Section 32 Evaluation Report
Part 2: Wind Chapter

Contents

Table of acronyms

Abbreviation	Full term
AEE	Assessment of Environmental Effects
CCSV	Central City Spatial Vision
NES	National Environmental Standard
NPS	National Policy Statement
NPS-UD	National Policy Statement on Urban Development
ODP	Operative District Plan
PDP	Proposed District Plan
RMA	Resource Management Act
RPS	Regional Policy Statement

1.0 Overview and Purpose

1.1 Introduction to the resource management issue/s

This section 32 evaluation report is focussed on the Wind chapter. The purpose of the topic 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 is widely acknowledged as being the windiest major city in the world, with an average wind speed measured at the airport of 26 km/h. Wellington's windy climate necessitates management of new development in order to manage the ground level wind effects in urban areas. Adverse wind conditions can be often mitigated through the design of buildings, with architectural devices also assisting in reducing high speed winds and providing protection for pedestrians.

The Wind chapter regulates wind effects from new buildings or additions or alterations to existing buildings on public spaces in a number of zones across the City, including the City Centre Zone, different Centres Zones, Hospital Zone and Tertiary Education Zone. Provisions in this chapter do not apply to private spaces such as adjacent properties or backyards. 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.

If not managed appropriately, new developments, particularly buildings that are much larger than their surroundings, can cause downdrafts and channelling, which accelerates winds at ground level. The scale of effects is related to the design of the new building and the location due to the existing wind environment. The Wind provisions in the operative District Plan are not consolidated within a dedicated chapter but are instead spread across the Central Area Zone and Centres and Business Zones chapters.

The Wind chapter proposes to update and consolidate the wind provisions. Updated height triggers for Wind assessments have been introduced, as well as updated assessment mechanisms. Quantitative wind studies or qualitative wind assessments and certification may be required to understand the effects of a development on wind conditions, including any cumulative effects.

In addition to provisions in this chapter, Appendix 8 sets out the modelling and reporting requirements for the Quantitative Wind Study and Qualitative Wind Assessment in accordance with the Wind Chapter requirements. 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 addition to the provisions in this chapter, a number of other Part 2: District-Wide chapters also contain provisions that may be relevant in addition to the underlying Zone chapter provisions.

2.0 Reference to other evaluation reports

This report should also be read in conjunction with the following evaluation reports:

Report	Relationship to this topic
Zone chapters: • City Centre Zone • Metropolitan Centre Zone • Local Centre Zone • Neighbourhood Centre Zone • Inner Harbour Port Precinct • Multi-User Ferry Precinct • Special Purpose Waterfront Zone • Special Purpose Stadium Zone • Special Purpose Hospital Zone • Special Purpose Tertiary Education Zone	Contains provisions centred on managing the location, bulk and scale of new buildings and structures, or additions and alterations to existing buildings and structures within the zones.

3.0 Strategic Direction

The following objectives in the Strategic Direction chapter of the Proposed District Plan that are relevant to this issue/topic are:

CC-O2	***Capital City***
Wellington City is a well-functioning Capital City where: 1. *A wide range of activities that have local, regional and national significance are able to establish and thrive;* 2. *The social, cultural, economic and environmental wellbeing of current and future residents is supported;* 3. *Mana whenua values and aspirations become an integral part of the City's identity;* 4. *Urban intensification is delivered in appropriate locations and in a manner that meets the needs of current and future generations;* 5. *Innovation and technology advances that support the social, cultural, economic and environmental wellbeing of existing and future residents are promoted; and* 6. *Values and characteristics that are an important part of the City's identity and sense of place are identified and protected.*	
CC-03	***Capital City***
Development is consistent with and supports the achievement of the following strategic city objectives: 1. *Compact: Wellington builds on its existing urban form with quality development in the right locations;* 2. *Resilient: Wellington's natural and built environments are healthy and robust, and we build physical and social resilience through good design;* 3. *Vibrant and Prosperous: Wellington builds on its reputation as an economic hub and creative centre of excellence by welcoming and supporting innovation and investing strategically to maintain a thriving economy;* 4. *Inclusive and Connected: Wellington recognises and fosters its identity by supporting social cohesion and cultural diversity, has world-class movement systems and attractive and accessible public spaces and streets;* 5. *Greener: Wellington is environmentally sustainable and its natural environment is protected, enhanced and integrated into the urban environment; and*	

6. *Partnership with mana whenua: Wellington recognises the unique role of mana whenua within the city and advances a relationship based on active partnership.*	
NE-O3	***Natural Environment***
The City retains an extensive open space network across the City that: 1. *Is easily accessible;* 2. *Connects the urban and natural environment;* 3. *Supports ecological, cultural, and landscape values; and* 4. *Meets the needs of anticipated future growth.*	
SRCC-O1	***Sustainability, Resilience and Climate Change***
The City's built environment supports: 1. *A net reduction in the City's carbon emissions by 2050;* 2. *More energy efficient buildings;* 3. *An increase in the use of renewable energy sources; and* 4. *Healthy functioning of native ecosystems and natural processes.*	
SRCC-O3	***Sustainability, Resilience and Climate Change***
Subdivision, development and use: 1. *Effectively manage the risks associated with climate change and sea level rise;* 2. *Support the City's ability to adapt over time to the impacts of climate change and sea level rise; and* 3. *Support natural functioning ecosystems and processes to help build resilience into the natural and built environments.*	
UFD-O7	***Urban Form and Development***
Development supports the creation of a liveable, well-functioning urban environment that enables all people and communities to provide for their social, economic, environmental, and cultural wellbeing, and: 1. *Is accessible and well-designed;* 2. *Supports sustainable travel choices, including active and micromobility modes;* 3. *Is serviced by the necessary infrastructure appropriate to the intensity, scale and function of the development and urban environment;* 4. *Is socially inclusive;* 5. *Is ecologically sensitive;* 6. *Is respectful of the City's historic heritage;* 7. *Provides for community well-being; and* 8. *Is adaptable over time and responsive to its evolving, more intensive surrounding context.*	

An evaluation of these objectives is contained in the companion Section 32 Evaluation Overview Report.

4.0 Regulatory and policy direction

In carrying out a s32 analysis, an evaluation is required of how the proposal achieves the purpose and principles contained in Part 2 of the RMA.

Section 5 sets out the purpose of the RMA, which is to promote the sustainable management of natural and physical resources.

Sustainable management '*means managing the use, development, and protection of natural and physical resources to enable people and communities to provide for their social, economic and cultural wellbeing and for their health and safety, while -*

(a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and
(b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and
(c) avoiding, remedying, or mitigating any adverse effects of activities on the environment'.

In achieving this purpose, all persons exercising functions and powers under the RMA also need to:

- Recognise and provide for the matters of national importance identified in s6
- Have particular regard to the range of other matters referred to in s7
- Take into account the principles of the Treaty of Waitangi/Te Tiriti o Waitangi in s8.

4.1 Section 6

There are no s6 matters relevant to this topic.

4.2 Section 7

The s7 matters that are relevant to this topic are:

Section	Relevant Matter
7(c)	*The maintenance and enhancement of amenity values* Relates to the recognition that 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 amenity, comfort and safety, as well as the comfort and amenity in public spaces.
7(f)	*Maintenance and enhancement of the quality of the environment* Relates to the general recognition of the role of wind provisions in managing and mitigating wind effects from new buildings, the success/lack of success to be able to do so affects urban experiences and the quality of the environment in areas such as the City Centre, Centres and the Waterfront. This can be compromised by poor wind consideration and mitigation in design.
7(i)	*The effects of climate change* Wellington's windy climate necessitates management of new development in order to manage the ground level wind effects in urban areas. Future changes to the climate may worsen wind conditions and needs to be managed through good design and mitigation outcomes.

4.3 Section 8

Section 8 requires that in managing the use, development, and protection of natural and physical resources the principles of the Treaty of Waitangi are taken into account. In developing the WIND provisions the Council has worked in partnership with Taranaki Whānui ki te Upoko o te Ika and Ngāti Toa Rangatira to actively protect their interests.

4.4 National Direction

4.4.1 National Policy Statements

There are five National Policy Statements (NPS) currently in force:

- NPS for Electricity Transmission 2008
- New Zealand Coastal Policy Statement 2010
- NPS for Renewable Electricity Generation 2011
- NPS for Freshwater Management 2020
- NPS on Urban Development 2020

The instrument of particular relevance to this topic is outlined below:

NPS	**Relevant Provisions**
NPS for Urban Development 2020 (NPS-UD)	The NPS-UD came into force on 20 August 2020 and sets out objectives and policies to ensure that New Zealand's towns and cities are well-functioning urban environments that meet the changing needs of our diverse communities. It also removes overly restrictive barriers to development to allow growth 'up' and 'out' in locations that have good access to existing services, public transport networks and infrastructure. Policy 1 directs that planning decisions contribute to well-functioning urban environments and sets minimum requirements for urban environments. Of relevance to the Wind topic are: *Policy 1: Planning decisions contribute to well-functioning urban environments, which are urban environments that, as a minimum:* … *(c) have good accessibility for all people between housing, jobs, community services, natural spaces, and open spaces, including by way of public or active transport; and* … *(f) are resilient to the likely current and future effects of climate change.* Item (c) is relevant to the Wind topic as wind impacts from new buildings can adversely impact people's ability to move about the city as pedestrians and using active transport. Hence, new buildings need to be designed to minimise and mitigate adverse wind impacts upon the public environment. Item (f) is relevant because climate change may make wind effects stronger and increases the necessity for buildings to be designed with the intention to reduce and mitigate wind effects.

	Policy 6 directs decision-makers when making planning decisions that affect urban environments to have particular regard to certain matters with one being: *(c) the benefits of urban development that are consistent with well-functioning urban environments (as described in Policy 1)* A building successfully designed to reduce, minimise or mitigate wind impacts on the public environment can be considered a benefit of urban development consistent with well-functioning urban environments.

4.4.2 Proposed National Policy Statements

In addition to the five NPSs currently in force there are also two proposed NPSs under development, noting that these are yet to be issued and have no legal effect:

- Proposed NPS for Highly Productive Land
- Proposed NPS for Indigenous Biodiversity

4.4.3 National Environmental Standards

In addition to the NPSs there are nine National Environmental Standards (NES) currently in force:

- NES for Air Quality 2004
- NES for Sources of Human Drinking Water 2007
- NES for Electricity Transmission Activities 2009
- NES for Assessing and Managing Contaminants in Soil to Protect Human Health 2011
- NES for Telecommunication Facilities 2016
- NES for Plantation Forestry 2017
- NES for Freshwater 2020
- NES for Marine Aquaculture 2020
- NES for Storing Tyres Outdoors 2021

There are no NESs of direct relevance to this topic.

4.4.4 National Planning Standards

The National Planning Standards require that where district wide matters are addressed, they must be included in the General District-Wide Matters section in Part 2 – District-Wide Matters of the District Plan.

The National Planning Standards do not expressly reference Wind as a topic or chapter. However, they do speak to additional chapters to address other matters on a district-wide basis and that these must be housed under the General district-wide matters heading. No definitions of relevance are included in the National Planning Standards either.

4.5 National Guidance Documents

There is no national guidance relevant to this topic.

4.6 Regional Policy and Plans

Regional Policy Statement for the Wellington Region 2013 (RPS)

The table below identifies the relevant provisions and resource management topics for *wind* contained in the RPS.

Regional form, design and function	
Section	***Relevant matters***
Objective 19	The risks and consequences to people, communities, their businesses, property and infrastructure from natural hazards and climate change effects are reduced.
Objective 20	Hazard mitigation measures, structural works and other activities do not increase the risk and consequences of natural hazard events.
Objective 21	Communities are more resilient to natural hazards, including the impacts of climate change, and people are better prepared for the consequences of natural hazard events.
Policy 29 (M)	Avoiding inappropriate subdivision and development in areas at high risk from natural hazards – district and regional plans
Policy 51 (M)	Minimising the risks and consequences of natural hazards – consideration
Policy 52 (M)	Minimising adverse effects of hazard mitigation measures – consideration
Objective 22	A compact well designed and sustainable regional form that has an integrated, safe and responsive transport network and: (a) a viable and vibrant regional central business district in Wellington city; (b) an increased range and diversity of activities in and around the regionally significant centres to maintain vibrancy and vitality
Policy 30 (M)	District plans shall include policies, rules and/or methods that enable and manage a range of land use activities that maintain and enhance the viability and vibrancy of the regional central business district in Wellington city and the: (b) Suburban centres in: (ii) Kilbirnie, and (iii) Johnsonville.
Policy 54 (R)	Achieving the region's urban design principles – consideration When considering an application for a notice of requirement, or a change, variation or review of a district or regional plan, for development, particular regard shall be given to achieving the region's urban design principles, including context and character.
Policy 55	Maintaining a compact, well designed and sustainable regional form – consideration

(M)	
Policy 67 (M)	Maintaining and enhancing a compact, well designed and sustainable regional form – non-regulatory

M = policies which must be implemented in accordance with stated methods in the RPS
R = policies to which particular regard must be had when varying a district plan

Regional Plans

There are currently five operative regional plans and one proposed regional plan for the Wellington region:

- Regional Freshwater Plan for the Wellington Region, 1999
- Regional Coastal Plan for the Wellington Region, 2000
- Regional Air Quality Management Plan for the Wellington Region, 2000
- Regional Soil Plan for the Wellington Region, 2000
- Regional Plan for discharges to the land, 1999
- Proposed Natural Resources Plan, appeals version 2021

The proposed Natural Resources Plan (PNRP) replaces the five operative regional plans, with provisions in this plan now largely operative with the exception of those that are subject to appeal.

The table below identifies the relevant provisions for Wind contained in the Proposed Natural Resources Plan.

Proposed Natural Resources Plan (appeals version)	
Section	***Relevant matters***
Policy P142: Lambton Harbour Area	*Policy P142: Lambton Harbour Area When considering whether use and development of the Lambton Harbour Area is appropriate, have regard to the extent which it:* *(j) addresses provisions, including design guides, contained in the Wellington City District Plan and any relevant proposed plan changes or variations, including the following matters: amenity values; noise and vibration; views; traffic; wind; lighting and glare; sunlight and shading; height, bulk and form; and urban design.*

4.7 Iwi Management Plan(s)

There are no Iwi Management Plans relevant to this topic.

4.8 Relevant plans or strategies

The following plans / strategies are relevant to this topic:

Plan / Strategy	Organisation	Relevant Provisions
Our City Tomorrow – He Mahere Mokowā mō Pōneke - A Spatial	Wellington City Council	The key aim of the Spatial Plan is to provide a clear direction for the city that supports and enables managed growth to meet projected

Plan for Wellington City 2021		demand. To accommodate anticipated growth in the central city a range of area-wide initiatives are proposed including increases in building height. This will have repercussions for wind effects from taller new development. The wind provisions relate to the Spatial Plan's compact, vibrant and prosperous and resilient goals as they aim support all three elements through minimising wind impacts on public spaces to provide for a more liveable environment for city residents. The Spatial Plan talks to shaping a liveable city, where streets are made for people, which is directly relevant to the Wind chapter intention.
Central City Spatial Vision (CCSV) 2020	Wellington City Council	The Spatial Vision identifies 5 underlying spatial directions for the central city: • Neighbourhoods • Connectors • Greening • Anchors • Areas of Change Under the greener direction, the CCSV talks about how green space is scarce and inhibits liveability. It talks about neighbourhood scale spaces within comprehensive development being needed, in particular climatically responsive spaces i.e. with shelter and sun access. Whilst wind is not explicitly mentioned, it is imperative to achieving climatically responsive spaces as wind effects can have a dramatic effect on the comfort and enjoyment of public spaces. Hence, it is critical to have wind provisions to minimise and mitigate wind effects from new developments.
Wellington Resilience Strategy (2017)	Wellington City Council	This strategy sets out a blueprint to enable Wellingtonians to better prepare for, respond to, and recover from disruptions. The document discusses Wellington's windy environment and the impact of high winds. It notes that by 2090, Wellington is projected to have a 2-3% increase in frequency of extremely windy days.
Wellington Region Natural Hazards Strategy 2019	Wellington City Council	The purpose of the Wellington Region Natural Hazards Management Strategy is to help create a region resilient to the impacts from natural hazard events. The strategy identifies various natural hazards including Wind. It speaks to the ability of high winds to cause widespread damage to buildings, infrastructure, and transport disruption. It notes that the windiest areas are generally along Wellington's coasts and

		speaks to the both the westerly winds funnelled through the Cook Strait gap and southerly winds.

4.9 Other relevant legislation or regulations

The following additional legislative / regulatory requirements are also relevant to this topic:

Legislation / Regulation	Relevant Provisions
Health and Safety at Work Act 2015	There is a general duty on people working for organisations, whose activities affect the health or safety of others, to protect others from harm. Developers, designers and Wellington City Council contribute to the design or approval of building developments that alter the natural environment, which can create wind hazards if poorly designed.

5.0 Resource Management Issues Analysis

5.1 Background

Wind is currently managed through the operative District Plan. The Wind provisions are located in the Central Area and Centres and Business Areas zone chapters of the District Plan. Comprehensive wind provisions (Policies, Rules and Standards) are in place for the Central Area of Wellington, while less comprehensive wind provisions are in place for the Centres and Business Areas, where wind effects are only considered if relevant Height Standards are exceeded. The Institutional Precincts have some consideration of wind effects, but only in very specific circumstances.

Wind provisions were comprehensively reviewed as part of Plan Change 48. Plan Change 48, which became operative 16 October 2013, introduced two significant changes to the wind provisions:

- Wind speed criteria relate to all hours of the day; and
- The criteria to avoid progressive deterioration of wind conditions are expressed in terms that might be more easily interpreted as minor or major effects in planning terms.

The effects of moderate and tall buildings on the wind environment can create unpleasant and hazardous conditions for people using public spaces near such buildings. Peoples' safety can be compromised when strong winds unexpectantly unbalance or blow people over. The amenity of parks and other recreational areas within the City (for example, outdoor cafes) can also be compromised by unsuitably strong winds, to a point where people no longer use the area as intended. The only regulatory controls on adverse wind effects that developments can have on public spaces are in District Plans.

In Wellington, problematic wind conditions created by buildings are recorded in newspaper article since the 1930's, with reports of broken arms caused by falls in the wind and ropes being used at street corners to stop people being blown into traffic. Dangerous wind conditions created by a large office tower at 1 Willis Street is likely to have been the catalyst for introducing wind controls into the planning rules for Wellington City in 1979. Since this time, wind studies of new developments across Wellington City have shown that unpleasant and unsafe wind conditions occur in many places throughout the city.

5.2 Evidence Base - Research, Consultation, Information and Analysis undertaken

The Council has reviewed the operative District Plan, commissioned technical advice and assistance from various internal and external experts and utilised this, along with internal workshops and community feedback to assist with setting the plan framework. This work has been used to inform the identification and assessment of the environmental, economic, social and cultural effects that are anticipated from the implementation of the provisions. This advice includes the following:

Title	Author	Brief synopsis
Evaluation of the Wellington District Plan Wind Rules 2020 Monitoring evaluation and issues and options report	WSP	The report evaluates the effectiveness of the wind related objectives, policies, rules and standards in the Operative District Plan to deliver developments that minimise adverse wind effects and do not compromise public safety or comfort. The evaluation includes: 1. An assessment of how the current wind provisions are operating in practice and what outcomes are being achieved; 2. A review of the wind rules from other cities around the world and a comparison with the Wellington approach; and 3. High level options for how the wind rules, standards and design guidance, could be improved.

In addition to the material listed in the table above, the Council has also gathered the following information and advice that is relevant to this topic:

- Resource consent files and decision reports from past developments that created adverse wind effects and/or have incorporated wind mitigation.
- Advice from internal council stakeholders such as the Resource Consent Team. This is summarised within the engagement table at Section 5.2.4 of this report.

5.2.1 Analysis of Operative District Plan provisions relevant to this topic

The current wind provisions are spread across four separate topic chapters within the Operative Wellington District Plan. These include the Central Area, Business Area Zones, Centres Zones and Institutional Precincts.

For the purposes of this report the key provisions in the Operative Wellington District Plan of relevance to this topic are summarised below.

Topic	Summary of relevant provisions
Central Area	This zone chapter has no objectives specific to wind. However, it does have two objectives of relevance which relates to generating adverse effects and buildings and public amenity: • 12.2.5 Encourage the development of new buildings within the Central Area provided that any potential adverse effects can be avoided, remedied or mitigated.

Topic	Summary of relevant provisions
	• 12.2.6 To ensure that new building works maintain and enhance the amenity and safety of the public environment in the Central Area, and the general amenity of any nearby Residential Areas. These objectives are implemented by a framework of four supporting policies specific to wind: • 12.2.5.6 Ensure that buildings are designed to avoid, remedy or mitigate the wind problems that they create and where existing wind conditions are dangerous, ensure new development improves the wind environment as far as reasonably practical. • 12.2.5.7 Ensure that the cumulative effect of new buildings or building alterations does not progressively degrade the pedestrian wind environment. • 12.2.5.8 Ensure that the wind comfort levels of important public spaces are maintained. • 12.2.5.9 Encourage consideration of wind mitigation measures during the early stages of building design and ensure that such measures are contained within the development site. In the Central Area, due to larger buildings being anticipated than the rest of the City, the wind tunnel test is more appropriate and is considered first and foremost before a wind assessment report. Other policies that are broadly relevant to wind include: • 12.2.6.8 Ensure that pedestrian shelter is continuous on identified streets where there are high volumes of pedestrians, and on identified pedestrian access routes leading to the Golden Mile from the outskirts of the Central Area. • 12.2.6.10 Encourage the provision of pedestrian shelter along streets and public spaces throughout the Central Area (including within the Pipitea Precinct). Rules and standards relating to wind are co-located in the chapter. A Discretionary (Restricted) resource consent is required where new buildings breach the wind standards. The following wind specific standards apply to the Central Area, excluding buildings and structures for the Operational Port Area: • 13.6.3.5.2 New buildings, structures, or additions above 18.6 metres in height will be designed to comply with the following standards: (a) SAFETY: The safety criteria shall apply to all public space. The maximum gust speed shall not exceed 20 m/s. If the speed exceeds 20 m/s with the proposed development, it must be reduced to 20 m/s or below. (b) CUMULATIVE EFFECT: The cumulative criteria shall apply to all public space. Any proposed development must meet the requirements for both of the following wind strengths, at each measurement location.

<table>
<tr><th>Topic</th><th>Summary of relevant provisions</th></tr>
<tr><td></td><td>
<table>
<tr><th>Wind strength</th><th>Change in annual days of occurrence with the development at all measurement points</th><th>Requirements on developer</th></tr>
<tr><td>Strong

(mean hourly wind speed = 3.5 m/s)</td><td>If days that 3.5 m/s is equalled or exceeded increase by more than 20 days/year (i.e. 5.5% of the year)</td><td>Reduce change in days to a maximum of 20 days.</td></tr>
<tr><td>Moderate

(mean hourly wind speed = 2.5 m/s)</td><td>If days that 2.5m/s is equalled or exceeded increase by more than 20 days/year (i.e. 5.5% of the year)</td><td>Reduce change in days to a maximum of 20 days.</td></tr>
</table>
(c) Under the Cumulative Effect Criterion, the overall impact of a building on the wind conditions must be neutral or beneficial.
(d) COMFORT: The comfort criteria only applies to the public spaces listed in standard 13.6.3.4
<table>
<tr><th>Comfort wind strength</th><th>Annual days of occurrence with the development</th><th>Requirements on developer</th></tr>
<tr><td>Mean hourly wind speed = 2.5 m/s</td><td>If days that 2.5 m/s is equalled or exceeded increase above 73 days/year (i.e. 20% of the year).</td><td>If existing building exceeds 73 days, then reduce number of days for proposed building to existing levels.
If existing building is below 73 days then reduce number of days for proposed building to below 73 days.</td></tr>
</table>

13.6.3.5.3 To show that a development complies with these standards a wind report must be supplied that meet the requirements outlined in Appendix 8 (see also section 3.2.2.15 of the Information Requirements).

For information purposes, the effects of wind speeds, which correspond to those used in, the safety criteria, are 20 metres/second gust - Completely unacceptable for walking.
the comfort or cumulative criteria, are

3.5 metres/second mean - Corresponds to threshold of danger level.
2.5 metres/second mean - Generally the limit for comfort when sitting for lengthy periods in an open space.

Central Area Appendix 8 details the requirements for wind tunnel tests and describes the form and content of the wind reports, as required by standard 13.6.3.5.3. Key requirements include:

Aims of the Wind Tunnel Test
Form of the Wind Tunnel Test
Form of the Wind Tunnel Test Report
Form of Wind Assessment Report.

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<tr><td>Centres</td><td>
This zone chapter has no objectives specific to wind. However, it does have one objective of relevance which relates to maintaining and enhancing the safety and amenity values of Centres:

6.2.3 To ensure that activities and developments maintain and enhance the safety and amenity values of Centres and any adjoining or nearby Residential or Open Space Areas, and actively encourage characteristics, features and areas of Centres that contribute positively to the City’s distinctive physical character and sense of place.

These objectives are implemented by a framework of three supporting policies specific to wind:

6.2.3.10 Ensure that new buildings higher than three storeys are designed to avoid, remedy or mitigate any wind problems that they create and where existing wind conditions are dangerous, ensure new development improves the wind environment as far as reasonably practical.

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Topic	Summary of relevant provisions
	• 6.2.3.11Ensure that the cumulative effect of new buildings and building additions or alterations higher than three storeys do not progressively degrade the pedestrian wind environment. • 6.2.3.12 Encourage the use of wind mitigation measures for buildings higher than three storeys during the early stages of building design and ensure that such measures are contained within the development site. In the Centres Zone a wind assessment report is considered first to establish the likely effects of new buildings. In some cases a wind tunnel test may also be required. The policy explanation notes that: *When resource consent to assess wind effects is required for taller buildings in Centres (particularly in Mt Cook and Johnsonville), Council will seek to ensure new developments do not make the existing wind environment dangerous or significantly worse for pedestrians, particularly at building entries in the surrounding area.* *Section 3.2.2 of the Plan outlines the information requirements for land use consent applications. When developments propose a taller building, Council will require a wind assessment report to establish the likely effects of the new building at ground level. In some case a wind tunnel assessment may also be required.* For the Centres, wind effects are only considered under Rule 7.3.7.1 if the Maximum Building Height standard 7.6.2.1 is exceeded: *7.3.7.1 height (standard 7.6.2.1), discretion is limited to the effect of the additional building height on:* *…* • *the wind environment at ground level* Centres Appendix 2 details the requirements for wind assessment reports and wind tunnel tests and describes the form and content of the wind reports, as required by Rule 7.3.7.1. Key requirements include: • Form of Wind Assessment Report • Aims of the Wind Tunnel Test • Form of the Wind Tunnel Test • Form of the Wind Tunnel Test Report.
Business Areas	This zone chapter has no objectives, policies, rules or standards specific to wind. For the Business Areas , wind effects are only considered under Rule 34.3.9 for construction of a new buildings or additions and alterations that would not be a Permitted, Controlled or Discretionary (Restricted) Activity if the Height standard 34.6.2.1 is exceeded: *34.3.9 The construction or alteration of, or addition to buildings and structures which would be a Permitted, Controlled or Discretionary (Restricted) Activity but that does not meet one or more of the following standards outlined in section 34.6.2 (buildings and structures), are Discretionary Activities (Restricted). Unless otherwise noted below, discretion is limited to the effects generated by the standard(s) not met:* *34.3.9.1 height (standard 34.6.2.1)* *…* • *the impact of wind from additional building height on pedestrian amenity and safety, particularly at surrounding building entries*

Topic	Summary of relevant provisions
Institutional Precincts	This zone chapter has no objectives, policies, rules or standards specific to wind. However, under Rule 9.4.2, the effect of a structure on the wind environment of the street is an assessment criteria: *9.4.2 Buildings and structures, including pedestrian bridges, located above or over the street that exceed 25 percent of the width of the road at any point are Discretionary Activities (Unrestricted).* *Assessment Criteria* *In determining whether to grant consent and what conditions, if any, to impose Council will have regard to the following criteria:* *…* *9.4.2.4 The effect of the structure on the wind environment of the street and the extent to which sunlight levels in the street will be reduced.*

The Operative District Plan has a non-statutory WCC Wind Design Guide. The design guide is to be used as a basis for design evaluation checklists for Wind Assessment Reports, complimented by the Central Area Design Guide and the Centres Design Guide.

5.2.2 Analysis of other District Plan provisions relevant to this topic

Current practice has been considered in respect of this topic, with a review undertaken of the following District Plans. It is noted that none these plans have been prepared in accordance with the National Planning Standards and the NPS-UD.

The Issues and Options report completed for this topic completed a review of wind rules from a number of cities across New Zealand and the around world and compared these to Wellington's wind rules. In New Zealand, Wellington and Auckland have the most thorough and specific wind rules in their respective district plans.

Some other cities in New Zealand have district plan provisions for wind, but these are these are not specified in the same level of detail. The report reviewed wind provisions in New Zealand as detailed below, and overseas with examples including Brisbane, Sydney, Melbourne, Toronto, Ottawa, San Francisco and London.

Plan	Local Authority	Description of approach
Auckland Unitary Plan	Auckland Council	• The Unitary Plan for Auckland contains wind provisions for buildings that exceed 25m height. • The occurrence of mean wind speeds is used to define 5 performance categories that correspond to different pedestrian activities. • There is also a safety criterion that is defined by the annual maximum 3-second gust speed. • The same wind rules are set for a number of different areas in the city. Auckland's

		Business – City Centre Zone (as an example) includes: ○ One policy which requires development to avoid, remedy or mitigate adverse wind and glare effects on public open spaces, including streets, and shading effects on open space zoned land. ○ One wind standard with the purpose being to mitigate the adverse wind effects generated by high-rise buildings. Under this standard a new building must not cause: ▪ The mean wind speed around it to exceed the category for the intended use of the area (detailed in the associated performance category table) and wind environment control figure; ▪ The average annual maximum peak 3 second gust to exceed the dangerous level of 25m per second; and ▪ An existing wind speed which exceeds the controls of the specified standard to increase. ○ The wind environment control figure graph delineates the boundaries between the acceptable categories (A-D) and unacceptable categories (E) of wind performance.
Tauranga District Plan	Tauranga City Council	• Tauranga considers wind effects in its district plan but does not have specific wind standards or criteria. • Tauranga has one Wind policy within its High Density Residential Zone which speaks to bulk and scale of buildings in the High Density Residential Zone with regards to height. The policy is centred on High Rise Plan Areas where absolute maximum heights are identified, while limiting the potential adverse effects of accelerated wind speed and overshadowing on adjacent residential development. • Tauranga's plan also has one matter of discretion which notes that *Council reserves*

		control over density and scale, and wind effects.

Hutt City District Plan	Hutt City Council	• Hutt City has policies that consider wind effects of development, but does not have specific wind standards or criteria in its district plan.
		• Hutt City has two policies:
		  ○ One policy is focused on the Central Commercial Activity Area and encourages buildings to be well designed to manage the adverse effects on amenity values, including visual, wind and glare.
		  ○ The other policy focuses on the Petone West Mixed Use Activity Area, specifically on character and building form and quality. This policy seeks that new buildings be designed to manage adverse effects on amenity values, including visual, wind and glare.

These plans were selected because:

- They address the management of wind effects from new buildings like Wellington's District Plan does; and
- The associated Councils are of a similar scale to Wellington City.

A summary of the key findings follows:

- There are few district plans across New Zealand that manage wind effects. Auckland has the most thorough and specific wind rules in their respective district plan when compared with Wellington.
- Whilst Tauranga and Hutt City reference wind effects in policies, these policies are not specific to just wind effects and are generalised.

5.2.3 Advice received from Taranaki Whānui and Ngāti Toa Rangatira

Under Clause 4A of Schedule 1 of the RMA local authorities are required to:

- Provide a copy of any draft policy statement or plan to any iwi authority previously consulted under clause 3 of Schedule 1 prior to notification;
- Allow adequate time and opportunity for those iwi authorities to consider the draft and to supply advice; and
- Have particular regard to any advice received before notifying the plan.

As an extension of this s32(4A) requires evaluation reports prepared in relation to a proposed plan to include a summary of:

- All advice received from iwi authorities concerning the proposal; and

- The response to that advice, including any proposed provisions intended to give effect to the advice.

The District Plan Review has included significant engagement with our mana whenua partners - Taranaki Whānui ki te Upoko o te Ika and Ngāti Toa Rangatira. This has included over 100 hui and wānanga attended by Council officers over the last 12 months. This has provided a much greater understanding of mana whenua values and aspirations as they relate to the PDP.

The PDP elevates the consideration of mana whenua values in resource management processes, including:

- A new Tangata Whenua chapter which provides context and clarity about who mana whenua are and what environmental outcomes they are seeking.
- A new Sites and Areas of Significance to Māori chapter that provides greater protection for sites and areas of significance than the current District Plan.
- Integrating mana whenua values across the remainder of the plan where relevant.

This is consistent with both the City Goal of 'Partnership with mana whenua' in the Spatial Plan; and the recently signed Tākai Here (2022), which is the new partnership agreement between the Council and our mana whenua partners, Rūnanga o Toa Rangatira, Taranaki Whānui ki Te Upoko o Te Ika and Te Rūnanganui o Te Āti Awa.

A full copy of the advice received is attached as an addendum to the complete suite of Section 32 reports as Addendum A – Advice received from Taranaki Whānui and Ngāti Toa Rangatira.

Taranaki Whānui and Ngāti Toa provided one written comment on this topic. The advice received and Council's response to this advice is detailed in the table below.

Topic	Advice Received	Response
Character of Wellington being windy and the cultural association with this	• An early informal discussion was had with mana whenua advisors regarding the character of Wellington being windy and a cultural association by that nature. • This conversation came in response to design of the new convention centre in Wellington 'Tākina'. The building has a unique sculptural form that draws inspiration from a wide range of sources Wellington's dramatic weather patterns. • Tākina means to invoke, to connect and to bring forth, in te reo Māori. In Wellington, wind is a powerful force that is summoned here. • Te Whanganui-a-Tara (Wellington Harbour) is	• On the back of this initial discussion, Council and mana whenua's advisor contemplated how mana whenua's cultural association with Wellington's windy climate could be incorporated. • No solution was decided at the time and it was agreed that this would be revisited. • Further targeted work is required to identify how mana whenua interests with the cultural associations with Wellington's windy climate can be incorporated into this chapter.

	renowned for its unique and diverse winds.	

5.2.4 Consultation undertaken to date

The following is a summary of the primary consultation undertaken in respect of this topic:

Who	What	When	Relevant Issues Raised
General Public	Public engagement on Draft District Plan, including an associated submissions process and programme of roadshow events	November-December 2021	• Limited feedback received on the Wind chapter. • Of the feedback received, concerns were raised regarding the application of Wind rules to the Tertiary Education Zone and the Hospital Zone, and with regards to the height trigger for the wind rule in the City Centre Zone being 20m which is below the minimum building height of 21.5m (now 22m in the PDP). • Concerns were also raised regarding increased wind effects from increased building heights in residential areas. • See Appendix 2 for submissions.
WCC Resource Consent team members, WCC District Plan team members and Wellington Wind experts	Wind Workshop	February 2020	• The purpose of the workshop was to identify issues with the wind provisions in the Plan and suggest potential areas for change. • The workshop highlighted a number of problems that people experience when dealing with wind effects in the resource consent process, and also highlighted some poor wind outcomes. • Encouragingly, most of these problems have arisen from poor behaviours (and incentives) rather than

			any particular failing of the wind rules in the Plan. • Most Assessments of Environmental Effects do not contain any description of wind effects, and instead refer to specialist wind reports, which do not relate the measured wind speeds to planning effects. • The timing of wind studies/assessments, late in the design process, can also be problematic, as wind effects may require design changes to buildings that have, to all intense purposes, been finalised. • Consideration of whether wind rules should extend beyond their current application (public spaces and the street environment), and also apply to private spaces and whether greater controls on pedestrian comfort are required.

A summary of specific feedback on this topic received during consultation on the Draft District Plan is contained in Appendix 2, including how it has been responded to in the Proposed District Plan. Additional detail concerning the wider consultation undertaken in preparing the Proposed District Plan is contained in the companion Section 32 Evaluation Overview Report.

5.3 Summary of Relevant Resource Management Issues

Based on the research, analysis and consultation outlined above the following issues have been identified:

Issue	Comment	Response
Issue 1: Incomplete assessment of environmental effects in consent applications	• AEE do not describe the wind effects in planning terms, but refer to specialist wind reports. • The technical nature of the wind standards make it difficult for planners to relate wind speeds to planning effects.	• Improve best practice wind guidance for designers and planners. • Clarify and simplify wind rules and standards.

	• Hard to incentivise applicants to provide detailed and complete AEE via rule changes, when time and cost constraints are dominant considerations.	
Issue 2: Wind effects are considered late in the design process	Improving the wind performance of a building can require changing its shape, mass and site layout. Within the resource consent process the building design has been finalised, making it difficult to substantially improve adverse wind effects.	• Improve best practice guidance • Introduce policy in Wind Chapter to encourage consideration of wind early in the design process.
Issue 3: Second Generation District Plan format	The current wind rules and standards do not fit with the format and layout of the Second Generation District Plans.	• Rewrite the wind rules and standards.
Issue 4: National Policy Statement on Urban Development 2020	Adverse wind effects will occur in parts of the city that currently comprise low-rise buildings, but are earmarked for 6-storey development with NPS-UD 2020 provisions.	• Apply wind provisions to new zones where development will be substantially higher than previously permitted.

6.0 Evaluation of the Proposal

This section of the report evaluates the objectives of the proposal to determine whether they are the most appropriate means to achieve the purpose of the RMA, as well as the associated policies, rules and standards relative to these objectives. It also assesses the level of detail required for the purposes of this evaluation, including the nature and extent to which the benefits and costs of the proposal have been quantified.

6.1 Scale and Significance

Section 32(1)(c) of the RMA requires that this report contain a level of detail that corresponds with the scale and significance of the environmental, economic, social and cultural effects that are anticipated from the implementation of the proposal.

The level of detail undertaken for this evaluation has been determined by assessing the scale and significance of the environmental, economic, social and cultural effects anticipated through introducing and implementing the proposed provisions (i.e. objectives, policies and rules) relative to a series of key criteria.

Based on this the scale and significance of anticipated effects associated with this proposal are identified below:

Criteria	*Scale/Significance*			*Comment*
	Low	*Medium*	*High*	
Basis for change	✓			• Improve operational efficiency of the existing wind controls (simplify and restructure). • Some adjustment to wind rules to account for higher buildings in some parts of Wellington under the National Policy Statement on Urban Development 2020.
Addresses a resource management issue	✓			• Wind controls will be simplified, and guidance provided to help laypersons understanding of the wind controls. • Some adjustment to wind rules for the National Policy Statement on Urban Development 2020.
Degree of shift from the status quo	✓			• Existing wind controls in the Operative District Plan are fit for purpose. • The proposed wind controls are similar to those in the Operative District Plan but have small adjustments to simplify the standards, adjustments for the National Policy Statement on Urban Development 2020, and have been restructured into a standardised format.
Who and how many will be affected/ geographical scale of effect/s		✓		• The wind controls minimise adverse wind effects from specific developments, which are localised in their geographic extent but can affect large numbers of people in highly trafficked areas. • Wind occurs throughout Wellington so has potential to be problematic with unsuitable developments.
Degree of impact on or interest from iwi/ Māori	✓			• Wind has no specific effects for Māori that differ from the general population.
Timing and duration of effect/s		✓		• Adverse wind effects correspond to windy periods and for specific development they correspond to specific wind directions. • Wind effects on safety have short duration but are unexpected so are hard to avoid. • Wind effects that degrade the amenity (for example, comfort) of an area occur

Criteria	*Scale/Significance*			*Comment*
	Low	*Medium*	*High*	
				for significant amounts of the year and are likely to be felt by people in an affected area.
Type of effect/s		✓		• Strong unexpected wind gusts can unbalance or blow people over, causing injuries. • Moderate winds can degrade the amenity of an area that is intended for recreation or relaxation, impacting on the economic and social viability of an area. • The proposed wind controls do not substantially differ from the existing wind controls and so their effect on the environment is unlikely to be noticed. Where large building are introduced into areas with existing low-rise buildings, the proposed wind controls will limit adverse environmental wind effects. It is intended the proposed wind controls will improve useability and planning decisions.
Degree of risk and uncertainty	✓			• There is a low risk of adverse community reaction to the proposed wind controls because they effectively continue the existing levels of wind controls. • Safety and amenity risks of wind may receive increased focus in areas where larger developments are permitted but wind rules do not apply. In such areas, wind controls can be implemented via the use of statutory guidance which references the Best Practice Wind Guide.

Overall, the scale and significance of the proposed provisions are considered to be low for the following reasons:

- The proposed wind controls are a refinement of existing requirements, which are fit for purpose. Implementing the technical wind standards has been improved by providing additional guidance and simplifying some of the wind standards.
- The proposed wind controls are no more onerous than existing controls, except in areas affected by the National Policy Statement on Urban Development 2020 where type of permitted activities and associated environmental effects will change significantly.

Consequently, a high level evaluation of these provisions has been identified as appropriate for the purposes of this report.

6.2 Quantification of Benefits and Costs

Section 32(2)(b) requires that, where practicable, the benefits and costs of a proposal are to be quantified.

Specific quantification of the benefits and costs beyond the information and evidence outlined in section 5.2 of this report is neither practicable nor readily available. However, a qualitative assessment of identifiable costs and benefits associated with this proposal is provided below and, where relevant, in the assessment of policies, rules and other methods contained in section 11 of this report.

- In general, the benefits of planning controls for wind primarily accrue by minimising adverse wind conditions in public spaces, which can become unsafe, unpleasant and incompatible with the activities that are envisaged for the spaces when development is uncontrolled.
- Costs associated with adverse wind conditions include personal injury (for example, broken bones and sprains), economic disruption (for example, outdoor food and beverage areas become unpleasant and are not frequented by customers) and social disruption (for example, parks become unpleasant, are unused and neglected).
- Because the proposed new wind provisions refine existing wind controls already in the District Plan, the specific benefits of the proposed wind provisions will be realised in their application. Simplification of the rules and the associated guidance is aimed at helping laypeople understand and apply the wind controls more efficiently.
- The threshold where the activity status changes from a permitted activity to a restricted discretionary activity is increased, which will mean that less new buildings and additions to existing buildings will be required to have their wind effects reported. The areas of Wellington where the proposed wind controls will be introduced, where currently there are no wind controls, will benefit by avoiding the worst wind effects from larger new developments.
- The costs associated with planning controls for wind can broadly be split into the assessment and reporting of the environmental effects, and the impact on the development that occurs as a result of complying with the wind controls. These costs vary for specific sites and building designs, but could include costs of wind specialist assessment or testing, re-design, planning costs, construction of wind mitigation (for example planting, horizontal canopies or vertical screens) and loss of floor area or height of the building.
- These costs will accrue for developments that exceed the thresholds for permitted activities in those parts of Wellington where wind controls will be introduced, where currently there are no wind controls. In these areas, the size of new buildings are expected to increase significantly, as planning controls are relaxed to reflect the National Policy Statement on Urban Development 2020.
- In most area of Wellington, the proposed new wind provisions refine existing wind controls already in the District Plan, and the specific costs of proposed wind provisions will be limited to transition costs, as planners and designers familiarise themselves with the new format of the Wind Chapter and the minor changes to the Rules and Standards.

7.0 Overview of Proposal

The proposed provisions relevant to this topic are set out in detail in the ePlan and should be referenced to in conjunction with this evaluation report.

In summary, the proposed provisions include:

- Definitions
    - A set of relevant definitions, including those for:
        - Public space
        - Qualitative wind assessment
        - Quantitative wind study
        - Wind mitigation measures
- One objective (WIND-O1) that address:
    - Adverse impact of wind from new developments, additions and alterations
    - The comfort and safety of pedestrians in public spaces
    - Improving existing unsafe winds where practical
    - Preventing the gradual degradation of pedestrian wind conditions
- Four policies that:
    - Provide a basis for managing adverse wind effects of building development (WIND-P1 to WIND-P4)
    - Encourage good practice to minimise the adverse wind effects of new buildings
- A rule framework that manages building and structure activities as follows:
    - WIND-R1.1 Construction, alteration and additions to buildings is a permitted activity if the building is below 20 metres in height (and other thresholds for additions) or is compliant with wind standards, otherwise it is a restricted discretionary activity. Applies to zones with typically larger and taller buildings, such as the City Centre Zone.
    - WIND-R1.2 Construction, alteration and additions to buildings is a permitted activity if the building is below 12 metres in height (and other thresholds for additions) or is compliant with wind standards, otherwise it is a restricted discretionary activity. Applies to zones with typically low to mid-rise buildings, such as the Local Centre Zone.
    - WIND-R1.3 Construction, alteration and additions to buildings is a permitted activity if the building is below 12 metres in height (and other thresholds for additions) or is compliant with wind standards, otherwise it is a restricted discretionary activity. Applies to the Hospital and Tertiary Education zones, but only when a new building is adjacent to a public street.
    - WIND-R1.4 Construction, alteration and additions to buildings that exceed the thresholds and do not comply with the wind standards are restricted discretionary activities. WIND-R1.44 lists the matters of discretion and the section 88 reporting requirements for the relevant zones.
        - WIND-R2 Construction, alteration and additions to buildings in zones no cover by WIND-R1 are -permitted activities.
- A complementary set of effects standards that address:
    - WIND-S1 Safety of pedestrians
    - WIND-S2 Deterioration of the wind environment
    - WIND-S3 Comfort of pedestrians

    - APP8 Technical and reporting requirements for wind studies and wind assessments.
    - APP9 A list of public spaces that are subject to the wind comfort standard WIND-S3.
- Supporting Design Guides that:
    - APP14 – Wind Chapter Best Practice Guidance Document provides a brief introduction to wind and to the management of wind effects from buildings for planners, developers and building designers. It explains how the wind rules and standards in the Wellington District Plan apply to new building developments, and describes features of a building that affect wind flows and the mitigation strategies that can be used to minimise adverse wind effects from a building development.

8.0 Evaluation of Proposed Objective

8.1 Introduction

Section 32(1)(a) of the RMA requires that the evaluation report examine the extent to which the objective of the proposal is the most appropriate way to promote the sustainable management of natural and physical resources.

An examination of the proposed objective along with reasonable alternatives is included below, with the relative extent of their appropriateness based on an assessment against the following criteria:

1. Relevance (i.e. Is the objective related to addressing resource management issues and will it achieve one or more aspects of the purpose and principles of the RMA?)
2. Usefulness (i.e. Will the objective guide decision-making? Does it meet sound principles for writing objectives (i.e. does it clearly state the anticipated outcome?)
3. Reasonableness (i.e. What is the extent of the regulatory impact imposed on individuals, businesses or the wider community? Is it consistent with identified tangata whenua and community outcomes?)
4. Achievability (i.e. Can the objective be achieved with tools and resources available, or likely to be available, to the Council?)

8.2 Evaluation of Objective WIND-O1

While not specifically required under s32, it is appropriate to also consider alternative objectives to those currently included in the Proposed District Plan, so as to ensure that the proposed objective is the most appropriate to achieve the purpose of the RMA.

For the purposes of this evaluation, the Council has considered two potential objectives:

1. The proposed objective
2. The current most relevant objective - the status quo

Proposed objective WIND-O1

The adverse impact of wind from new developments, additions and alterations on public spaces is managed to:

i. Provide comfortable conditions for pedestrians, whilst acknowledging that not all wind effects can be mitigated;
ii. 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
iii. Prevent the gradual degradation of Wellington's pedestrian wind environment over time.

General intent:

The wind objective is intended to provide good amenity and safety in public spaces, whilst recognising that the existing wind environment in parts of Wellington is already windy and that new buildings will typically have some effect on the wind environment.

Other potential objectives

Status quo – Two broadly relevant objectives in the ODP:

Objective – Effects of New Building Works
12.2.5 Encourage the development of new buildings within the Central Area provided that any potential adverse effects can be avoided, remedied or mitigated.

Objective – Built Development, Urban Form and Public Space
6.2.3 To ensure that activities and developments maintain and enhance the safety and amenity values of Centres and any adjoining or nearby Residential or Open Space Areas, and actively encourage characteristics, features and areas of Centres that contribute positively to the City's distinctive physical character and sense of place.

	Preferred objective	Status quo
Relevance:		
Addresses a relevant resource management issue	Manages the adverse wind effects of building developments on people. The District Wide chapter for wind controls provides consistency from zone to zone.	Manages the adverse wind effects of building developments on people. The objective varies from zone to zone.
Assists the Council to undertake its functions under s31 RMA	Supports the Councils responsibilities under section 31(1)(a) and 31(1)(b) by manging the wind effects of development and preventing or mitigating adverse wind effects of development.	Supports the Councils responsibilities under section 31(1)(a) and 31(1)(b) by manging the wind effects of development and preventing or mitigating adverse wind effects of development. However, the management of wind effects from one zone to the next is hampered by different objectives – the

		differences between zones are most disruptive within the wind rules and standards.
Gives effect to higher level documents	The preferred objective gives effect to higher level documents, particularly Objectives 19, 20,21 and 22 and associated Policies 29, 30, 54, 55 and 51 of the RPS. The objective is also consistent with the purpose and principles of the RMA, particular ss7(c), (f) and (i), reflects the requirements of Policies 1 and 6 of the NPS-UD, the National Planning Standards and the Vibrant and Prosperous and Resilient goals and related directions in Our City Tomorrow: A Spatial Plan for Wellington City.	Although the objectives give effect to the RPS they are less aligned with relevant directions in the NPS-UD, National Planning Standards and Our City Tomorrow: A Spatial Plan for Wellington City.
Usefulness:		
Guides decision-making	Provides a clear intent for the wind controls.	Provides a clear intent for the wind controls, but varies from zone to zone.
Meets best practice for objectives	The objective is specific and describes what outcome is sought.	The objective describes what outcome is sought, but is not specific to wind as the objectives relate to a wider range of environmental effects.
Reasonableness:		
Will not impose unjustifiably high costs on the community/parts of the community	The objective does not seek to improve the existing wind environment except where it is practical to improve safety. The general aim is to avoid deterioration of the wind environment whilst recognising that is impractical to prevent any change when building in a windy environment.	The objectives are inconsistent in the outcome sought. The Central Area objective seeks to avoid or mitigate adverse effects of development, while the Centres object is to ensure development maintains and enhances amenity and safety.
Acceptable level of uncertainty and risk	The objective is specific and describes what outcome is sought.	The objective describes what outcome is sought, but the extent to which Centres objective will be possible to achieve will vary from site to site.
Achievability:		
Consistent with identified tangata whenua and community outcomes	The balance between enabling building developments and maintaining or improving the	The balance between enabling building developments and maintaining or improving the

	wind environment reflects the existing wind controls and the outcomes sought from consultation.	wind environment reflects the practice that has evolved over many years of operating the existing wind controls in the District Plan.
Realistically able to be achieved within the Council's powers, skills and resources	The objective can be achieved with appropriate management of the resource consent process and specialist wind review of complex applications that have significant adverse wind effects.	The objective of the Central Area can be achieved with appropriate management of the resource consent process and specialist wind review of complex applications that have significant adverse wind effects. The Centres objective can be achieved with appropriate management of the resource consent process and specialist wind advice where significant technical judgement is required for development proposals that have potentially have significant adverse effects.
Summary		
The preferred objective is the best way to achieve the stated community outcomes and to implement the RMA. A lack of consistency with the status quo objectives makes it difficult to establish an appropriate balance between enabling development and avoiding or mitigating adverse wind effects.		

9.0 Evaluation of Reasonably Practicable Options and Associated Provisions

9.1 Introduction

Under s32(1)(b) of the RMA, reasonably practicable options to achieve the objective associated with this proposal need to be identified and examined. This section of the report evaluates the proposed policies and rules, as they relate to the associated objective.

Along with the proposed provisions, the Council has also identified through the research, consultation, information gathering and analysis undertaken in relation to this topic a reasonably practicable alternative option to achieve the objective.

The technical and consultation input used to inform this process is outlined in section 5 of this report.

9.2 Evaluation method

For each potential approach an evaluation has been undertaken relating to the costs, benefits and the certainty and sufficiency of information (as informed by section 5 of this report) in order to determine the effectiveness and efficiency of the approach, and whether it is the most appropriate way to achieve the relevant objective.

This evaluation is contained in the following sections.

9.3 Provisions to achieve Objective WIND-O1

For the purpose of this evaluation, the Council has considered the following potential options:

1. The proposed provisions
2. The status quo
3. A reasonable alternative, that uses different wind standards based on Lawson's Comfort Criteria.

Objective WIND-O1:

The adverse impact of wind from new developments, additions and alterations on public spaces is managed to:
1. Provide comfortable conditions for pedestrians, whilst acknowledging that not all wind effects can be mitigated;
2. 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
3. Prevent the gradual degradation of Wellington's pedestrian wind environment over time.

Option 1: Proposed approach (recommended)	**Costs**	**Benefits**	**Risk of Acting / Not Acting if there is uncertain or insufficient information about the subject matter of the provisions**

<u>Policies:</u>
 	
Four policies that:
 	
• Encourage good design practice to minimise the adverse wind effects of new buildings (WIND-P1), and
• Provide a broad basis for managing adverse wind effects of new buildings (WIND-P2 to WIND-P4).
 	
<u>Rules:</u>
 	
Enable the construction, and alteration of buildings as a permitted activity if the building does not exceed a threshold size or if the building effects are shown to comply with the wind standards. Buildings that exceed size thresholds and whose effects do not comply with the wind standards have a restricted discretionary status, such that matters of discretion apply when a consent is sought.
 	
<u>Other Methods:</u>
 	
Appendix 14 – Wind Chapter Best Practice Guidance Document provides a brief introduction to wind effects of buildings and how the wind rules and standards in the Wellington District Plan apply to new building developments. The extent to which a building design is consistent with this guidance is a matter of
	Environmental
	
	• No direct or indirect costs have been identified.
	
	Economic
	
	• Direct costs: wind controls in general impose design, consenting and construction costs on building developers and property owners. Non-compliant developments, with a restricted discretionary status, are likely to accrue greater costs from redesign, reassessment and longer consenting processes.
	• These costs are the same as the status quo, except in:
	  ○ zones where the wind provisions will be introduced for the first time to manage the effects of higher buildings, where the status quo has no associated costs, and
	  ○ the Centres areas where the wind standards apply and wind effects of the whole building are assessed, as compared to the status quo which does not have wind standards and assesses the wind effects of only the additional building height above the height limit.
	• No indirect costs have been identified.
	
	Social
	
	• Direct costs: New buildings that are smaller than the size thresholds are not controlled by the proposed wind provisions, but may never-the-less create adverse wind conditions that degrade the amenity value of some public spaces.
	• Costs are similar to the status quo, except in
	  ○ zones where the wind provisions will be introduced for the first time to manage the effects of higher buildings, where the status quo has no associated benefits, and
	  ○ the Centres areas where the wind standards apply and wind effects of the whole building are
		Environmental
		
		• Gives heightened effect to ss7(c), (f) and (i) of the RMA and the policy intent articulated in policies 1 and 6 of the NPS-UD and policies 29, 30, 54, 55 and 51 of the RPS through:
		  ○ Supporting a well-functioning urban environment through managing and mitigating adverse wind effects from new buildings, additions and alterations;
		  ○ Clearly aligning with the Vibrant and Prosperous and Resilient goals and related directions in Our City Tomorrow: A Spatial Plan for Wellington City;
		  ○ Providing clear direction concerning managing new development so as to maintain or enhance comfortable and safe wind conditions for pedestrians and public space users; and
		  ○ Responds to natural hazard and climate change risk with management of new development in order to manage the ground level wind effects in urban areas. Noting that future changes to the climate may worsen wind conditions and needs to be managed through good design and mitigation outcomes.
		
		Economic
		
		• Direct benefits: improves the consenting efficiency by: simplifying the existing rules and standards, reformatting the existing provisions into a District wide Wind Chapter, and providing guidance to help laypeople apply the wind rules and standards effectively.
		• Indirect benefits: wind controls in general, maintain or improve the amenity of outdoor areas, which support commercial activities (example, food and beverage) in effected areas. These benefits are the same as the status quo, except in:
			It is considered that there is certain and sufficient information on which to base the proposed policies and methods as:
			• The proposed provisions are a refinement of existing wind provisions that have been successfully used in Wellington for over 40 years.
			• The evidence base for refining the wind provisions is comprehensive.

discretion for non-complying developments.	assessed, as compared to the status quo which does not have wind standards and assesses the wind effects of only the additional building height above the height limit • No indirect costs have been identified. ***Cultural*** • No direct or indirect costs have been identified.	○ zones where the wind provisions will be introduced for the first time to manage the effects of higher buildings (status quo has no associated benefits), and ○ the Centres areas, where wind standards will be applied consistently with other zones, compared to the status quo which has no criteria to assess wind effects against and considers the effect of only the additional building height above the height limit. ***Social*** • Direct benefits: wind controls in general contribute to outdoor areas having greater amenity value, which in turn contribute to a liveable outdoor environment. Unsafe wind conditions are avoided, contributing to people's wellbeing. • Benefits are the same as the status quo, except in ○ zones where the wind provisions will be introduced for the first time to manage the effects of higher buildings (status quo has no associated benefits), and ○ the Centres areas where wind standards will be applied consistently with other zones, compared to the status quo which has no criteria to assess wind effects against and considers the effect of only the additional building height above the height limit. • No indirect benefits have been identified. ***Cultural*** • No direct or indirect benefits have been identified.	
Effectiveness and efficiency	***Effectiveness*** The proposal is intended to improve laypeople's understanding of the wind provisions by simplifying the technical standards, providing objective wind criteria for all zones, reformatting the existing provisions into a District wide Wind Chapter (consistent from zone to zone), and providing guidance on wind effects of buildings and mitigation strategies. These changes will improve the status quo.	***Efficiency*** The proposal is intended to improve the application of the wind provisions by simplifying the technical standards, reformatting the existing provisions into a District wide Wind Chapter (consistent from zone to zone), and providing guidance on how the wind provisions apply in Wellington. After a transition where people familiarise themselves with the new Plan format, new layout of the wind provisions, and simplified standards, the efficiency of the single District wide Wind Chapter will be better than the status quo.	
Overall evaluation	The proposal is considered to be the most appropriate approach as it builds on the successful aspects of the status quo, while simplifying some of the Standards and incorporates an up-to-date plan format.		
Option 2: Status Quo	**Costs**	**Benefits**	**Risk of Acting / Not Acting if there is uncertain or insufficient information about the subject matter of the provisions**
Policies: The Centres objective 6.2.3 is implemented by three wind polices (6.2.3.10 to 6.2.3.12)	***Environmental*** • No direct or indirect costs have been identified	***Environmental***	It is considered that there is certain and sufficient information on the operative policies and methods as these wind provisions have been used, in their current form, for around 10 years, and wind provisions have been in place in Wellington for over 40 years. They are understood by those familiar with

and the Central Area objective 12.2.5 is implemented by 4 specific wind policies 12.2.5.6 to 12.2.5.9, and three further policies, 12.2.5.2, 12.2.6.18 and 12.2.8.6, where wind is a matter for consideration. These policies limit the adverse wind effects created by new buildings, improve existing dangerous wind conditions were practicable, and encourage early consideration of wind design and on-site wind mitigation. **Rules:** Rules for wind default to restricted discretionary activities when building developments do not comply with: • in the Centres area, height limits, and • in the Central Area, wind standard 13.6.3.5. The Centres areas do not have wind standards to assess effect against. **Other Methods:** Non-statutory guidance is provided to help people gain a basic understanding of wind effects of buildings.	***Economic*** • Direct costs: wind controls in general impose design, consenting and construction costs on building developers and property owners. Non-compliant developments, with a restricted discretionary status, are likely to accrue greater costs from redesign, reassessment and longer consenting processes. • No indirect costs have been identified. ***Social*** • Direct costs: New buildings that are smaller than the size thresholds are not controlled by the operative wind provisions, but may never-the-less create adverse wind conditions that degrade the amenity value of some public spaces. • No indirect costs have been identified. ***Cultural*** • No direct or indirect costs have been identified	• Gives effect to ss7(c), (f) and (i) of the RMA and to a degree the policy intent articulated in policies 29, 30, 54, 55 and 51 of the RPS. • Aligns with the Vibrant and Prosperous and Resilient goals and related directions in Our City Tomorrow: A Spatial Plan for Wellington City. ***Economic*** • Indirect benefits: wind controls in general, maintain or improve the amenity of outdoor areas, which support commercial activities (example, food and beverage) in effected areas. ***Social*** • Direct benefits: wind controls in general contribute to outdoor areas having greater amenity value, which in turn contribute to a liveable outdoor environment. Unsafe wind conditions are avoided, contributing to people's wellbeing. • No indirect benefits have been identified. ***Cultural*** • No direct or indirect benefits have been identified.	the Central Area planning controls. Therefore, no risk assessment is necessary.
Effectiveness and efficiency	***Effectiveness*** The status quo is not considered to be the most effective approach to achieve the proposed objective. Some inconsistency in the rules and standards between zones could lead to different interpretations of compliance.	***Efficiency*** The status quo is not considered to be the most efficient approach to achieve the proposed objective. The format of the provisions and some inconsistency between zones may be confusing for practitioners, particularly those who are unfamiliar with the wind provisions.	
Overall evaluation	The operative wind provisions are not optimum for achieving objectives for wind effects of buildings		
Option 3: Alternative approach to provisions	**Costs**	**Benefits**	**Risk of Acting / Not Acting if there is uncertain or insufficient information about the subject matter of the provisions**
An alternative approach would be to use wind standards that have criteria corresponding to	***Environmental***	***Environmental***	It is considered that there is sufficient information with respect to the evidence base to conclude that alternative wind

different types of pedestrian activity – commonly referred to as Lawsons Comfort Criteria. These standards are widely used in other cities that have wind ordinances and are presented in terms of the effects on people (comfort categories) rather than wind speeds. The policies and rules are the same as the proposed approach.	• No direct or indirect costs have been identified. ***Economic*** • Direct costs: wind controls in general impose design, consenting and construction costs on building developers and property owners. Non-compliant developments, with a restricted discretionary status, are likely to accrue greater costs from redesign, reassessment and longer consenting processes. • These costs will accrue with any regulatory approach, including with wind standards that use Lawsons Comfort Criteria. Uncertainty is created when the Lawson Comfort Criteria are used because planners must agree (or decree) the comfort category that needs to be achieved in areas affected by a development. • Indirect costs The Lawson Comfort Criteria do not control the gradual deterioration of the wind environment, and would therefore potentially allow wind conditions to gradually deteriorate over time. This could affect the viability of parts of the city that rely on high levels of outdoor amenity. ***Social*** • Direct costs: The alternative wind standards would not change adverse effects that could arise with smaller buildings not controlled by the wind provisions, that would degrade the amenity value of some public spaces. • No indirect costs have been identified. ***Cultural*** • No direct or indirect costs have been identified.	• Potential alignment with the Vibrant and Prosperous goal and related directions in Our City Tomorrow: A Spatial Plan for Wellington City. ***Economic*** • Direct benefits: The Lawson Comfort Criteria are believed to be easier for lay people to apply because they are presented as activities (for example, sitting long term, strolling, walking) that correspond to the measured wind conditions. Therefore, the alternative Standards should allow planners to exercise discretion more easily, when balancing wind effects against other planning issues. ***Social*** • Direct benefits: The alternative approach will have similar benefits to the proposed approach. • No indirect benefits have been identified. ***Cultural*** • No direct or indirect benefits have been identified.	standards would be less effective at controlling adverse wind effects over time.
Effectiveness and efficiency	***Effectiveness*** Alternative wind standards are not expected to control adverse wind effects as well as the proposed approach. A gradual deterioration of wind conditions over time may occur and inconsistent application of the comfort categories by different planners will cause uncertainty in regulatory outcomes.	***Efficiency*** The alternative wind standards could allow planning discretion to be exercised more easily. However, this would be balanced by greater scrutiny being applied to planning judgements made around which comfort category is appropriate for specific areas and developments.	
Overall evaluation	This alternative proposal is not considered to be as effective or efficient as the proposed approach.		

9.4 Further Explanation of Proposed Approach to Provisions

The following notes provide some additional detail on the rationale for the proposed approach, with particular emphasis on features that differ from the status quo.

- The wind standards criteria for deterioration of the wind environment have been simplified by removing the number of hours that the mean wind speeds exceeds 3.5 m/s per year. In practice, this 3.5 m/s criterion show very similar trends of wind effects when compared to the 2.5 m/s criterion that is retained in the proposed approach, and does not justify the added reporting required.
- The height thresholds when buildings are no longer permitted activities by default have been increased slightly, and expanded to include size thresholds for additions, to improve implementation. The height and size thresholds provide a balance between the risk of not assessing buildings that have significant adverse wind effects and the inefficiency of assessing small buildings that have little adverse effects.
- The format of the Wind Chapter has reorganised and restructured the wind provisions, but the level of stringency of the proposed approach is the same as the operational wind provisions, except that trigger levels have increase slightly (as above).
- The proposed Wind Chapter provides a consistent set of triggers, wind rules and standards for all relevant zones. Objective wind standards and criteria are provided for zones covering the Centres, Institutional Precinct and Business areas in the operative District Plan, which currently have no objective criteria for assessing wind effects.

10.0 Conclusion

This evaluation has been undertaken in accordance with section 32 of the RMA in order to identify the need, benefits and costs and the appropriateness of the proposal having regard to its effectiveness and efficiency relative to other means in achieving the purpose of the RMA. The evaluation demonstrates that this proposal is the most appropriate option as it:

- It gives due regard to the matters in ss7(c), (f) and (i) of the RMA;
- It broadly aligns with the intent of relevant policies in the RPS;
- It aligns with relevant directions in the National Planning Standards and the directive for well-functioning urban environments in the NPS-UD; and
- The objectives and policies provide certainty and clear direction regarding the purpose and outcomes sought in relation to managing new developments so as to maintain or enhance comfortable and safe wind conditions for pedestrians and public space users in the city. These objectives and policies are supported by a framework of rules and an associated effects standard that seek to manage building design for improve environmental benefits for people and communities.

Appendix 1: Advice Received from Taranaki Whānui and Ngāti Toa Rangatira

Appendix 2: Feedback on Draft District Plan 2021

Topic	Submitter No.	Submitter	Submission Point No.	General	Change/s Sought		Proposed Change/s (Note: specific text changes sought are either underlined or ~~struck through~~)	Response:
					Y	N		
Wind – Special Purpose Tertiary Education Zone	876	Vic Uni	5	The proposed introduction of objectives, policies and rules in relation to wind effects is not supported. Wind rules do not apply to the operative Institutional Precinct and are not proposed for the Special Purpose Hospital Zone. We are unaware of any widespread and/or significant existing adverse wind effects that would justify extending Council control of wind effects to include the campus.			Delete reference to the Special Purpose Tertiary Education Zone in the Wind Chapter rules.	WCC and its wind experts believe that wind rules should still apply to this zone as: 1. Wind effects have been created from existing buildings, particularly in the Kelburn Campus for example Rutherford House. 2. Heights are increasing across both campuses quite substantially and they will generate wind effects. 3. Both campuses have reasonably high pedestrian counts and pedestrian movements along adjacent roads given their central city locations. 4. Both campuses are on elevated topography. Under the Draft District Plan Wind Chapter the Special Purpose Tertiary Zone is caught under rule WINDR1.1 with a trigger height of 20m as applies to other zones like the City Centre Zone.

								This is the same for the Special Purpose Hospital Zone. Under the Operative District Plan wind is only included as an assessment criteria in the Institutional Precincts chapter: *9.4.2.4 The effect of the structure on the wind environment of the street* Consideration given to the demographic of the universities. Typically, the universities have a younger demographic and effects more akin to Centres or City Centre Zone, when compared to Hospital Zone who are typically likely to have an older or sick populace utilising the campus. Both the Hospital Zone and Tertiary Zone are likely to generate wind effects based on current state and increased maximum building heights under the Proposed Plan. As such wind rules should apply and it is only equitable to make the City Centre height trigger of 20m apply. This height trigger is more enabling than the Centres trigger (surrounding the wider campuses). It

								would not be fair to enable a higher threshold than the City Centre Zone. Wind experts have advised that it is important to consider wind impacts within the hospital because of the vulnerable population who utilise the site. Effects will be focused on the impact of the hospital on the street (not within the campus). Amend Wind-R1 as follows: 1. Add another row below the Centres row to be specific to the Hospital and Tertiary Zones. 2. Make the focus on the street level/ where the site abuts a public road. Hence wind rules are more limited in application and implication than in the Centres Zones. A slightly more permissive approach was taken. 3. Apply 12m height trigger etc. 4. Make the default wind test a wind assessment not a wind tunnel test. As such 12m height limit is more appropriate than 20m.
Wind – Special Purpose Hospital Zone	852	Capital and Coast District Health Board	1	If it is intended that the wind provisions of the DDP are extended to cover the SPHZ, this is opposed.			Delete reference to the Special Purpose Hospital Zone in the Wind Chapter rules.	Wind experts have advised that it is important to consider wind impacts within the hospital because of the

								vulnerable population who utilise the site. Effects will be focused on the impact of the hospital on the street (not within the campus). Amend Wind-R1 as follows: 1. Add another row below the Centres row to be specific to the Hospital and Tertiary Zones. 2. Make the focus on the street level/ where the site abuts a public road. Hence wind rules are more limited in application and implication than in the Centres Zones. A slightly more permissive approach was taken. 3. Apply 12m height trigger etc. 4. Make the default wind test a wind assessment not a wind tunnel test. As such 12m height limit is more appropriate than 20m.
Wind – General	1133	Aro Valley Community Council	7	AVCC submits that the draft District Plan needs modification so as to provide a far more nuanced and careful consideration of issues such as light, shading, wind, privacy, design quality, retention of green areas, character and heritage within the Aro Valley.			Changes sought to height and a more careful consideration of wind sought. No specific changes to wind chapter sought.	Concerned regarding heightened wind effects from increased building heights in residential areas are acknowledged. Tall buildings (in comparison to those in the City Centre and Centres Zones) are less likely to be built in residential environments i.e. buildings over six stories. As such it has been decided that the wind provisions need to be targeted to areas where taller buildings are more

								anticipated in order to manage the effects on the public environment and public spaces. However, in the High Density Residential Zoned areas (currently referred to as Medium Density Residential Areas with a height limit of 22m) there is an assessment criteria under MRZ-S8 Maximum Height which states 'wind effects for buildings exceeding 21m'. This will mean wind effects can be considered for tall buildings but not under the Wind Chapter.
	1132	Penelope Borland	1	The current District Plan draft has a blanket application of 21m building high irrespective of the topology of the suburb. A 21m building at the top of Majoribanks Street, on Hawker, Earl's Terrace or Stafford Street would negatively impact light for many neighbours, have dramatic wind effects in extreme wind zones, massively impact the neighbourhood character, and stretch constrained infrastructure including roads, parking and other amenities.			Changes sought to height of the Medium Density Residential Zone (MDRZ) for Mount Victoria. Changes also sought in the MDRZ to the notification settings so that provision is given for limited notification in respects to effects including wind on adjacent properties. No specific changes	See response to submission in row number 3.

				An 11m zoning (or 8 metre as in the RMA Housing Enabling Amendment Bill) would give fair consideration to: Wind: many properties are in the extreme wind zone category. Any large building would have major wind effects on other properties. Quality of life: The draft District Plan needs to be amended to make greater provision for limited notification (as opposed to non-notification) in relation to light, shading, privacy and wind effects so as to enable and support fair and reasonable comprises between neighbours.			to wind chapter sought.	
	808	Living Streets Aotearoa	1	The city is not currently delivering that, and there is little incentive or ability for an individual developer to create or contribute to public spaces. Issues we notice currently and that need to be addressed in the new plan include:			Concern raised regarding the wind effects from new tall buildings. No specific changes to Wind chapter sought. Tall buildings (over threshold) will be caught by the Wind rules and an	Concern regarding wind effects acknowledged. However, no change made. It is worth noting that we have safety and cumulative wind standards that apply to all public spaces and a comfort standard that applies to listed public

				- Tall building wind and shading effects Some of the elements needed for walkable catchments and liveable neighbourhoods are: design avoids hidden corners and dark places, orientates roads to best sun/ wind/ slope angles Ensuring that design does not generate wind problems. There are a number of buildings in Wellington that generate their own weather in the adjacent public space (Majestic Centre being one where wind speeds increase markedly as you approach the building).			assessment of wind effects made.	spaces, which work to mitigate and minimise wind effects in public spaces. This is paired with qualitative and quantitative wind assessments and studies and best practice wind guidance to encourage developers to consider wind effects early in building design.
	683	Don Smith	1	WIND … as we all know, Wellington is exposed to significant wind impacts, for the most part Northerlies although our worst recent experience was a Southerly, the 1968 "Wahine" storm and similar storms can be expected given climate change. However it is the prevailing wind, the Northerlies, that are the			Re wind tunnels, consideration sought in the planning framework and consenting to ensure uncontrolled expansion of wind tunnels across the CBD isn't allowed.	Concerns regarding wind effects acknowledged, particularly in the CBD. Under Wind Chapter standard WIND-S2 which concerns deterioration of the wind environment applicants are required to demonstrate that wind conditions overall will not deteriorate in public places that are affected by the development. This is a key control in

				greater concern. They accelerate down the Hutt Valley and Ngauranga Gorge and proceed unimpeded across the harbour to impact on the cbd. They can be experienced in their fullness at the corner of Whitmore and Featherston Streets, three of the four corners of which are medium or high rise buildings with a high-rise on the fourth corner under construction. Consideration must be taken in both planning and consenting not to allow uncontrolled expansion of wind tunnels across the cbd. ….to make greater provision for limited notification (as opposed to non-notification) in relation to light, shading, privacy and wind effects so as to enable and support fair and reasonable compromises between neighbours.			Changes also sought in the MDRZ to the notification settings so that provision is given for limited notification in respects to effects including wind on adjacent properties. The Wind chapter does not apply to residential zones.	mitigating the expansion of wind tunnels across the CBD. Due to the National Planning Standards the wind provisions have been separated from the City Centre and Centres Zones and as such has separate notification settings to those for adds/alts or building construction in these zones. The wind rule notification settings have not been detailed which means that consent planners have discretion to notify applications if they produce significant wind effects.
Wind – in relation to	1063	Earls Tce Stafford St Port St Mt Vic	4	An 11m zoning would give fair consideration to:			Changes sought to height of the Medium Density	See response to submission in row number 3.

height increases	697	joint submission Neil van Geest	1	**Wind:** many properties are in the extreme wind zone category. Any large building would have major wind effects on other properties			Residential Zone (MDRZ) for Mount Victoria. Changes also sought in the MDRZ to the notification settings so that provision is given for limited notification in respects to effects including wind on adjacent properties. No specific changes to wind chapter sought.	
	871	Hillary Watson	1	Every high-rise development in among a low-rise neighbourhood will cast shade across a wide area. There is also the loss of privacy, and the increased effects from wind deflected off the sides of tall buildings down into neighbouring houses and gardens			Changes sought to height of the Medium Density Residential Zone (MDRZ) for Mount Victoria. Changes also sought in the MDRZ to the notification settings so that provision is given for limited notification in respects to effects including wind on adjacent properties.	See response to submission in row number 3.

							No specific changes to wind chapter sought.	
	686	Property Council NZ	1	Increase the wind test requirements (i.e. to 22 metres) to allow for a buffer to the newly proposed minimum building heights and residential maximum heights; 8.2 The Draft District Plan recommends retaining the current building height limits in most areas, while increasing heights in Te Aro and along a portion of Adelaide Road. Although supportive, we are concerned that there are some adverse outcomes that would need to be resolved within the draft. Proposing minimum building heights that sit above the 20 metre City Centre wind test threshold could have adverse effects for development within the City. For example, a minimum building height of 21.5 metres in Te Aro would mean all future			A change is sought to increase the wind tunnel test level threshold to higher than the minimum building height limit in the City Centre. This is also sought to avoid deterring applicants from going above the Maximum Heights and providing Assisted Housing outcomes through the City Outcomes Contribution mechanism.	1. Wind experts have advised that their recommendation for the trigger for the City Centre Zone stay at 20 metres (as per the Draft District Plan). The rationale for this is that isolated buildings can generate significant wind effects above 20m, and this height provides a reasonable balance between avoiding unnecessary cost (of formally assessing wind effects) and allowing badly performing buildings (less than the trigger height that never-the-less cause significant deterioration in wind conditions). The updated Wind Best Practice Guidelines will encourage designers to consider wind effects, but the wind trigger is the “hook” that compels designers to think about wind effects. It is important to remember that a wind tunnel test is not always required if a planner

				developments would have to undertake a wind test which costs around $20,000 - $25,000 and adds approximately six to nine months to a project. We recommend increasing the wind test requirements to allow for a buffer in addition to the newly proposed minimum building heights. Increasing the wind test level will likely encourage more large-scale developments in Wellington and would also simplify the Council's and applicant's overall development process. 10 Residential 10.1 As noted earlier in our submission, buildings over 20 metres require a wind test in Wellington. The Draft District Plan proposes medium density residential zone maximum height limits of 11m, 14m and 21m depending on the height area. In reality, a proposed maximum height of 21 meters will not be used, as under				considers a development will have minimal effects on wind conditions. 2. Regarding the residential zone change request, the Wind chapter does not apply to these zones. No change made. See row #3 for rationale to this approach. 3. The City Outcomes Contribution and the associated outcome of this mechanism that relates to assisted housing only kicks in once maximum heights have been exceeded. The wind test threshold sits well below the maximum heights for the City Centre. Hence, we don't believe this will deter this outcome being achieved given the Wind rules have been in place for a long time, they sit below the maximum height and the threshold is increasing.

				current rules an additional meter would trigger a wind test. We recommend slightly increasing the wind test threshold (i.e. to 22 metres) to best align with the Draft District Plan proposals. Assisted Housing 11.3 Option 2 is another incentive-based approach which would allow the Council to consider additional building height for developments that provide assisted and affordable housing options. We would be supportive of this, but noting our previous concerns around wind test requirements, without increasing the wind test threshold, this option may not capture a large amount of uptake.				
	101	Diane Radford	1	At [redacted] Hay Street, I experience daily how tall buildings create shade and cold (not to mention wind funnels which are unsafe to walk in			Changes sought to height of the Medium Density Residential Zone (MDRZ) for Mount	See response to submission in row number 3.

				during a notorious Oriental Bay northerly).			Victoria. Changes also sought in the MDRZ to the notification settings so that provision is given for limited notification in respects to effects including wind on adjacent properties. No specific changes to wind chapter sought.	
	165	Friends of Khandallah – Martin Jenkins	1	With 'bulk' residential developments (up to six stories on both sides of Ganges Road), the impact on amenities is likely to be 'severe'. • Creation of a sunless, shaded, damp, wind tunnel creating a hostile environment for the public (particularly so in winter) • Loss of sunlight. Predicted to be the new 'leaky building' crisis. • Creation of a 'wind tunnel' through the tall buildings.			Changes sought to height of the Medium Density Residential Zone (MDRZ) for Mount Victoria. Changes also sought in the MDRZ to the notification settings so that provision is given for limited notification in respects to effects including wind on adjacent properties. No specific changes	See response to submission in row number 3.

							to wind chapter sought.	
	209	R.Fisher	1	Brooklyn village - Cleveland Street runs east west so sun is important. Building 22m on both sides of the street will create a sunless wind canyon. 12m on the north side is adequate.			Changes sought to height of the Medium Density Residential Zone (MDRZ) for Mount Victoria. Changes also sought in the MDRZ to the notification settings so that provision is given for limited notification in respects to effects including wind on adjacent properties. No specific changes to wind chapter sought.	See response to submission in row number 3.
	396	Penelope Anne Griffith	1	My submission on inappropriateness focuses on the following points arising from Type 4b zoning in Oriental Bay: …			Changes sought to height of the Medium Density Residential Zone (MDRZ) for Mount Victoria. Changes also sought in the MDRZ to the notification settings	See response to submission in row number 3.

				(2) Negative impacts relative to adjoining areas -- the potential for: … (d) "Canyon"/wind tunnel effects from tall buildings either side of narrow streets.			so that provision is given for limited notification in respects to effects including wind on adjacent properties. No specific changes to wind chapter sought.	
	438	Jan Kirkcaldie	1	(Part of lower Kelburn Neighbourhood group) Concerned with the effects of increase density on wind and sunlight. … How apartment blocks could be built on this terrain in an earthquake-prone city, is very difficult to imagine and to understand such a proposal. They would create wind canyons (as if we need any more wind in Wellington) and block the sunlight essential for healthy living.			Changes sought to height of the Medium Density Residential Zone (MDRZ) for Mount Victoria. Changes also sought in the MDRZ to the notification settings so that provision is given for limited notification in respects to effects including wind on adjacent properties. No specific changes to wind chapter sought.	See response to submission in row number 3.

	422	Tore Hayward	1	The topography is quite variable within this proposed zone. Some of the houses are built on (or on top of) steep hill faces, there are health and safety issues relating to the access for some of the houses, and there would be differing vulnerability to wind tunnelling effects from high rise buildings. A 'one size fits all' approach is simply not appropriate in this area.			Changes sought to height of the Medium Density Residential Zone (MDRZ) for Mount Victoria. Changes also sought in the MDRZ to the notification settings so that provision is given for limited notification in respects to effects including wind on adjacent properties. No specific changes to wind chapter sought.	See response to submission in row number 3.
	470	Victoria Stace	1	Regarding Oriental Bay: Safety - Wind issues. Considerations also include the likely increased wind effect from large apartment buildings on this hillside. This area faces northwest and is very exposed to the prevailing northwest wind. Allowing large scale structures on this hillside is likely to create increased wind			Changes sought to height of the Medium Density Residential Zone (MDRZ) for Mount Victoria. Changes also sought in the MDRZ to the notification settings so that provision is given for limited notification in	See response to submission in row number 3.

				flow that would have the potential to cause major property damage and consequent impact on safety.			respects to effects including wind on adjacent properties. No specific changes to wind chapter sought.	
	514	Susan Callan	1	Regarding Newtown: I disagree with that area being Purple on the Plan. I feel that Six Story Apartments within those blocks of old homes would destroy and devalue the area. The increased shading on existing homes and possibility of creating wind tunnels in the area is of great concern.			Changes sought to height of the Medium Density Residential Zone (MDRZ) for Mount Victoria. Changes also sought in the MDRZ to the notification settings so that provision is given for limited notification in respects to effects including wind on adjacent properties. No specific changes to wind chapter sought.	See response to submission in row number 3.
	527	Charlotte Von Dadelszen	1	Regarding Thorndon: While I am not opposed to in-fill housing, minimum 6 storey apartments or commercial offices up and down these			Changes sought to height of the Medium Density Residential Zone (MDRZ) for Mount	See response to submission in row number 3.

				streets would create noise, create shading issues, wind tunnels, destroy the wildlife and birdlife, and consume the very little green space and gardens that exist.			Victoria. Changes also sought in the MDRZ to the notification settings so that provision is given for limited notification in respects to effects including wind on adjacent properties. No specific changes to wind chapter sought.	
	528	Jenny Gyles Trust - Jenny Gyles	1	Lining Lower Hay Street with high rise buildings will turn Hay Street into a furious wind tunnel. The predominant Northerly wind will have its speed increased several times by the tunnel effect.			Changes sought to height of the Medium Density Residential Zone (MDRZ) for Mount Victoria. Changes also sought in the MDRZ to the notification settings so that provision is given for limited notification in respects to effects including wind on adjacent properties. No specific changes	See response to submission in row number 3.

							to wind chapter sought.	
	651	Glen Scanlon	1	Like many properties on our street, Earls Tce, our section is tiny, 177sqm, and on a steep elevation. Under the proposed rules a building of up to 21 metres (six storeys) in height could theoretically replace, be built next to, behind or in front of it - without any specific design guidance or checks and balances. Such a one-size-fits-all approach appears impractical. The street, and a number of those surrounding it (i.e. Port and Stafford Sts), are narrow single carriageways. Earls Terrace has a gradient of 17 per cent and gets narrower the further you go up. Construction of such large buildings would likely require the purchase of a number of properties in the area and major, dangerous, lengthy, earthworks to provide suitable building platforms (when our			Changes sought to height of the Medium Density Residential Zone (MDRZ) for Mount Victoria. Changes also sought in the MDRZ to the notification settings so that provision is given for limited notification in respects to effects including wind on adjacent properties. No specific changes to wind chapter sought.	See response to submission in row number 3.

				house was renovated earthworks were limited due to the risk of destabilisation to neighbouring properties). The cost will be high, the infrastructure - parking, sewer etc - is already under immense pressure and much of the area is also in an extreme wind zone. The draft plans don't account for these issues.				
	585	Gillian Press	1	The thought of "wind tunnels" through Khandallah with 6-10 story buildings without parking, lack of vegetation to break up the Concrete Jungle hardly enhances the Area which most residents have chosen to live in. A Suburb rather than Inner City Living.			Changes sought to height of the Medium Density Residential Zone (MDRZ) for Mount Victoria. Changes also sought in the MDRZ to the notification settings so that provision is given for limited notification in respects to effects including wind on adjacent properties. No specific changes to wind chapter sought.	See response to submission in row number 3.

	637	Greater Brooklyn Residents Association - Katie Underwood	1	The proposed building height of 22m on both sides of the street will create a sunless wind canyon and detract from the pleasure of 'going to the village'. It will destroy the village vibe.			Changes sought to height of the Medium Density Residential Zone (MDRZ) for Mount Victoria. Changes also sought in the MDRZ to the notification settings so that provision is given for limited notification in respects to effects including wind on adjacent properties. No specific changes to wind chapter sought.	See response to submission in row number 3.
	671	Jane Meares	1	Regarding Clifton: The housing in this area consists almost entirely of the kind of well-maintained and renovated historic buildings that the new plan will either destroy directly or severely downgrade by enclosing homes in increasing numbers of building sites and apartment blocks that remove sunlight			Changes sought to height of the Medium Density Residential Zone (MDRZ) for Mount Victoria. Changes also sought in the MDRZ to the notification settings so that provision is given for limited notification in	See response to submission in row number 3.

				and views, increase mould and damp and create wind canyons.			respects to effects including wind on adjacent properties. No specific changes to wind chapter sought.	
	712	Charlie Crighton Gabrielle Rubin & Richard Owen Kellie Coombes	1	The current District Plan draft has a blanket application of a 21m building high irrespective of the topology of the suburb. A 21m building at the top of Majoribanks Street or Stafford Street would negatively impact light for many neighbours, have dramatic wind effects in extreme wind zones, massively impact the neighbourhood character, and stretch constrained infrastructure including roads, parking and other amenities.			Changes sought to height of the Medium Density Residential Zone (MDRZ) for Mount Victoria. Changes also sought in the MDRZ to the notification settings so that provision is given for limited notification in respects to effects including wind on adjacent properties. No specific changes to wind chapter sought.	See response to submission in row number 3.
	601	National Council of Women of New Zealand - Amy Rice	1	A minimum building height of six storeys could block out sunlight and lead to more wind tunnels			Not sure if this change is related to the CCZ's minimum building height rule or the enabling at	See response to submission in row number 3.

							least 6 storeys (i.e. 21m max. height in the MDRZ) has been accidentally taken as a Minimum Building height requirement. Regardless this relates to building height requirements in the zones themselves and no changes to the wind chapter is sought.	
	986	Rob Taylor	1	Substantive environmental impacts. We are already seeing with the construction of eleven story building along Thorndon Quay and Molesworth St high rise barriers between the city and the sea. Other impacts will include, light degeneration, the loss of trees and green spaces, wind tunnelling, noise from constant construction, traffic and further congestion			Changes sought to height of the Medium Density Residential Zone (MDRZ) for Mount Victoria. Changes also sought in the MDRZ to the notification settings so that provision is given for limited notification in respects to effects including wind on adjacent properties.	See response to submission in row number 3.

							No specific changes to wind chapter sought.	
	1004	Newtown Residents' Association - Rhona Carson	1	Every high-rise development on an unsuitable site will cast shade across a wide area of low-rise neighbours, and the loss of sun is only one of the problems. There is also the loss of privacy, and the increased effects from wind deflected off the sides of tall buildings down into neighbouring houses and gardens.			Changes sought to height of the Medium Density Residential Zone (MDRZ) for Mount Victoria. Changes also sought in the MDRZ to the notification settings so that provision is given for limited notification in respects to effects including wind on adjacent properties. No specific changes to wind chapter sought.	See response to submission in row number 3.
Wind impacts on cycling and walking	80, 79	Hugh Hawley, Mike Green	1	Place transport hubs in sheltered places. Wind in Wellington often makes cycling and walking unsafe. Above all let's be realistic about what can be achieved.			Change sought to the transport chapter and at a higher level to Council's placement of transport hubs. Submitter seeks that they are placed in	Concern noted. No change to chapter. The comfort, safety and cumulative effect wind standards as in the Draft Plan work to reduce and mitigate effects for pedestrians and cyclists.

							sheltered spaces away from wind effects. No change sought to the Wind chapter itself.	
	521	Victoria Porter	1	More connected walkways, pedestrian (non-car) priority at traffic lights - people in vehicles are a) protected from the weather, and b) have a fuel powered machine to accelerate them away from a stopped position - cyclists/pedestrians have neither, yet we give priority and benefit at junctions to those commuters that already have all the advantages and don't have to worry about the wind and rain!			Change sought at a higher level to Council's creation of walkways and pedestrian routes, as well as giving pedestrians priority above car users. This acknowledges wind effects, but doesn't seek any specific changes to the wind chapter.	Concern noted. No change to chapter. The comfort, safety and cumulative effect wind standards as in the Draft Plan work to reduce and mitigate effects for pedestrians and cyclists.

	266	Robert Murray	1	As I understand it the plan is to promote Wellington as a livable human oriented city where people can enjoy walking and cycling and indeed living. Yet this plan is building an 11 storey high maze where street level will be cold, in shadow and wind swept with only an occasional glimpse of our magnificent harbour.			Changes sought to height of the Medium Density Residential Zone (MDRZ) for Mount Victoria. Changes also sought in the MDRZ to the notification settings so that provision is given for limited notification in respects to effects including wind on adjacent properties. No specific changes to wind chapter sought.	See response to submission in row number 3.
Wind – notification status	391, 390, 573, 701, 727, 795, 799, 825, 1077, 386	Daphne Pilaar, Margret Franken, Francis Kemble Welch, Mary Busch, Jane Meares, Joanna Higgins, Hillary Unwin, Daniela	1	I submit that the draft District Plan needs to be amended to make greater provision for limited notification (as opposed to non-notification) in relation to light, shading, privacy and wind effects so as to enable and support fair and reasonable compromises between neighbours.			Changes sought to height of the Medium Density Residential Zone (MDRZ) for Mount Victoria. Changes also sought in the MDRZ to the notification settings so that provision is given for limited notification in	The wind rule notification settings have not been detailed which means that consent planners have discretion to notify applications if they produce significant wind effects.

		Butterfield, Jane Szentivanyi Ben Briggs, Jane Patterson					respects to effects including wind on adjacent properties. No specific changes to wind chapter sought.	
City Centre Zone – General wind comments	289	Karen Wong	1	This is due to the draft rules for the Central City Zone (CCZ) on the eastern side of Hania St allowing very high buildings (up to 28.5m high) directly to the rear of the homes on Moir St. The outcome would be a wall of 8 storey builds directly overlooking and dominating 1-2 storey cottages. Such development would have a significant adverse effect on the character, heritage and amenity of houses on both sides of Moir St. This includes loss of sunlight, overlooking, shading, wind, over- dominance of building form and loss of privacy. CCZ development on Hania Street will have detrimental impacts in the form of			Changes sought to height of the City Centre Zone edge along Hania Street (CCZ). Concern about wind effects from tall buildings on Mount Victoria, Moir Street in particular. No specific changes to wind chapter sought.	Concern noted. However, wind effects on adjacent properties is not managed under the District Plan. The district plan mitigates and manages wind impacts from adds/alts or new buildings on public spaces i.e. parks, the street etc. This process does not look at backyards – wind impacts only considered in terms of impact on street level and public space, not private space. Need to add a sentence noting this in the Wind Chapter introduction: ... The provisions within this chapter apply to public spaces in a number of zones across the district including the City Centre and different Centres Zones. The provisions do not apply to private

				shadowing, privacy, wind and dominance				spaces such as adjacent properties or backyards.
Wind design guidance	309	Julie Patricia Ward	1	Develop design guides and relevant standards to enable a more granular approach to local character; access to sunlight and shade; the maintenance of personal privacy; the variety and location of green spaces; the location and scale of exterior space and development; the control of heat island effects; the control of wind effects which are significant in Wellington, and the look and feel of the streets we inhabit.			The submitter seeks that wind standards and design guides are created to control wind effects (in addition to other effects).	No change required, Wind standards and guidelines exist. Council advises submitter to read the Wind Chapter and Appendix 13 Wind Chapter Best Practice Guidance Document.
Appendix 9 CCZ and SPZ Min. Sunlight Access and Wind Comfort Control	975	WCC Environmental Group - Lynn Cadenhead	1	*We agree with these requirements.*			N/A	Support noted.
Wind test threshold	1111	Wellington Chamber of Commerce - Joe Pagani	1	The District Plan, while a positive step in the right direction, should not be a final step. It is an important start on			A change is sought to increase the wind tunnel test level threshold to higher	See response in row #9.

				the road to a modern Wellington. But we must go further. New developments enabled by the plan risk meeting other restrictive regulations which add costs and hinder development. For example, as the Property Council notes in their submission: *"A minimum building height of 21.5 metres in Te Aro would mean all future developments would have to undertake a wind test which costs around $20,000 - $25,000 and adds approximately six to nine months to a project. We recommend increasing the wind test requirements to allow for a buffer in addition to the newly proposed minimum building heights. Increasing the wind test level will likely encourage more large-scale developments in Wellington and would also simplify the Council's and*			than the minimum building height limit in the City Centre. This is also sought to avoid deterring applicants from going above the Maximum Heights and providing Assisted Housing outcomes through the City Outcomes Contribution mechanism.	

				applicant's overall development process." The Chamber endorses the Property Council's recommendation to increase the wind test threshold and notes this as an example of where ongoing reform is needed to enable our shared vision for a dense and compact Wellington city. We recommend that the council continues to work towards finding new ways to cut red tape and empower business to solve our housing crisis. Reducing regulatory requirements on business, opening land, and increasing housing density is welcome news for our city, and will benefit all Wellingtonians.				