

BLUEMONT ELMFIELD

CLONDALKIN, IRELAND

PEDESTRIAN LEVEL WIND DESK-BASED ASSESSMENT

RWDI #2601269

8TH JUNE 2026

SUBMITTED TO

Bluemont

SUBMITTED BY

RWDI



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VERSION HISTORY

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	TV	

1 EXECUTIVE SUMMARY

This is a qualitative assessment of the likely wind conditions around the proposed Bluemont Elmfield development in Clondalkin, Ireland. The report outlines the overall methodology and the use of the Lawson Comfort Criteria to describe the expected on-Site wind conditions. The assessment is based upon analysis of meteorological conditions for Dublin, adjusted to the Site, and a review of the scheme drawings in the context of the meteorological data and surrounding area in combination with RWDI's extensive experience in wind flow in the urban environment.

The meteorological data for the Site indicates prevailing winds predominantly from the west and south-west throughout the year, with secondary winds from the south-east. Winds from other directions do occur, and are considered within the assessment; however, their impact on the overall wind microclimate conditions tends to be low, due to being relatively infrequent (compared to the prevailing directions).

A review of the baseline meteorological data for the Site with the existing building and surrounding context indicates that wind conditions at the existing Site are expected to be acceptable for the current uses throughout the year with no safety exceedances.

With the introduction of the Proposed Development (and no landscaping), wind conditions would generally become windier when compared to the existing Site conditions. There would be thoroughfares, entrances, a ground level seating area and balconies with windier than suitable conditions. Strong wind exceedances would also be anticipated to occur at the windy thoroughfares and at balconies, posing safety concerns for pedestrians/occupants.

With the inclusion of the proposed landscaping, there would be a slight improvement to the wind conditions. However, due to the lack of landscaping at the windiest areas and exposure to the stronger winds at higher levels, the following areas would be anticipated to have wind conditions windier than suitable/unsafe for pedestrian use:

- Pedestrian thoroughfares at the southern corners of Blocks 3A, 3B, 4A and 4B;
- Entrance to Block 3A at the north-west corner;
- Entrance to Block 4B at the north-east corner;
- Ground level private amenity spaces at the southern corners of Blocks 3A, 3B, and 4B;
- Level 1 balcony at the southeastern corner of Block 4A;
- Levels 5-8 balconies at the south-west and south-east corners of Block 1;
- Level 4 balconies at the south-west and south-east corners of Block 3A;
- Level 4 balconies at the north-west, south-west and south-east corners of Block 4B; and
- Accessible terrace of Block 2B.

These areas would benefit from the wind mitigation measures discussed in Section 8. With the implementation of the above mitigation, wind conditions would be expected to improve such that they would be suitable for the intended uses. It is recommended that the final landscaping and wind mitigation measures are reviewed by a qualified wind engineer to ensure that wind conditions around the Proposed Development would be suitable safe for occupant use.

2 INTRODUCTION

RWDI was commissioned by Bluemont to conduct a desk-based assessment of the proposed Bluemont Elmfield development (hereafter referred to as the 'Proposed Development'), in Clondalkin, Ireland. This report presents the background, objectives, results and recommendations from RWDI's assessment. A summary of the overall recommendations from the study are presented in Section 9, "Concluding Remarks".

3 SITE DESCRIPTION

3.1 Site and Surroundings

The Site is located in Clondalkin, Ireland. The Site is bound by existing low-rise commercial and industrial developments to the north, south and west with the low-rise residential buildings to the east.

The terrain surrounding the Site is predominantly suburban in nature, with open fields further afield in the surrounding area. Due to the low-rise nature of the surrounding development, winds approaching the Site would have a relatively high mean wind speed with low turbulence, as opposed to a more urban terrain which would have a lower mean wind speed and relatively higher turbulence.

Figure 1 below shows an aerial view of the existing Site and surrounding buildings.



Figure 1: Aerial photograph of the existing Site (approximate extent of the Site highlighted in yellow)

3.2 The Proposed Development

Thornmeadow Developments Limited intend to apply for permission for a Large-Scale Residential Development on lands at the Securispeed Logistics site, Elmfield, Ninth Lock Road, Clondalkin, Dublin 22. The Proposed Development will consist of the demolition of the existing warehouses and structures on site and the construction of a mixed-use residential-led development. The residential units will comprise a mixture of apartments and own-door houses and range in height from 2-9 storeys. The Proposed Development will also comprise all associated car parking, cycle parking, refuse and storage areas, plant, landscaping, open space, boundary treatment, public lighting, ESB substations, and site and infrastructural works necessary to facilitate the Proposed Development.

Amenity spaces would be provided at ground level within the courtyard spaces of the Blocks 2A-2B, 3A-3B and within level 1 courtyard of Blocks 4A-4B. All Blocks would also include private balcony amenity spaces at all levels.

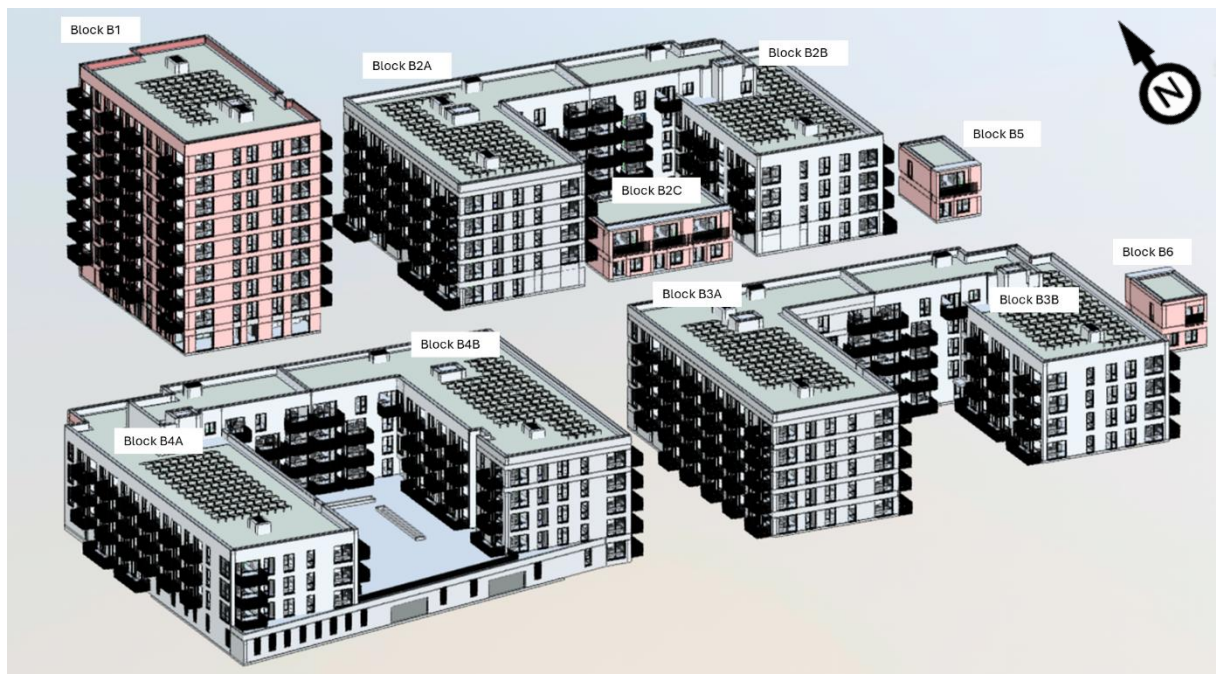


Figure 2: 3D model of the Proposed Development

4 METHODOLOGY AND ASSESSMENT CRITERIA

The wind conditions at the Proposed Development have been qualitatively assessed based on the meteorological data for the area, a terrain assessment, and RWDI extensive experience of wind flow in the urban environment.

Knowledge of the prevailing wind direction focuses attention on the likely impact of these winds on the Site except where the proposed building massing/layout indicates that winds from other directions are likely to be important.

4.1 General Meteorological Data

Meteorological data for Dublin derived from the meteorological station at Dublin Airport in combination with roughness values to take into account the surrounding terrain have been corrected to 2m and 10m above ground.

Wind statistics recorded at Dublin Airport between 1973 and 2020 were analysed for four seasons. The assessment presented in this report focusses on the windiest season, representing a 'worst-case' season for windy conditions, and a summer season (representing a time of the year when amenity spaces are expected to be usable between June and August). Figure 3 graphically depicts the distribution of wind frequency and directionality annually.

The meteorological data indicate that the prevailing wind direction throughout the year is from the west and south-west with a secondary peak from south-easterly winds. Based on the background wind climate, Dublin is a relatively windy city (by comparison with other large cities, such as London) prior to any further wind-building interactions that may occur.

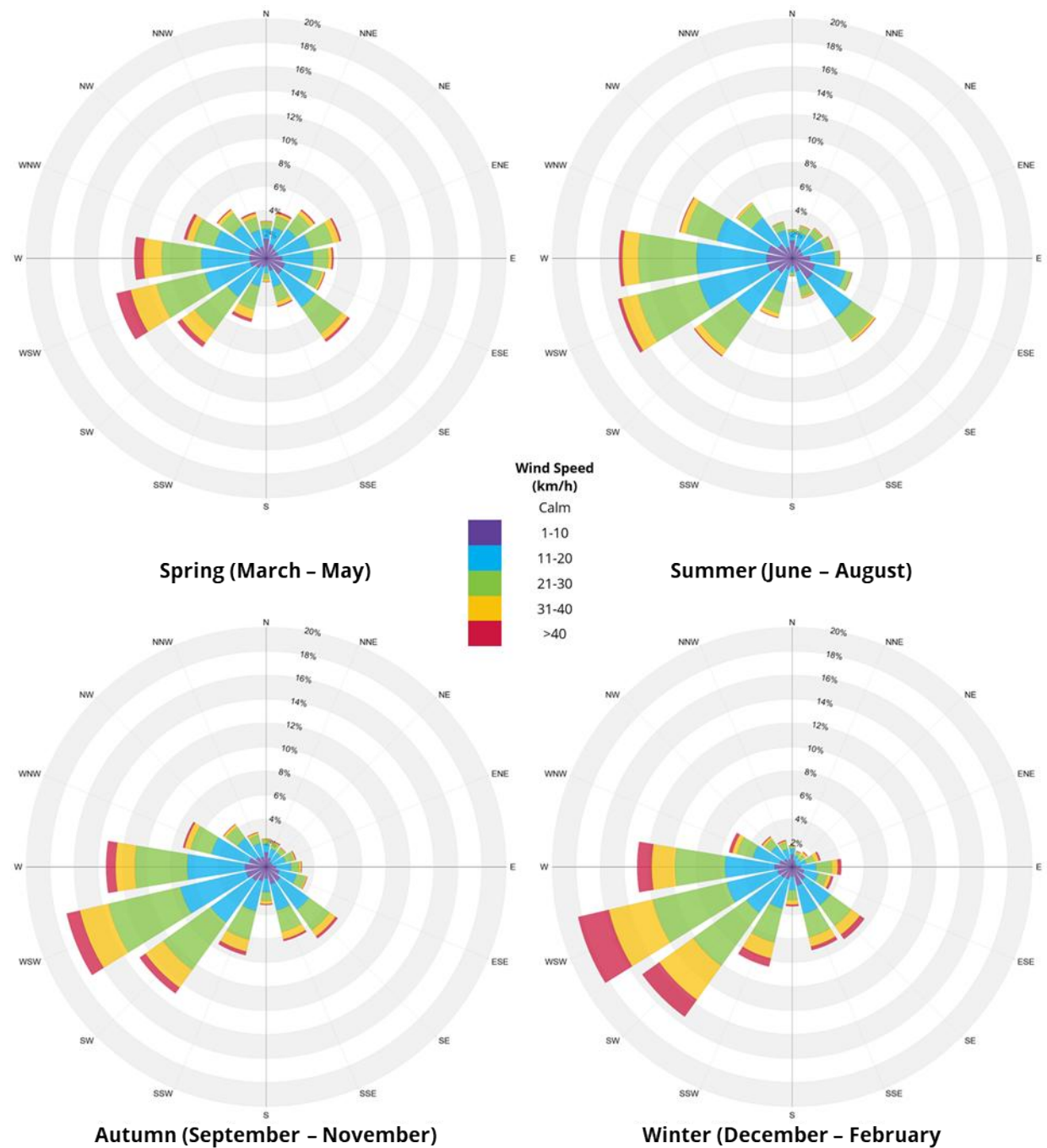


Figure 3: Seasonal wind roses from Dublin Airport (in km/h) – (Radial axis indicates the percentage of time for which the stated threshold is exceeded)



4.2 Terrain Roughness

Another consideration is the terrain roughness in each wind direction because wide, open spaces permit the wind to flow smoothly at ground level generating conditions similar to those of open countryside even within a built-up area. An assessment of the terrain roughness for the Site was conducted using the methodology implemented in ESDU 01008¹ which models the wind characteristics caused by changes in the terrain roughness.

Mean factors for the Site are presented in Appendix Table 2, where the mean factor represents the ratio of wind speed on site, at the stated reference height, as a fraction of the wind speed in open, flat countryside at a height of 2m and 10m.

4.3 Comfort Criteria

The assessment of the wind conditions requires a standard against which the measurements can be compared. This report uses the Lawson Comfort Criteria, which have been established for over thirty years. The Criteria, which seek to define the reaction of an average pedestrian to the wind, are described in Table 1. If the measured wind conditions exceed the threshold wind speed for more than 5% of the time, then they are unacceptable for the stated pedestrian activity and the expectation is that there may be complaints of nuisance or people will not use the area for its intended purpose.

The Criteria set out four pedestrian activities and reflect the fact that less active pursuits require more benign wind conditions. The four categories are sitting, standing, strolling and walking, in ascending order of activity level, with a fifth category for conditions that are uncomfortable for all uses. In other words, the wind conditions in an area for sitting need to be calmer than a location that people merely walk past. The distinction between strolling and walking is that in the strolling scenario pedestrians are more likely to take on a more leisurely pace, with the intention of taking time to move through the area, whereas in the walking scenario pedestrians are intending to move through the area quickly and are therefore expected to be more tolerant of windier conditions.

The Criteria are derived for open air conditions and assume that pedestrians will be suitably dressed for the season. Thermal comfort is discussed with reference to acceptable wind environments but not evaluated as part of the assessment.

¹ ESDU International, 2001. Computer program for wind speeds and turbulence properties: flat or hilly sites in terrain with roughness changes, ESDU 01008, 2001 01008.

Table 1: Lawson Comfort Criteria

Key	Comfort Category	Threshold	Description
	Sitting	0-4 m/s	Light breezes desired for outdoor restaurants and seating areas where one can read a paper or comfortably sit for long periods
	Standing	4-6 m/s	Gentle breezes acceptable for main building entrances, pick-up/drop-off points and bus stops
	Strolling	6-8 m/s	Moderate breezes that would be appropriate for window shopping and strolling along a city/town centre street, plaza or park
	Walking	8-10 m/s	Relatively high speeds that can be tolerated if one's objective is to walk, run or cycle without lingering
	Uncomfortable	>10 m/s	Winds of this magnitude are considered a nuisance for most activities, and wind mitigation is typically recommended

Generally, the target conditions are:

- Strolling use conditions during the windiest season on pedestrian thoroughfares (with walking conditions potentially being tolerated in areas where pedestrians would not linger);
- Standing use conditions at entrances, drop off areas or taxi ranks, and bus stops throughout the year;
- Standing use conditions at private amenity areas where seating is not designated (such as balconies) during the summer season; and
- Sitting use conditions at outdoor seating and amenity areas during the summer season when these areas are more likely to be frequently used by pedestrians. It is noted that in large mixed-use amenity spaces a mixture of sitting use and standing / entrance use can be considered acceptable as users can choose to sit in 'calmer' areas, with 'windier' areas acceptable for more active pursuits.

The wind conditions in an area for sitting need to be calmer than a location that people merely walk past, and this is reflected in the Comfort Criteria.

4.4 Strong Winds

Lawson² also specified a lower limit strong wind threshold when winds exceed 15m/s for more than 2.2 hours of the year (or 0.025% of the time). Exceedance of this threshold may indicate a need for remedial measures or a careful assessment of the expected use of that location, e.g. is it reasonable to expect cyclists or elderly or very young pedestrians to be present at the location on the windiest day of the year? Wind Speeds that exceed 20m/s for more than 2 hours of the year represent a safety issue for all members of the population, which would require mitigation to provide an appropriate wind environment.

² Lawson T.V. (April 2001), Building Aerodynamics, Imperial College Press

Strong winds are generally associated with areas which would be classified as acceptable for walking or as uncomfortable. In a mixed-use urban development scheme, walking and uncomfortable conditions would not usually form part of the 'target' wind environment and would usually require mitigation due to pedestrian comfort considerations. This mitigation would also reduce the frequency of, or even eliminate, any strong winds.

4.5 Typical Wind – Building Interactions

The wind conditions at the Proposed Development are expected to be due to either one, or a combination of, two generalised flow behaviours.

Channelling (Figure 4a) of the wind occurs between buildings of similar height when in close proximity to each other. Windy conditions occur at pedestrian level since the flow accelerates as it is “squeezed” between the buildings.

Corner acceleration (Figure 4b) around building corners may occur due to the difference in pressure on the upwind and downwind façades (low pressure zones on the leeward side and zones of higher pressure on the windward side of the building). This effect is particularly pronounced around sharp corners which create localised windy areas in the vicinity of the corner where the flow is accelerated around the building.

Down-washing (Figure 4c) of the wind occurs when a building is taller than its surrounding buildings. The taller scheme forces high level winds to ground level where they create locally high wind speeds in the pedestrian realm.

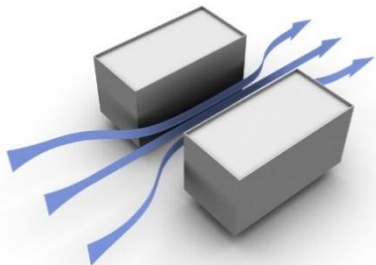


Figure 4a: Channelling

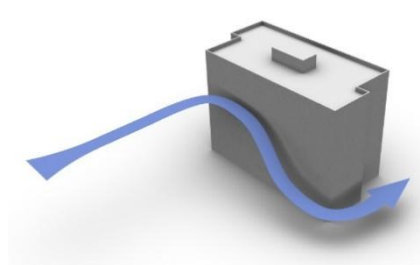


Figure 4b: Corner acceleration



Figure 4c: Down-washing



5 EXISTING SITE WITH EXISTING SURROUNDING BUILDINGS

Often a new development will alter the pedestrian activity (i.e. intended use) on site. Occasionally, although wind conditions may not change after the Proposed Development is completed (e.g. stay suitable for strolling), mitigation would still be required if, on the new development, the location of interest is intended for a critical activity (e.g. a main entrance) for which the wind condition would be unsuitable. Assessment in terms of the desired pedestrian activity on, or around, a site takes into consideration any change of use, and this is where the comfort criteria are particularly helpful.

5.1 Pedestrian Comfort

Based on the terrain roughness analysis discussed in Section 4.2, the baseline conditions at 2m above ground level at an idealised “empty” Site would be suitable for standing use throughout the year.

The Site of the Proposed Development is currently occupied by low-rise warehouse buildings. Wind conditions within the Site are expected to be suitable for generally standing use during the windiest season, with small areas of acceleration at building corners suitable for strolling use, as well as sitting use wind conditions in the sheltered areas. This range of wind conditions are suitable for the current uses.

5.2 Strong Winds

Strong winds in excess of 15m/s are often concurrent with areas with conditions suitable for walking use or windier. As no conditions suitable for walking use are likely to occur, strong winds are not expected to occur at the existing Site.

6 CONFIGURATION 1: PROPOSED DEVELOPMENT WITH EXISTING SURROUNDING BUILDINGS (NO LANDSCAPING)

6.1 Pedestrian Comfort

Configuration 1 assesses wind conditions around the Proposed Development in the absence of the proposed landscaping, to provide an initial worst-case scenario.

The expected wind conditions at the Proposed Development are shown in Figures 5 and 6 at ground level for the windiest and summer seasons respectively. Figure 7 presents the expected wind conditions at the podium and balconies during the summer season.

As the Proposed Development is taller in comparison to the surrounding development, wind conditions would be expected to be windier to those in the current existing scenario.

Thoroughfares (Figure 5)

Wind conditions on pedestrian thoroughfares around the Proposed Development would be expected to range from suitable for sitting to walking use during the windiest season.

Areas of walking use conditions would be one category too windy for the intended pedestrian use; and would occur around the southern corners of Blocks 3A, 3B, 4A and 4B. These wind conditions are expected due to prevailing westerly and south-westerly winds accelerating around the corners.

Off-Site, the introduction of the Proposed Development would not be expected to materially change wind conditions at off-Site thoroughfares.

Entrances (Figure 5)

Standing conditions or calmer are the target wind conditions for main entrances, with strolling conditions tolerable for secondary entrances. Entrances to the Proposed Development would be expected to be suitable for standing and strolling use during the windiest season.

Strolling use conditions would be expected at the entrance to Block 1 on the western side closer to the south-west corner, Blocks 3A and 4A at the north-west corner and at the entrance to Block 4B at the north-east corner. These locations would be one category too windy for entrance use.

Off-Site, the introduction of the Proposed Development would not be expected to materially change wind conditions at off-Site entrances.

Ground and Level 1 Podium Amenity (Figure 6)

Ground and level 1 amenity spaces would be expected to range from suitable for sitting to standing use during the summer season. Areas with sitting use conditions would be suitable for seating, and areas with standing conditions would be suitable for mixed-use amenity.

As discussed in Configuration 2 below, with the proposed landscaping in situ, all the seating areas at ground level would have wind conditions suitable for sitting use during the summer season.

Strolling conditions at the ground floor private amenity spaces at the southern corners of Blocks 3A, 3B and 4B and the southern corners of the level 1 podium of Block 4 would be one category windier than suitable for the intended use and would require wind mitigation measures to increase the shelter.

Balconies (Figure 7)

The majority of the balcony amenity spaces would have expected to have wind conditions suitable for sitting and standing use during the summer season, suitable conditions for private amenity use.

However, strolling conditions would be expected on the following upper-level balconies:

- Levels 5-8 balconies at the south-west and south-east corners of Block 1;
- Level 4 balconies at the south-west and south-east corners of Block 3A;
- Level 1 balcony at the south-east corner of Blocks 4A and Block 4B; and
- Level 4 balconies at the south-west and south-east corners of Block 4B.

These conditions would likely occur due to localised corner accelerations from the prevailing south-westerly and westerly winds, where corner points tend to be windier compared to the centre of the façade. Strolling use conditions would be one category too windy for the intended use.

Terrace Amenity (Figure 7)

The elevated terrace of Block 2B is generally exposed to higher wind speeds due to its height above ground level. However, Block 2 is of a similar height to the buildings located to the south, which would likely provide a degree of shelter. Wind conditions suitable for standing and strolling use would be expected within this terrace during the summer season. Any seating areas within this terrace and areas with strolling conditions would benefit from wind mitigation measures discussed in Section 8 to increase the shelter to this space.

6.2 Strong Winds

Strong winds in excess of 15m/s are often concurrent with areas with conditions suitable for walking use or windier. During the summer season, areas with strolling conditions would likely be one category windier and have walking conditions during the windiest season, therefore areas with strolling conditions during the summer season would also be anticipated to have strong winds.

As such, at ground level, strong wind exceedances would be anticipated to occur around the southern corners of Blocks 3A, 3B, 4A and 4B.



At the level 1 podium of Block 4, strong wind exceedances would be anticipated at the southern corners where strolling conditions were noted during the summer season.

At balconies, strong wind exceedances would be anticipated to occur on levels 5-8 balconies at the south-west and south-east corners of Block 1, the level 4 balconies at the south-west and south-east corners of Block 3A and the level 4 balconies at the south-west and south-east corners of Block 4B.

At the Block 2B terrace strong wind exceedances would be anticipated within the areas of the terrace where strolling conditions were noted during the summer season.

7 CONFIGURATION 2: PROPOSED DEVELOPMENT WITH PROPOSED LANDSCAPING AND EXISTING SURROUNDING BUILDINGS

7.1 Pedestrian Comfort

Configuration 2 assesses wind conditions around the Proposed Development with the inclusion of the proposed landscaping at ground level and at the podium of Block B04. The proposed trees, which would be up to 3m in height, are expected to increase the shelter to these areas.

The expected wind conditions at the Proposed Development are shown in Figures 8 and 9 at ground level and podium level for the windiest and summer seasons respectively.

Thoroughfares (Figure 8)

The inclusion of the proposed landscaping would be expected to provide some shelter to the northern passageway. However, due to the lack of shelter along the southern side of the Site where the windiest conditions would occur, walking conditions would be expected to persist around the southern corners of Blocks 3A, 4A and 4B. Walking use conditions would be one category too windy, and mitigation measures would be required, further discussed in Section 8.

Off-Site, the introduction of the Proposed Development would not be expected to materially change wind conditions at off-Site thoroughfares.

Entrances (Figure 8)

The inclusion of the proposed landscaping would be expected to be beneficial to the main entrance to Block 4A as the nearby proposed trees would increase the shelter to this entrance. Wind conditions at the majority of the entrances would be expected to be suitable for standing use during the windiest season, suitable conditions for the intended use.



Strolling conditions expected at the entrance to Block 3A at the north-west corner and at the entrance to Block 4B at the north-east corner would be one category too windy, and mitigation measures would be required, further discussed in Section 8.

Off-Site, the introduction of the Proposed Development would not be expected to materially change wind conditions at off-Site entrances.

Ground and Level 1 Podium Level Amenity (Figure 9)

Wind conditions at ground level amenity would be expected to be suitable for sitting and standing use during the summer season. With the proposed landscaping in place, seating areas would be expected to have sitting conditions, suitable conditions for the intended use.

Strolling conditions expected at the ground level balconies at the southeastern corner of Block 4B would be one category windier than suitable for private amenity use. Necessary wind mitigation measures are discussed in Section 8.

With the inclusion of the proposed landscaping measures the majority of the podium space would be expected to have wind conditions suitable for sitting use with conditions suitable for standing conditions expected closer to the edge of the podium, these conditions would be suitable for mixed use amenity.

Strolling conditions expected at the vicinity of the private amenity at the south-east corner of Block 4A would be one category windier than suitable for the intended use and would benefit from wind mitigation measures discussed in Section 8.

Balconies and Elevated Terrace (Figure 7)

Similar to Configuration 1, the majority of the balcony amenity spaces would be expected to have wind conditions suitable for sitting and standing use during the summer season, suitable conditions for private amenity use.

However, the balconies and the accessible terrace of Block 2B identified in Configuration 1 would require wind mitigation measures discussed in Section 8 to increase the shelter to these spaces.

7.2 Strong Winds

Strong winds in excess of 15m/s are often concurrent with areas with conditions suitable for walking use or windier. During the summer season, areas with strolling conditions would likely be one category windier and have walking conditions during the windiest season, therefore areas with strolling conditions during the summer season would also be anticipated to have strong winds.

Due to the lack of shelter provided by the proposed landscaping and exposure to the approaching winds at higher levels following areas would be anticipated to have strong winds which would pose a safety concern for the pedestrians:

- Southern corners of Blocks 3A, 3B, 4A and 4B;
- Levels 5-8 balconies at the south-west and south-east corners of Block 1;

- Level 4 balconies at the south-west and south-east corners of Block 3A;
- Level 1 balcony at the south-east corner of Blocks 4A and Block 4B;
- Level 4 balconies at the south-west and south-east corners of Block 4B; and
- Accessible roof terrace of Block 2B.

8 MITIGATION MEASURES

The assessment of the scheme identified windier than suitable conditions at the following locations (with the inclusion of the proposed landscaping):

- Pedestrian thoroughfares at the southern corners of Blocks 3A, 3B, 4A and 4B;
- Entrance to Block 3A at the north-west corner;
- Entrance to Block 4B at the north-east corner;
- Ground level private amenity spaces at the southern corners of Blocks 3A, and 4B;
- Level 1 balcony at the southeastern corner of Block 4A;
- Levels 5-8 balconies at the south-west and south-east corners of Block 1;
- Level 4 balconies at the south-west and south-east corners of Block 3A;
- Level 4 balconies at the south-west and south-east corners of Block 4B; and
- Accessible terrace of Block 2B.

Pedestrian thoroughfares

Inclusion of trees (3-5m in height) along southern boundary would be expected to increase the shelter from the winds approaching the Site. Furthermore, inclusion of 1.5m high shrub planting or trees in pots placed in the immediate vicinity of the southern corners of Blocks 3A, 4A and 4B would be beneficial to increase the localised shelter at these corners. Combination of these measures would be expected to reduce the extent of walking conditions at these corners.

Entrances

Inclusion of the landscaping measures suggested above for the pedestrian thoroughfares with increasing the number of tree planting within the passageway between Blocks 3A and 4B with up to 1.5m high shrub planting underneath would be expected to increase the shelter to the entrances of Blocks 3A and 4B.

Alternatively, inclusion of additional trees along the corners of Blocks 3A and 4B or inclusion of 2m high at least 50% closed porous screening on either side of the entrances would be expected to increase the localised shelter to these entrances.

Balconies

Ground and upper level balconies with strolling conditions would require a 1.5m high at least 50% closed porous balustrade along the perimeter of the balcony, or alternatively a full height, full width 50% closed porous side screens along the shorted edges of the balcony.

With the implementation of the above mitigation, wind conditions would be expected to improve such that they would be suitable for the intended uses.



Ground and podium level amenity

The ground level and Block 4A podium private amenity spaces with strolling conditions during the summer season would benefit from inclusion of the perimeter screening in the form of 1.5m high at least 50% closed porous panel. These measures would be expected to increase the localised shelter.

Accessible terrace amenity

Increasing the height of the balustrade to 1.5m high (solid/ 50% porous screening) would be expected to increase the area of shelter behind the terrace. Furthermore, a landscaping scheme which incorporates 2-3m high trees placed along the terrace and closer to the corner of the rooftop access core would be beneficial to break up the winds flowing across this terrace. It is recommended any bench amenity spaces proposed within this terrace include localised shelter around the bench in the form of 1.5m high shrub or at least 50% closed porous screening around the back of seating to increase the localised shelter.

9 CONCLUDING REMARKS

In conclusion:

1. The Proposed Development has been qualitatively assessed based on meteorological data, terrain assessment and professional judgement/experience. The widely accepted Lawson Comfort Criteria have been used.
2. The meteorological data for the Site indicates prevailing winds from the west and south-west throughout the year, with secondary winds from the south-east.
3. For the existing Site, the wind microclimate at ground level is expected to be acceptable for the current use throughout the year with no safety exceedances.
4. With the Proposed Development situ (and no landscaping), wind conditions would be expected to become windier. There would be thoroughfares, entrances, a ground level seating area and balconies with windier than suitable conditions. Strong wind exceedances would also be anticipated to occur at the windy thoroughfares and balconies, posing safety concerns for pedestrians/occupants.
5. The following areas would be expected to have wind conditions windier than suitable/unsafe for pedestrian use:
 - Pedestrian thoroughfares at the southern corners of Blocks 3A, 3B, 4A and 4B;
 - Entrance to Block 3A at the north-west corner;
 - Entrance to Block 4B at the north-east corner;
 - Ground level private amenity spaces at the southern corners of Blocks 3A, 3B, and 4B;
 - Level 1 balcony at the southeastern corner of Block 4A;
 - Levels 5-8 balconies at the south-west and south-east corners of Block 1;
 - Level 4 balconies at the south-west and south-east corners of Block 3A;
 - Level 4 balconies at the north-west, south-west and south-east corners of Block 4B; and
 - Accessible terrace of Block 2B.
6. Wind mitigation measures that would be expected to increase the shelter to the above areas are discussed in Section 8. With the implementation of the wind mitigation measures, wind conditions would be expected to improve such that they would be suitable for the intended uses.



10 STATEMENT OF LIMITATIONS

This report entitled Pedestrian Level Wind Desk-Based Assessment dated June 8th, 2026, was prepared by RWDI for Bluemont (“Client”). The findings and conclusions presented in this report have been prepared for the Client and are specific to the development described herein (“Project”). The conclusions and recommendations contained in this report are based on the information available to RWDI when this report was prepared. Because the contents of this report may not reflect the final design of the Project or subsequent changes made after the date of this report, RWDI recommends that it be retained by Client during the final design stage to verify that the results and recommendations provided in this report have been correctly interpreted in the final design of the Project.

The conclusions and recommendations contained in this report have also been made for the specific purpose(s) set out herein. Should the Client or any other third party utilise the report and/or implement the conclusions and recommendations contained therein for any other purpose or project without the involvement of RWDI, the Client or such third party assumes any and all risk of any and all consequences arising from such use and RWDI accepts no responsibility for any liability, loss, or damage of any kind suffered by Client or any other third party arising therefrom.

Finally, it is imperative that the Client and/or any party relying on the conclusions and recommendations in this report carefully review the stated assumptions contained herein and to understand the different factors which may impact the conclusions and recommendations provided.

11 ASSUMPTIONS AND LIMITATIONS

The findings included in this report are based on the following information (“Project Data”) disclosed to RWDI:

- 3d model – received 1st May 2026;
- Floor plans and elevation drawings – received 6th May 2026; and
- Landscaping plans – received 22nd May 2026.

The recommendations and conclusions are based on the following assumptions:

- The Project Data is accurate and complete;
- The Proposed Development, when built, does not deviate substantially from the information listed above. “Substantially” in this case means any change to the exterior form of the buildings that would change the wind flow around it, in a way that would impact pedestrian comfort or safety.
- Sensitive areas of the Site (such as amenity spaces) are expected to be used in line with the temporal specifications set out in the report body.

Any change in the Project Data or Project Specific Conditions not reflected in this report can impact and/or alter the recommendations and conclusions in this report. Therefore, it is incumbent for the Client and/or any other third party relying on the recommendations and conclusions in this report to contact RWDI in the event of any change in the Project Data and Project Specific Conditions in order to determine whether any such change(s) may impact the assumptions upon which the recommendations and conclusions were made.

Finally, the recommendations and conclusions in this report are partially based on historical data and can be affected by a number of external factors, including but not limited to Project design, quality of materials and construction, site conditions, meteorological events, and climate change. As such, the conclusions and recommendations contained in this report do not list every possible outcome.

12 REFERENCES

1. ESDU International, 2001. Computer program for wind speeds and turbulence properties: flat or hilly sites in terrain with roughness changes, ESDU 01008, 2001 01008.
2. Lawson T.V. (April 2001), Building Aerodynamics, Imperial College Press

FIGURES





LDDC COMFORT CATEGORIES:

- Sitting —————
- Standing —————
- Strolling —————
- Walking —————
- Uncomfortable —————

Pedestrian Comfort- Expected Wind Conditions - Ground Floor

Configuration 1: Proposed Development with Existing Surrounding Buildings

Windiest Season

2601269 Bluemont Elmfield - Clondalkin, Ireland



Figure: 5



LDDC COMFORT CATEGORIES:

Sitting	Light Green
Standing	Blue
Strolling	Yellow
Walking	Magenta
Uncomfortable	Red

Pedestrian Comfort- Expected Wind Conditions - Ground Floor

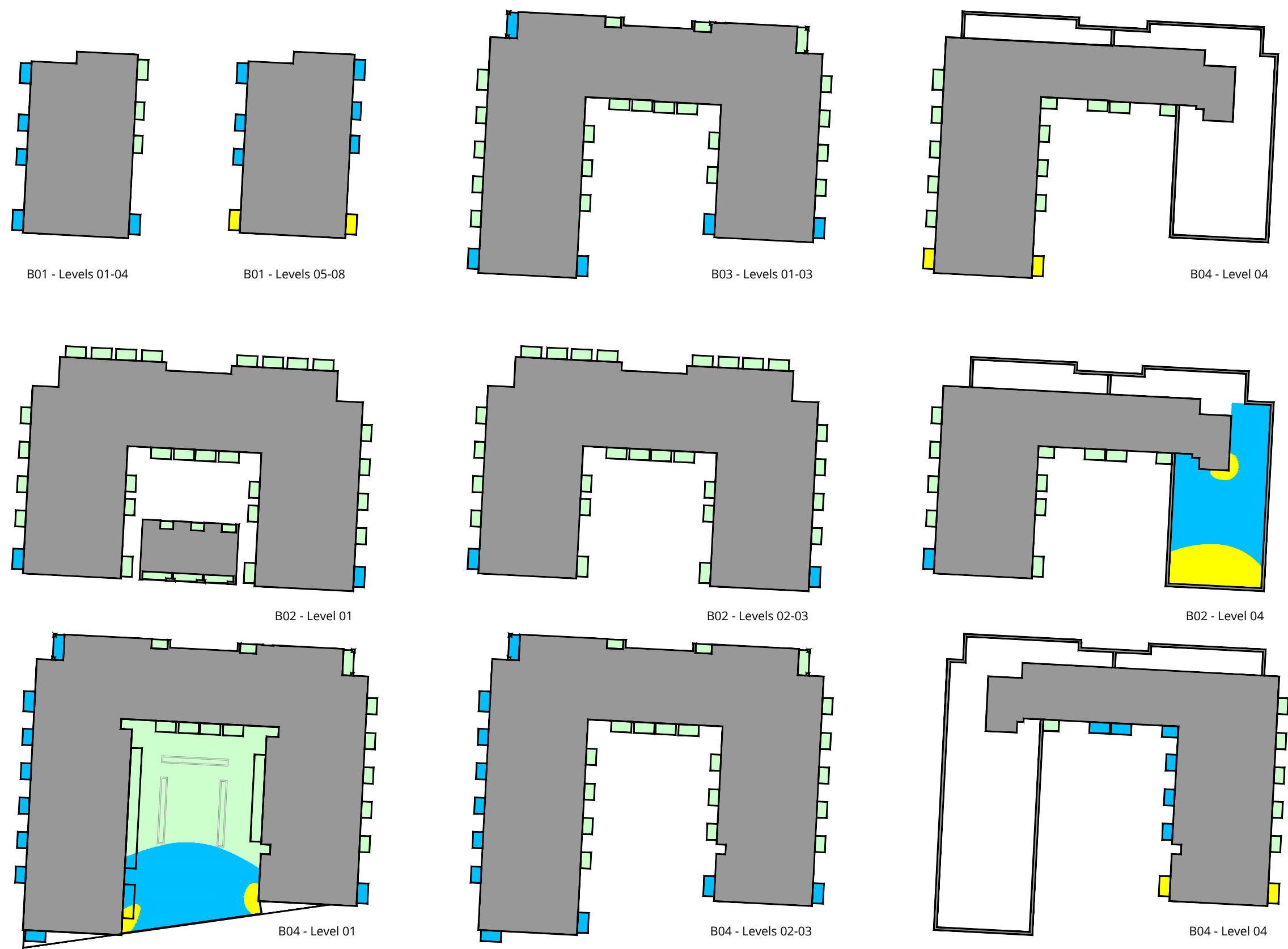
Configuration 1: Proposed Development with Existing Surrounding Buildings

Summer Season

2601269 Bluemont Elmfield - Clondalkin, Ireland



Figure: 6



LDDC COMFORT CATEGORIES:

- Sitting —————
- Standing —————
- Strolling —————
- Walking —————
- Uncomfortable —————

Pedestrian Comfort- Expected Wind Conditions - Elevated Levels

Configuration 1: Proposed Development with Existing Surrounding Buildings

Summer Season

2601269 Bluemont Elmfield - Clondalkin, Ireland



Figure: 7



LDDC COMFORT CATEGORIES:

- Sitting —————
- Standing —————
- Strolling —————
- Walking —————
- Uncomfortable —————

Pedestrian Comfort- Expected Wind Conditions - Ground Floor and B04 Level 01 Terrace

Configuration 2: Proposed Development with Proposed Landscaping and Existing Surrounding

Buildings

Windiest Season

2601269 Bluemont Elmfield - Clondalkin, Ireland



Figure: 8



LDDC COMFORT CATEGORIES:

- Sitting —————
- Standing —————
- Strolling —————
- Walking —————
- Uncomfortable —————

Pedestrian Comfort- Expected Wind Conditions - Ground Floor and B04 Level 01 Terrace

Configuration 2: Proposed Development with Proposed Landscaping and Existing Surrounding

Buildings

Summer Season

2601269 Bluemont Elmfield - Clondalkin, Ireland



Figure: 9