

# FINAL REPORT



## WHITE HEATHER LRD

WHITE HEATHER INDUSTRIAL ESTATE, DUBLIN 8

PEDESTRIAN LEVEL WIND DESK-BASED ASSESSMENT

RWDI #2508070

8<sup>TH</sup> DECEMBER 2025

SUBMITTED TO

Green Urban Logistics 3 White Heather  
Propco Limited

SUBMITTED BY

RWDI



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## VERSION HISTORY

RWDI Project #2508070		White Heather LRD, Dublin, Ireland	
Report	Releases	Dated	
Reports	Rev A	November 19 <sup>th</sup> , 2025	
	Rev B	December 5 <sup>th</sup> , 2025	
	Final	December 8 <sup>th</sup> , 2025	
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# 1 EXECUTIVE SUMMARY

This is a qualitative assessment of the likely wind conditions around the proposed White Heather LRD development in Dublin, 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, ground level amenity areas, podium level amenity, balconies and roof terraces with windier than suitable conditions. Strong wind exceedances would also be anticipated to occur at the windy thoroughfares, podium, balconies and roof terraces, posing safety concerns for pedestrians/occupants.

With the inclusion of the existing and proposed landscaping (provided the larger trees are 5-7m tall, and smaller trees are 3m tall at time of planting), wind conditions would overall improve. Areas at ground level would be expected to be suitable for the intended uses, and no strong wind exceedances would be expected to occur at ground level, the podium and terraces.

There would be seating areas on the podium, and seating areas on the terraces of Blocks B03 and B04 that would be one category too windy for seating. The conditions would mean there would be times throughout the summer when conditions would be suitable for sitting, however not frequent enough to be considered as overall being suitable for sitting use based on the Lawson Criteria. To achieve sitting conditions, these seating areas would benefit from additional trees and planting.

At the balconies identified as being windier than suitable with strong wind exceedances, mitigation in the form of a balustrade height increase from 1.2m to 1.5m, or alternatively a full height, full width solid side screen on one side of the balcony would be required.

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

## 2 INTRODUCTION

RWDI was commissioned by DNV on behalf of Green Urban Logistics 3 White Heather Propco Limited to conduct a desk-based assessment of the proposed White Heather LRD development (hereafter referred to as the 'Proposed Development'), in Dublin, 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 Dublin and is bound by the Grand Canal to the south, St James's Terrace to the west, South Circular Road to the north, and Priestfield Cottages to the east.

The terrain surrounding the Site is predominantly suburban in nature, with open fields to the south of the Site. 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

The proposed mixed-use Large-Scale Residential Development (LRD) will comprise the demolition of all existing commercial and warehouse buildings and structures on the site, and the construction of 250 no. residential units within six blocks (Blocks 01, 02(A/B), 03(A/B), 04(A/B), and two duplex blocks) ranging in height up to seven storeys. The development will include 12 no. studio apartments, 148 no. one-bedroom apartments, 74 no. two-bedroom apartments, 8 no. one-bedroom duplex units, and 8 no. two-bedroom duplex units.

All residential units will include private balconies or terraces, oriented north, south, east, or west.

The proposal also includes the conversion of the existing residential dwelling at 307/307A South Circular Road to a crèche with an associated external play area. A new kiosk/café and adjoining open space will be provided adjacent to 307/307A South Circular Road, along with car and bicycle parking. The development will provide public open spaces between Blocks 03 and 04, as well as to the north and south of the apartment blocks, the latter overlooking the Grand Canal, together with communal open spaces throughout the scheme. Vehicular, pedestrian, and cyclist access will be provided from the northeast of the site via South Circular Road, with additional pedestrian and cyclist access from the west via St James's Terrace.

The proposal also includes landscaping, public and communal open spaces, and all associated site development works required to facilitate the project. These works include boundary treatments, plant and waste management areas, and other service provisions, including ESB infrastructure.

A 3D model of the Proposed Development is shown in Figure 2 below.

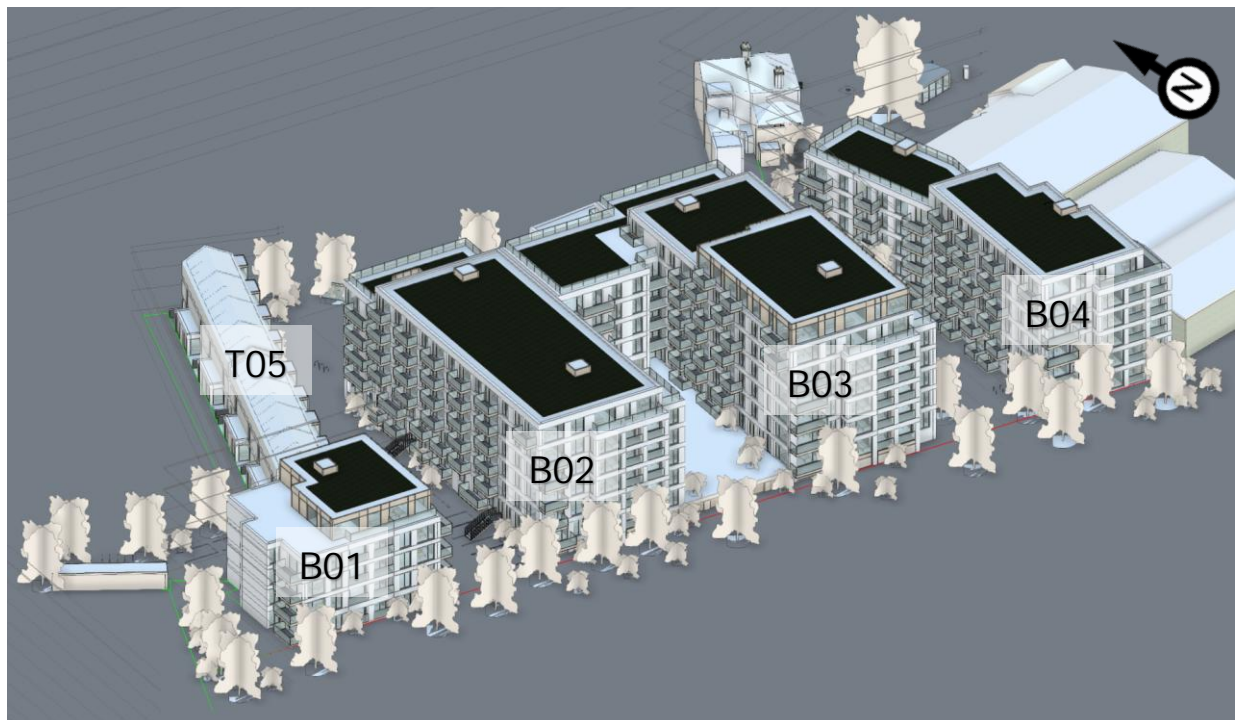


Figure 2: View of the Proposed Development from south-west

## 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.

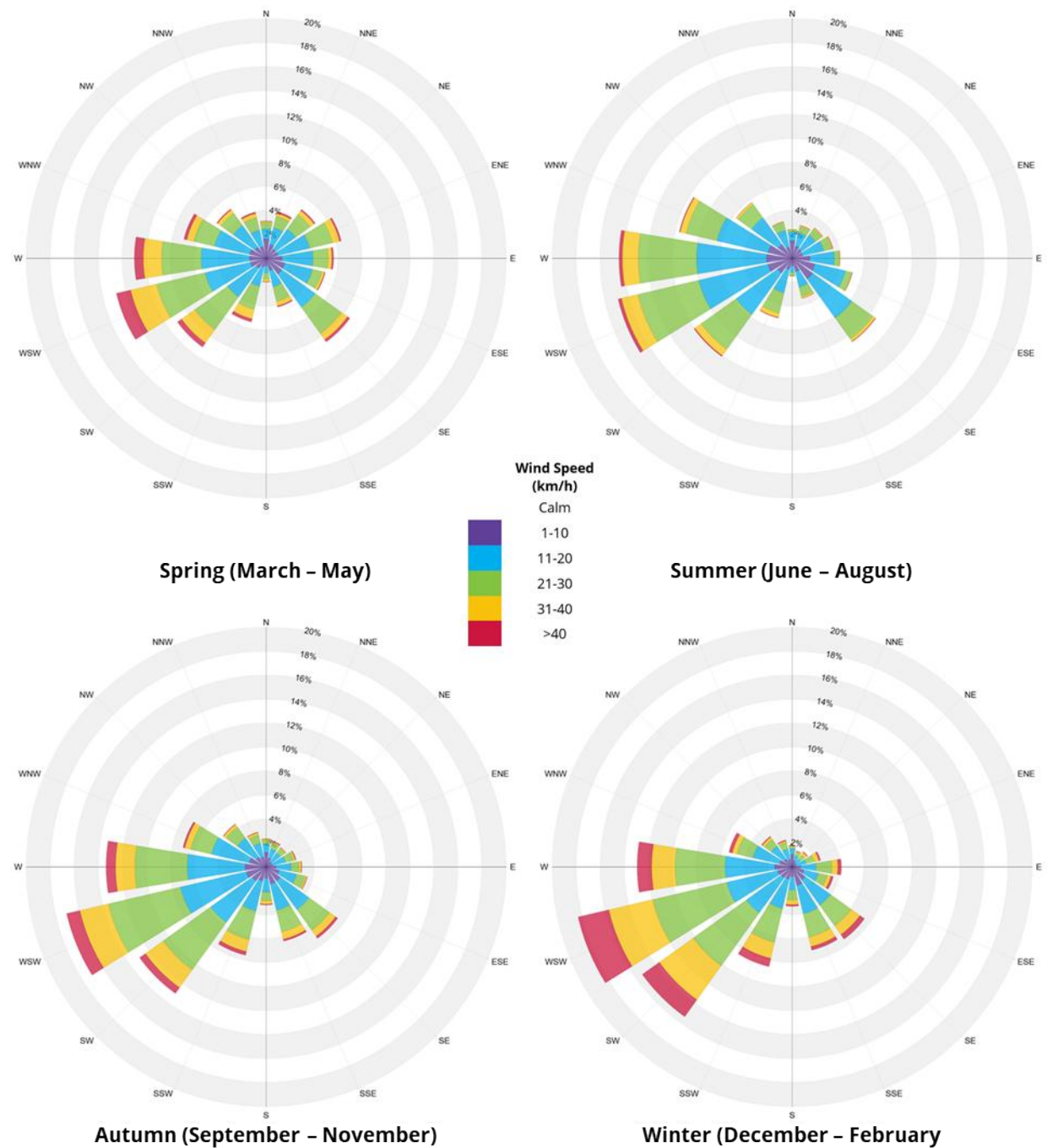


Figure 3: Seasonal wind roses from Dublin Airport (in km/h) – (Radial axis indicates the percentage of time for which the stated threshold is exceeded)



## 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 01008<sup>1</sup> 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.

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<sup>1</sup> 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

Lawson<sup>2</sup> 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.

<sup>2</sup> 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.

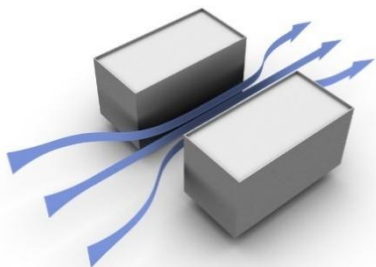


Figure 4a: Channelling

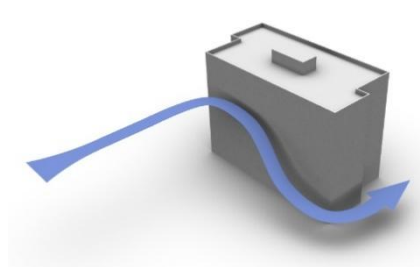


Figure 4b: Corner acceleration



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 standing use during the windiest season, suitable for the current pedestrian 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 both existing and proposed landscaping, to provide an initial worst-case scenario. The landscaping has been assessed in Configuration 2 discussed in Section 7.

The expected wind conditions at the Proposed Development are shown in Figures 7 and 8 at ground level for the windiest and summer seasons respectively. Figure 9 presents the expected wind conditions at the podium level, balconies and terraces 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 7)

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 B01-B04 and the north-western corner of B02. 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 7)

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 occur at the southern entrance on the western façade of Block B02, and the southern entrance on the western façade of Block B04. These would be one category too windy.

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



## Ground Level Amenity (Figure 8)

Ground level amenity around the blocks would be expected to range from suitable for sitting to strolling 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. However, areas of standing and strolling conditions would occur at the amenity situated at the south-east corner of Block B01, south of Blocks B02 and B03, south-east, south of Block B04, and between Blocks B03 and B04. The areas of standing here would be too windy for seating, and the areas of strolling use conditions would be too windy for seating or mixed-use amenity.

## Podium (Figure 9)

The podium between Blocks B02 and B03 would be expected to range from suitable for sitting to strolling use during the summer season. Strolling conditions would occur around the southern corners of the podium, due to prevailing south-westerly winds accelerating around the corners. There would also be a large area of standing use conditions, at the southern side and through the middle of the podium, which would be too windy for benches situated in this area.

## Balconies (Figure 9)

The balconies would feature a 1.2m tall solid balustrade which have been considered in this assessment. Wind conditions at balconies would be expected to range from suitable for sitting to strolling use during the summer season. Balconies with strolling conditions would occur on the southern façades, and around the southern corners on Blocks B02 (upper three levels), B03 (upper three levels) and B04 (upper two levels). 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.

## Terraces (Figure 9)

The roof terraces would feature a 1.2m tall solid balustrade which have been considered in this assessment. Wind conditions at the terraces would be expected to be suitable for standing and strolling use during the summer season. Strolling use conditions would occur around the corners, due to accelerating winds. Strolling use conditions would be considered too windy for the intended use. As seating will be situated on the terraces of Blocks B03 and B04, standing use conditions would also be too windy, requiring mitigation measures.



## 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 B01, B02, B03, B04, and the north-western corner of Block B02 (where walking conditions occur in Figure 7).

At the podium level, strong wind exceedances would be anticipated to occur at the southern corners between Blocks B02 and B03 (where strolling conditions would occur in Figure 9).

At balconies, strong wind exceedances would be anticipated to occur on the southern façades, and around the southern corners on Blocks B02 (upper three levels), B03 (upper three levels) and B04 (upper two levels) (where strolling conditions would occur in Figure 9).

At terraces, strong wind exceedances would be anticipated to occur on the terraces of Blocks B02, B03 and B04 (where strolling conditions would occur in Figure 9).

## 7 CONFIGURATION 2: PROPOSED DEVELOPMENT WITH EXISTING SURROUNDING BUILDINGS (INCLUDING LANDSCAPING)

### 7.1 Pedestrian Comfort

Configuration 2 assesses wind conditions around the Proposed Development with the inclusion of both the existing and proposed landscaping, as these would be expected to help provide beneficial shelter. Larger trees would need to be 5-7m tall, and smaller trees 3m tall at time of planting

The expected wind conditions at the Proposed Development are shown in Figures 10 and 11 at ground level for the windiest and summer seasons respectively. Figure 12 presents the expected wind conditions at the podium level, balconies and terraces during the summer season.

#### Thoroughfares (Figure 10)

With the inclusion of the existing and proposed landscaping, the large quantity of trees, particularly on the southern side would help provide shelter to winds accelerating around the Proposed Development. Wind conditions would be expected to be calmer, ranging from suitable for sitting to strolling use during the windiest season. These wind conditions would be suitable for thoroughfare use.

#### Entrances (Figure 10)

With the inclusion of the existing and proposed landscaping, wind conditions at entrances would be expected to be suitable for standing use during the windiest season, suitable conditions for the intended use.

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

#### Ground Level Amenity (Figure 11)

Wind conditions at ground level amenity would be expected to be suitable for sitting and standing use during the summer season with the inclusion of the existing and proposed landscaping. Seating areas would be expected to have sitting conditions, suitable conditions for the intended use.

## Podium (Figure 12)

At the podium level, the proposed landscaping does help provide additional shelter in comparison to Configuration 1. However, there would be seating (on the southern side) that would be expected to have standing conditions, one category windier than suitable. Mitigation measures would be required to achieve sitting conditions, further discussed in Section 8. Wind conditions elsewhere on the podium would have suitable conditions for the intended use.

## Balconies (Figure 12)

Balconies would be expected to have materially similar wind conditions as those discussed in Configuration 1. Whilst the trees would help provide some level of shelter for the lower balconies, the upper balconies would still be exposed. Balconies with strolling conditions would be expected to occur on the southern façades, and around the southern corners on Blocks B02 (upper three levels), B03 (upper three levels) and B04 (upper two levels). 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, and mitigation measures would be required, further discussed in Section 8.

## Terraces (Figure 12)

The inclusion of landscaping at terraces would help provide shelter. Wind conditions would be expected to be suitable for sitting and standing use during the summer season. Whilst the majority of the terraces would be suitable for the intended use, there would be seating areas on Blocks B03 and B04 that would be expected to have standing conditions, one category windier than suitable. Mitigation measures would be required to achieve sitting conditions, further discussed in Section 8.

## 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.

At ground level, the podium and terraces, the inclusion of both existing and proposed landscaping would be expected to resolve strong wind exceedances that occur in Configuration 1 (without landscaping).

At balconies, strong wind exceedances would be anticipated to occur on the southern façades, and around the southern corners on Blocks B02 (upper three levels), B03 (upper three levels) and B04 (upper two levels) (where strolling conditions would occur in Figures 9 and 12).

## 8 MITIGATION MEASURES

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

- Seating on the podium between Blocks B02 and B03, on the southern side and central space;
- Balconies situated on the southern façades, and around the southern corners on Blocks B02 (upper three levels), B03 (upper three levels) and B04 (upper two levels); and
- Seating on the terraces of Blocks B03 and B04.

At the podium level, seating nearby the southern edge and centrally would be expected to have standing conditions during the summer season. It should be noted the current expected conditions (with the landscaping, and no mitigation), would mean there would be times throughout the summer when conditions would be suitable for sitting, however not frequent enough to be considered as overall being suitable for sitting use based on the Lawson Criteria. To achieve sitting conditions, further shelter would need to be provided such as additional trees and planting south of the benches. It is understood that this may impact the views to the south, therefore an alternative such as a seating design with a series of benches located within planters of at least 1.2m total height (planter and dense planting) could also be used.

Similarly, seating at the terraces on Blocks B03 and B04 would be expected to have standing conditions during the summer season. As above, the conditions would mean there would be times throughout the summer when conditions would be suitable for sitting, however not frequent enough to be considered as overall being suitable for sitting use based on the Lawson Criteria. To achieve sitting conditions, these seating areas would benefit from additional trees and planting on the southern and western edges of the terraces.

Balconies with strolling conditions would require a balustrade height increase from 1.2m to 1.5m, or alternatively a full height, full width solid side screen on one side 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.





Figure 5: Podium mitigation markup

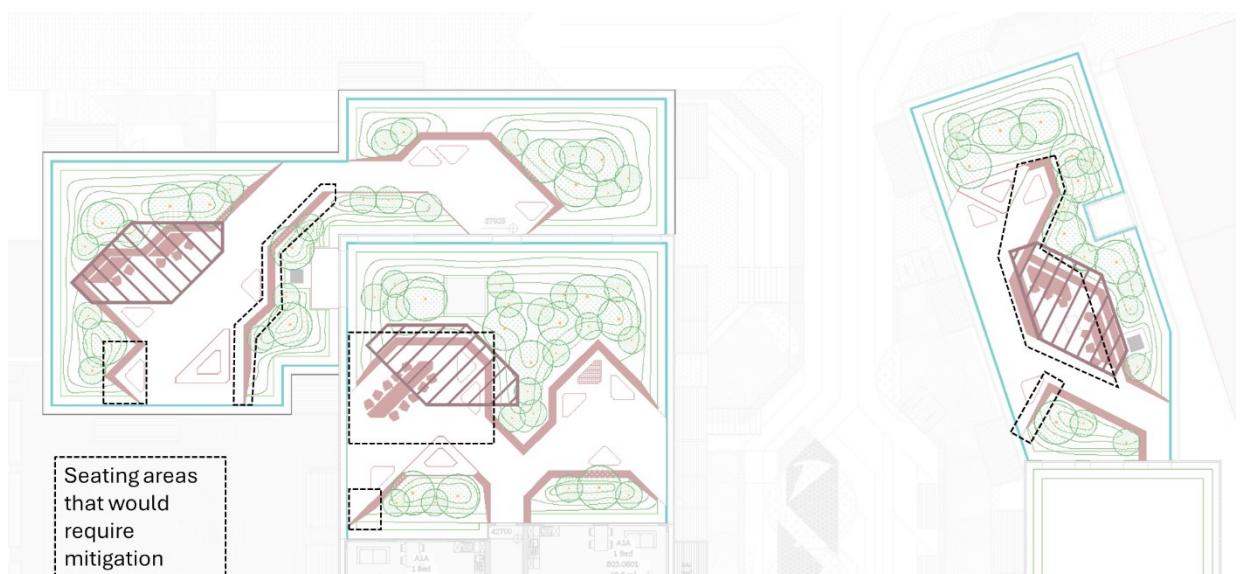


Figure 6: Terrace mitigation markup

## 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, ground level amenity areas, podium level amenity, balconies and roof terraces with windier than suitable conditions. Strong wind exceedances would also be anticipated to occur at the windy thoroughfares, podium, balconies and roof terraces, posing safety concerns for pedestrians/occupants.
5. With the inclusion of the existing and proposed landscaping (provided the larger trees are 5-7m tall, and smaller trees are 3m tall at time of planting), wind conditions at ground level would be expected to improve such that they would be suitable for the intended uses, and no strong wind exceedances anticipated to occur at ground level, podium level and terraces.
6. There would be seating areas on the podium, and seating areas on the terraces of Blocks B03 and B04 that would be one category too windy for seating. The conditions would mean there would be times throughout the summer when conditions would be suitable for sitting, however not frequent enough to be considered as overall being suitable for sitting use based on the Lawson Criteria. To achieve sitting conditions based on the criteria, these seating areas would benefit from additional trees and planting.
7. At the balconies identified as being windier than suitable with strong wind exceedances, mitigation in the form of a balustrade height increase from 1.2m to 1.5m, or alternatively a full height, full width solid side screen on one side of the balcony would be required.
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.



## 10 STATEMENT OF LIMITATIONS

This report entitled Pedestrian Level Wind Desk-Based Assessment dated December 8<sup>th</sup>, 2025, was prepared by RWDI for Green Urban Logistics 3 White Heather Propco Limited ("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:

- Floor plans and elevation drawings – received 23<sup>rd</sup> October 2025;
- 3D Model – received 23<sup>rd</sup> October 2025; and
- Landscaping information – received 28<sup>th</sup> November 2025.

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.

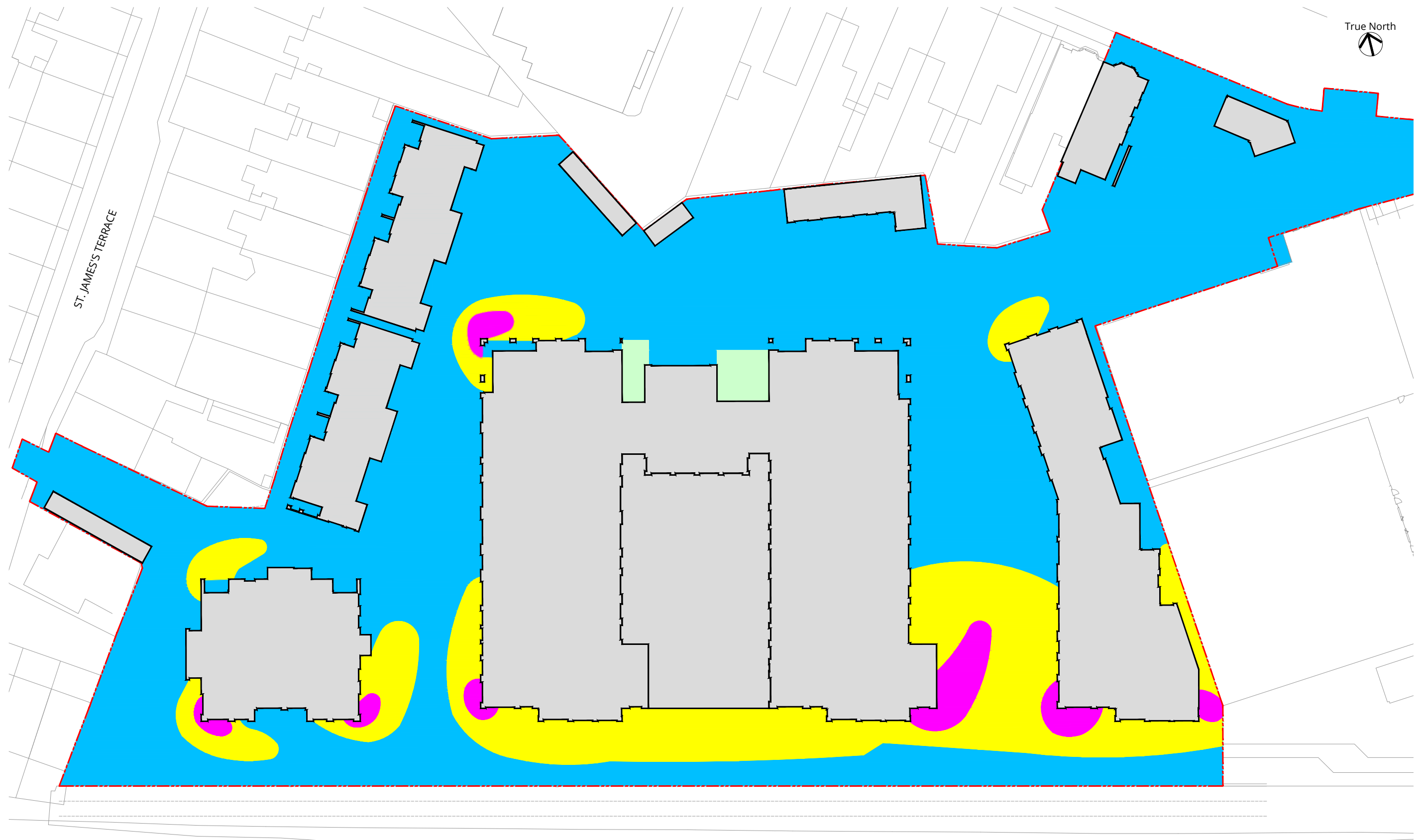
## 12 REFERENCES

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 Desk Study - Expected Wind Conditions - Ground Floor**

Configuration 1: Proposed Development with Existing Surrounding (No Landscaping)

Windiest Season

2508070 White Heather SHD - Dublin, Ireland



Figure: 7



**LDDC COMFORT CATEGORIES:**

Sitting	Light Green
Standing	Blue
Strolling	Yellow
Walking	Magenta
Uncomfortable	Red

**Pedestrian Comfort Desk Study - Expected Wind Conditions - Ground Floor**

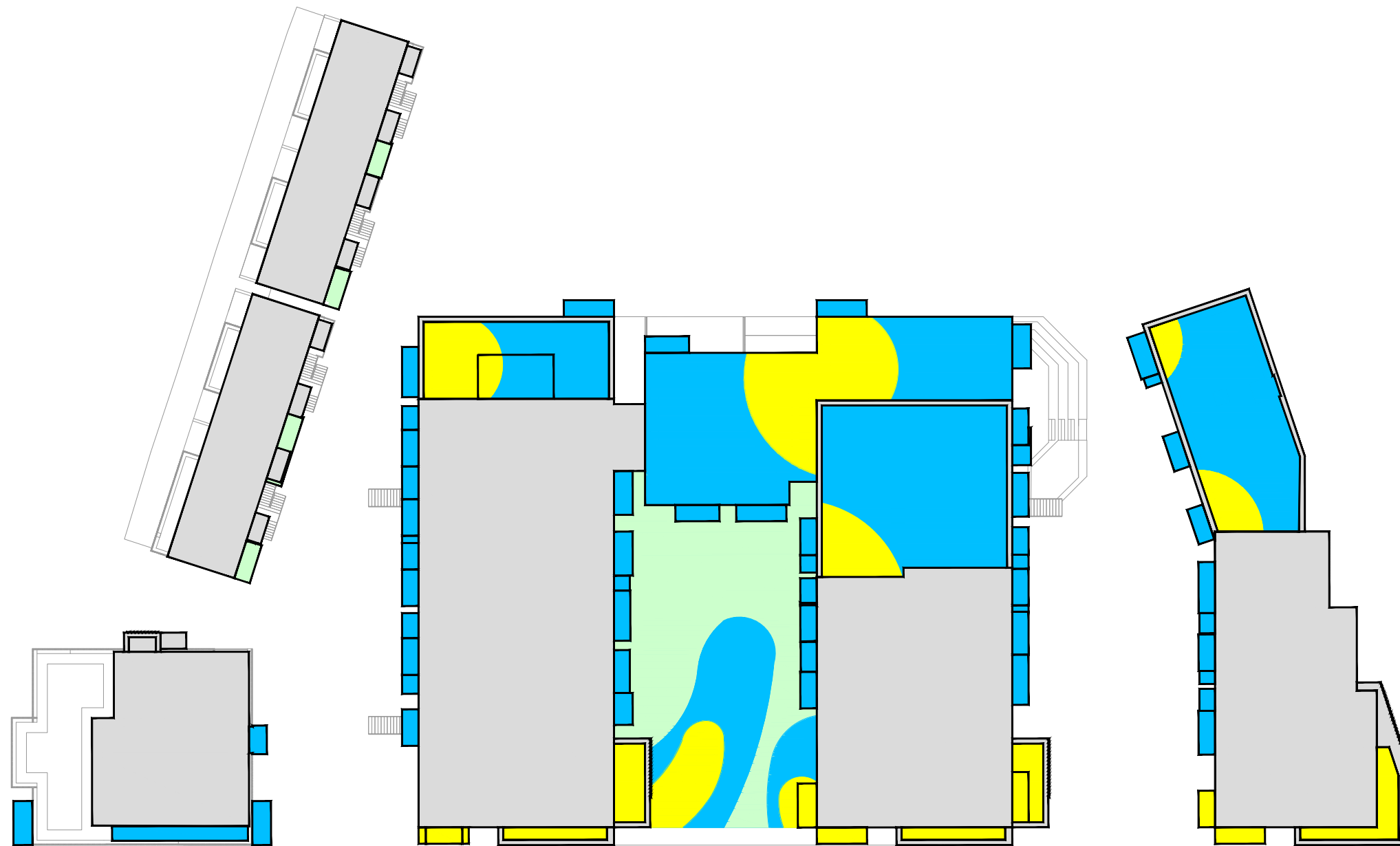
Configuration 1: Proposed Development with Existing Surrounding (No Landscaping)

Summer Season






2508070 White Heather SHD - Dublin, Ireland



Figure: 8



**LDDC COMFORT CATEGORIES:**

Sitting	
Standing	
Strolling	
Walking	
Uncomfortable	

**Pedestrian Comfort Desk Study - Expected Wind Conditions - Roof Plan**

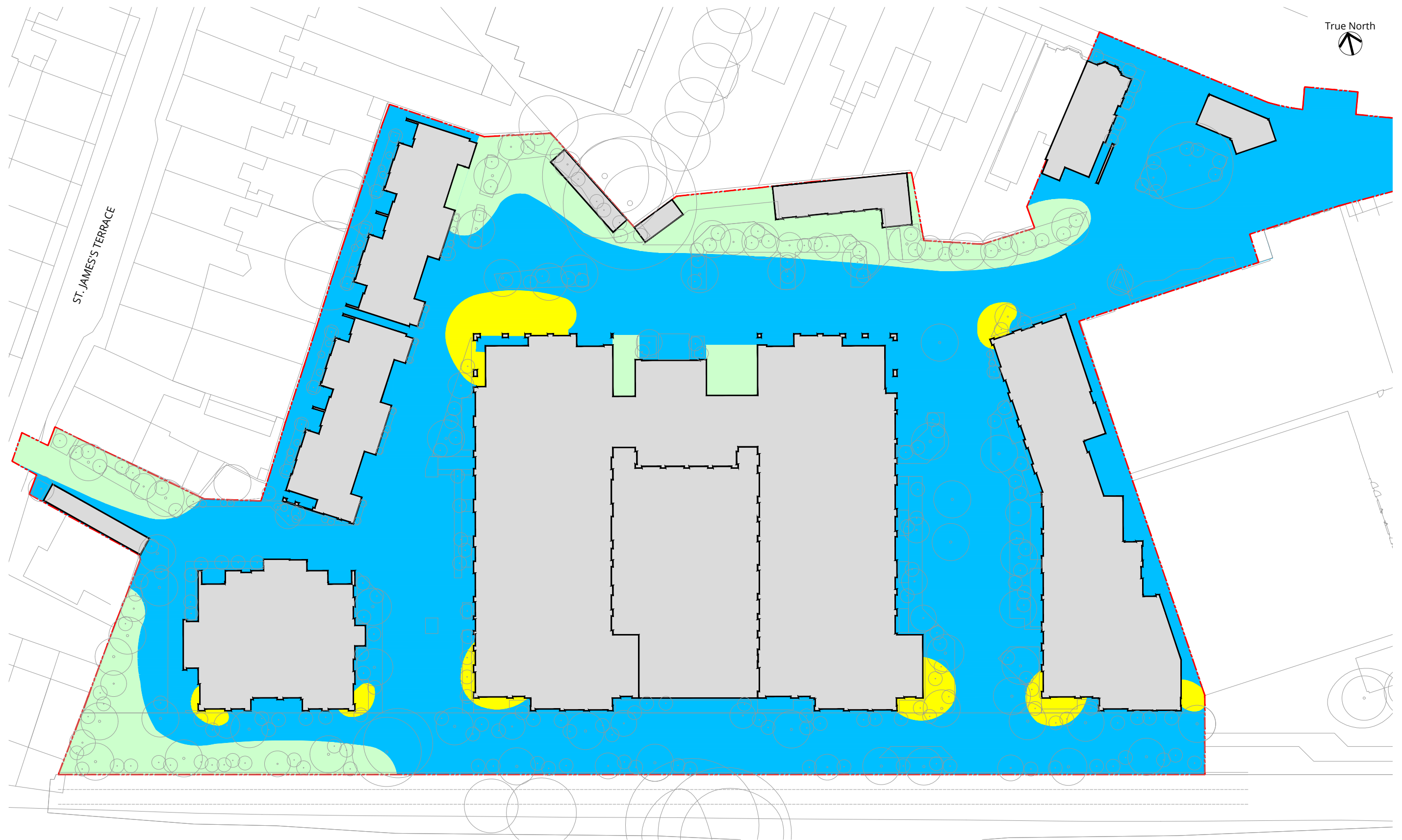
Configuration 1: Proposed Development with Existing Surrounding (No Landscaping)

Summer Season

2508070 White Heather SHD - Dublin, Ireland



Figure: 9



**LDDC COMFORT CATEGORIES:**

Sitting	Light Green
Standing	Blue
Strolling	Yellow
Walking	Magenta
Uncomfortable	Red

**Pedestrian Comfort Desk Study - Expected Wind Conditions - Ground Floor**

Configuration 2: Proposed Development with Existing Surrounding Buildings (Including Landscaping)  
Windiest Season






2508070 White Heather SHD - Dublin, Ireland



Figure: 10



**LDDC COMFORT CATEGORIES:**

Sitting	
Standing	
Strolling	
Walking	
Uncomfortable	

**Pedestrian Comfort Desk Study - Expected Wind Conditions - Ground Floor**

Configuration 2: Proposed Development with Existing Surrounding Buildings (Including Landscaping)

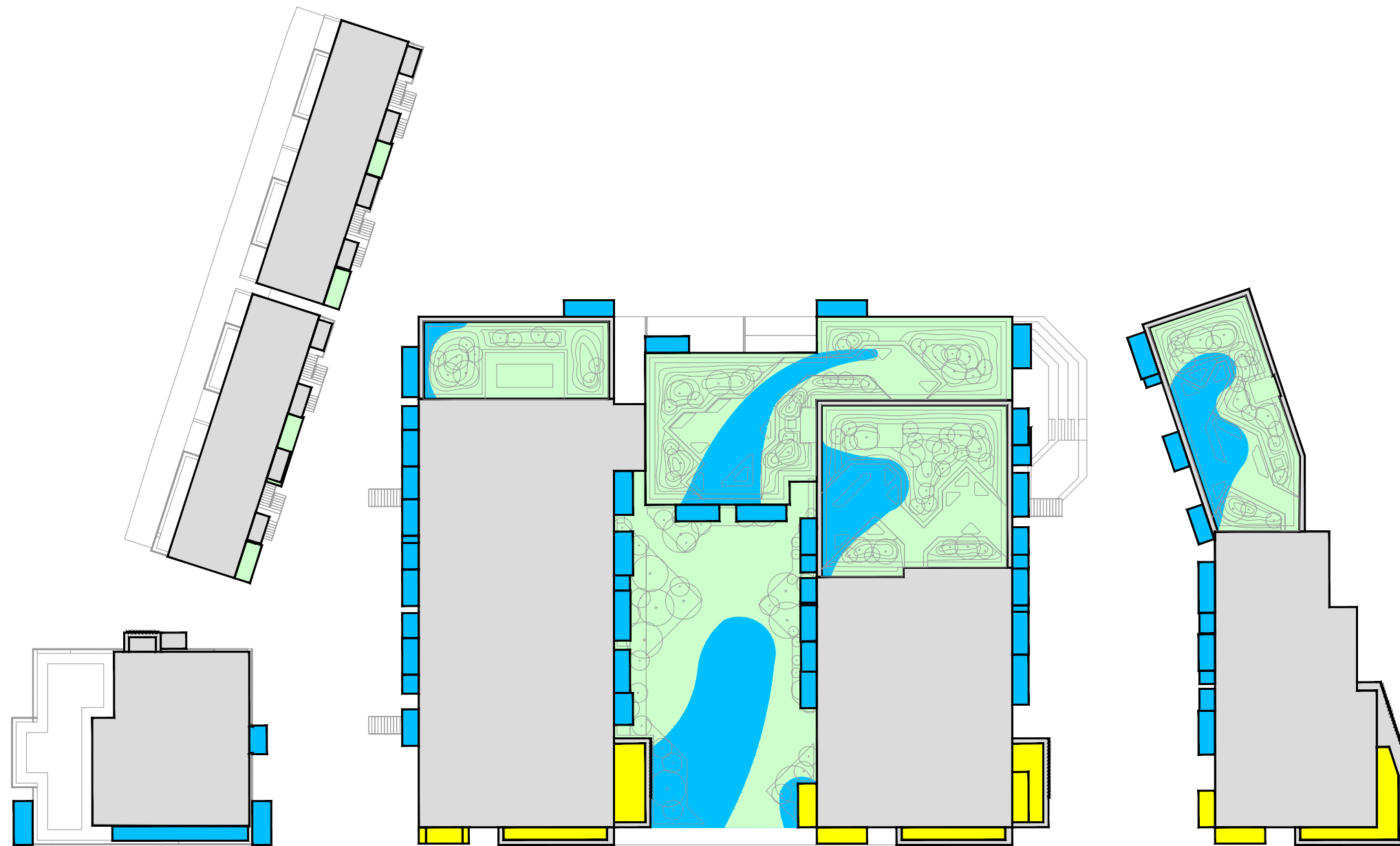
Summer Season

2508070 White Heather SHD - Dublin, Ireland








Figure: 11





**LDDC COMFORT CATEGORIES:**

Sitting	
Standing	
Strolling	
Walking	
Uncomfortable	

**Pedestrian Comfort Desk Study - Expected Wind Conditions - Roof Plan**

Configuration 2: Proposed Development with Existing Surrounding Buildings (Including Landscaping)  
Summer Season

2508070 White Heather SHD - Dublin, Ireland

Figure: 12



## APPENDIX A





# APPENDIX A

Table 2: ESDU Mean Factors at 2m and 10m above ground level

Wind Direction	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°
Mean Factor at 2 m	0.32	0.32	0.30	0.30	0.30	0.30	0.32	0.33	0.33	0.33	0.33	0.41
Mean Factor at 10 m	0.69	0.69	0.65	0.65	0.66	0.66	0.69	0.71	0.71	0.72	0.72	0.76
Wind Direction	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°
Mean Factor at 2 m	0.40	0.40	0.38	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Mean Factor at 10 m	0.74	0.74	0.71	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Wind Direction	240°	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°
Mean Factor at 2 m	0.39	0.38	0.38	0.38	0.38	0.38	0.40	0.40	0.40	0.39	0.39	0.39
Mean Factor at 10 m	0.72	0.71	0.71	0.71	0.71	0.71	0.74	0.74	0.74	0.72	0.72	0.72

PEDESTRIAN LEVEL WIND - DESK BASED ASSESSMENT  
WHITE HEATHER SHD - DUBLIN, IRELAND

RWDI #2508070  
December 5<sup>th</sup>, 2025



Figure 13: Proposed landscaping scheme at ground and podium level



PEDESTRIAN LEVEL WIND - DESK BASED ASSESSMENT  
WHITE HEATHER SHD - DUBLIN, IRELAND

RWDI #2508070  
December 5<sup>th</sup>, 2025

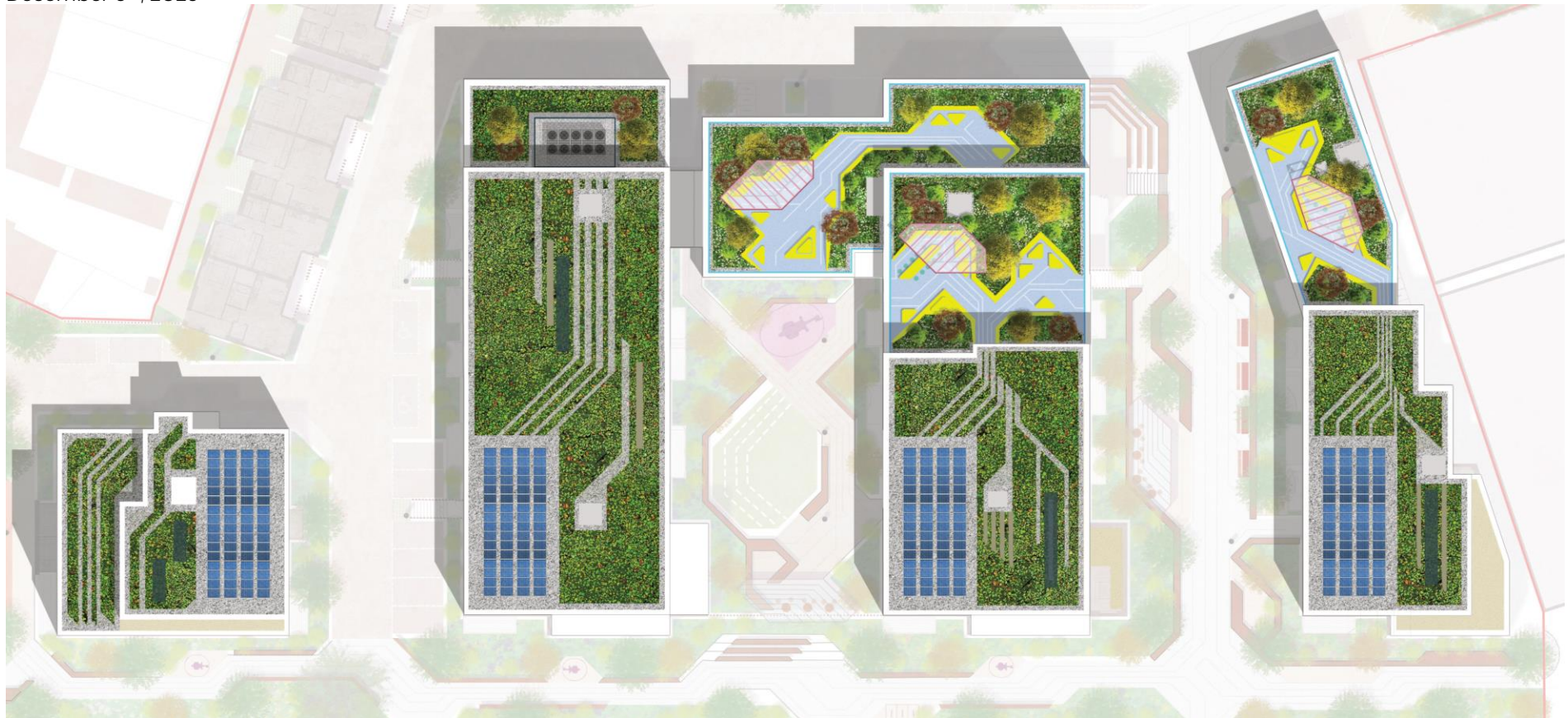


Figure 14: Proposed landscaping scheme at terraces