

Wellington City Proposed District Plan

Appendix A – Wind

Section 42A of the Resource Management Act 1991

This entire chapter has been notified as part of an Intensification Planning Instrument, using the Intensification Streamlined Planning Process (ISPP) in accordance with Section 80E of the RMA.

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Wind

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Introduction

The purpose of the Wind Chapter is to manage new developments, additions and alterations so as to maintain or enhance comfortable and safe wind conditions for pedestrians and public space users. The management of building design for wind effects provides environmental benefits for people and communities.

Wellington's windy climate necessitates management of new development in order to manage the ground level wind effects in urban areas. New development, particularly buildings that are much larger than their surroundings, can cause downdrafts and channelling, which accelerates winds at ground level. This can negatively affect pedestrian-level comfort and even become hazardous. The taller a building is, the greater its exposure to higher wind speeds, which increases its impact on the ground level winds around it and requires greater wind mitigation measures through building design.

Adverse wind conditions can be often mitigated through the design of buildings. Architectural devices and structures added to a building may also assist in reducing high speed winds and provide protection for pedestrians.

Proposals which include additions or alterations to an existing building or construction of a new building must have regard to the Wind Chapter Best Practice Guidance Document (Appendix 14) in order to achieve optimum building design for wind that minimises the impact of the development on the public realm and achieves wind mitigation that is contained within the site.

The provisions within this chapter apply to public spaces in a number of zones across the City including the City Centre ~~and different some~~ Centres Zones ~~and the High Density Residential Zone~~. The provisions do not apply to private spaces such as adjacent properties or backyards.

Within these zones, Council encourages the consideration of wind effects and aerodynamics early in the design phase for all additions and alterations to existing buildings and any construction of a new building. The provisions seek to manage the individual and cumulative effects of new building works, additions and alterations on pedestrian amenity, comfort, safety and the progressive deterioration of the wind environment.

Quantitative wind studies (~~wind tunnel testing~~) or qualitative (~~descriptive~~) wind assessments ~~are required when triggered by developments of different scales to may be required~~ to understand the effects of a development on wind conditions. ~~The type of assessment and information requirements are detailed in the relevant rule. For the City Centre Zone, Metropolitan Centre Zone Height Control Area 1, Special Purpose Port Zone, Multi-User Ferry Precinct and Inner Harbour Port Precinct, Special Purpose Stadium Zone and Special Purpose Waterfront Zone, a quantitative wind study will usually be required to show compliance with the wind standards. Council may accept a qualitative wind assessment when a development is likely to have little, if any, impact on wind conditions — refer Wind Chapter Best Practice Guidance Document (Appendix 14) for likely wind effects of buildings.~~

~~For the Local Centre Zone, Neighbourhood Centre Zone, Metropolitan Centre Zone — excluding Height Control Area 1, Special Purpose Hospital Zone, and Special Purpose Tertiary Education Zone, a qualitative wind~~

assessment is usually all that is required to show compliance with the wind standards. However, if a development is assessed to have a large negative impact on wind conditions, then a quantitative wind study may be required to enable the wind effects of the development to be fully understood.

It is up to the discretion of the Council to decide whether a quantitative wind study or a qualitative wind assessment is required. The requirements for quantitative wind studies and qualitative wind assessments are set out in Appendix 8.

Objectives	
WIND-O1	<p>Purpose</p> <p>The adverse impact of wind from new developments, additions and alterations on public spaces is managed to:</p> <p>1. Provide comfortable conditions for pedestrians whilst acknowledging that not all wind effects can be mitigated;</p> <ol style="list-style-type: none"> 1. Ensure that new developments, additions and alterations do not generate unsafe wind conditions in public spaces and, where possible, ameliorate existing unsafe wind conditions; and 2. Prevent the gradual degradation of Wellington's pedestrian wind environment over time; and 3. <u>Ensure a comfortable wind environment in the public spaces listed in Appendix 9 – City Centre Zone and Special Purpose Waterfront Zone – Minimum Sunlight Access and Wind Comfort Control – Public Space Requirements, while acknowledging that not all wind effects can be mitigated.</u>
Policies	
WIND-P1	<p>Early consideration of wind in design</p> <p>Encourage consideration of wind effects during the early stages of building design to achieve:</p> <ol style="list-style-type: none"> 1. Optimum design for wind that minimises the impact of the development on the public realm; and 2. Wind mitigation that is contained within the site.
WIND-P2	<p>Managing effects</p> <p>Require that larger-scale buildings, including additions and alterations, are designed to:</p> <ol style="list-style-type: none"> 1. Manage adverse wind effects that they create; 2. Improve the wind environment as far as practicalble where existing wind conditions are dangerous; and 3. Limit any deterioration of the wind environment that eaffects: <ol style="list-style-type: none"> a. The Ssafety and amenity of the pedestrians s <u>experience</u>; and b. Existing wind mitigation measures.
WIND-P3	<p>Comfort and safety in <u>listed</u> public spaces</p> <p>Require building design and wind mitigation measures to maintain and where possible enhance pedestrian safety and the comfort of the wind environment for users of the public spaces listed in <u>Appendix 9 – City Centre Zone and Special Purpose Waterfront Zone – Minimum Sunlight Access and Wind Comfort Control – Public Space Requirements.</u></p>
WIND-P4	<p>Comfort and safety in public spaces created through new development</p> <p>Encourage new public spaces created through new development to have wind conditions that are appropriate for the expected public use of the space.</p>

Building and Structure Activities	
WIND-R1	Construction, alteration and additions to buildings and structures
City Centre Zone Metropolitan Centre Zone - Height Control Area 1 and 2 Port Zone: Inner Harbour Port Precinct Port Zone: Multi-User Ferry Precinct Waterfront Zone Stadium Zone	<p>1. Activity status: Permitted</p> <p>Where:</p> <ul style="list-style-type: none"> a. New or altered buildings or structures are less than or equal to 20m in height above ground level; or b. Rooftop a Additions: <ul style="list-style-type: none"> i. The height of the rooftop additions are less than or equal to 8m in height when measured from the highest point of the building or structure; or e-ii. Are setback at least 5m from the building facades adjacent to public spaces and d. Are less than 33% of the existing building volume; or e. Compliance with the following standards is achieved: <ul style="list-style-type: none"> i. WIND-S1; ii. WIND-S2; and iii. WIND-S3.
Local Centre Zone Neighbourhood Centre Zone Metropolitan Centre Zone - excluding Metropolitan Centre Zone Height Control Area 1 and 2 <u>High Density Residential Zone</u>	<p>2. Activity status: Permitted</p> <p>Where:</p> <ul style="list-style-type: none"> a. New or altered buildings or structures are less than or equal to 42m <u>15m</u> in height above ground level; or b. Rooftop a Additions: <ul style="list-style-type: none"> i. The height of the rooftop additions are less than or equal to 4m; or in height when measured from the highest point of the building or structure; or c. Rooftop additions a Are setback at least 3m from the building facades adjacent to public spaces and d. are less than 33% of the existing building volume; or e. Compliance with the following standards is achieved: <ul style="list-style-type: none"> i. WIND-S1; and ii. WIND-S2.
Hospital Zone Tertiary Education Zone	<p>3. Activity status: Permitted</p> <p>Where development is adjacent to a public street:</p> <ul style="list-style-type: none"> a. New or altered buildings or structures are less than or equal to 42m <u>15m</u> in height above ground level; or b. Rooftop a Additions: <ul style="list-style-type: none"> i. The height of the rooftop additions are less than or equal to 4m; or in height when measured from the highest point of the building or structure; or e-ii. Rooftop additions A are setback at least 3m from the building facades adjacent to public spaces; and e. d. are less than 33% of the existing building volume; or e. Compliance with the following standards is achieved: <ul style="list-style-type: none"> i. WIND-S1; and ii. WIND-S2.

<p><u>City Centre Zone</u></p> <p><u>Waterfront Zone</u></p>	<p>4. <u>Activity status: Restricted Discretionary</u></p> <p><u>Where:</u></p> <ol style="list-style-type: none"> <u>Compliance with WIND-R1.1 cannot be achieved; or</u> <u>New buildings and structures exceed 20m above ground level, but are less than 25m above ground level.</u> <p><u>Matters of discretion are:</u></p> <ol style="list-style-type: none"> <u>The extent and effect of non-compliance with WIND-S1, WIND-S2 and WIND-S3 as specified in the associated assessment criteria for the infringed standard.</u> <u>The matters in WIND-P1, WIND-P2, WIND-P3 and WIND-P4;</u> <u>The extent of compliance with qualitative wind assessment requirements included in Appendix 8; and</u> <u>The level of consistency with the Wind Chapter Best Practice Guidance Document (Appendix 14).</u> <p><u>Section 88 Information Requirements</u></p> <p><u>Applications under this rule must provide a qualitative wind assessment that:</u></p> <ol style="list-style-type: none"> <u>Details the extent of compliance with WIND-S1, WIND-S2 and WIND-S3;</u> <u>Is based on the expert opinion of a suitably qualified and experienced person;</u> <u>Considers the effects of the proposed building upon all public spaces;</u> <u>Complies with the reporting requirements in Appendix 8 WIND-A2 and be consistent with the 'rules of thumb' for estimating wind effects in the Wind Chapter Best Practice Guidance Document (Appendix 14); and</u> <u>Be consistent with the proposed design in the resource consent application and any associated urban design analysis and landscaping proposals.</u>
<p><u>City Centre Zone</u></p> <p><u>Waterfront Zone</u></p>	<p>5. <u>Activity status: Restricted Discretionary</u></p> <p><u>Where</u></p> <ol style="list-style-type: none"> <u>Compliance with WIND-R1.1 cannot be achieved; or</u> <u>New buildings and structures exceed 25m above ground level.</u> <p><u>Matters of discretion are:</u></p> <ol style="list-style-type: none"> <u>The extent and effect of non-compliance with WIND-S1, WIND-S2 and WIND-S3 as specified in the associated assessment criteria for the infringed standard;</u> <u>The matters in WIND-P1, WIND-P2, WIND-P3 and WIND-P4;</u> <u>The extent of compliance with quantitative wind assessment requirements included in Appendix 8; and</u> <u>The level of consistency with the Wind Chapter Best Practice Guidance Document (Appendix 14).</u> <p><u>Section 88 Information Requirements</u></p> <p><u>Applications under this rule must provide a quantitative wind assessment that:</u></p> <ol style="list-style-type: none"> <u>Details the extent of compliance with WIND-S1, WIND-S2, and WIND-S3;</u> <u>Where WIND-S1, WIND-S2, and WIND-S3 are not complied with, show how the proposed building most closely complies with these standards when compared to any other practical alternative building design (i.e. it is the optimum aerodynamic design for the site);</u> <u>Is based on the expert opinion of a suitably qualified and experienced person;</u> <u>Complies with the reporting requirements set out in Appendix 8 WIND-A1;</u>

	<p>5. <u>Is consistent with the Wind Chapter Best Practice Guidance Document (Appendix 14);</u></p> <p>6. <u>Considers the effects of the proposed building upon all public spaces;</u></p> <p>7. <u>Compares the effects of the proposed building against the existing situation, except where the site is currently vacant. If the site is vacant, the proposed building must be compared against any building which existed on the site within the previous 5 years; and</u></p> <p>8. <u>Be consistent with the proposed design in the resource consent application and any associated urban design analysis and landscaping proposals.</u></p>
<p><u>Port Zone:</u> <u>Inner Harbour</u> <u>Port Precinct</u></p> <p>- <u>Port Zone:</u> <u>Multi-User</u> <u>Ferry Precinct</u></p> <p>- <u>Metropolitan</u> <u>Centre Zone</u></p> <p><u>Stadium Zone</u></p>	<p>6. <u>Activity status: Restricted Discretionary</u></p> <p><u>Where</u></p> <ol style="list-style-type: none"> 1. <u>Compliance with WIND-R1.1 cannot be achieved; or</u> 2. <u>New buildings and structures exceed 20m above ground level, but are less than 25m above ground level.</u> <p><u>Matters of discretion are:</u></p> <ol style="list-style-type: none"> 1. <u>The extent and effect of non-compliance with WIND-S1 and WIND-S2 and as specified in the associated assessment criteria for the infringed standard;</u> 2. <u>The matters in WIND-P1, WIND-P2, WIND-P3 and WIND-P4;</u> 3. <u>The extent of compliance with quantitative wind assessment requirements included in Appendix 8; and</u> 4. <u>The level of consistency with the Wind Chapter Best Practice Guidance Document (Appendix 14).</u> <p><u>Section 88 Information Requirements</u></p> <p><u>Applications under this rule must provide a qualitative wind assessment that:</u></p> <ol style="list-style-type: none"> 1. <u>Details the extent of compliance with WIND-S1 and WIND-S2;</u> 2. <u>Is based on the expert opinion of a suitably qualified and experienced person;</u> 3. <u>Considers the effects of the proposed building upon all public spaces;</u> 4. <u>Complies with the reporting requirements in Appendix 8 WIND-A2 and be consistent with the 'rules of thumb' for estimating wind effects in the Wind Chapter Best Practice Guidance Document (Appendix 14); and</u> 5. <u>Be consistent with the proposed design in the resource consent application and any associated urban design analysis and landscaping proposals.</u>
<p><u>Port Zone:</u> <u>Inner Harbour</u> <u>Port Precinct</u></p> <p>- <u>Port Zone:</u> <u>Multi-User</u> <u>Ferry Precinct</u></p> <p><u>Metropolitan</u> <u>Centre Zone</u></p> <p>- <u>Stadium Zone</u></p>	<p>7. <u>Activity status: Restricted Discretionary</u></p> <p><u>Where</u></p> <ol style="list-style-type: none"> 1. <u>Compliance with WIND-R1.1 cannot be achieved; or</u> 2. <u>New buildings and structures exceed 25m above ground level.</u> <p><u>Matters of discretion are:</u></p> <ol style="list-style-type: none"> 1. <u>The extent and effect of non-compliance with WIND-S1 and WIND-S2 as specified in the associated assessment criteria for the infringed standard;</u> 2. <u>The matters in WIND-P1, WIND-P2, WIND-P3 and WIND-P4;</u> 3. <u>The extent of compliance with quantitative wind assessment requirements included in Appendix 8; and</u> 4. <u>The level of consistency with the Wind Chapter Best Practice Guidance Document (Appendix 14).</u>

	<p><u>Section 88 Information Requirements</u></p> <p><u>Applications under this rule must provide a quantitative wind assessment that:</u></p> <ol style="list-style-type: none"> 1. <u>Details the extent of compliance with WIND-S1 and WIND-S2;</u> 2. <u>Where WIND-S1 and WIND-S2 are not complied with, show how the proposed building most closely complies with these standards when compared to any other practical alternative building design (i.e. it is the optimum aerodynamic design for the site);</u> 3. <u>Is based on the expert opinion of a suitably qualified and experienced person;</u> 4. <u>Complies with the reporting requirements set out in Appendix 8 WIND-A1;</u> 5. <u>Is consistent with the Wind Chapter Best Practice Guidance Document (Appendix 14);</u> 6. <u>Considers the effects of the proposed building upon all public spaces;</u> 7. <u>Compares the effects of the proposed building against the existing situation, except where the site is currently vacant. If the site is vacant, the proposed building must be compared against any building which existed on the site within the previous 5 years; and</u> 8. <u>Be consistent with the proposed design in the resource consent application and any associated urban design analysis and landscaping proposals.</u>
<p><u>Local Centre Zone</u></p> <p><u>Neighbourhood Centre Zone</u></p> <p><u>High Density Residential Zone</u></p> <p><u>Tertiary Education Zone</u></p> <p><u>Hospital Zone</u></p>	<p>8. <u>Activity status: Restricted Discretionary</u></p> <p><u>Where:</u></p> <ol style="list-style-type: none"> c. <u>Compliance with WIND-R1.2 cannot be achieved; or</u> d. <u>New buildings and structures exceed 15m above ground level, but are less than 25m above ground level.</u> <p><u>Matters of discretion are:</u></p> <ol style="list-style-type: none"> 1. <u>The extent and effect of non-compliance with WIND-S1 and WIND-S2 as specified in the associated assessment criteria for the infringed standard.</u> 2. <u>The matters in WIND-P1, WIND-P2, WIND-P3 and WIND-P4;</u> 3. <u>The extent of compliance with qualitative wind assessment requirements included in Appendix 8; and</u> 4. <u>The level of consistency with the Wind Chapter Best Practice Guidance Document (Appendix 14).</u> <p><u>Section 88 Information Requirements</u></p> <p><u>Applications under this rule must provide a qualitative wind assessment that:</u></p> <ol style="list-style-type: none"> 1. <u>Details the extent of compliance with WIND-S1 and WIND-S2;</u> 2. <u>Is based on the expert opinion of a suitably qualified and experienced person;</u> 3. <u>Considers the effects of the proposed building upon all public spaces;</u> 4. <u>Complies with the reporting requirements in Appendix 8 WIND-A2 and be consistent with the 'rules of thumb' for estimating wind effects in the Wind Chapter Best Practice Guidance Document (Appendix 14); and</u> 5. <u>Be consistent with the proposed design in the resource consent application and any associated urban design analysis and landscaping proposals.</u>
<p><u>Local Centre Zone</u></p> <p><u>Neighbourhood Centre Zone</u></p>	<p>9. <u>Activity status: Restricted Discretionary</u></p> <p><u>Where</u></p> <ol style="list-style-type: none"> 1. <u>Compliance with WIND-R1.2 cannot be achieved; or</u>

<p><u>High Density Residential Zone</u></p> <p><u>Tertiary Education Zone</u></p> <p><u>Hospital Zone</u></p>	<p>2. <u>New buildings and structures exceed 25m above ground level.</u></p> <p><u>Matters of discretion are:</u></p> <ol style="list-style-type: none"> 5. <u>The extent and effect of non-compliance with WIND-S1 and WIND-S2 as specified in the associated assessment criteria for the infringed standard;</u> 6. <u>The matters in WIND-P1, WIND-P2, WIND-P3 and WIND-P4;</u> 7. <u>The extent of compliance with quantitative wind assessment requirements included in Appendix 8; and</u> 8. <u>The level of consistency with the Wind Chapter Best Practice Guidance Document (Appendix 14).</u> <p><u>Section 88 Information Requirements</u></p> <p><u>Applications under this rule must provide a quantitative wind assessment that:</u></p> <ol style="list-style-type: none"> 1. <u>Details the extent of compliance with WIND-S1 and WIND-S2;</u> 2. <u>Where WIND-S1 and WIND-S2 are not complied with, show how the proposed building most closely complies with these standards when compared to any other practical alternative building design (i.e. it is the optimum aerodynamic design for the site);</u> 3. <u>Is based on the expert opinion of a suitably qualified and experienced person;</u> 4. <u>Complies with the reporting requirements set out in Appendix 8 WIND-A1;</u> 5. <u>Is consistent with the Wind Chapter Best Practice Guidance Document (Appendix 14);</u> 6. <u>Considers the effects of the proposed building upon all public spaces;</u> 7. <u>Compares the effects of the proposed building against the existing situation, except where the site is currently vacant. If the site is vacant, the proposed building must be compared against any building which existed on the site within the previous 5 years; and</u> 8. <u>Be consistent with the proposed design in the resource consent application and any associated urban design analysis and landscaping proposals.</u>
<p><u>City-Centre Zone</u></p> <p>-</p> <p><u>Metropolitan Centre Zone</u></p> <p>-</p> <p><u>Local Centre Zone</u></p> <p>-</p> <p><u>Neighbourhood Centre Zone</u></p> <p>-</p> <p><u>Port Zone: Inner Harbour Port Precinct</u></p> <p>-</p> <p><u>Port Zone: Multi-User Ferry Precinct</u></p> <p>-</p> <p><u>Waterfront Zone</u></p> <p>-</p> <p><u>Stadium Zone</u></p> <p>-</p>	<p>4. Activity status: Restricted Discretionary</p> <p><u>Where:</u></p> <p>a. <u>Compliance with WIND-R1.1 or WIND-R1.2 or WIND-R1.3 cannot be achieved</u></p> <p>-</p> <p><u>Matters of discretion are:</u></p> <ol style="list-style-type: none"> 1. <u>The matters in WIND-P1, WIND-P2, WIND-P3 and WIND-P4;</u> 2. <u>The extent and effect of non-compliance with any relevant standard as specified in the associated assessment criteria for the infringed standard;</u> 3. <u>The extent of compliance with the quantitative wind study and qualitative wind assessment requirements included in Appendix 8; and</u> 4. <u>The level of consistency with the Wind Chapter Best Practice Guidance Document (Appendix 14).</u> <p><u>Section 88 information requirements for applications:</u></p> <p>-</p> <ol style="list-style-type: none"> 2. <u>For the City Centre Zone, Stadium Zone, Port Zone, Multi-User Ferry Precinct, Inner Harbour Port Precinct, Waterfront Zone and Metropolitan Centre Zone—Height Control Area 1 and 2, applications under this rule must provide, in addition to the standard information requirements:</u> <ol style="list-style-type: none"> 1. <u>A wind report, which is based on the results of a quantitative wind study, must be submitted to show compliance with WIND-S1, WIND-S2, and WIND-S3; and</u> 2. <u>The wind report must address the wind report information requirements set out in Appendix 8 WIND-A1 and:</u>

<p>Hospital Zone - Tertiary Education Zone</p>	<p>a. Be based on the results of testing that complies with the requirements given in Appendix 8 WIND-A1;</p> <p>b. Show the effects of the proposed building upon all public spaces;</p> <p>c. Compare the effects of the proposed building against the existing situation, except where the site is currently vacant. If the site is vacant, the proposed building must be compared against any building which existed on the site within the previous 5 years;</p> <p>d. Where WIND-S1, WIND-S2, or where applicable WIND-S3, is not complied with, show how the proposed building most closely complies with these standards when compared to any other practical alternative building design (i.e. it is the optimum aerodynamic design for the site);</p> <p>e. Comply with the reporting requirements in Appendix 8 WIND-A1 and be consistent with the Wind Chapter Best Practice Guidance Document (Appendix 14); and</p> <p>f. Be consistent with the proposed design in the resource consent application and any associated urban design analysis and landscaping proposals.</p> <p>3. For the Local Centre Zone, Neighbourhood Centre Zone, Metropolitan Centre Zone—excluding Metropolitan Centre Zone Height Control Area 1 and 2, Hospital Zone, and Tertiary Education Zone, applications under this rule must provide, in addition to the standard information requirements:</p> <p>1. A qualitative wind assessment, and certification must be submitted to show compliance with WIND-S1 and WIND-S2; and</p> <p>2. The qualitative wind assessment must:</p> <p>a. Be based on the expert opinion of a suitably qualified and experienced person; and</p> <p>b. Consider the effects of the proposed building upon all public spaces; and</p> <p>c. Detail the extent of compliance with WIND-S1 and WIND-S2; and</p> <p>d. Comply with the reporting requirements in Appendix 8 WIND-A2 and be consistent with the ‘rules of thumb’ for estimating wind effects in the Wind Chapter Best Practice Guidance Document (Appendix 14); and</p> <p>e. Be consistent with the proposed design in the resource consent application and any associated urban design analysis and landscaping proposals.</p>	
<p>WIND-R2</p>	<p>Construction, alteration and additions to buildings and structures <u>not otherwise provided for in this chapter</u></p>	
<p>All zones <u>not otherwise listed in WIND-R1</u></p>	<p>1. Activity status: Permitted</p>	
<p>Effects Standards</p>		
<p>WIND-S1</p>	<p>Safety</p>	
<p>City Centre Zone Metropolitan Centre Zone Local Centre Zone Neighbourhood Centre Zone Port Zone: Inner Harbour Port Precinct</p>	<p>1. The proposed building, additions or alterations must not result in an annual maximum gust speed in excess of 20 m/s in any public space.</p>	<p>Assessment criteria where the standard is infringed:</p> <p>1. The extent to which pedestrians can easily avoid dangerous gust speeds created by the proposed development, including effects on building entrances, pedestrian crossings, or major walking routes;</p> <p>2. The extent to which pedestrian use in areas where dangerous wind speeds occur is low and wind conditions elsewhere are improved by the proposed development;</p> <p>3. The extent to which dangerous wind speeds at one location results from</p>

Port Zone: Multi-User Ferry Precinct Waterfront Zone Stadium Zone Hospital Zone Tertiary Education Zone <u>High Density Residential Zone</u>		wind being redirected or shifted from another location, with no significant change in the overall wind conditions; 4. The extent to which an existing dangerous gust speed is reduced, improving the overall wind conditions; 5. The extent to which it is shown that the proposed design is the optimum aerodynamic solution, including whether changes in bulk or location of the proposed development are documented and do not significantly improve the situation; and 6. The extent to which the proposed development design is consistent with the Wind Chapter Best Practice Guidance Document (Appendix 14).
WIND-S2	Deterioration of the wind environment	
City Centre Zone Metropolitan Centre Zone Local Centre Zone Neighbourhood Centre Zone Port Zone: Inner Harbour Port Precinct Port Zone: Multi-User Ferry Precinct Waterfront Zone Stadium Zone Hospital Zone Tertiary Education Zone <u>High Density Residential Zone</u>	1. Wind conditions overall must not deteriorate in public spaces that are affected by the development when undesirable wind conditions are assessed by the number of hours a mean wind speed of 2.5 m/s is equaled or exceeded each year; and 2. Wind conditions at any specific locations may deteriorate by up to 500 hours per year, provided the wind conditions averaged over all the public spaces do not deteriorate.	Assessment criteria where the standard is infringed: 1. The extent to which pedestrians can easily avoid dangerous gust speeds created by the proposed development, including effects on building entrances, pedestrian crossings, or major walking routes; 2. The extent to which pedestrian use in areas where dangerous wind speeds occur is low and wind conditions elsewhere are improved by the proposed development; 3. The extent to which dangerous wind speeds at one location results from wind being redirected or shifted from another location, with no significant change in the overall wind conditions; 4. The extent to which existing wind conditions are maintained or improved; 5. The extent to which it is shown that the proposed design is the optimum aerodynamic solution, including whether changes in bulk or location of the proposed development are documented and do not significantly improve the situation; and 6. The extent to which the proposed development design is consistent with the Wind Chapter Best Practice Guidance Document (Appendix 14).
WIND-S3	Comfort	
WIND-S3 applies to pPublic spaces	1. A proposed development must not cause uncomfortable wind conditions in <u>listed</u> public spaces; and	Assessment criteria where the standard is infringed:

<p>listed in Appendix 9 City Centre Zone and Special Purpose Waterfront Zone – Minimum Sunlight Access <u>and Wind Comfort Control</u> – Public Space Requirements.</p>	<p>2. A development must not cause existing uncomfortable wind conditions to deteriorate.</p>	<ol style="list-style-type: none"> 1. The extent to which pedestrians can easily avoid areas where winds deteriorate and use other areas where the winds do not deteriorate; 2. The extent to which pedestrian use and expectations for the area where winds deteriorate are low and wind conditions elsewhere improve. 3. The extent to which a deterioration in winds at one location results from wind being redirected or shifted from one area to another, with no significant change in the overall wind conditions; 4. The extent to which existing wind conditions have been maintained or improved; 5. The extent to which very low existing winds speeds have been increased towards the comfort threshold; 6. The extent to which it is shown that the proposed design is the optimum aerodynamic solution, e.g. changes in bulk or location of the proposed development are documented and do not significantly improve the situation. A “significant” improvement would be a difference of more than 175 hours per year; and 7. The extent to which the proposed development design is consistent with advice and recommendations in the Wind Chapter Best Practice Guidance Document.
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