
4.0	2.4	4.9
6.0	0.1	0.3
8.0	0.0	0.0
10.0	0.0	0.0
3.4	5.0	Ped. Sitting
6.7	0.022	Pass
3.9	Ped. Sitting	5.0
7.4	Pass	0.022

### LOCATION 85

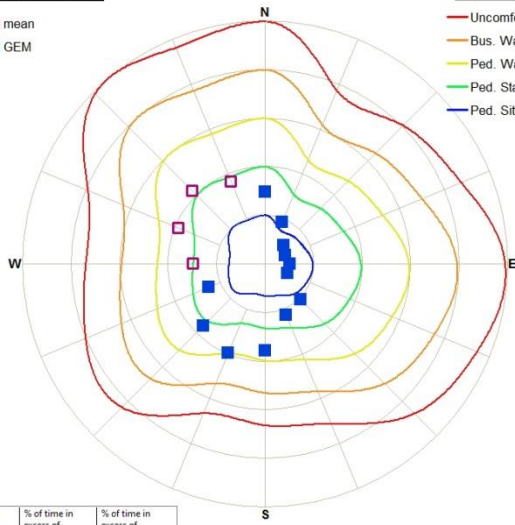
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	26.5	33.9
4.0	5.4	8.0
6.0	0.6	1.0
8.0	0.0	0.1
10.0	0.0	0.0
4.0	5.0	Ped. Standing
8.4	0.022	Pass
4.5	Ped. Standing	5.0
8.8	Pass	0.022

### LOCATION 86

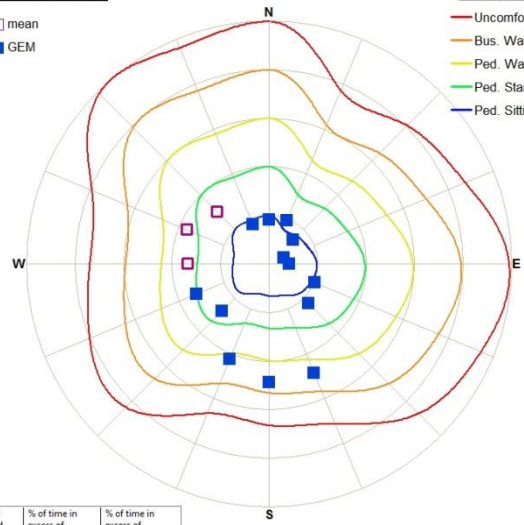
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	21.7	25.9
4.0	3.2	5.0
6.0	0.3	0.5
8.0	0.0	0.0
10.0	0.0	0.0
3.5	5.0	Ped Sitting
8.3	0.022	Pass
4.0	Ped Sitting	5.0
8.0	Pass	0.022

### LOCATION 87

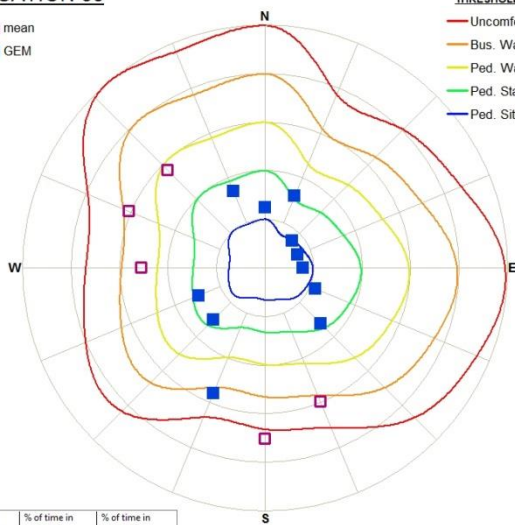
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	25.6	29.6
4.0	9.6	11.0
6.0	1.9	2.8
8.0	0.2	0.4
10.0	0.0	0.0
4.8	5.0	Ped Standing
9.2	0.022	Pass
5.2	Ped Standing	5.0
10.1	Pass	0.022

### LOCATION 88

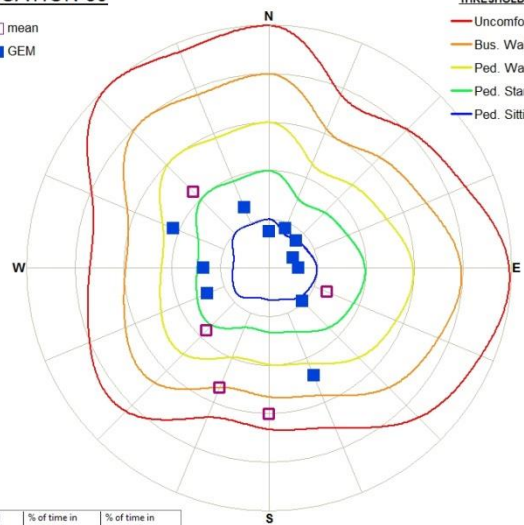
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	36.5	42.0
4.0	18.5	18.3
6.0	9.7	8.1
8.0	3.7	2.5
10.0	1.1	0.5
7.3	5.0	Ped Walking
14.3	0.022	Pass
6.8	Ped Walking	5.0
12.9	Pass	0.022

### LOCATION 89

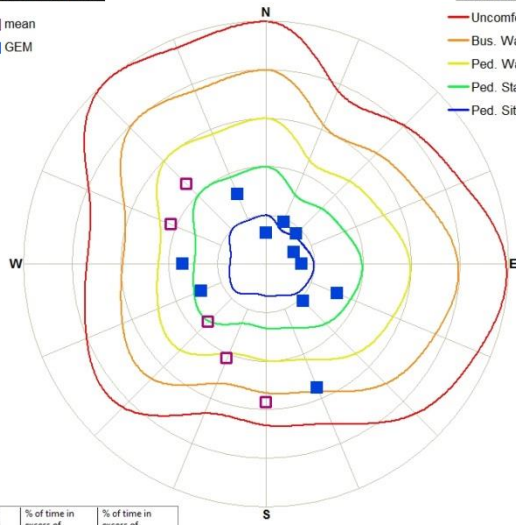
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	26.4	30.4
4.0	12.4	12.0
6.0	5.2	3.7
8.0	1.5	0.6
10.0	0.3	0.1
6.0	5.0	Ped Standing
12.4	0.022	Pass
5.5	Ped Standing	5.0
10.7	Pass	0.022

### LOCATION 90

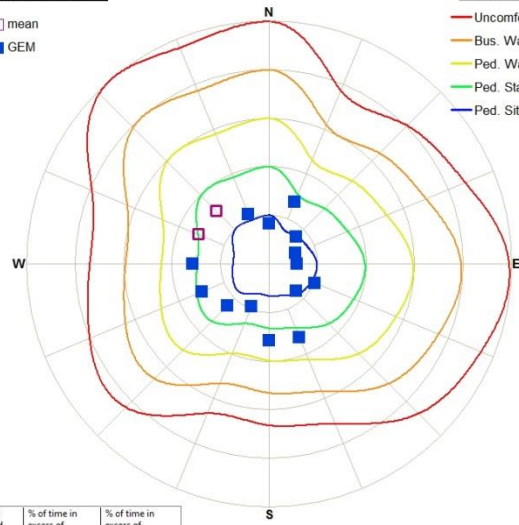
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	29.4	33.1
4.0	12.4	12.5
6.0	4.5	3.5
8.0	1.1	0.6
10.0	0.1	0.1
5.8	5.0	Ped Standing
11.5	0.022	Pass
5.5	Ped Standing	5.0
10.5	Pass	0.022

### LOCATION 91

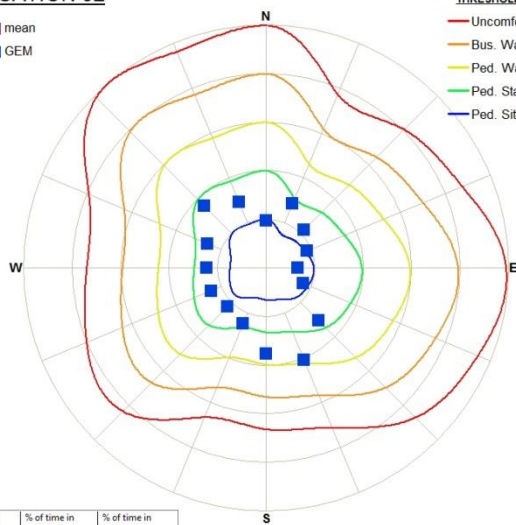
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	13.6	25.6
4.0	1.1	3.5
6.0	0.1	0.1
8.0	0.0	0.0
10.0	0.0	0.0
2.7	5.0	Ped Sitting
6.5	0.022	Pass
3.7	Ped Sitting	5.0
7.0	Pass	0.022

### LOCATION 92

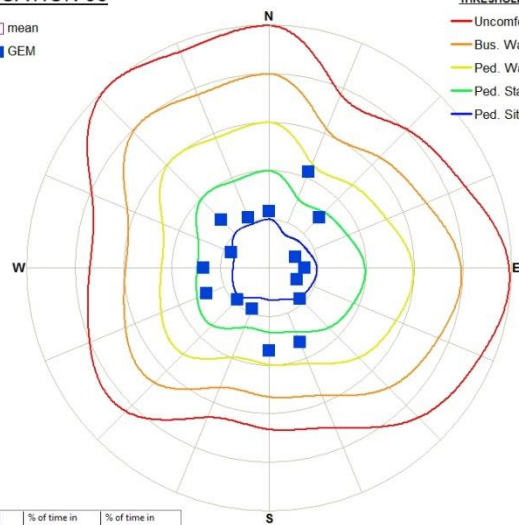
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	20.8	31.3
4.0	1.1	5.3
6.0	0.0	0.5
8.0	0.0	0.0
10.0	0.0	0.0
3.1	5.0	Ped Sitting
6.0	0.022	Pass
4.0	Ped Standing	5.0
7.8	Pass	0.022

### LOCATION 93

□ mean  
■ GEM

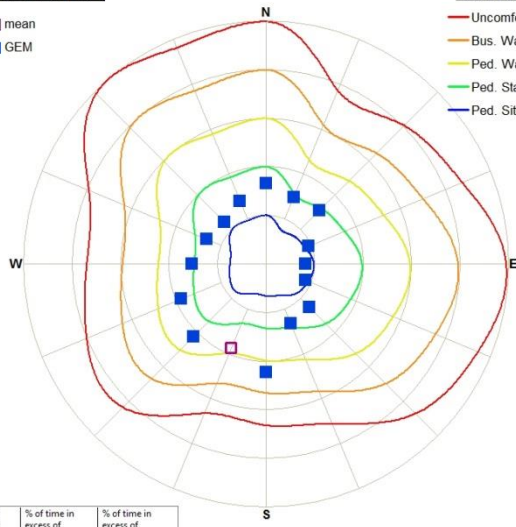


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	17.8	29.8
4.0	2.2	5.7
6.0	0.1	0.4
8.0	0.0	0.0
10.0	0.0	0.0
3.2	5.0	Ped Sitting
6.4	0.022	Pass
4.1	Ped Standing	5.0
7.4	Pass	0.022



### LOCATION 94

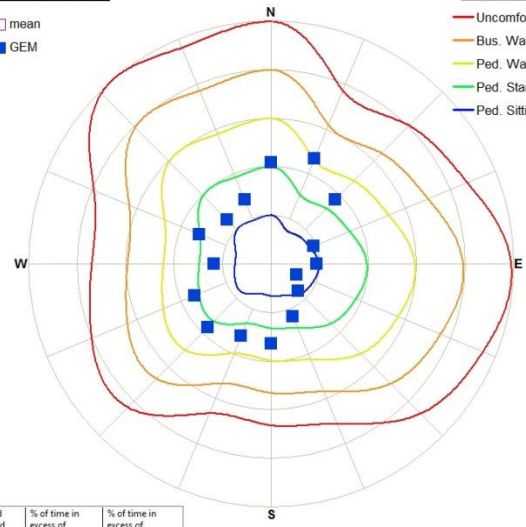
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	26.5	36.7
4.0	3.7	8.3
6.0	0.3	1.3
8.0	0.0	0.1
10.0	0.0	0.0
3.7	5.0	Ped Sitting
7.6	0.022	Pass
4.5	Ped Standing	5.0
9.1	Pass	0.022

### LOCATION 95

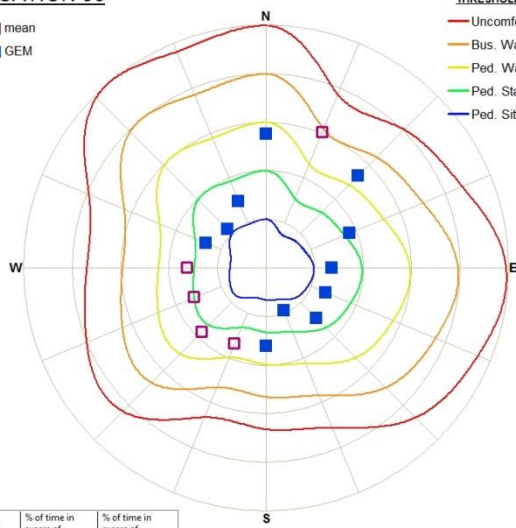
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	21.0	35.9
4.0	2.4	8.0
6.0	0.1	0.7
8.0	0.0	0.0
10.0	0.0	0.0
3.3	5.0	Ped Sitting
6.6	0.022	Pass
4.4	Ped Standing	5.0
7.9	Pass	0.022

### LOCATION 96

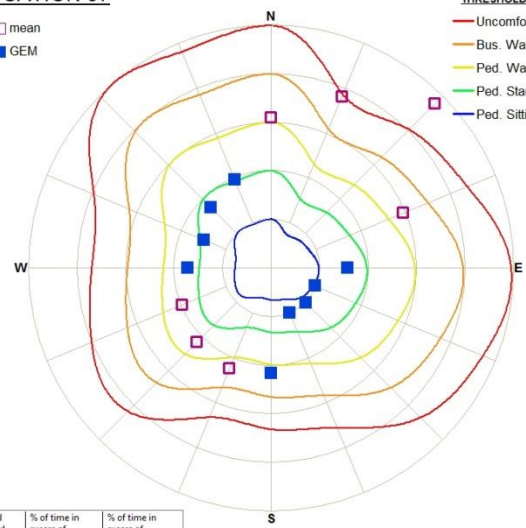
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	37.1	43.6
4.0	10.3	13.0
6.0	2.5	2.9
8.0	0.4	0.4
10.0	0.0	0.0
5.0	5.0	Ped Standing
9.9	0.022	Pass
5.3	Ped Standing	5.0
9.8	Pass	0.022

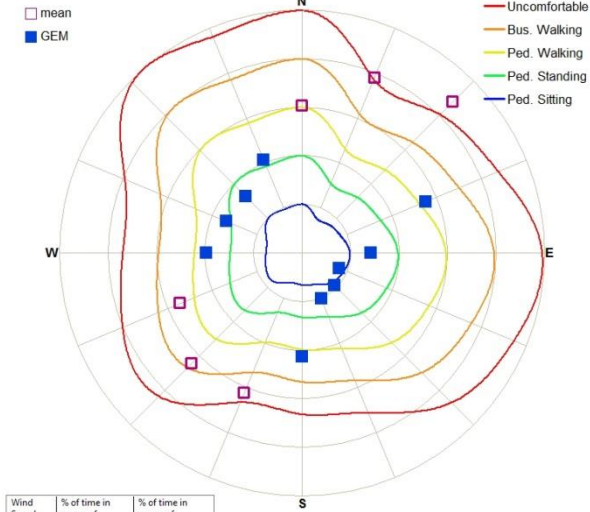
### LOCATION 97

□ mean  
■ GEM



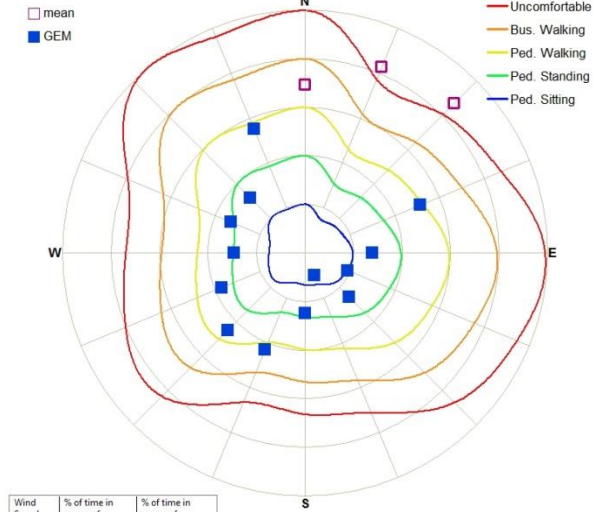
Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	44.9	48.2
4.0	21.2	20.6
6.0	9.7	6.8
8.0	4.5	1.5
10.0	1.7	0.2
7.6	5.0	Ped Walking
15.2	0.022	Able Body
6.4	Ped Walking	5.0
11.6	Pass	0.022

LOCATION 98



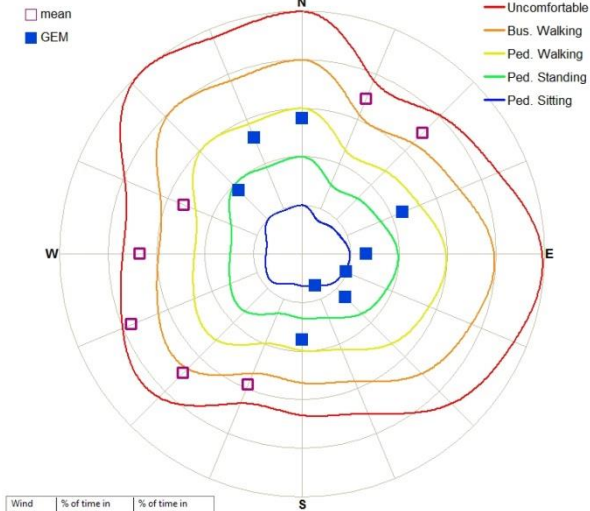
Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	46.9	49.8
4.0	23.2	23.3
6.0	10.6	8.4
8.0	4.7	1.9
10.0	1.4	0.3
7.8	5.0	Ped Walking
14.2	0.022	Pass
6.7	Ped Walking	5.0
11.7	Pass	0.022

LOCATION 99



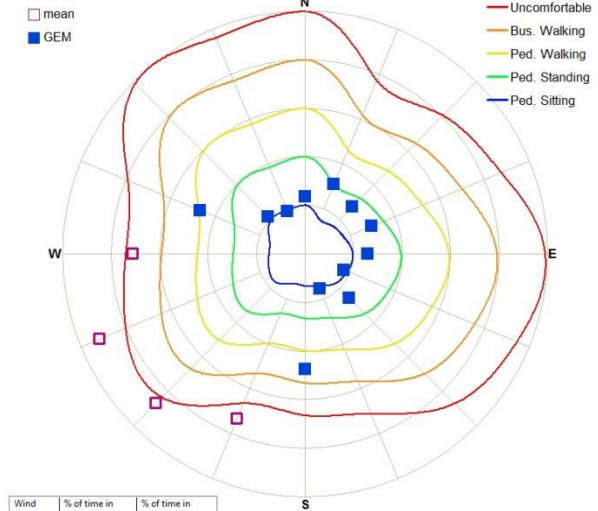
Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	39.1	44.4
4.0	17.6	16.5
6.0	9.2	6.1
8.0	4.4	1.3
10.0	1.4	0.2
7.6	5.0	Ped Walking
14.2	0.022	Pass
6.2	Ped Walking	5.0
11.2	Pass	0.022

LOCATION 100



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	48.0	51.5
4.0	22.7	22.7
6.0	11.1	7.3
8.0	3.6	1.5
10.0	0.8	0.2
7.4	5.0	Ped Walking
14.2	0.022	Pass
6.5	Ped Walking	5.0
12.4	Pass	0.022

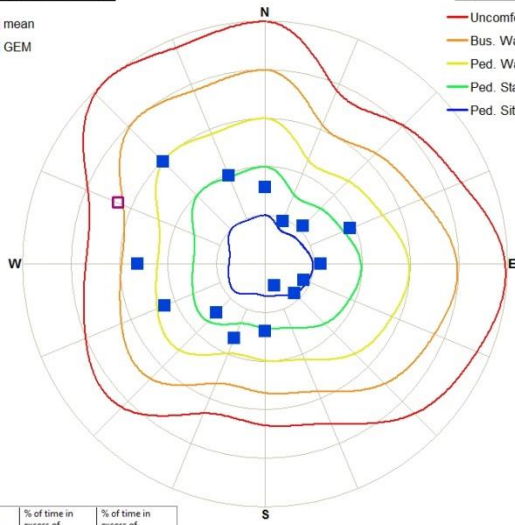
LOCATION 101



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	34.2	41.5
4.0	13.9	16.6
6.0	7.0	7.0
8.0	3.4	2.2
10.0	1.4	0.6
6.9	5.0	Ped Walking
16.9	0.022	Able Body
6.5	Ped Walking	5.0
14.4	Pass	0.022

### LOCATION 102

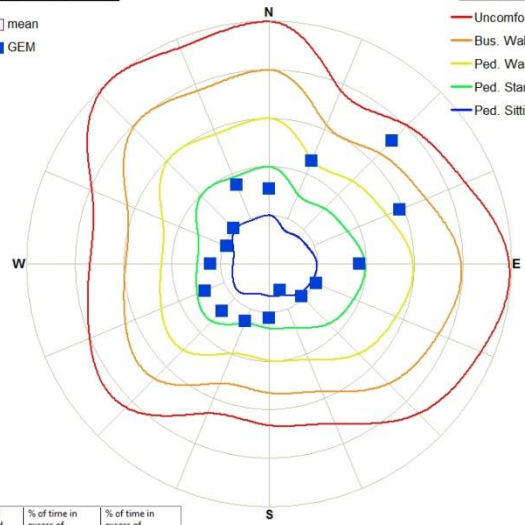
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	24.0	35.3
4.0	5.4	8.3
6.0	1.7	2.2
8.0	0.5	0.6
10.0	0.1	0.2
4.0	5.0	Ped Standing
12.7	0.022	Pass
4.6	Ped Standing	5.0
12.2	Pass	0.022

### LOCATION 103

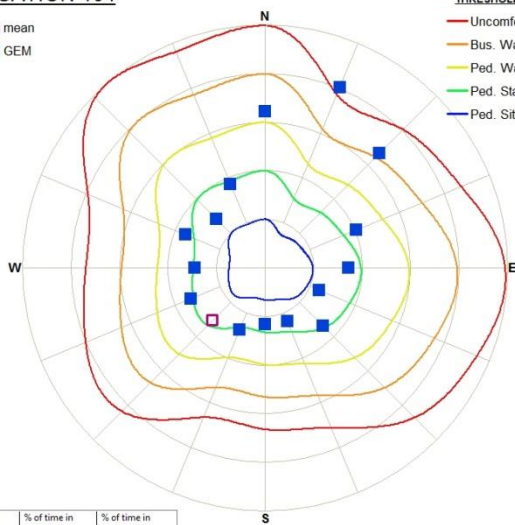
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	25.1	34.0
4.0	6.4	10.4
6.0	1.5	3.8
8.0	0.2	0.9
10.0	0.0	0.1
4.3	5.0	Ped Standing
9.2	0.022	Pass
5.4	Ped Standing	5.0
11.4	Pass	0.022

### LOCATION 104

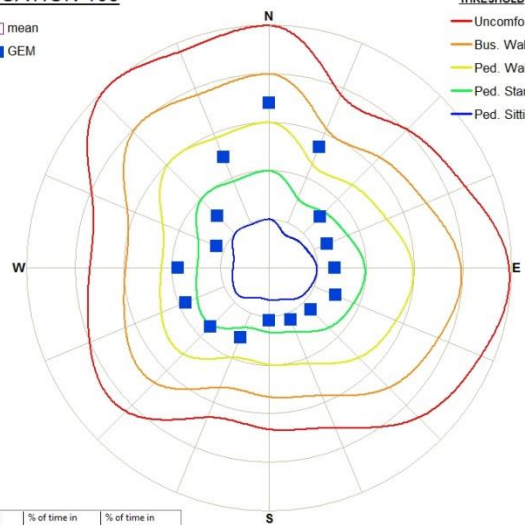
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	34.7	45.4
4.0	11.7	14.8
6.0	4.9	6.7
8.0	1.6	2.4
10.0	0.3	0.6
5.9	5.0	Ped Standing
12.4	0.022	Pass
6.5	Ped Walking	5.0
13.2	Pass	0.022

### LOCATION 105

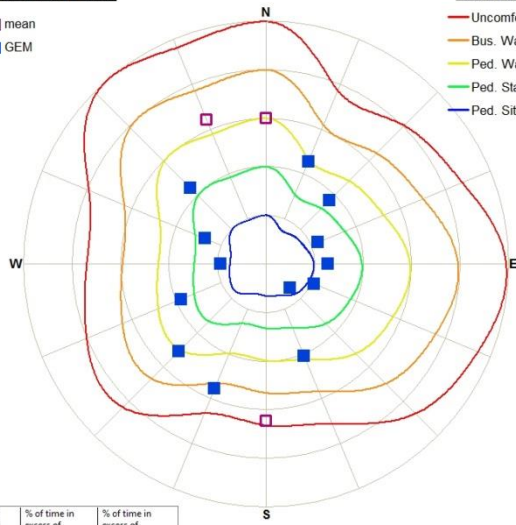
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	30.3	41.1
4.0	5.5	9.1
6.0	0.8	2.1
8.0	0.1	0.3
10.0	0.0	0.0
4.0	5.0	Ped Standing
9.1	0.022	Pass
4.8	Ped Standing	5.0
9.9	Pass	0.022

### LOCATION 106

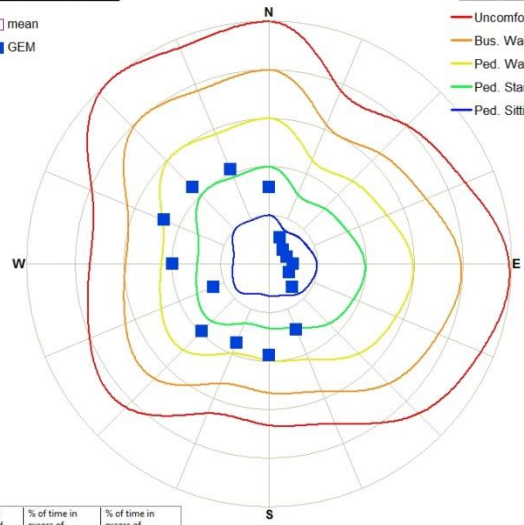
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	40.3	47.2
4.0	16.1	19.2
6.0	6.4	6.4
8.0	2.1	1.7
10.0	0.5	0.3
6.4	5.0	Ped Walking
13.2	0.022	Pass
6.3	Ped Walking	5.0
12.6	Pass	0.022

### LOCATION 107

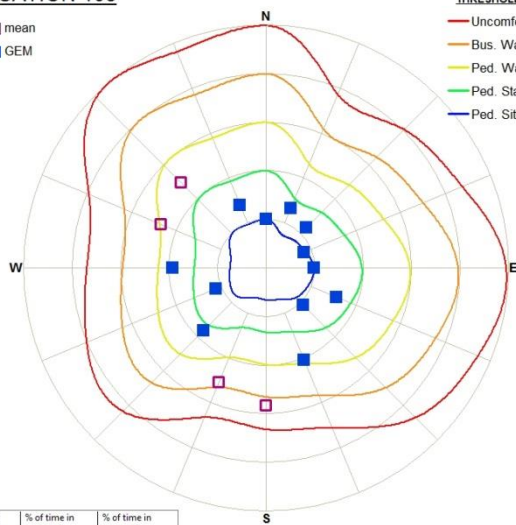
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	22.2	29.9
4.0	4.9	8.0
6.0	0.4	1.1
8.0	0.0	0.1
10.0	0.0	0.0
3.9	5.0	Ped Sitting
8.1	0.022	Pass
4.5	Ped Standing	5.0
9.4	Pass	0.022

### LOCATION 108

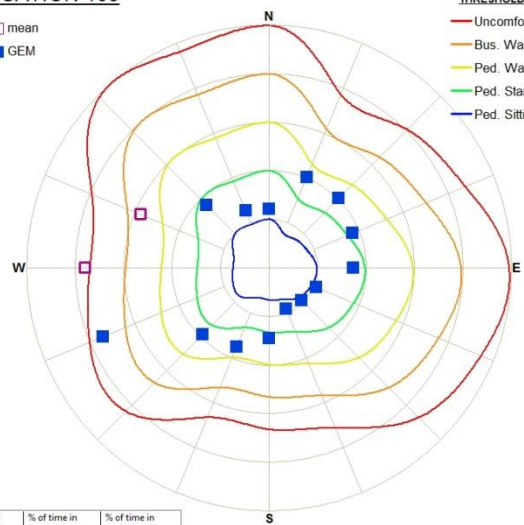
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	34.2	37.3
4.0	12.9	11.4
6.0	4.6	2.6
8.0	1.2	0.3
10.0	0.2	0.0
5.8	5.0	Ped Standing
11.7	0.022	Pass
5.1	Ped Standing	5.0
9.8	Pass	0.022

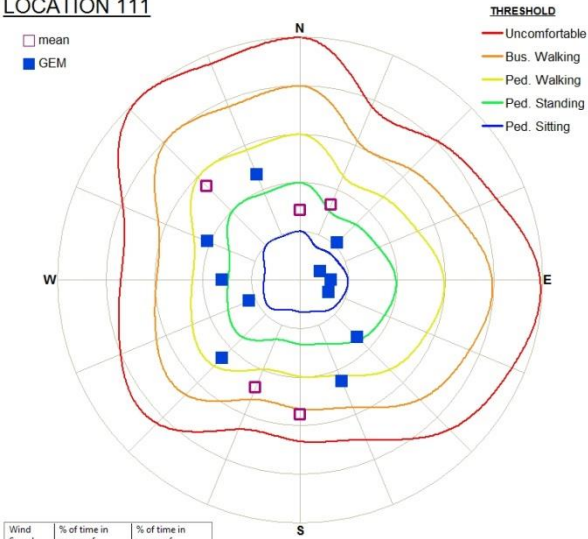
### LOCATION 109

□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	35.9	43.4
4.0	10.4	13.3
6.0	3.8	3.9
8.0	1.6	1.3
10.0	0.6	0.4
5.3	5.0	Ped Standing
15.0	0.022	Pass
5.5	Ped Standing	5.0
13.5	Pass	0.022

LOCATION 111



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	35.0	38.7
4.0	12.9	12.4
6.0	3.9	2.8
8.0	0.8	0.4
10.0	0.1	0.0
5.6	5.0	Ped Standing
11.5	0.022	Pass
5.3	Ped Standing	5.0
10.8	Pass	0.022



## Appendix 6: Directional Wind Results, Summer

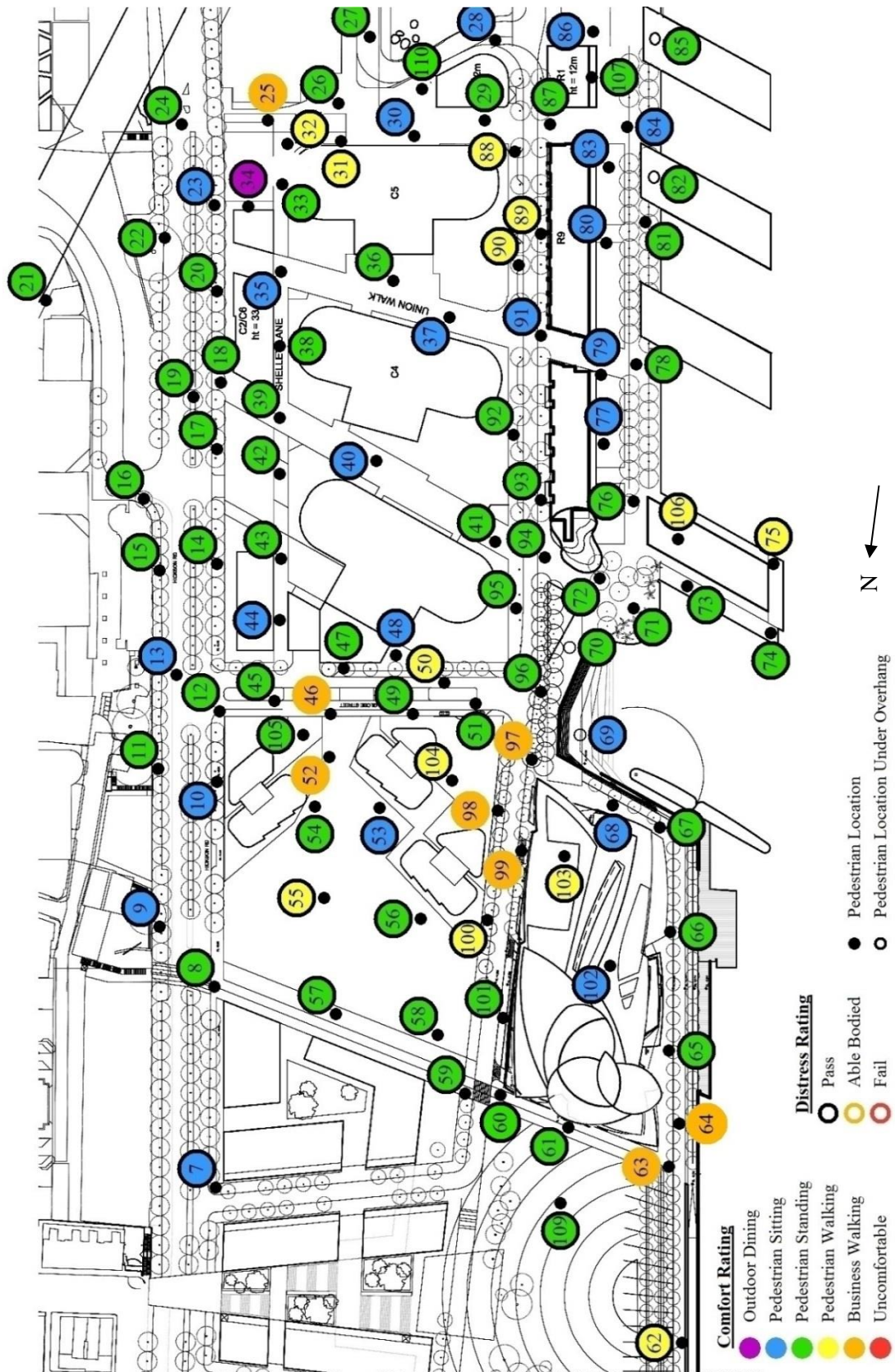
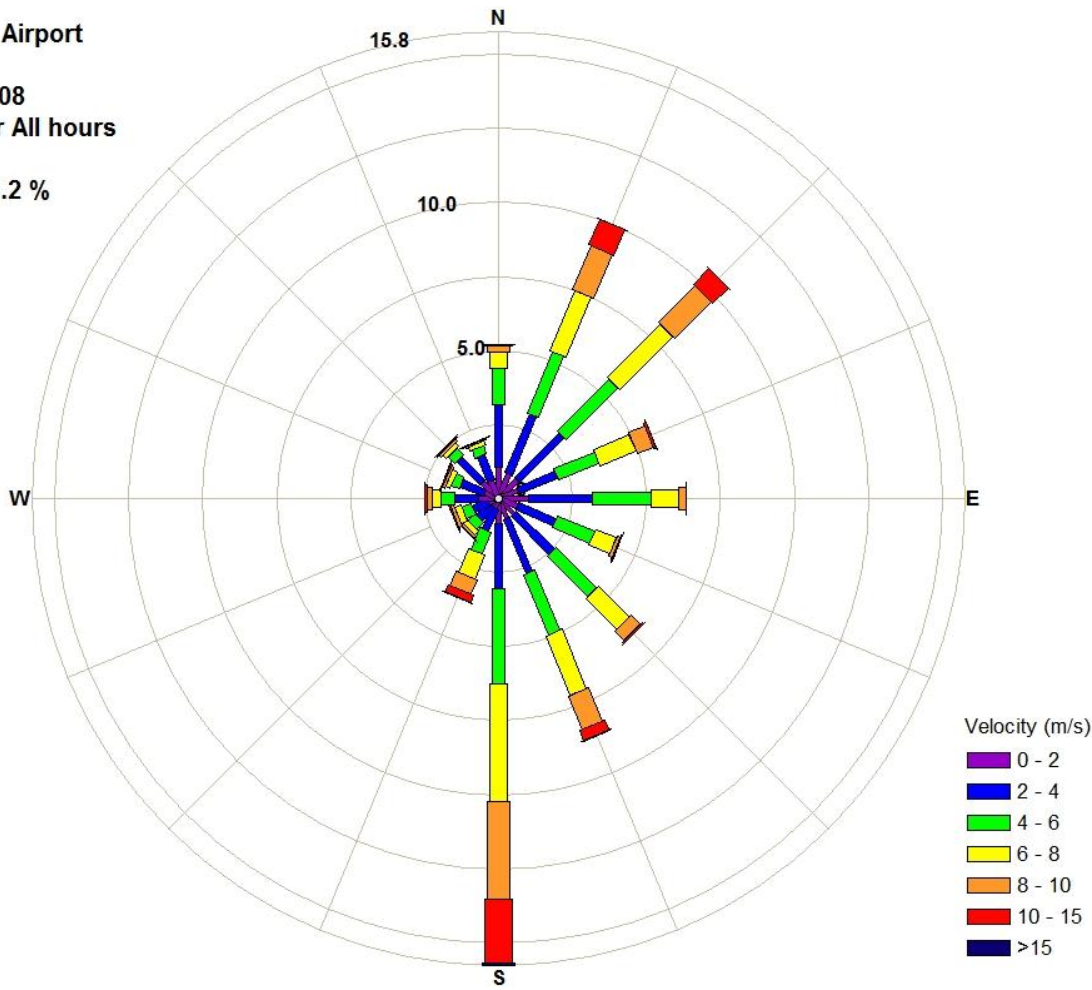


Figure 14: Pedestrian wind speed measurement locations – summer

# Sydney Airport

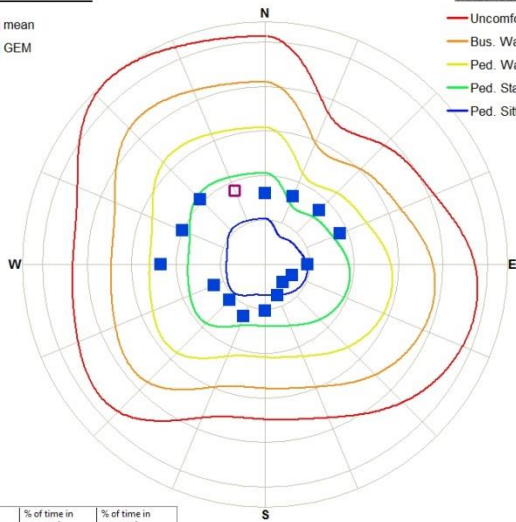
1974-2008  
Summer All hours

Calm 11.2 %



## LOCATION 7

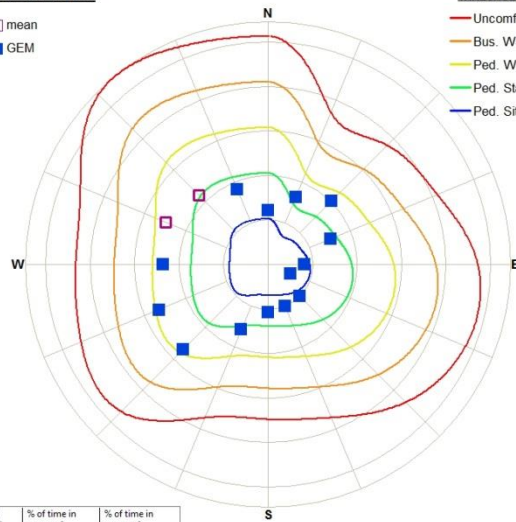
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	20.7	29.5
4.0	1.8	4.1
6.0	0.0	0.2
8.0	0.0	0.0
10.0	0.0	0.0
3.3	5.0	Ped Sitting
6.2	0.022	Pass
3.8	Ped Sitting	5.0
7.3	Pass	0.022

## LOCATION 8

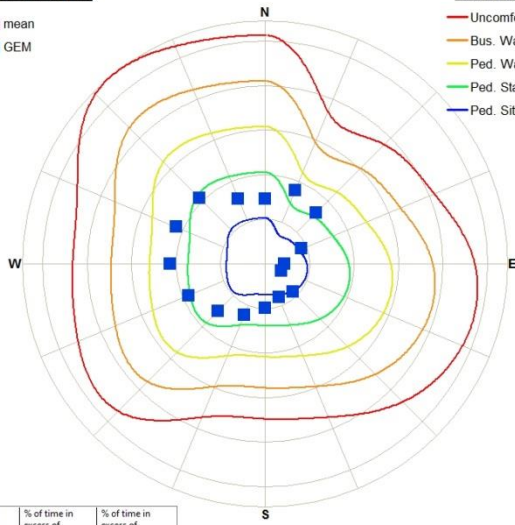
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	22.9	34.5
4.0	3.8	5.9
6.0	0.3	0.6
8.0	0.0	0.0
10.0	0.0	0.0
3.7	5.0	Ped Sitting
7.9	0.022	Pass
4.1	Ped Standing	5.0
8.2	Pass	0.022

### LOCATION 9

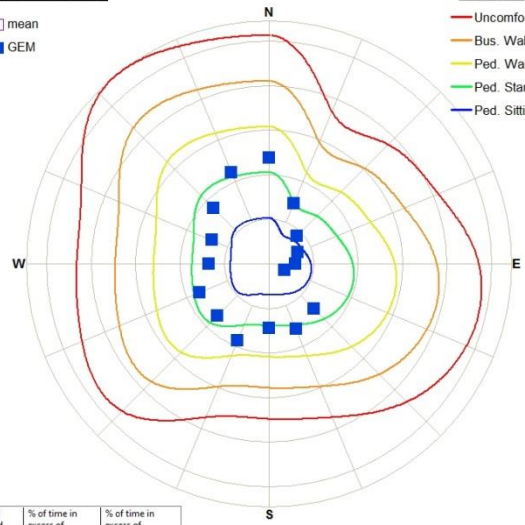
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	17.7	26.5
4.0	2.5	3.6
6.0	0.1	0.2
8.0	0.0	0.0
10.0	0.0	0.0
3.4	5.0	Ped Sitting
6.4	0.022	Pass
3.7	Ped Sitting	5.0
7.1	Pass	0.022

### LOCATION 10

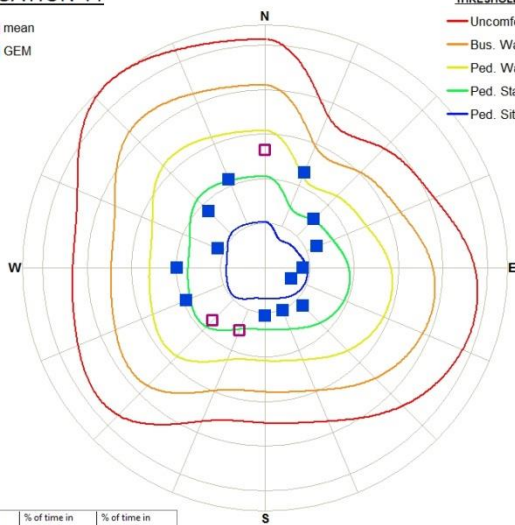
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	23.2	33.3
4.0	1.2	3.9
6.0	0.0	0.1
8.0	0.0	0.0
10.0	0.0	0.0
3.1	5.0	Ped Sitting
6.6	0.022	Pass
3.8	Ped Sitting	5.0
7.5	Pass	0.022

### LOCATION 11

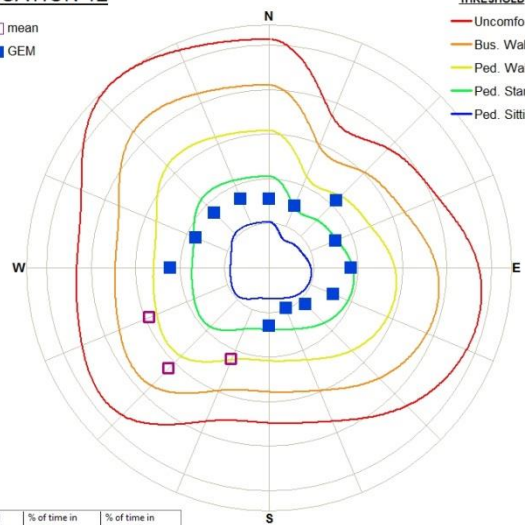
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	23.0	35.6
4.0	3.0	6.1
6.0	0.2	0.9
8.0	0.0	0.0
10.0	0.0	0.0
3.5	5.0	Ped Sitting
7.4	0.022	Pass
4.2	Ped Standing	5.0
8.1	Pass	0.022

### LOCATION 12

□ mean  
■ GEM

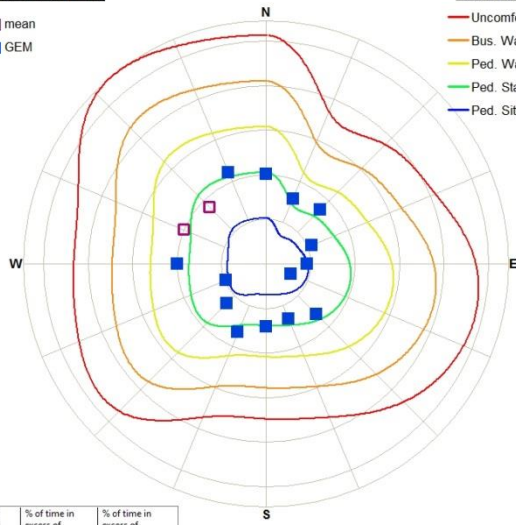


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	31.5	42.9
4.0	4.9	7.5
6.0	0.6	0.8
8.0	0.1	0.1
10.0	0.0	0.0
3.9	5.0	Ped Sitting
9.3	0.022	Pass
4.3	Ped Standing	5.0
8.7	Pass	0.022



### LOCATION 13

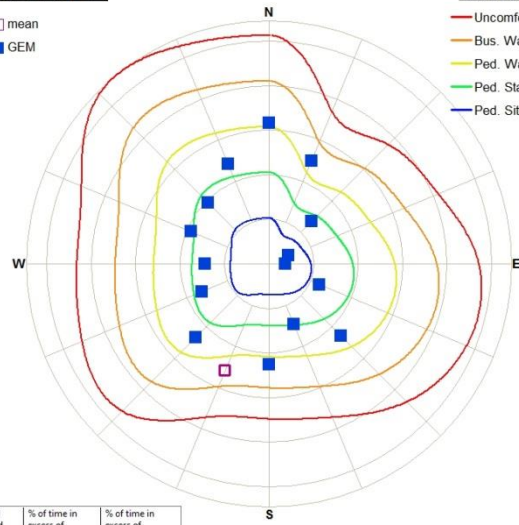
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	30.9	39.5
4.0	2.2	4.8
6.0	0.1	0.1
8.0	0.0	0.0
10.0	0.0	0.0
3.5	5.0	Ped Sitting
6.9	0.022	Pass
3.9	Ped Sitting	5.0
7.3	Pass	0.022

### LOCATION 14

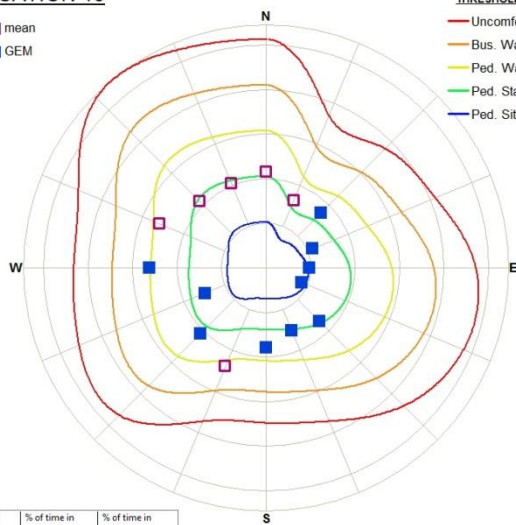
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	42.3	47.3
4.0	12.4	17.2
6.0	2.0	3.5
8.0	0.2	0.3
10.0	0.0	0.0
5.0	5.0	Ped Standing
9.8	0.022	Pass
5.6	Ped Standing	5.0
9.9	Pass	0.022

### LOCATION 15

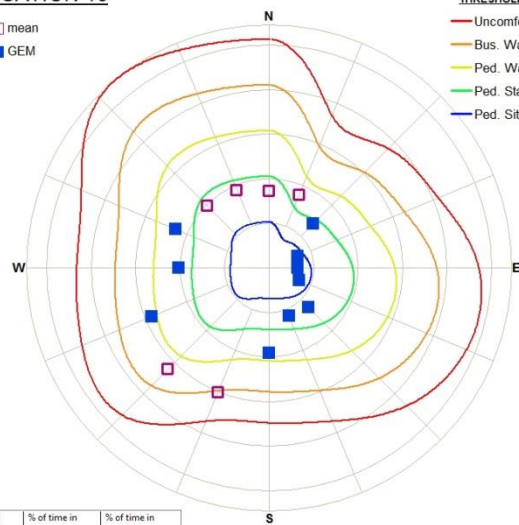
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	41.3	45.4
4.0	6.9	9.7
6.0	0.5	0.8
8.0	0.1	0.1
10.0	0.0	0.0
4.2	5.0	Ped Standing
8.9	0.022	Pass
4.5	Ped Standing	5.0
8.9	Pass	0.022

### LOCATION 16

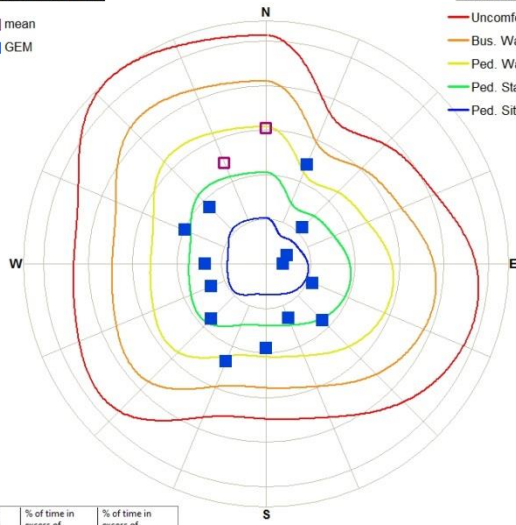
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	34.6	38.8
4.0	6.9	9.3
6.0	1.3	1.2
8.0	0.3	0.1
10.0	0.0	0.0
4.3	5.0	Ped Standing
11.1	0.022	Pass
4.6	Ped Standing	5.0
9.8	Pass	0.022

### LOCATION 17

□ mean  
■ GEM

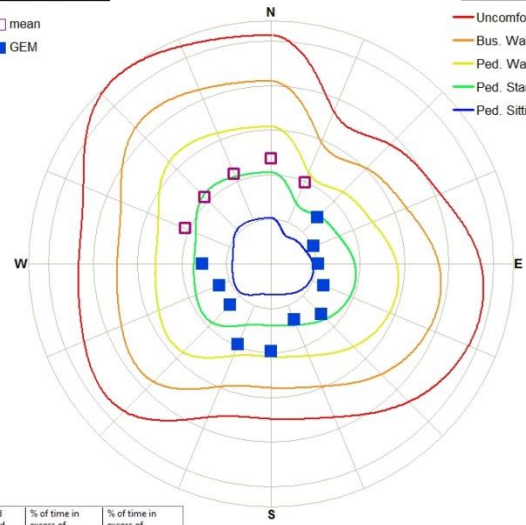


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	31.9	42.2
4.0	6.5	11.8
6.0	1.3	1.8
8.0	0.1	0.1
10.0	0.0	0.0
4.3	5.0	Ped Standing
9.0	0.022	Pass
5.0	Ped Standing	5.0
9.3	Pass	0.022

### LOCATION 18

□ mean  
■ GEM

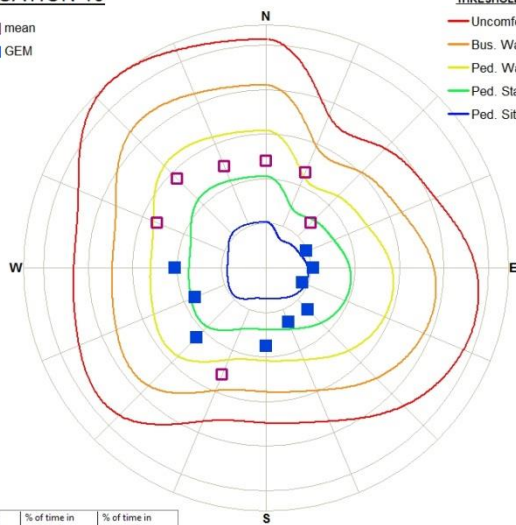
THRESHOLD  
— Uncomfortable  
— Bus. Walking  
— Ped. Walking  
— Ped. Standing  
— Ped. Sitting



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	36.0	43.2
4.0	4.9	9.0
6.0	0.3	0.7
8.0	0.0	0.0
10.0	0.0	0.0
4.0	5.0	Ped Sitting
7.5	0.022	Pass
4.5	Ped Standing	5.0
8.0	Pass	0.022

### LOCATION 19

□ mean  
■ GEM

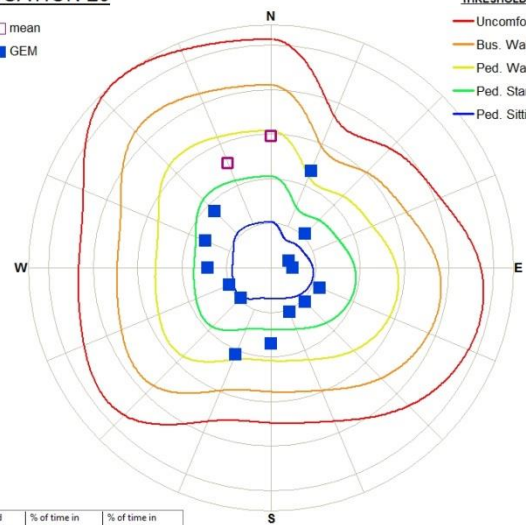


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	40.1	42.6
4.0	8.8	9.3
6.0	1.6	0.9
8.0	0.1	0.1
10.0	0.0	0.0
4.7	5.0	Ped Standing
9.8	0.022	Pass
4.6	Ped Standing	5.0
9.0	Pass	0.022

### LOCATION 20

□ mean  
■ GEM

THRESHOLD  
— Uncomfortable  
— Bus. Walking  
— Ped. Walking  
— Ped. Standing  
— Ped. Sitting

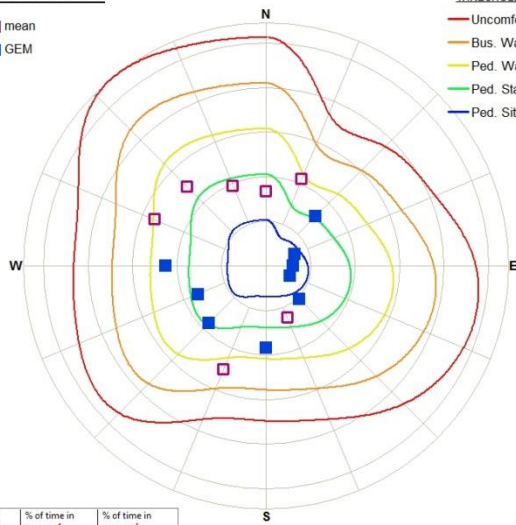


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	22.0	35.9
4.0	4.8	8.8
6.0	0.7	1.2
8.0	0.0	0.1
10.0	0.0	0.0
3.9	5.0	Ped Sitting
8.5	0.022	Pass
4.6	Ped Standing	5.0
8.7	Pass	0.022



### LOCATION 21

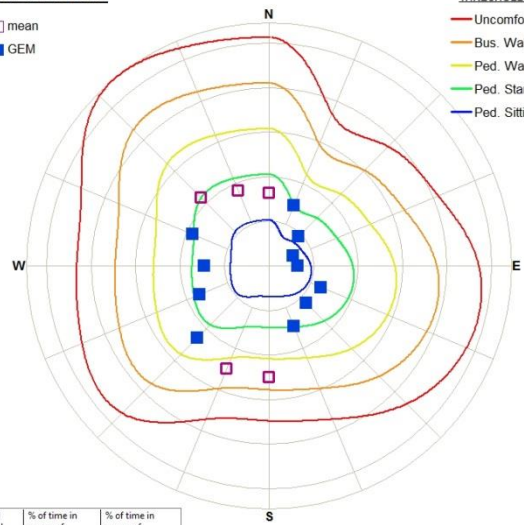
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	37.7	38.3
4.0	9.1	8.8
6.0	1.1	0.8
8.0	0.1	0.1
10.0	0.0	0.0
4.6	5.0	Ped Standing
9.4	0.022	Pass
4.5	Ped Standing	5.0
9.0	Pass	0.022

### LOCATION 22

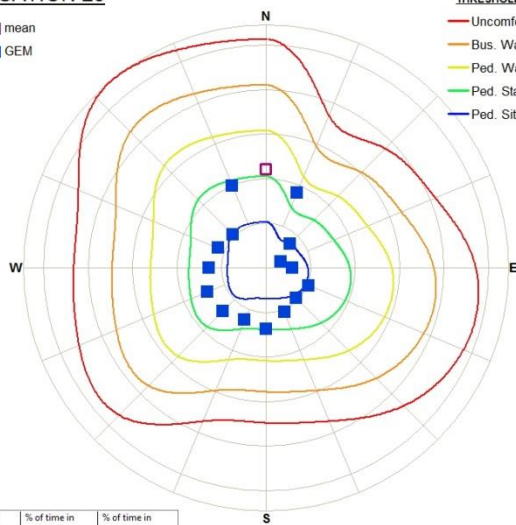
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	31.2	36.4
4.0	10.9	10.9
6.0	2.9	2.3
8.0	0.3	0.2
10.0	0.0	0.0
5.2	5.0	Ped Standing
10.1	0.022	Pass
5.0	Ped Standing	5.0
9.6	Pass	0.022

### LOCATION 23

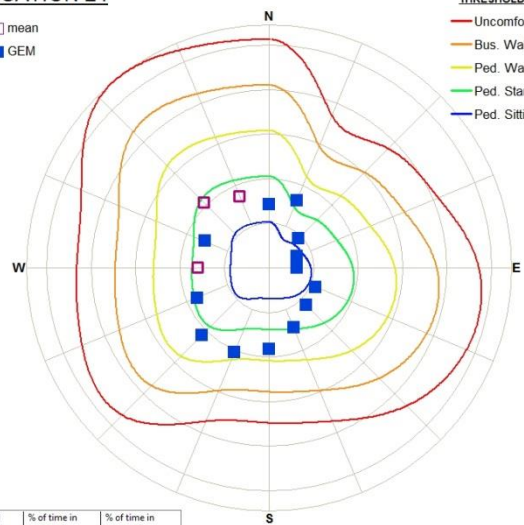
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	21.7	26.7
4.0	1.5	3.1
6.0	0.0	0.1
8.0	0.0	0.0
10.0	0.0	0.0
3.2	5.0	Ped Sitting
6.2	0.022	Pass
3.6	Ped Sitting	5.0
6.7	Pass	0.022

### LOCATION 24

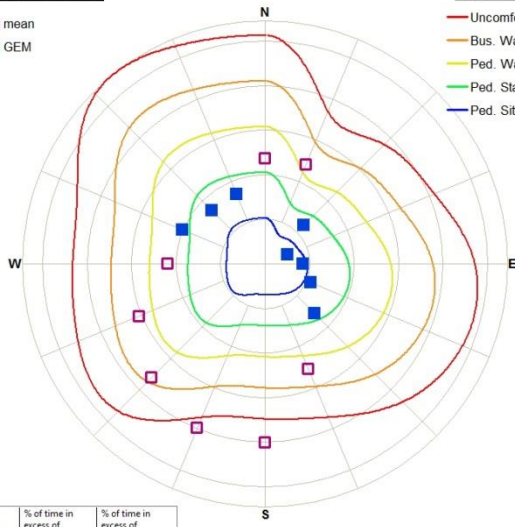
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	26.6	34.2
4.0	3.3	6.6
6.0	0.1	0.4
8.0	0.0	0.0
10.0	0.0	0.0
3.7	5.0	Ped Sitting
7.3	0.022	Pass
4.2	Ped Standing	5.0
7.8	Pass	0.022

### LOCATION 25

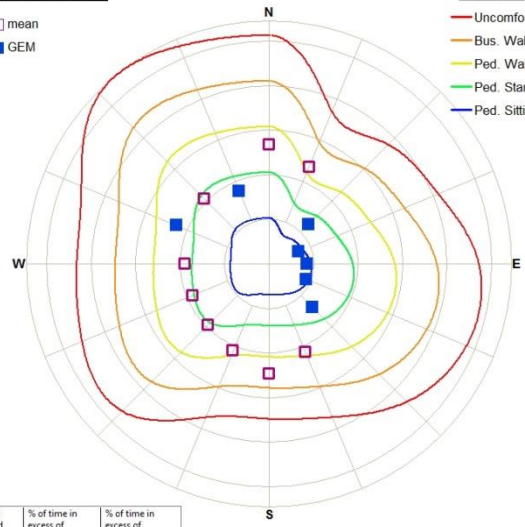
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	46.2	46.9
4.0	25.3	21.3
6.0	13.6	8.9
8.0	6.3	2.7
10.0	2.4	0.6
8.4	5.0	Bus Walking
16.1	0.022	Able Body
7.0	Ped Walking	5.0
13.1	Pass	0.022

### LOCATION 26

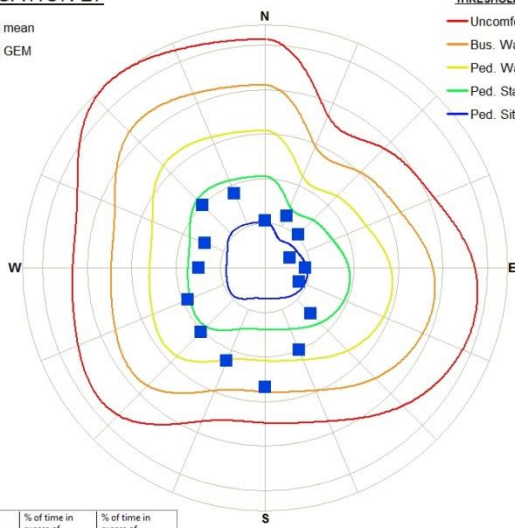
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	42.9	43.2
4.0	17.8	14.2
6.0	3.8	2.0
8.0	0.3	0.1
10.0	0.0	0.0
5.7	5.0	Ped Standing
9.9	0.022	Pass
5.2	Ped Standing	5.0
8.9	Pass	0.022

### LOCATION 27

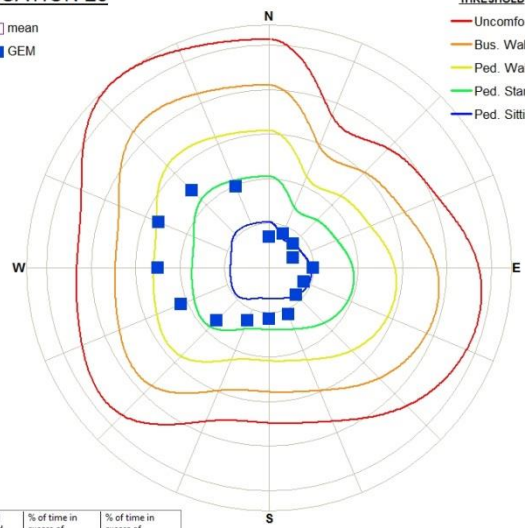
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	29.8	37.6
4.0	8.8	13.6
6.0	1.7	3.8
8.0	0.1	0.6
10.0	0.0	0.1
4.8	5.0	Ped Standing
9.0	0.022	Pass
5.6	Ped Standing	5.0
10.5	Pass	0.022

### LOCATION 28

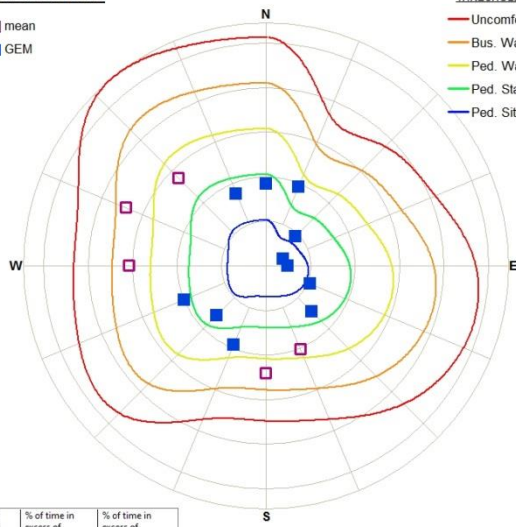
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	7.4	20.2
4.0	1.1	1.7
6.0	0.2	0.3
8.0	0.0	0.0
10.0	0.0	0.0
2.2	5.0	Ped Sitting
7.8	0.022	Pass
3.0	Ped Sitting	5.0
8.5	Pass	0.022

### LOCATION 29

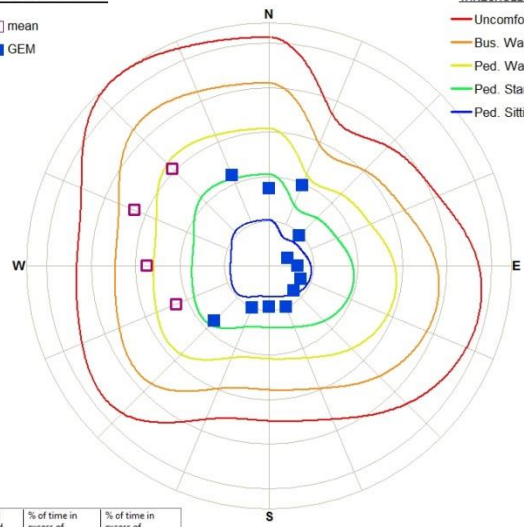
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	36.1	41.0
4.0	14.0	13.5
6.0	3.0	1.9
8.0	0.4	0.2
10.0	0.0	0.0
5.3	5.0	Ped Standing
10.7	0.022	Pass
5.1	Ped Standing	5.0
9.6	Pass	0.022

### LOCATION 30

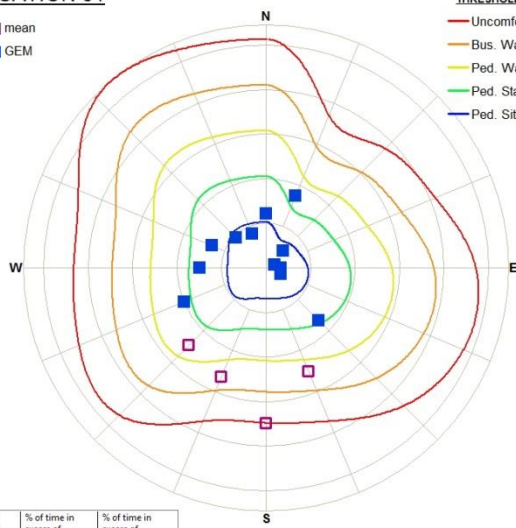
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	17.7	23.6
4.0	4.1	4.1
6.0	0.7	0.6
8.0	0.2	0.1
10.0	0.0	0.0
3.7	5.0	Ped Sitting
10.1	0.022	Pass
3.7	Ped Sitting	5.0
9.1	Pass	0.022

### LOCATION 31

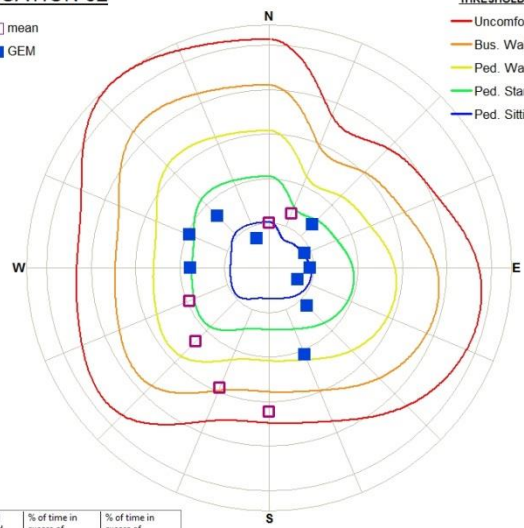
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	33.2	37.2
4.0	18.2	17.5
6.0	9.2	6.2
8.0	3.3	1.4
10.0	0.9	0.2
7.2	5.0	Ped Walking
13.6	0.022	Pass
6.3	Ped Walking	5.0
11.6	Pass	0.022

### LOCATION 32

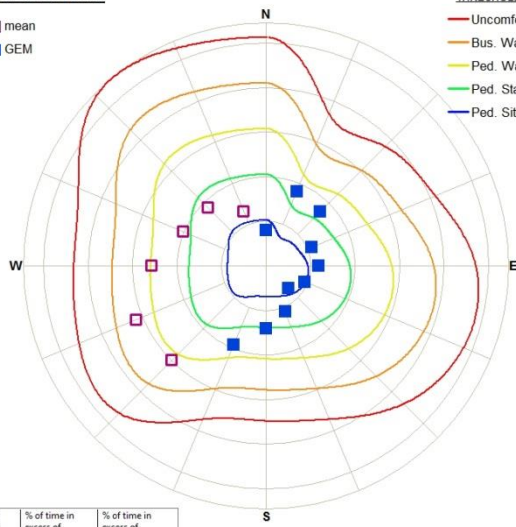
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	36.4	39.7
4.0	15.3	14.9
6.0	7.2	4.5
8.0	2.3	0.8
10.0	0.5	0.1
6.7	5.0	Ped Walking
12.8	0.022	Pass
5.8	Ped Standing	5.0
10.9	Pass	0.022

### LOCATION 33

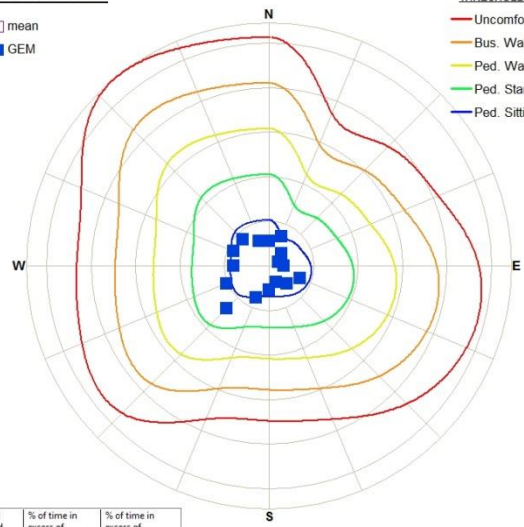
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	31.4	36.0
4.0	3.7	5.9
6.0	0.5	0.3
8.0	0.1	0.0
10.0	0.0	0.0
3.7	5.0	Ped Sitting
9.0	0.022	Pass
4.1	Ped Standing	5.0
7.7	Pass	0.022

### LOCATION 34

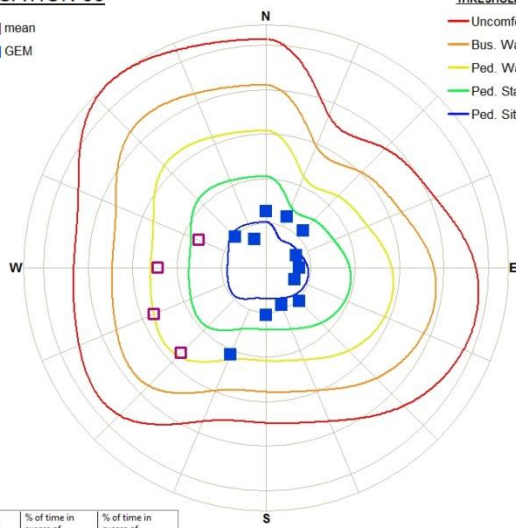
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	0.3	1.6
4.0	0.0	0.0
6.0	0.0	0.0
8.0	0.0	0.0
10.0	0.0	0.0
1.2	5.0	Outdoor Dining
2.9	0.022	Pass
1.6	Outdoor Dining	5.0
3.7	Pass	0.022

### LOCATION 35

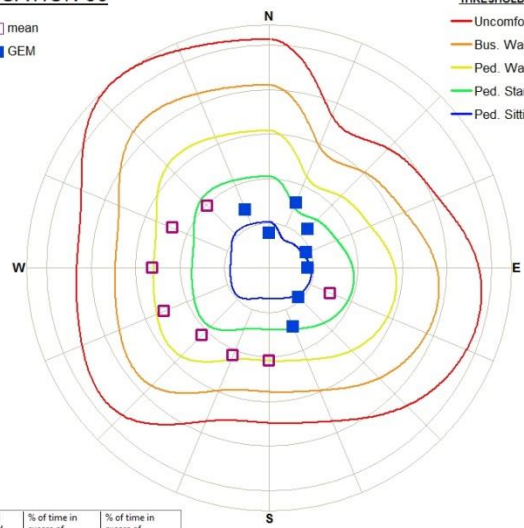
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	13.6	23.9
4.0	2.1	1.9
6.0	0.4	0.2
8.0	0.0	0.0
10.0	0.0	0.0
2.9	5.0	Ped Sitting
8.3	0.022	Pass
3.2	Ped Sitting	5.0
7.8	Pass	0.022

### LOCATION 36

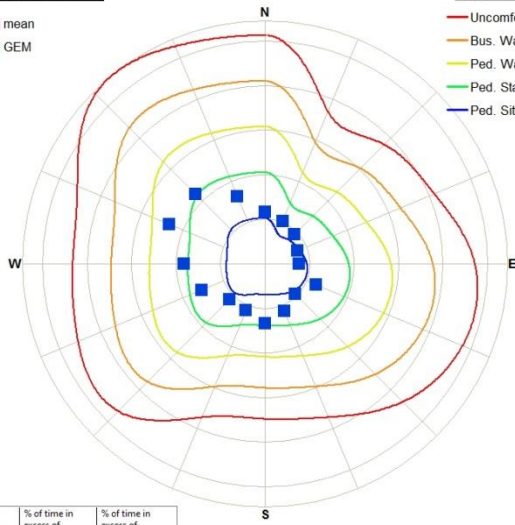
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	35.6	36.4
4.0	9.2	8.0
6.0	1.3	0.7
8.0	0.1	0.0
10.0	0.0	0.0
4.7	5.0	Ped Standing
9.0	0.022	Pass
4.4	Ped Standing	5.0
8.1	Pass	0.022

### LOCATION 37

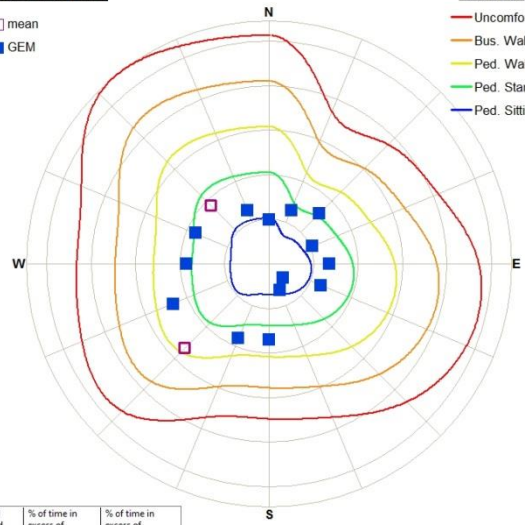
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	11.1	24.8
4.0	0.4	1.4
6.0	0.0	0.1
8.0	0.0	0.0
10.0	0.0	0.0
2.5	5.0	Ped Sitting
6.1	0.022	Pass
3.1	Ped Sitting	5.0
7.2	Pass	0.022

### LOCATION 38

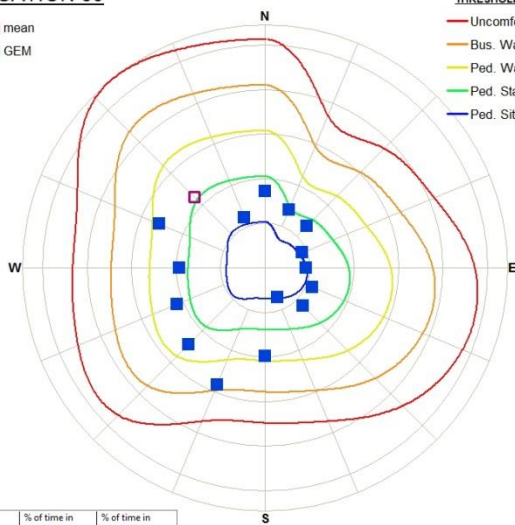
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	22.1	30.9
4.0	2.4	6.0
6.0	0.3	0.5
8.0	0.0	0.0
10.0	0.0	0.0
3.3	5.0	Ped Sitting
8.6	0.022	Pass
4.1	Ped Standing	5.0
8.4	Pass	0.022

### LOCATION 39

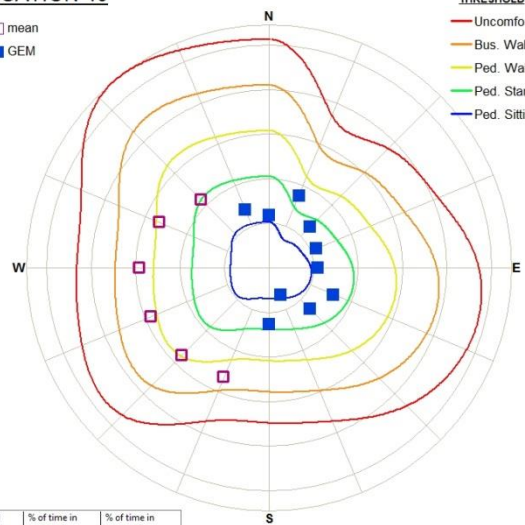
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	22.7	35.7
4.0	2.5	8.8
6.0	0.5	1.4
8.0	0.1	0.2
10.0	0.0	0.0
3.3	5.0	Ped Sitting
8.9	0.022	Pass
4.6	Ped Standing	5.0
10.1	Pass	0.022

### LOCATION 40

□ mean  
■ GEM

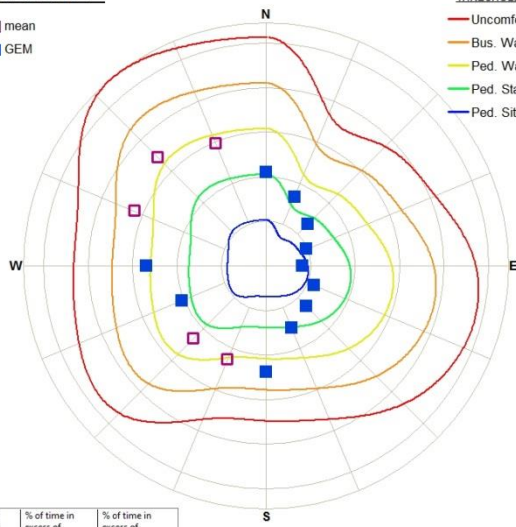


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	22.0	34.2
4.0	4.5	4.2
6.0	1.1	0.3
8.0	0.2	0.0
10.0	0.0	0.0
3.8	5.0	Ped Sitting
10.2	0.022	Pass
3.8	Ped Sitting	5.0
8.1	Pass	0.022



### LOCATION 41

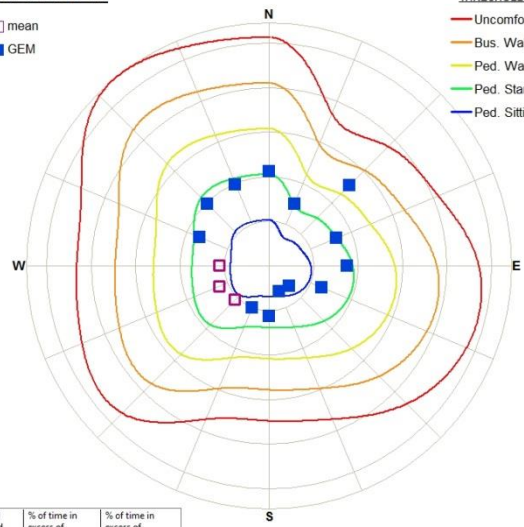
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	35.8	44.8
4.0	8.8	12.9
6.0	1.4	2.6
8.0	0.2	0.3
10.0	0.0	0.0
4.6	5.0	Ped Standing
10.7	0.022	Pass
5.2	Ped Standing	5.0
10.2	Pass	0.022

### LOCATION 42

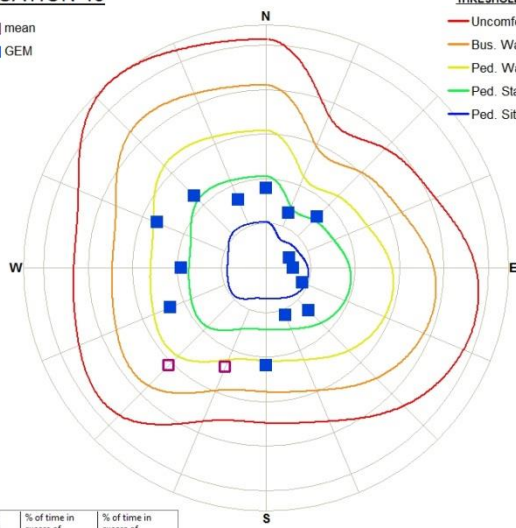
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	19.0	34.2
4.0	2.6	6.7
6.0	0.2	1.3
8.0	0.0	0.1
10.0	0.0	0.0
3.3	5.0	Ped Sitting
6.8	0.022	Pass
4.3	Ped Standing	5.0
8.9	Pass	0.022

### LOCATION 43

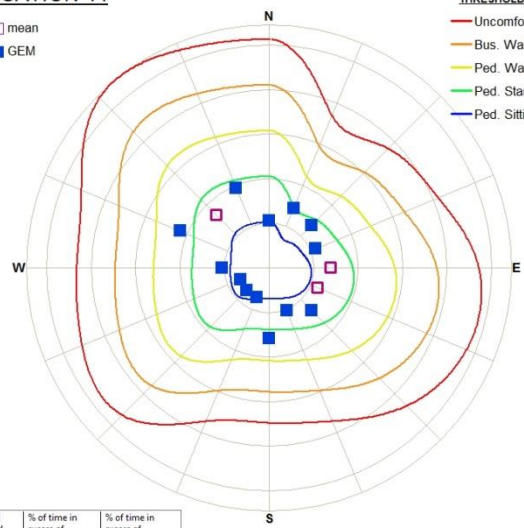
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	30.5	39.9
4.0	5.5	10.5
6.0	0.7	1.6
8.0	0.1	0.1
10.0	0.0	0.0
4.1	5.0	Ped Standing
9.3	0.022	Pass
4.8	Ped Standing	5.0
9.3	Pass	0.022

### LOCATION 44

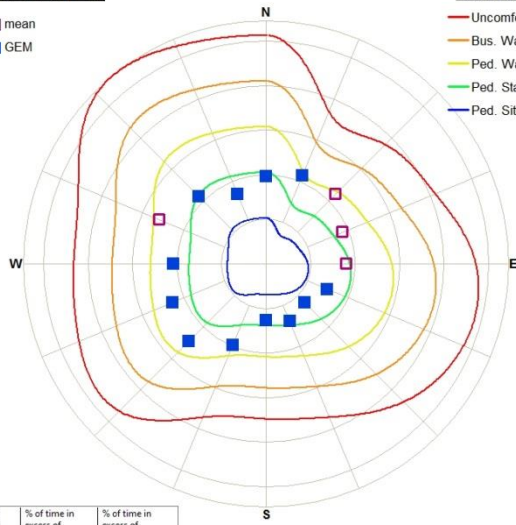
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	16.3	33.2
4.0	0.3	2.9
6.0	0.0	0.1
8.0	0.0	0.0
10.0	0.0	0.0
2.6	5.0	Ped Sitting
5.6	0.022	Pass
3.6	Ped Sitting	5.0
6.9	Pass	0.022

### LOCATION 45

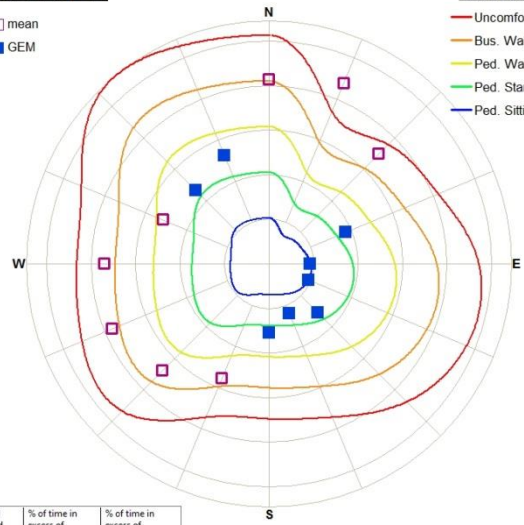
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	37.7	47.9
4.0	8.9	10.1
6.0	0.9	1.0
8.0	0.0	0.0
10.0	0.0	0.0
4.6	5.0	Ped Standing
8.3	0.022	Pass
4.7	Ped Standing	5.0
8.4	Pass	0.022

### LOCATION 46

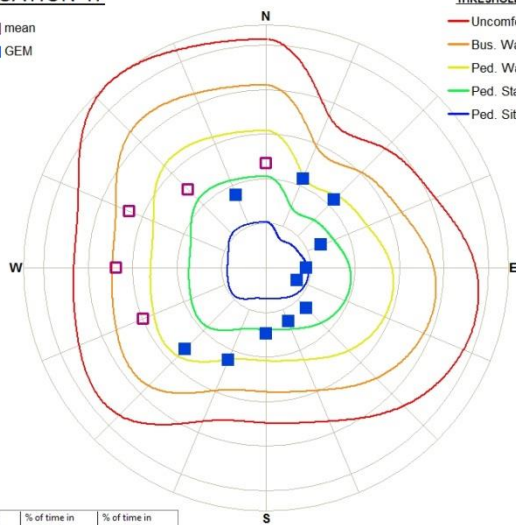
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	47.2	53.0
4.0	21.5	21.0
6.0	12.1	9.1
8.0	5.6	2.9
10.0	2.0	0.6
8.2	5.0	Bus Walking
15.3	0.022	Able Body
7.1	Ped Walking	5.0
12.6	Pass	0.022

### LOCATION 47

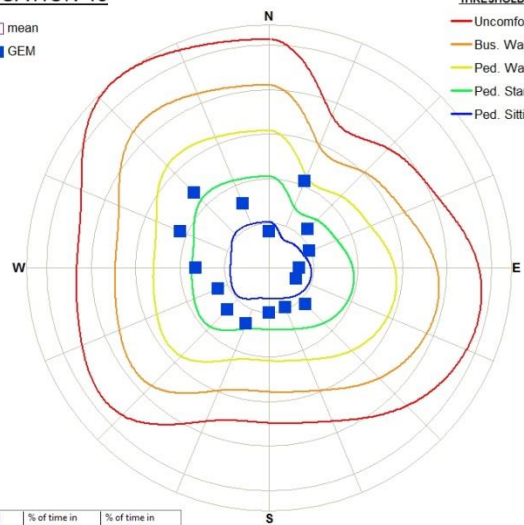
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	37.7	46.0
4.0	8.3	11.8
6.0	1.3	1.7
8.0	0.3	0.2
10.0	0.1	0.0
4.5	5.0	Ped Standing
10.9	0.022	Pass
4.9	Ped Standing	5.0
10.0	Pass	0.022

### LOCATION 48

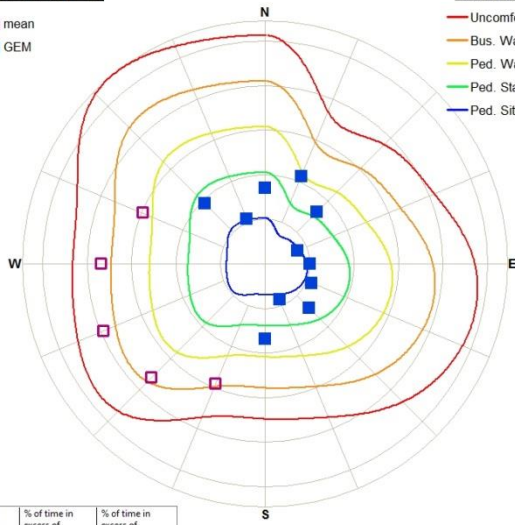
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	13.2	27.1
4.0	1.0	3.7
6.0	0.1	0.4
8.0	0.0	0.0
10.0	0.0	0.0
2.7	5.0	Ped Sitting
6.8	0.022	Pass
3.6	Ped Sitting	5.0
7.7	Pass	0.022

### LOCATION 49

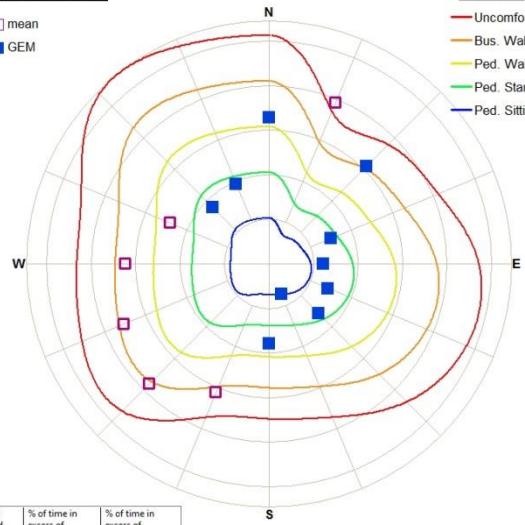
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	30.1	40.0
4.0	5.9	10.0
6.0	2.1	1.2
8.0	0.7	0.1
10.0	0.2	0.0
4.2	5.0	Ped. Standing
12.2	0.022	Pass
4.7	Ped. Standing	5.0
9.3	Pass	0.022

### LOCATION 50

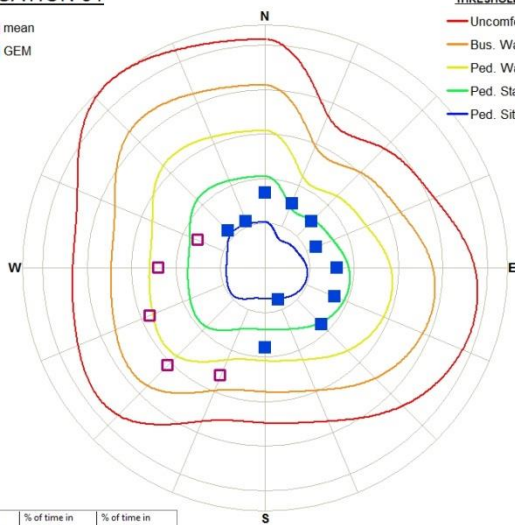
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	46.7	50.4
4.0	19.4	20.5
6.0	9.3	7.7
8.0	3.4	2.1
10.0	0.9	0.3
7.2	5.0	Ped. Walking
14.2	0.022	Pass
6.7	Ped. Walking	5.0
12.0	Pass	0.022

### LOCATION 51

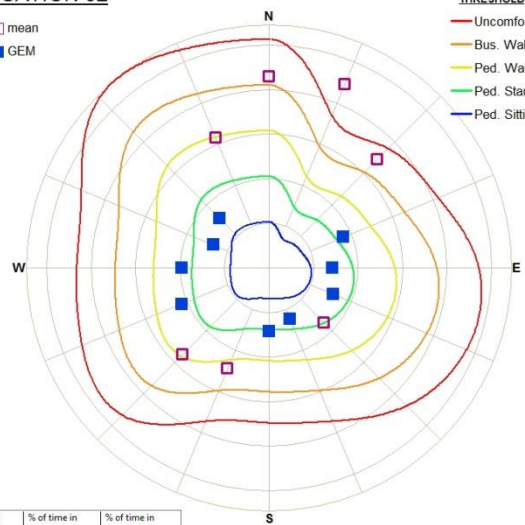
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	32.7	42.2
4.0	4.4	7.3
6.0	0.9	0.4
8.0	0.1	0.0
10.0	0.0	0.0
3.8	5.0	Ped. Sitting
9.9	0.022	Pass
4.3	Ped. Standing	5.0
8.2	Pass	0.022

### LOCATION 52

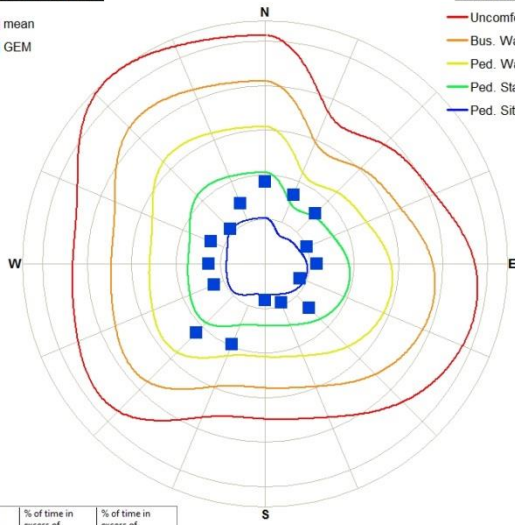
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	51.7	53.6
4.0	20.1	18.2
6.0	10.9	7.4
8.0	5.3	2.1
10.0	2.0	0.3
8.0	5.0	Bus. Walking
15.5	0.022	Able Body
6.6	Ped. Walking	5.0
12.0	Pass	0.022

### LOCATION 53

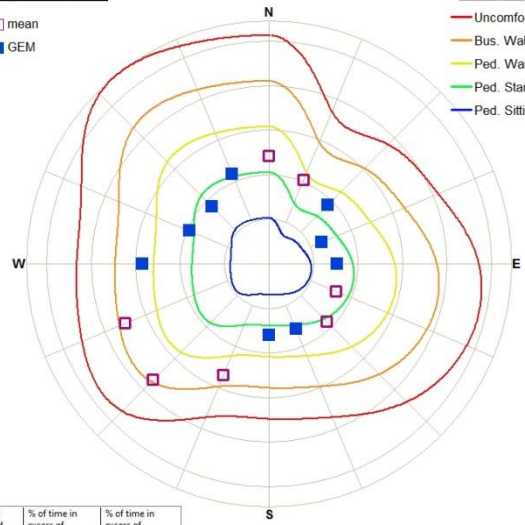
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	16.8	28.5
4.0	1.3	3.3
6.0	0.0	0.1
8.0	0.0	0.0
10.0	0.0	0.0
3.1	5.0	Ped Sitting
6.6	0.022	Pass
3.6	Ped Sitting	5.0
7.2	Pass	0.022

### LOCATION 54

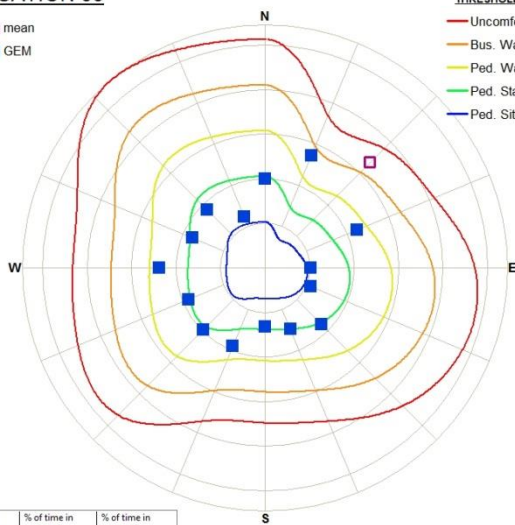
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	49.5	51.0
4.0	11.4	10.8
6.0	1.5	1.0
8.0	0.3	0.1
10.0	0.1	0.0
4.8	5.0	Ped Standing
10.9	0.022	Pass
4.7	Ped Standing	5.0
9.6	Pass	0.022

### LOCATION 55

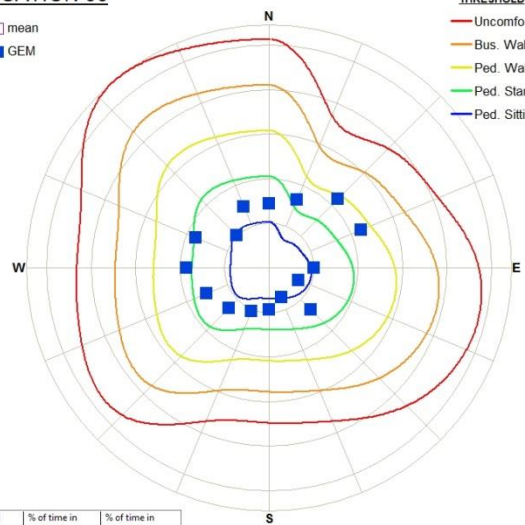
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	37.9	48.8
4.0	13.3	16.1
6.0	5.4	5.1
8.0	1.3	1.0
10.0	0.2	0.1
6.0	5.0	Ped Walking
11.5	0.022	Pass
6.0	Ped Standing	5.0
10.9	Pass	0.022

### LOCATION 56

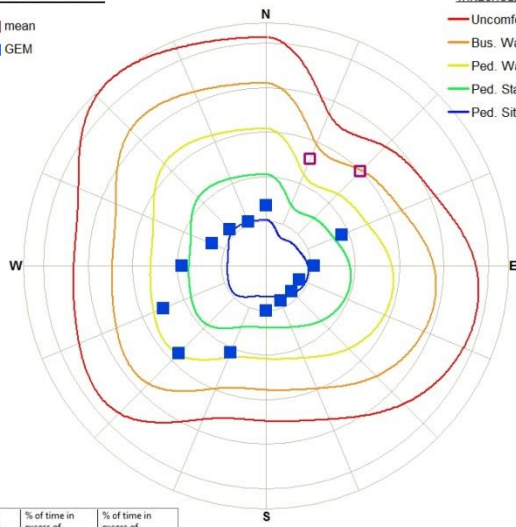
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	18.4	30.5
4.0	2.5	6.8
6.0	0.1	0.6
8.0	0.0	0.0
10.0	0.0	0.0
3.4	5.0	Ped Sitting
6.4	0.022	Pass
4.3	Ped Standing	5.0
7.6	Pass	0.022

### LOCATION 57

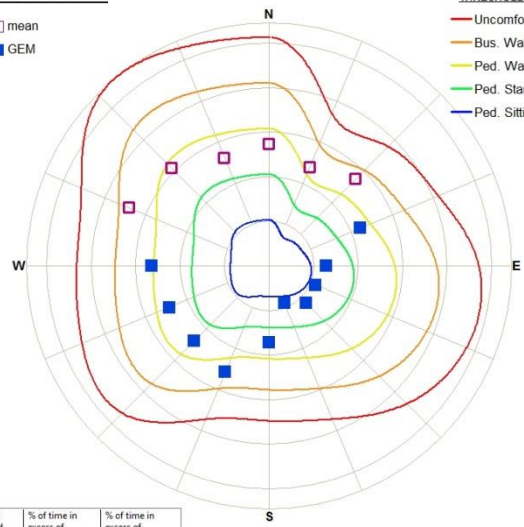
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	26.8	34.7
4.0	11.9	12.3
6.0	4.1	3.3
8.0	0.7	0.4
10.0	0.0	0.0
5.7	5.0	Ped Standing
10.4	0.022	Pass
5.4	Ped Standing	5.0
9.8	Pass	0.022

### LOCATION 58

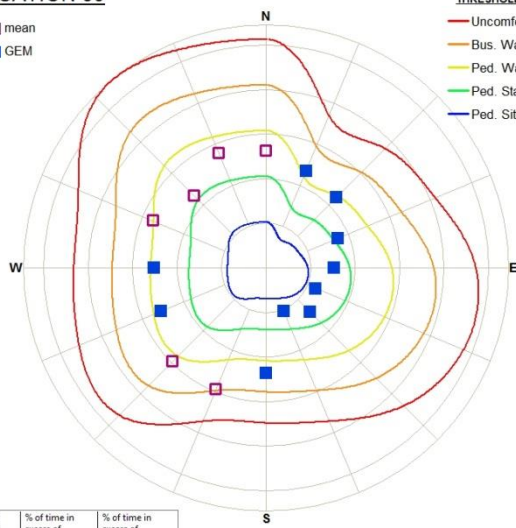
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	43.4	49.1
4.0	15.1	16.9
6.0	3.8	3.0
8.0	0.5	0.3
10.0	0.1	0.0
5.6	5.0	Ped Standing
11.0	0.022	Pass
5.4	Ped Standing	5.0
10.2	Pass	0.022

### LOCATION 59

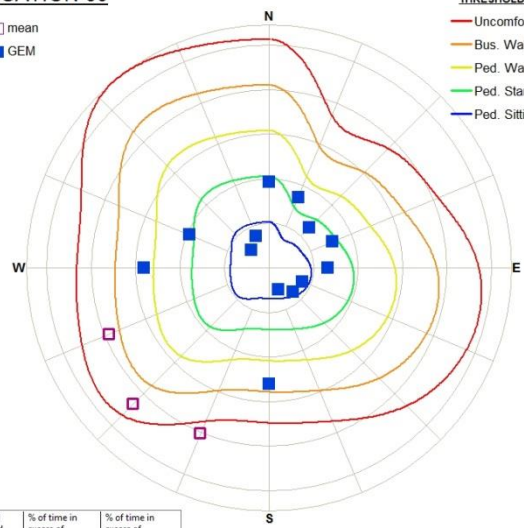
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	46.7	52.7
4.0	16.1	20.4
6.0	2.7	4.4
8.0	0.3	0.4
10.0	0.0	0.0
5.4	5.0	Ped Standing
11.0	0.022	Pass
5.8	Ped Standing	5.0
10.5	Pass	0.022

### LOCATION 60

□ mean  
■ GEM

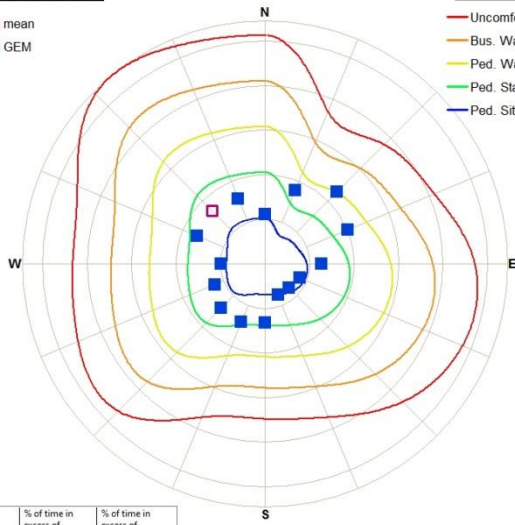


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	30.9	39.1
4.0	12.2	14.9
6.0	4.2	4.8
8.0	1.3	0.9
10.0	0.4	0.1
5.6	5.0	Ped Standing
14.9	0.022	Pass
5.9	Ped Standing	5.0
11.9	Pass	0.022



### LOCATION 61

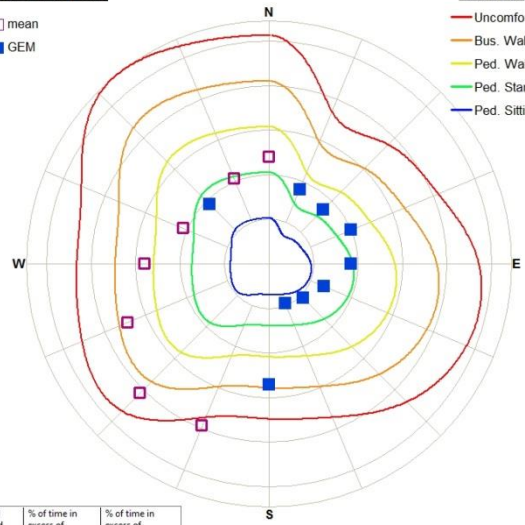
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	27.8	34.1
4.0	5.0	7.5
6.0	0.4	0.7
8.0	0.0	0.0
10.0	0.0	0.0
4.0	5.0	Ped Sitting
7.5	0.022	Pass
4.4	Ped Standing	5.0
7.9	Pass	0.022

### LOCATION 62

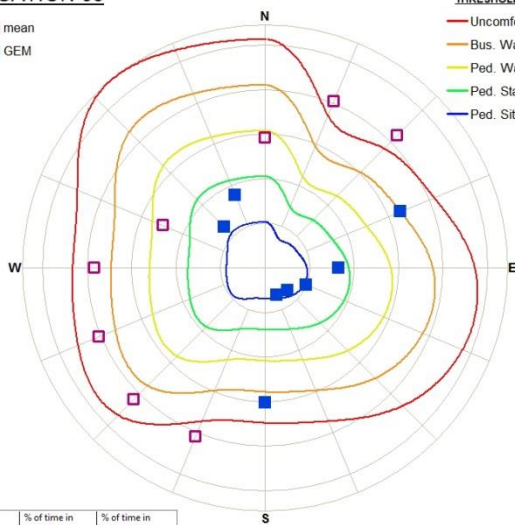
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	41.6	50.1
4.0	12.5	18.6
6.0	3.2	5.6
8.0	1.0	1.3
10.0	0.3	0.2
5.2	5.0	Ped Standing
14.1	0.022	Pass
6.1	Ped Walking	5.0
13.1	Pass	0.022

### LOCATION 63

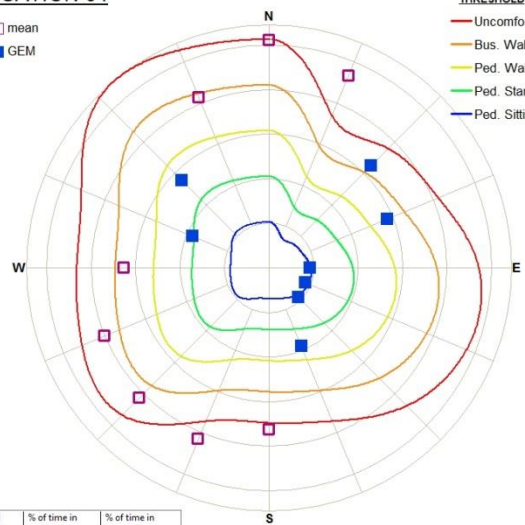
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	50.9	51.9
4.0	33.7	31.5
6.0	18.5	15.9
8.0	8.1	4.6
10.0	2.8	0.7
8.9	5.0	Bus Walking
16.0	0.022	Able Body
7.8	Ped Walking	5.0
13.1	Pass	0.022

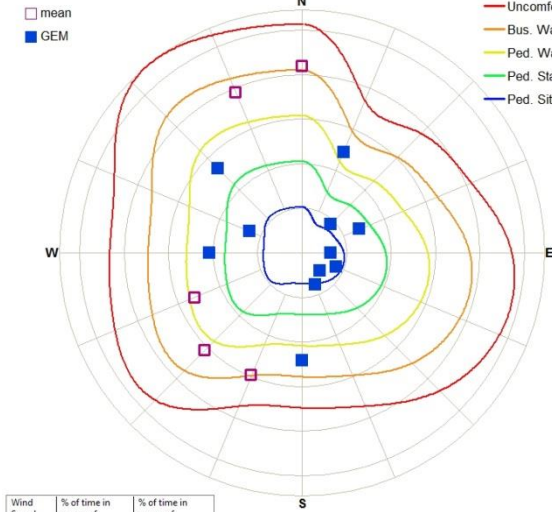
### LOCATION 64

□ mean  
■ GEM



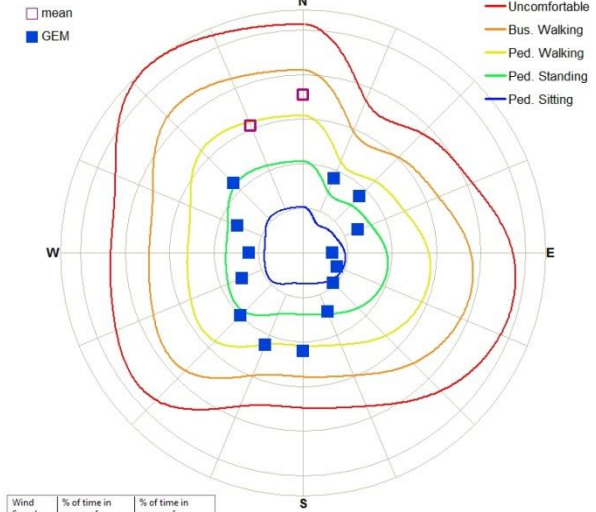
Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	54.7	58.3
4.0	31.3	35.0
6.0	18.7	16.9
8.0	9.7	5.8
10.0	3.9	1.6
9.4	5.0	Bus Walking
17.2	0.022	Able Body
8.2	Bus Walking	5.0
14.8	Pass	0.022

LOCATION 65



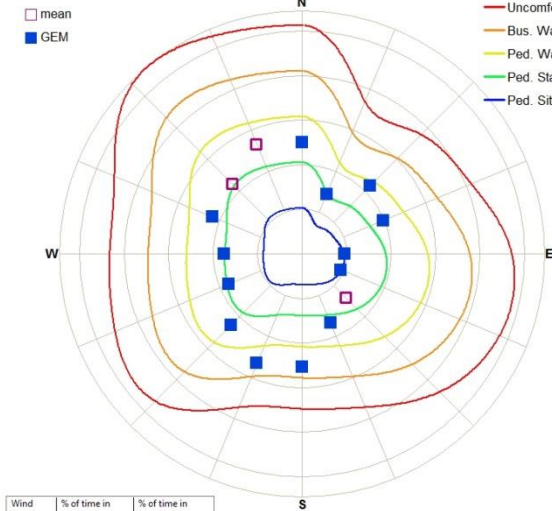
Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	31.4	38.6
4.0	14.2	17.0
6.0	4.3	4.4
8.0	0.9	0.5
10.0	0.2	0.0
5.8	5.0	Ped Standing
12.9	0.022	Pass
5.8	Ped Standing	5.0
10.8	Pass	0.022

LOCATION 66



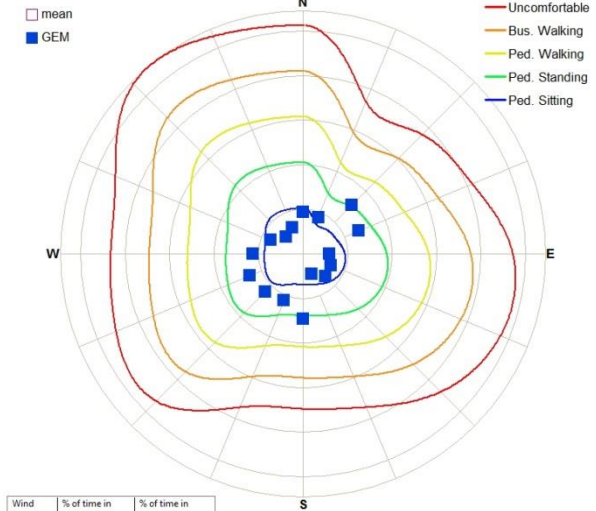
Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	34.2	45.1
4.0	8.2	14.0
6.0	1.3	2.1
8.0	0.2	0.2
10.0	0.0	0.0
4.5	5.0	Ped Standing
10.2	0.022	Pass
5.1	Ped Standing	5.0
10.2	Pass	0.022

LOCATION 67



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	41.4	49.9
4.0	11.5	18.1
6.0	2.3	3.9
8.0	0.2	0.5
10.0	0.0	0.0
5.1	5.0	Ped Standing
9.7	0.022	Pass
5.7	Ped Standing	5.0
10.5	Pass	0.022

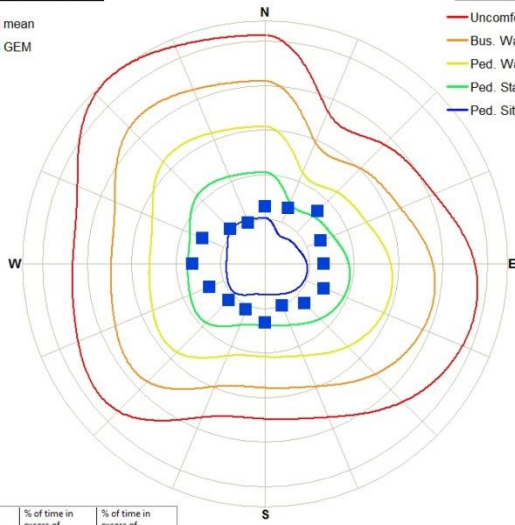
LOCATION 68



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	13.0	23.0
4.0	0.1	1.8
6.0	0.0	0.0
8.0	0.0	0.0
10.0	0.0	0.0
2.6	5.0	Ped Sitting
4.4	0.022	Pass
3.4	Ped Sitting	5.0
5.8	Pass	0.022

### LOCATION 69

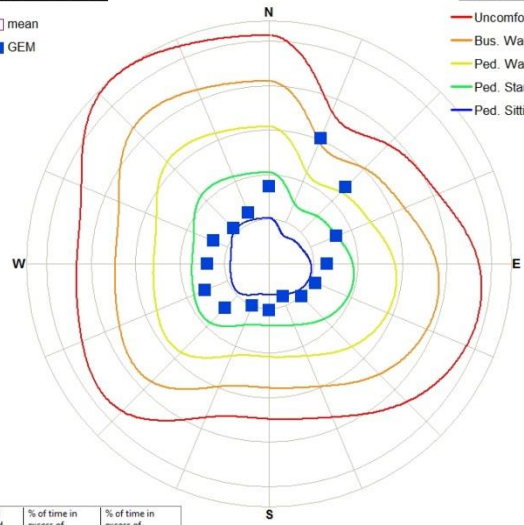
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	18.1	34.9
4.0	0.2	2.2
6.0	0.0	0.0
8.0	0.0	0.0
10.0	0.0	0.0
2.7	5.0	Ped Sitting
4.6	0.022	Pass
3.5	Ped Sitting	5.0
5.9	Pass	0.022

### LOCATION 70

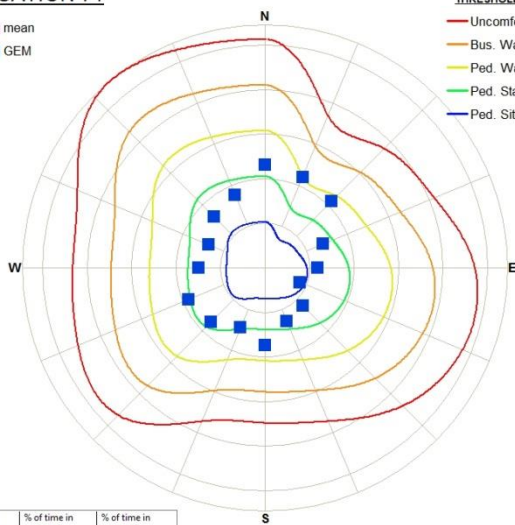
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	22.9	34.7
4.0	8.6	10.5
6.0	2.1	3.6
8.0	0.2	0.7
10.0	0.0	0.1
4.9	5.0	Ped Standing
9.0	0.022	Pass
5.4	Ped Standing	5.0
10.5	Pass	0.022

### LOCATION 71

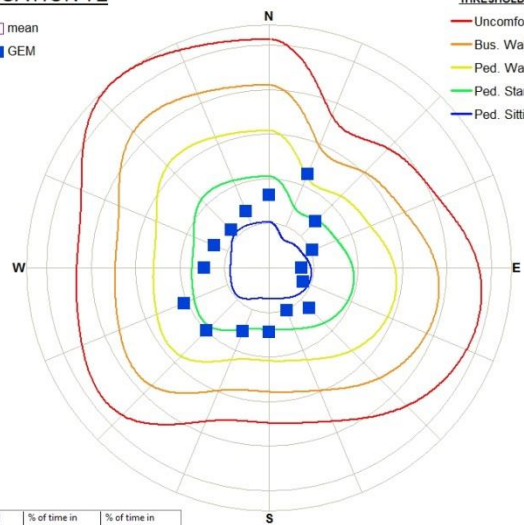
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	33.2	44.4
4.0	5.1	10.9
6.0	0.2	1.0
8.0	0.0	0.0
10.0	0.0	0.0
4.0	5.0	Ped Sitting
6.9	0.022	Pass
4.7	Ped Standing	5.0
8.0	Pass	0.022

### LOCATION 72

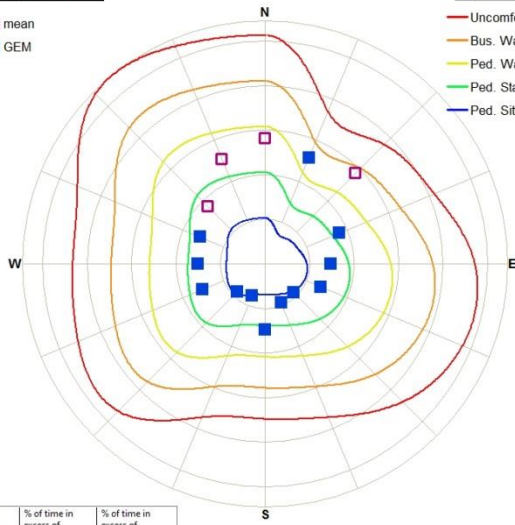
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	21.3	36.2
4.0	2.5	5.9
6.0	0.1	0.7
8.0	0.0	0.0
10.0	0.0	0.0
3.3	5.0	Ped Sitting
6.7	0.022	Pass
4.1	Ped Standing	5.0
7.9	Pass	0.022

### LOCATION 74

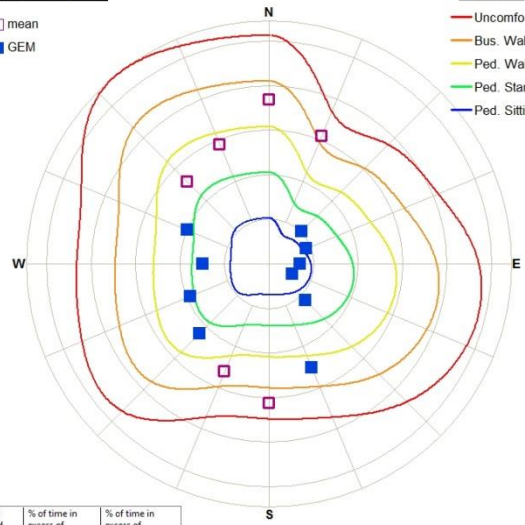
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	31.4	42.7
4.0	10.9	13.3
6.0	3.2	3.7
8.0	0.4	0.5
10.0	0.0	0.0
5.3	5.0	Ped Standing
10.0	0.022	Pass
5.5	Ped Standing	5.0
10.0	Pass	0.022

### LOCATION 75

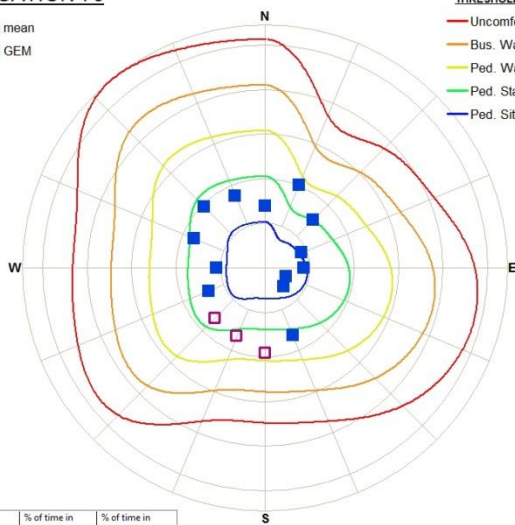
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	41.9	46.2
4.0	24.4	23.1
6.0	10.7	8.5
8.0	2.9	1.7
10.0	0.4	0.2
7.2	5.0	Ped Walking
12.3	0.022	Pass
6.7	Ped Walking	5.0
11.6	Pass	0.022

### LOCATION 76

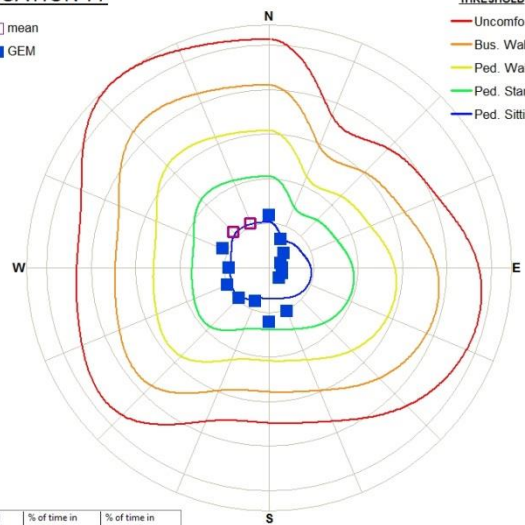
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	31.1	37.1
4.0	6.0	8.5
6.0	0.4	0.5
8.0	0.0	0.0
10.0	0.0	0.0
4.1	5.0	Ped Standing
7.5	0.022	Pass
4.4	Ped Standing	5.0
7.6	Pass	0.022

### LOCATION 77

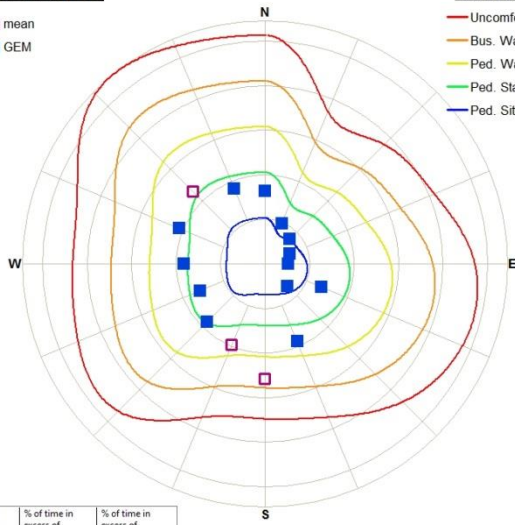
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	5.7	13.0
4.0	0.0	0.2
6.0	0.0	0.0
8.0	0.0	0.0
10.0	0.0	0.0
2.1	5.0	Ped Sitting
3.8	0.022	Pass
2.6	Ped Sitting	5.0
4.8	Pass	0.022

### LOCATION 78

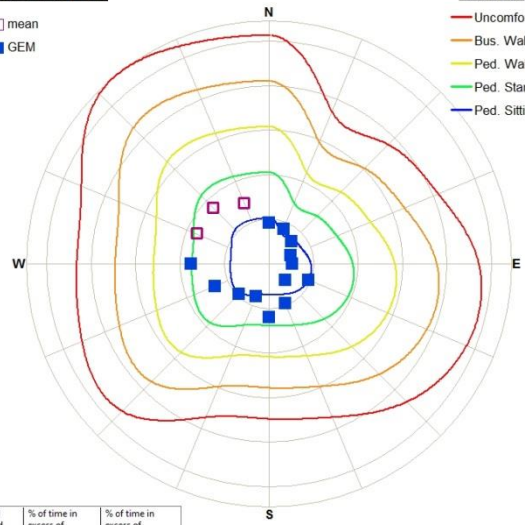
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	25.3	32.0
4.0	10.7	11.5
6.0	3.1	2.4
8.0	0.5	0.2
10.0	0.0	0.0
5.3	5.0	Ped Standing
10.1	0.022	Pass
5.1	Ped Standing	5.0
9.5	Pass	0.022

### LOCATION 79

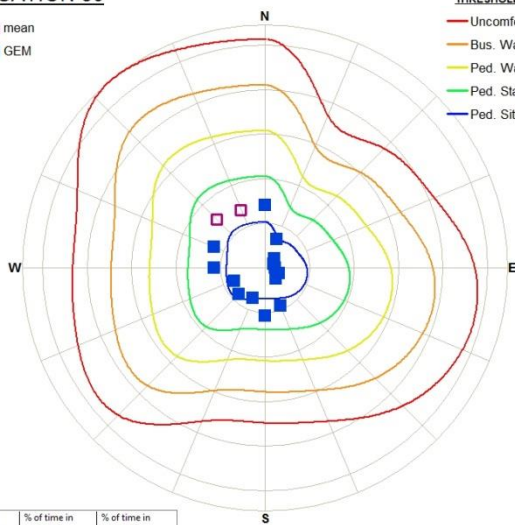
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	5.2	14.8
4.0	0.2	0.5
6.0	0.0	0.0
8.0	0.0	0.0
10.0	0.0	0.0
2.0	5.0	Ped Sitting
5.6	0.022	Pass
2.7	Ped Sitting	5.0
5.6	Pass	0.022

### LOCATION 80

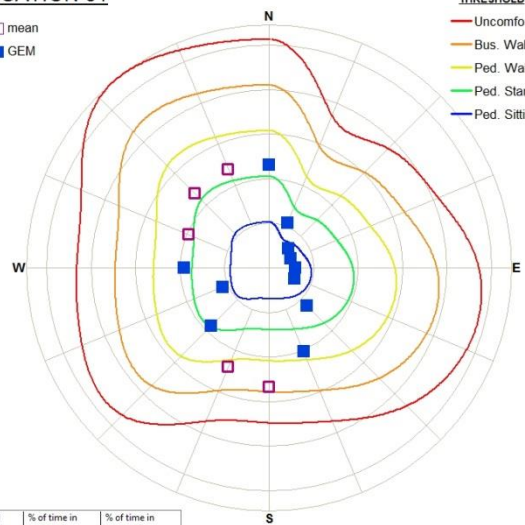
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	5.1	10.8
4.0	0.1	0.1
6.0	0.0	0.0
8.0	0.0	0.0
10.0	0.0	0.0
2.0	5.0	Outdoor Dining
4.6	0.022	Pass
2.4	Ped Sitting	5.0
4.5	Pass	0.022

### LOCATION 81

□ mean  
■ GEM

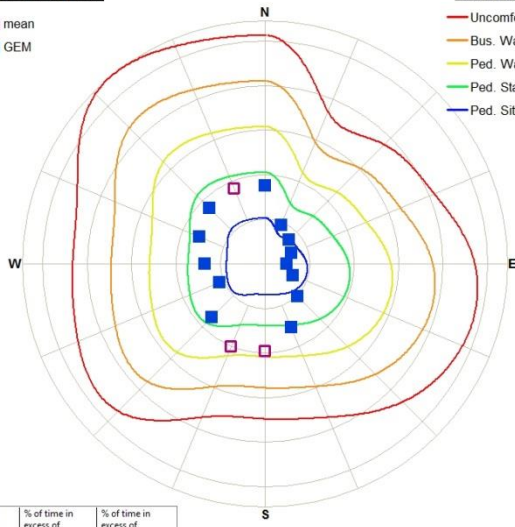


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	30.4	33.9
4.0	13.0	12.6
6.0	3.9	2.3
8.0	0.7	0.2
10.0	0.1	0.0
5.6	5.0	Ped Standing
10.7	0.022	Pass
5.2	Ped Standing	5.0
9.5	Pass	0.022



### LOCATION 82

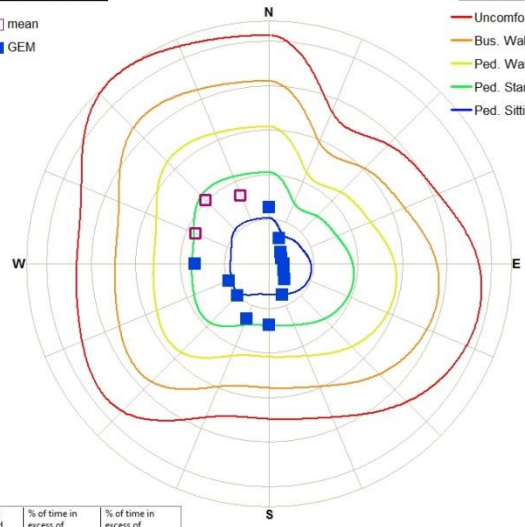
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	23.5	27.6
4.0	6.3	5.3
6.0	0.6	0.3
8.0	0.0	0.0
10.0	0.0	0.0
4.2	5.0	Ped Standing
8.0	0.022	Pass
4.0	Ped Standing	5.0
7.4	Pass	0.022

### LOCATION 83

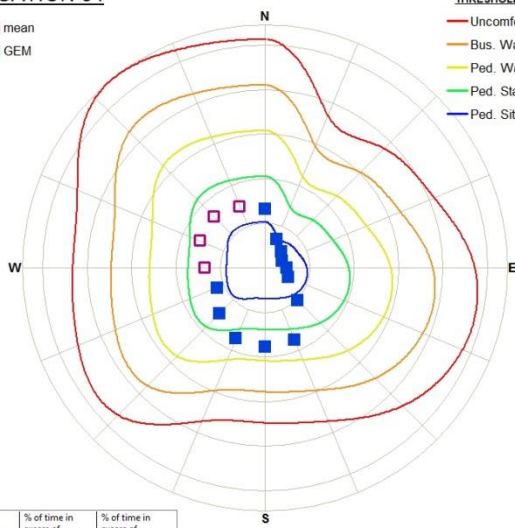
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	5.9	14.7
4.0	0.4	1.0
6.0	0.0	0.0
8.0	0.0	0.0
10.0	0.0	0.0
2.1	5.0	Ped Sitting
6.0	0.022	Pass
3.0	Ped Sitting	5.0
5.8	Pass	0.022

### LOCATION 84

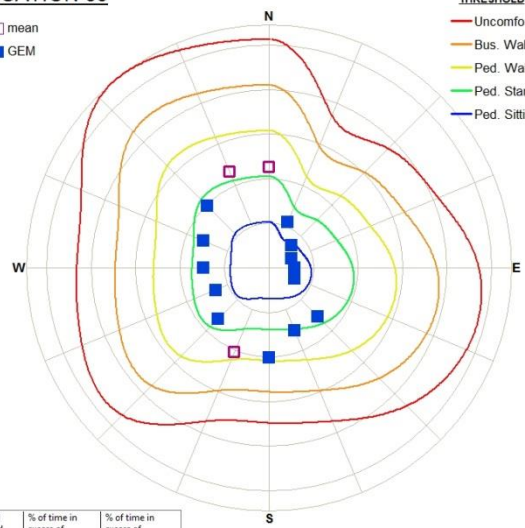
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	18.7	24.2
4.0	1.6	5.1
6.0	0.0	0.2
8.0	0.0	0.0
10.0	0.0	0.0
3.2	5.0	Ped Sitting
6.1	0.022	Pass
4.0	Ped Sitting	5.0
7.2	Pass	0.022

### LOCATION 85

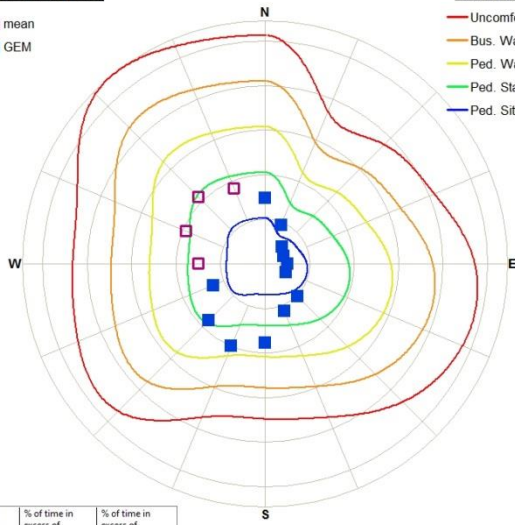
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	25.9	33.0
4.0	4.8	7.7
6.0	0.3	0.8
8.0	0.0	0.0
10.0	0.0	0.0
3.9	5.0	Ped Sitting
8.0	0.022	Pass
4.4	Ped Standing	5.0
8.2	Pass	0.022

### LOCATION 86

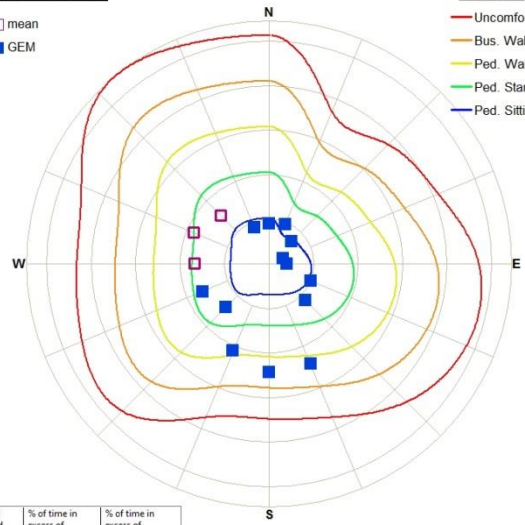
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	16.7	24.6
4.0	1.5	4.5
6.0	0.1	0.3
8.0	0.0	0.0
10.0	0.0	0.0
3.1	5.0	Ped Sitting
7.0	0.022	Pass
3.9	Ped Sitting	5.0
7.5	Pass	0.022

### LOCATION 87

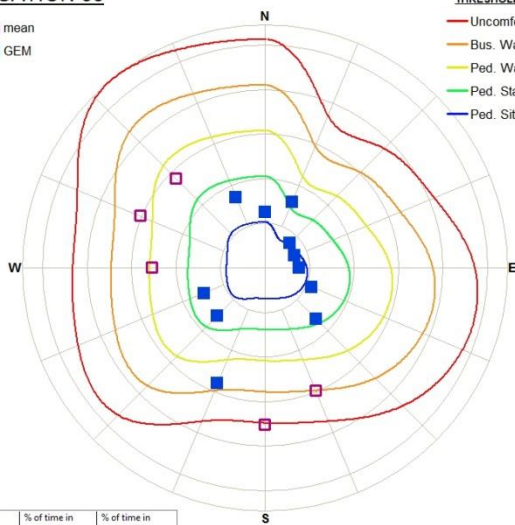
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	24.9	30.5
4.0	11.1	13.1
6.0	1.9	3.1
8.0	0.1	0.3
10.0	0.0	0.0
5.0	5.0	Ped Standing
8.9	0.022	Pass
5.4	Ped Standing	5.0
9.8	Pass	0.022

### LOCATION 88

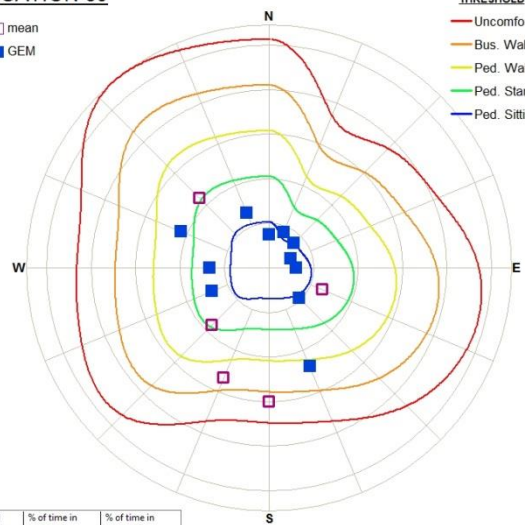
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	34.5	40.9
4.0	19.8	19.8
6.0	11.0	9.0
8.0	3.9	2.3
10.0	1.0	0.4
7.5	5.0	Ped Walking
13.8	0.022	Pass
6.9	Ped Walking	5.0
12.5	Pass	0.022

### LOCATION 89

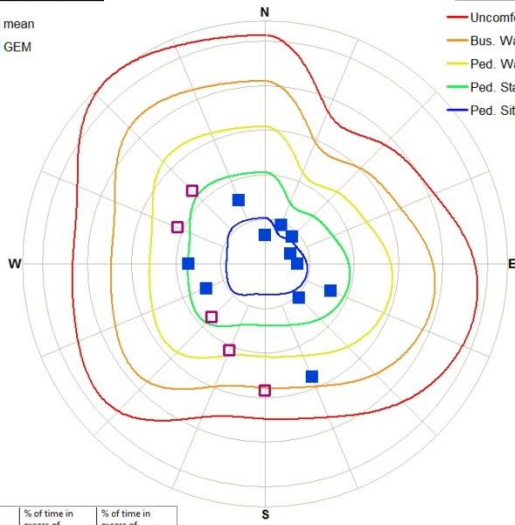
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	28.1	30.7
4.0	15.3	14.3
6.0	6.1	4.0
8.0	1.5	0.5
10.0	0.2	0.0
6.2	5.0	Ped Walking
11.9	0.022	Pass
5.7	Ped Standing	5.0
10.4	Pass	0.022

### LOCATION 90

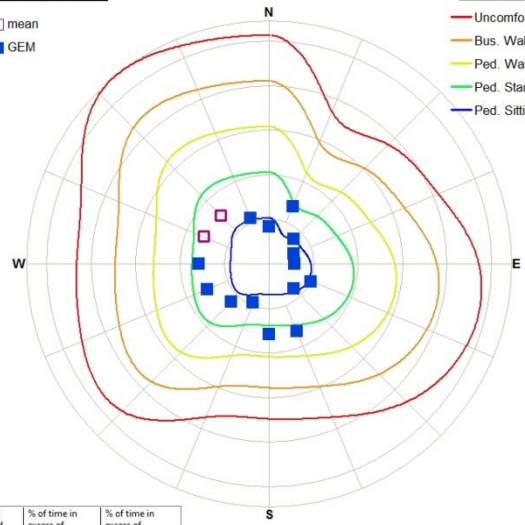
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	30.4	33.5
4.0	15.1	14.2
6.0	5.3	4.1
8.0	1.1	0.5
10.0	0.1	0.0
6.0	5.0	Ped Walking
11.2	0.022	Pass
5.7	Ped Standing	5.0
10.2	Pass	0.022

### LOCATION 91

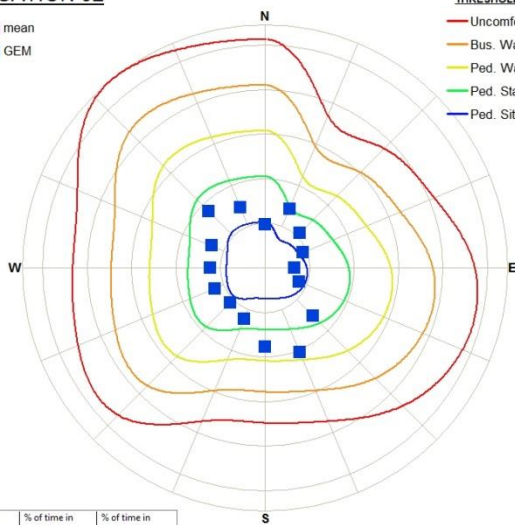
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	10.1	25.7
4.0	0.2	3.3
6.0	0.0	0.1
8.0	0.0	0.0
10.0	0.0	0.0
2.4	5.0	Ped Sitting
5.1	0.022	Pass
3.7	Ped Sitting	5.0
6.3	Pass	0.022

### LOCATION 92

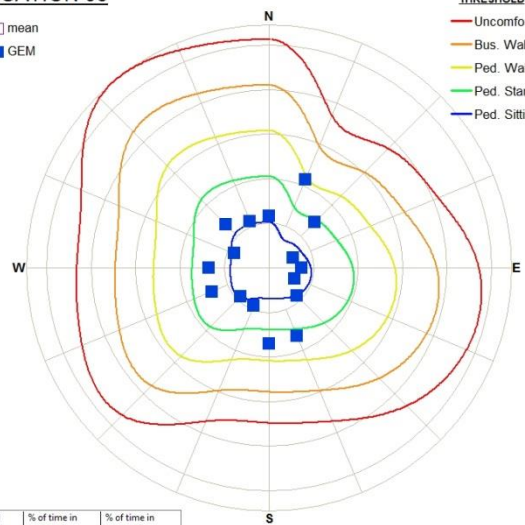
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	25.0	34.9
4.0	1.1	6.5
6.0	0.0	0.4
8.0	0.0	0.0
10.0	0.0	0.0
3.2	5.0	Ped Sitting
5.7	0.022	Pass
4.2	Ped Standing	5.0
7.5	Pass	0.022

### LOCATION 93

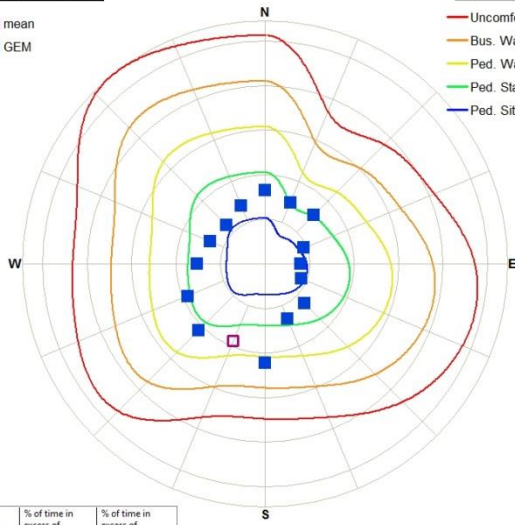
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	22.7	33.3
4.0	2.9	7.2
6.0	0.2	0.5
8.0	0.0	0.0
10.0	0.0	0.0
3.5	5.0	Ped Sitting
6.8	0.022	Pass
4.3	Ped Standing	5.0
7.5	Pass	0.022

### LOCATION 94

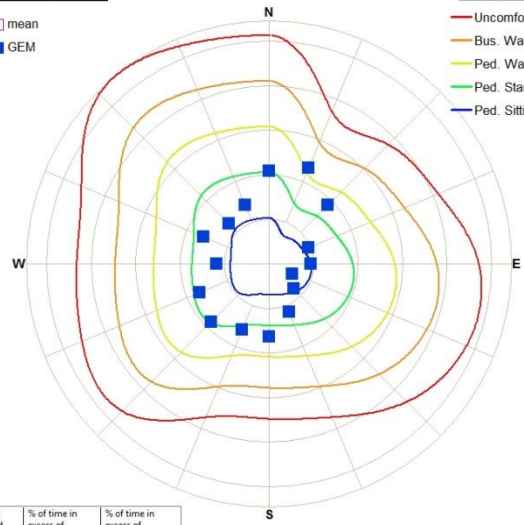
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	27.5	39.0
4.0	3.5	9.2
6.0	0.2	1.3
8.0	0.0	0.1
10.0	0.0	0.0
3.7	5.0	Ped Sitting
7.2	0.022	Pass
4.7	Ped Standing	5.0
8.7	Pass	0.022

### LOCATION 95

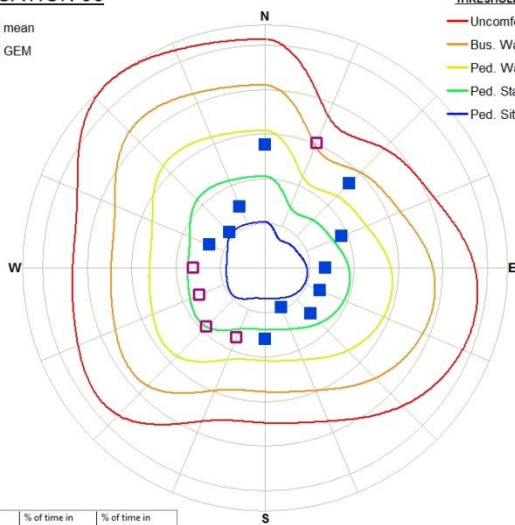
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	21.0	38.0
4.0	2.7	9.1
6.0	0.2	1.0
8.0	0.0	0.0
10.0	0.0	0.0
3.4	5.0	Ped Sitting
6.8	0.022	Pass
4.6	Ped Standing	5.0
8.1	Pass	0.022

### LOCATION 96

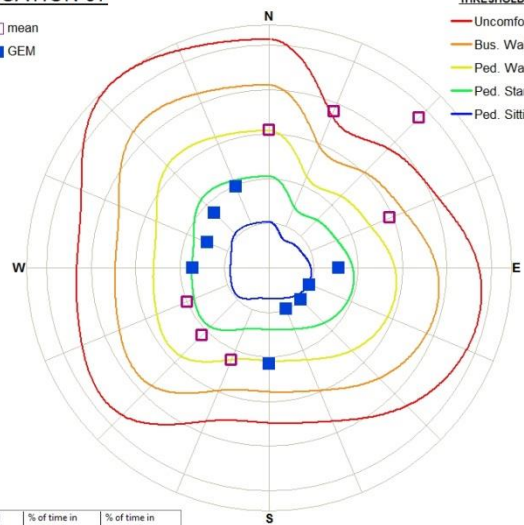
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	38.9	47.6
4.0	11.8	15.0
6.0	3.7	4.3
8.0	0.7	0.7
10.0	0.1	0.0
5.5	5.0	Ped Standing
10.5	0.022	Pass
5.7	Ped Standing	5.0
10.4	Pass	0.022

### LOCATION 97

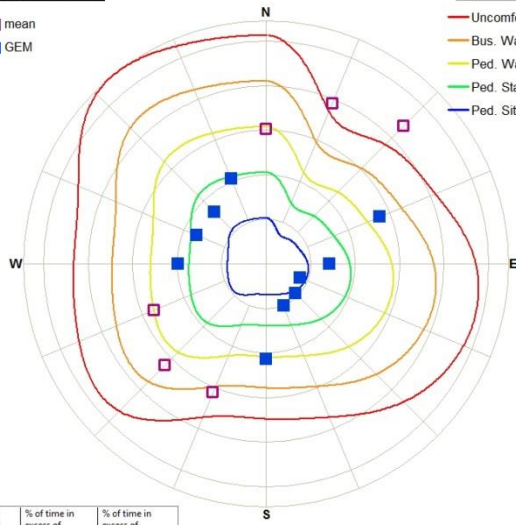
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	48.0	51.0
4.0	25.5	24.3
6.0	12.8	9.1
8.0	6.5	2.5
10.0	2.9	0.4
8.6	5.0	Bus Walking
16.5	0.022	Able Body
6.9	Ped Walking	5.0
12.6	Pass	0.022

### LOCATION 98

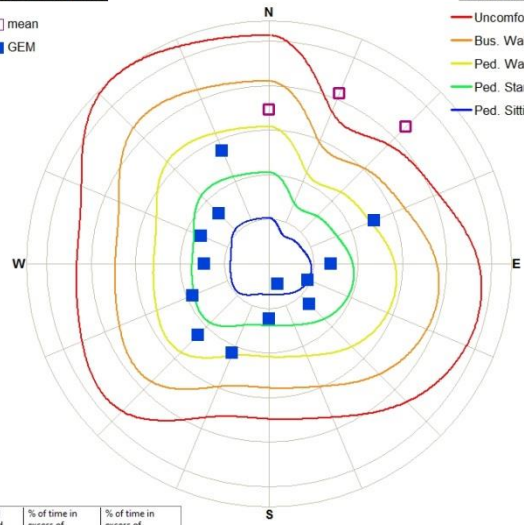
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	48.0	51.3
4.0	25.1	25.6
6.0	12.6	10.1
8.0	6.2	3.0
10.0	2.3	0.5
8.4	5.0	Bus Walking
15.3	0.022	Able Body
7.1	Ped Walking	5.0
12.6	Pass	0.022

### LOCATION 99

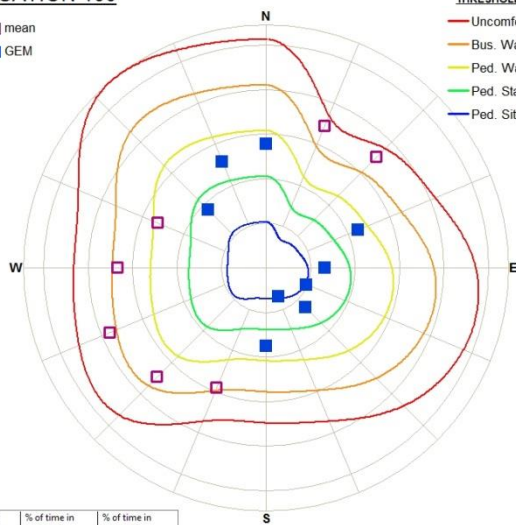
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	38.7	45.1
4.0	20.2	18.1
6.0	11.7	7.9
8.0	6.4	2.3
10.0	2.5	0.4
8.5	5.0	Bus Walking
15.5	0.022	Able Body
6.8	Ped Walking	5.0
12.2	Pass	0.022

### LOCATION 100

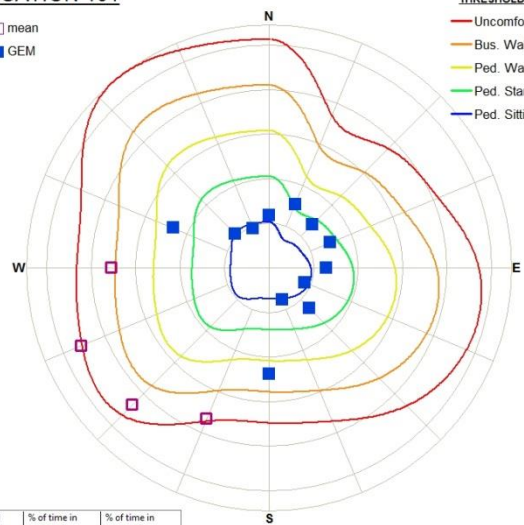
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	45.3	49.7
4.0	19.6	20.8
6.0	9.8	6.5
8.0	3.4	1.2
10.0	0.7	0.1
7.3	5.0	Ped Walking
13.3	0.022	Pass
6.3	Ped Walking	5.0
11.3	Pass	0.022

### LOCATION 101

□ mean  
■ GEM

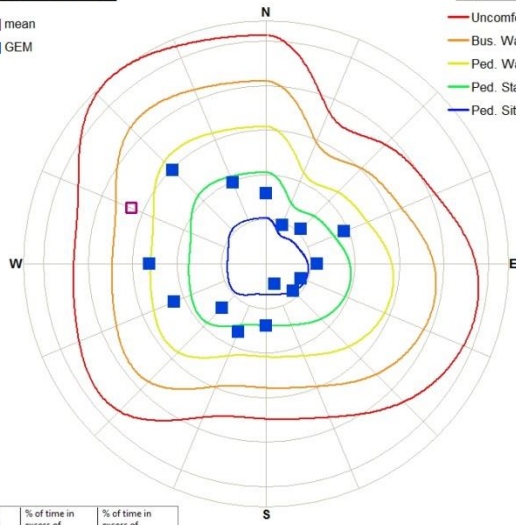


Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	31.7	40.6
4.0	8.1	13.3
6.0	2.9	3.9
8.0	1.2	0.8
10.0	0.4	0.1
4.8	5.0	Ped Standing
14.2	0.022	Pass
5.6	Ped Standing	5.0
11.9	Pass	0.022



### LOCATION 102

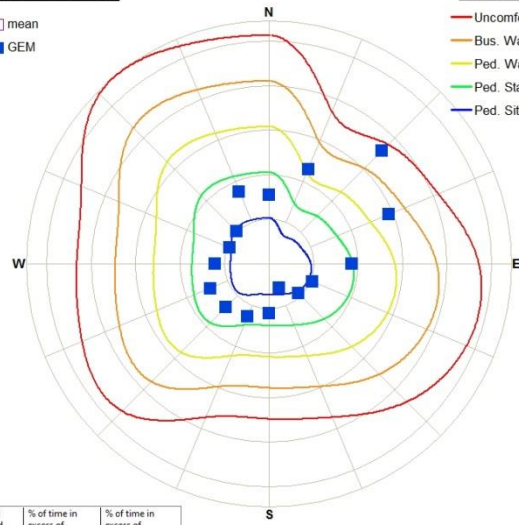
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	16.8	29.5
4.0	1.6	3.8
6.0	0.4	0.5
8.0	0.1	0.1
10.0	0.0	0.0
3.0	5.0	Ped Sitting
9.9	0.022	Pass
3.7	Ped Sitting	5.0
9.5	Pass	0.022

### LOCATION 103

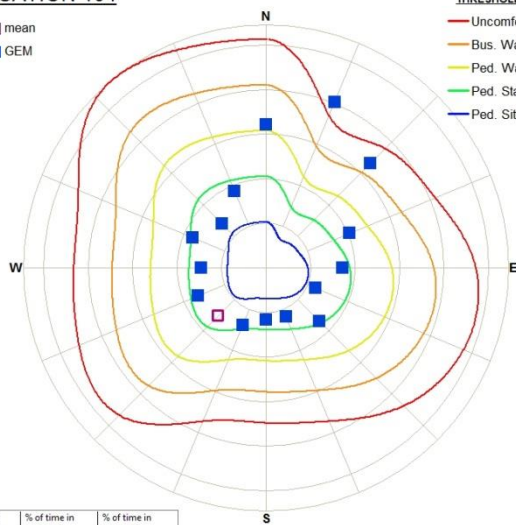
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	28.7	37.6
4.0	9.4	14.0
6.0	2.7	5.9
8.0	0.4	1.7
10.0	0.0	0.3
5.1	5.0	Ped Standing
10.0	0.022	Pass
6.2	Ped Walking	5.0
12.4	Pass	0.022

### LOCATION 104

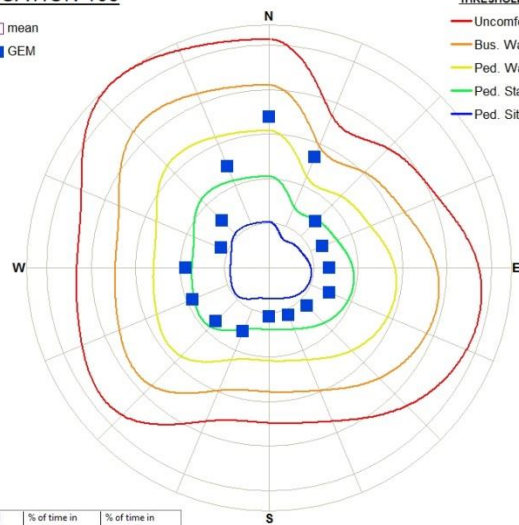
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	35.7	49.1
4.0	14.2	17.2
6.0	6.9	8.8
8.0	2.5	3.7
10.0	0.7	1.1
6.6	5.0	Ped Walking
13.1	0.022	Pass
7.3	Ped Walking	5.0
14.0	Pass	0.022

### LOCATION 105

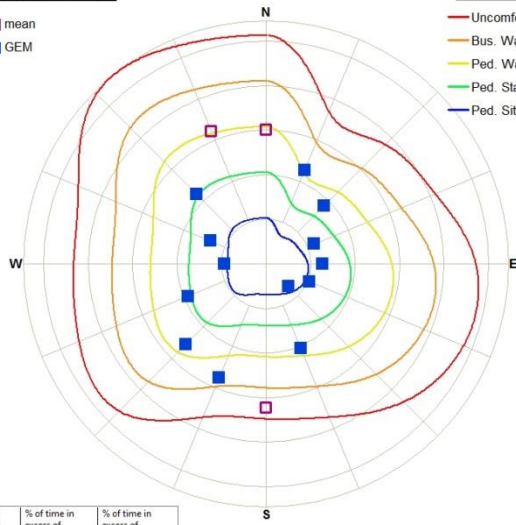
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	27.8	41.0
4.0	4.5	7.9
6.0	0.6	2.2
8.0	0.1	0.3
10.0	0.0	0.0
3.8	5.0	Ped Sitting
8.7	0.022	Pass
4.7	Ped Standing	5.0
10.0	Pass	0.022

### LOCATION 106

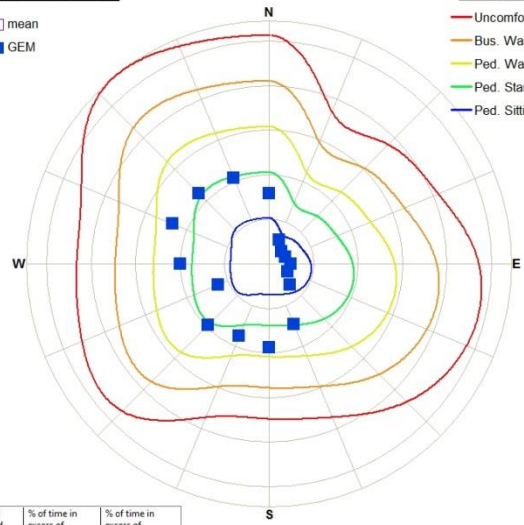
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	44.0	49.9
4.0	19.4	22.4
6.0	7.6	7.3
8.0	2.3	1.6
10.0	0.5	0.2
6.7	5.0	Ped Walking
12.7	0.022	Pass
6.5	Ped Walking	5.0
12.1	Pass	0.022

### LOCATION 107

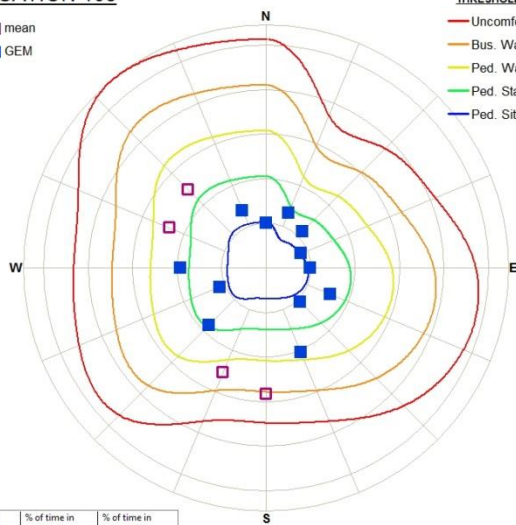
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	19.1	25.1
4.0	4.0	6.2
6.0	0.2	0.5
8.0	0.0	0.0
10.0	0.0	0.0
3.7	5.0	Ped Sitting
7.2	0.022	Pass
4.2	Ped Standing	5.0
8.0	Pass	0.022

### LOCATION 108

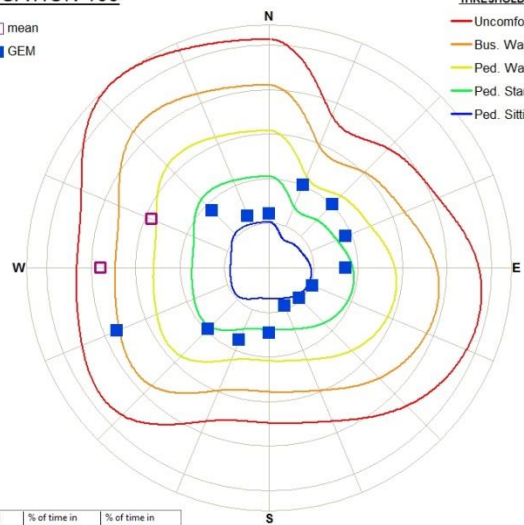
□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	35.0	39.0
4.0	14.3	12.3
6.0	4.9	2.3
8.0	1.0	0.2
10.0	0.1	0.0
5.9	5.0	Ped Standing
11.2	0.022	Pass
5.2	Ped Standing	5.0
9.5	Pass	0.022

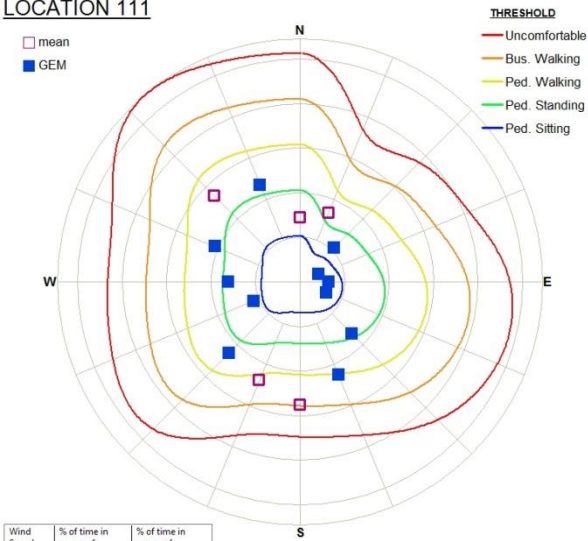
### LOCATION 109

□ mean  
■ GEM



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	32.2	42.1
4.0	6.3	9.9
6.0	1.0	1.3
8.0	0.3	0.3
10.0	0.1	0.0
4.2	5.0	Ped Standing
11.6	0.022	Pass
4.6	Ped Standing	5.0
10.6	Pass	0.022

LOCATION 111



Wind Speed (m/s)	% of time in excess of Mean	% of time in excess of GEM
2.0	35.0	38.7
4.0	12.9	12.4
6.0	3.9	2.8
8.0	0.8	0.4
10.0	0.1	0.0
5.6	5.0	Ped Standing
11.5	0.022	Pass
5.3	Ped Standing	5.0
10.8	Pass	0.022