

**Before the Hearings Panel
At Wellington City Council**

Under Schedule 1 of the Resource Management Act 1991

In the matter of Hearing submissions and further submissions on the
Proposed Wellington City District Plan

**Stream 1 Reporting Officer Right of Reply of Adam McCutcheon and Andrew
Wharton on behalf of Wellington City Council**

Date: 14 April 2023

Contents

RIGHT OF REPLY AUTHORS.....	2
SCOPE OF REPLY.....	5
FURTHER INFORMATION FROM MR WHARTON ON KEY TOPICS.....	6
JOHNSONVILLE RAIL LINE – RAPID TRANSIT OR NOT.....	6
EFFECT OF CITY CENTRE ZONE WALKABLE CATCHMENT ON NEWTOWN HRZ.....	10
HIGH DENSITY RESIDENTIAL ZONE AROUND THE KILBIRNIE METROPOLITAN CENTRE ZONE – EFFECT ON HOUSING CAPACITY	11
FEEDBACK ON MATTERS THAT THE PANEL RAISED IN MINUTE 11.....	13
MR WHITTINGTON (LEGAL COUNSEL)	13
MR OSBORNE (PROPERTY ECONOMICS).....	14
MR MCCUTCHEON (SECTION 42A AUTHOR).....	15
MR WHARTON (SECTION 42A AUTHOR)	24
CLARIFICATION ON POINTS RAISED DURING THE STREAM 1 HEARING - MR MCCUTCHEON	33
CLARIFICATION ON POINTS RAISED DURING THE STREAM 1 HEARING - MR WHARTON	35
APPENDIX 1 – TAWA PROPERTIES IN WALKABLE CATCHMENTS BUT ADJACENT TO THE PORIRUA STREAM.....	46
APPENDIX 2 – SANDRA MANDIC EVIDENCE ON WALKABILITY OF STEEP STREETS	52
FACTORS RELATED TO WALKING FOR TRANSPORT	52
WALKING FOR TRANSPORT SEEN THROUGH AN EXERCISE SCIENCE LENS	54
APPLYING AN EXERCISE SCIENCE LENS TO INFORM CONSIDERATION OF A DEFENSIBLE BOUNDARIES FOR WALKING FOR SELECTED WELLINGTON CITY STREETS.....	65
APPENDIX 2 REFERENCES	ERROR! BOOKMARK NOT DEFINED.
APPENDIX 3 – ORLA HAMMOND EVIDENCE ON WALKABILITY OF STEEP STREETS.....	75
APPENDIX 4 - AMENDMENTS TO THE HEARING STREAM 1 SECTION 42A REPORT.....	80
ATTACHMENT 1 – PHIL OSBORNE RESPONSE TO STREAM 1 PANEL QUESTIONS IN MINUTE 11.....	82

RIGHT OF REPLY AUTHORS

Adam McCutcheon

1 My name is Adam McCutcheon. I am employed as Acting Manager of the District Planning Team at Wellington City Council (the Council). My substantive role is that of a Team Leader in the District Planning Team.

2 I have prepared this Reply in respect of the matters in Hearing Stream 1 raised during the hearing.

3 I have listened to submitters in Hearing Stream 1, read their evidence and tabled statements, and referenced the written submissions and further submissions relevant to the Hearing Stream 1 topics.

4 The Stream 1 Section 42A Report section 1.3.1 sets out my qualifications and experience as an expert in planning.

5 I confirm that I am continuing to abide by the Code of Conduct for Expert Witnesses set out in the Environment Court's Practice Note 2023, as applicable to this Independent Panel hearing.

Andrew Wharton

6 My name is Andrew Wharton. I am employed as a Principal Advisor in the District Planning Team at the Wellington City Council.

7 I have prepared this Reply in respect of the 'rapid transit' and 'walkable catchment' matters in Hearing Stream 1 raised during the hearing.

8 I have listened to submitters in Hearing Stream 1, read their evidence and tabled statements, and referenced the written submissions and further submissions relevant to the Hearing Stream 1 topics.

9 The Stream 1 Section 42A Report section 1.3.3 sets out my qualifications and experience as an expert in planning.

10 I confirm that I am continuing to abide by the Code of Conduct for Expert Witnesses set out in the Environment Court's Practice Note 2023, as applicable to this Independent Panel hearing.

Sandra Mandic (evidence in Appendix 2)

11 My name is Sandra Mandic. I have worked as Principal Advisor Transport Strategy at Wellington City Council since September 2021.

12 I have prepared my evidence in respect of the walkable catchment question (5(g)) raised in the Panel's Minute 11.

13 I have a Master of Science and Doctoral degrees in exercise physiology from the University of Alberta (Edmonton, Canada), postdoctoral training in physical activity epidemiology from Stanford University (Palo Alto, California, USA) and have been working as an academic in New Zealand since 2009 with research and teaching responsibilities linked to exercise science, physical activity, health, transport and built environment. I am the founder and the lead researcher of an award-winning, interdisciplinary and cross-sector research programme in New Zealand - Built Environment and Active Transport to School (BEATS) – which has published 36 scientific articles and over 50 technical reports to date. I am also an Adjunct Professor at Auckland University of Technology leading a \$1.2 million research project BEATS Natural Experiment funded by the Health Research Council of New Zealand.

- 14 Although this is an Independent Hearing for a Proposed District Plan, I have read the Code of Conduct for Expert Witnesses contained in the Practice Note issued by the Environment Court effective 1 January 2023. I have complied with the Code of Conduct when preparing my written evidence and I agree to comply with it if the Panel chooses to call me to give any oral evidence.
- 15 Other than when I state that I am relying on the evidence or advice of another person, this evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.
- 16 Any data, information, facts, and assumptions I have considered in forming my opinions are set out in the part of the evidence in which I express my opinions. Where I have set out opinions in my evidence, I have given reasons for those opinions.

Orla Hammond (evidence in Appendix 3)

- 17 My name is Órla Hammond. I am the Team Lead for the City Insights GIS Team at Wellington City Council.
- 18 I have prepared my evidence in respect of the walkable catchment question (5(g)) raised in the Panel's Minute 11.
- 19 My Hearing Stream 1 Statement of Evidence sets out my qualifications and experience as an expert in geographic information systems and science.
- 20 I confirm that I am continuing to abide by the Code of Conduct for Expert Witnesses set out in the Environment Court's Practice Note 2023, as applicable to this Independent Panel hearing.

SCOPE OF REPLY

- 21 This Reply follows Hearing Stream 1 held from 21 February to 1 March 2023. Minute 1: Hearing Procedures required the Section 42A report authors to submit a written Right of Reply a formal response to matters raised during the hearing. The Minute required this within 10 working days of the adjournment of each hearing. However in an email, the Chair allowed additional time for this Right of Reply.
- 22 The Reply includes:
- information to help the Panel with their deliberations on the Johnsonville Rail Line (rapid transit or not), the recommended City Centre Zone walkable catchment, the requested High Density Residential Zone around the Kilbirnie Centre, and which qualifying matters are specified and applied in the Plan.
 - feedback on specific matters and questions the Panel asks the Section 42A authors and subject matter experts in Minute 11.
 - feedback on points raised by the Panel during the hearing and general points of clarification.
- 23 Appendix 1 contains the changes to the recommended Tawa walkable catchments around rapid transit stations. These changes exclude High Density Residential Zoning on properties near the Porirua Stream. The purpose is to reduce future costs for bank and corridor management and natural hazard protections by only allowing high density where it can feasibly be located away from the Stream corridor. More detailed natural hazard recommendations (e.g. a setback or other overlay) can be addressed in Stream 5. Appendix 1 also includes an RMA Section 32AA analysis on these changes.

- 24 Appendix 2 is Professor Mandic’s investigation into how street slope affects walking effort at different ages and fitness levels, and how this could affect “walkability”.
- 25 Appendix 3 elaborates on how the City’s Walking Model accounts for slope and walking speed, and how this is measured. It also includes maps of the six streets the Panel asked us to investigate.
- 26 Appendix 4 contains the consequential amendments to the recommendations in the original Hearing Stream 1 Section 42A Report, as a result of submitter presentations and evidence, and Panel questions to us.
- 27 Appendix 5 contains a tabular presentation of qualifying matters requested in paragraph 5(o) of minute 11.
- 28 Attachment 1 contains a response from Mr Phil Osborne answering the questions of the Panel directed to him.
- 29 Attachment 2 contains a response from Mr Nick Whittington answering the questions of the Panel directed to him.
- 30 Attachment 3 contains maps requested in paragraph 5(q) of Minute 11 showing the indicative character contribution areas of the ‘pre-1930s character area review’ report and officer recommendations on the Hearings Stream 2 s42A.

FURTHER INFORMATION FROM MR WHARTON ON KEY TOPICS

Johnsonville Rail Line – rapid transit or not

- 31 From the evidence and presentations at the Stream 1 hearing, and comments at the hearing about the weight given to guidance and regional documents, I acknowledge the Panel’s decision to classify the

Johnsonville Line as rapid transit, or as not rapid transit, will depend on which factors and facts the Panel chooses to emphasise.

32 I list some key points for/against the Johnsonville Line rapid transit question to assist the Panel in deliberations. Some submitters have raised points that I believe do not have merit as general reasons. For example, that enabling density close to these train stations would increase carbon emissions¹, or that six storey buildings are, *prima facie*, inappropriate for Wellington City’s western suburbs. I have not included those points.

Factor	Not rapid transit because ...	Is rapid transit because ...
National, regional and Council direction	<p>When notifying the Plan, the Council decided that the Johnsonville Line was not rapid transit under the NPS-UD.</p> <p>MfE confirms that interpreting the NPS-UD ‘rapid transit service’ definition is up to local councils.</p>	<p>Given weight but not determinative, the Wellington Regional Land Transport Plan and Wellington Regional Growth Framework identify the Johnsonville Line strategically and operationally as rapid transit. The Wellington Rail Programme Business Case anticipates 6+ stories around Wellington’s train stations.</p> <p>MfE guidance gives Wellington’s commuter rail service as an example of existing rapid transit.</p> <p>Regardless of Council decision, the Plan must give effect to the NPS-UD’s definition of rapid transit.</p>
Well-functioning environment	The Khandallah, Ngaio and Crofton Downs suburbs are in the medium to longer term (10-20 years) timeframe for	The suburbs’ high property values, high neighbourhood amenity and number of local shops and services along the Johnsonville Line support buildings up to six stories within

¹ This was based on an assumption that the apartments would otherwise be built in the CBD, and/or that residents in the western suburbs use cars more frequently. It does not account for new apartment residents who want to live in suburban areas, so are exchanging a carbon-intensive lifestyle in a car-dominated outer suburb for a lower carbon lifestyle where some journeys can be by train, walking, cycling and bus.

	<p>infrastructure investment – not priority growth areas.</p> <p>The Wellington Regional Growth Framework does not identify the Johnsonville Line suburbs as a key growth corridor.</p> <p>Enabling high density development along the Johnsonville Line could scatter density into the western suburbs instead of in identified growth areas.</p>	<p>a short walkable distance of the train stations.</p> <p>Enabling six stories close to Johnsonville Line train stations aligns with NPS-UD objectives, noting that changes to urban built form is not in itself an adverse effect (Policy 6).</p>
Attractiveness	<p>The alternative bus routes and cycling improvements within the Crofton Downs, Ngaio, Khandallah and Johnsonville suburbs are more attractive transport options compared to the Johnsonville Line for some residents.</p>	<p>The Johnsonville Line is a valued public transport service integrated with bus services at each end, and is more popular for people living closer to the stations. A ‘rapid transit’ classification may increase the number of households that live near the stations and increase the number of train journeys.</p>
Frequency peak	<p>Increasing the Line’s peak frequency to every 10 minutes (turn-up-and-go level) is not planned, and if built would likely affect timetable reliability. 10 minutes is best-practice for rapid transit (ref the <i>Auckland Transit Baseline</i>).</p>	<p>The peak services for the Johnsonville Line’s stations are more frequent at 15 minutes than the Kapiti and Hutt Lines’ stations at 20 minutes (except for Porirua, Taita and Waterloo Stations) which are accepted rapid transit services. This meets ONF criteria.</p> <p>The Onehunga Line is different – it can only cater for services every 30 minutes, with no plans to invest in more passing bays to increase this.</p>
Frequency off-peak	<p>The off-peak train service weekdays 7 am – 7 pm at every 30 minutes is less frequent than the Hutt, Kapiti, Auckland Southern, Eastern, Western lines at every 20 minutes. These other lines have plans for higher off-peak frequencies; the Johnsonville Line does not.</p>	<p>At every 30 minutes, the Johnsonville Line off-peak services are similar to other rail lines after 7 pm and on weekends: Hutt, Kapiti, Auckland Lines, which are accepted rapid transit services. Population growth could increase rail demand to justify higher off-peak services in the future, such as those supported in the Wellington Rail Programme Business Case.</p>
Quick	<p>The train has low operational speeds, with average speed</p>	<p>The train is faster than the bus from Wellington Station to the</p>

	<p>(including stopping at stations) of 27 km/h, and typical upper speed of around 50 km/h, due to mostly single track, curves, tunnels and steep terrain. It is not competitive with cars in peak time for Khandallah, Raroa and Johnsonville Stations.</p> <p>Buses are generally faster than the train from Johnsonville to Wellington, and the #1 bus route continues to other City destinations.</p>	<p>residential areas proposed to be up-zoned to High Density (except for around Johnsonville Station). Similar to the Hutt, Kapiti and Auckland Rail Lines, the Johnsonville Line is faster than cars in some peak times for their stations closer to Wellington Station, but slower for stations further away.</p> <p>The LGWM mass rapid transit may have a similar or slower speed along much of its length.²</p> <p>Other rail services in Wellington and Auckland also require transfers to buses to get to other destinations at their terminus – Johnsonville is not unusual in this.</p>
Reliable	<p>Dew and frost on steep parts of the Johnsonville Line makes slippery track conditions, which means services struggle to meet the current timetable on those mornings. Because there are only three passing bays, delay from one service can compound delays to other services.</p>	<p>The Johnsonville Lines has fundamental reliability due to its dedicated corridor and long-term commitment to reliability from Metlink/Greater Wellington. It has suffered from recent poor reliability due to slips and upgrades, but the same is true for the Kapiti Rail Line.</p>
High capacity	<p>The existing Johnsonville Line service of four-car trains in peak time is lower capacity than for rapid transit described in the <i>Auckland Transit Baseline</i>.</p> <p>The capacity limit in the ONF is low, and in any case is not determinative for deciding rapid transit descriptors.</p>	<p>The Johnsonville Line has capacity to service its current demand and more, with existing 2-carriage and 4-carriage trains. The Johnsonville Line's platforms are sized for 6-carriage trains, whenever demand requires them. The current services are rated as high capacity under the ONF (updated Nov 2022).</p>
Investment	<p>The current RLTP does not include any planned investment to increase frequency or capacity in the Johnsonville Line, compared to the investment proposed in the Hutt and Kapiti lines to increase their frequency.</p>	<p>The Johnsonville Line has had many upgrades to improve the rail service over the past 15 years: enlarging tunnels, sleeper replacement, steel poles, slope stabilisation, lengthening the crossing loops and station platforms, new power</p>

² Subject to detailed business case investigations and Wellington City Council policy on street speeds.

		substation, Snapper ticketing, new trains. If needed, future RLTPs can invest in more and longer trains to increase capacity or longer 15 minute frequencies.
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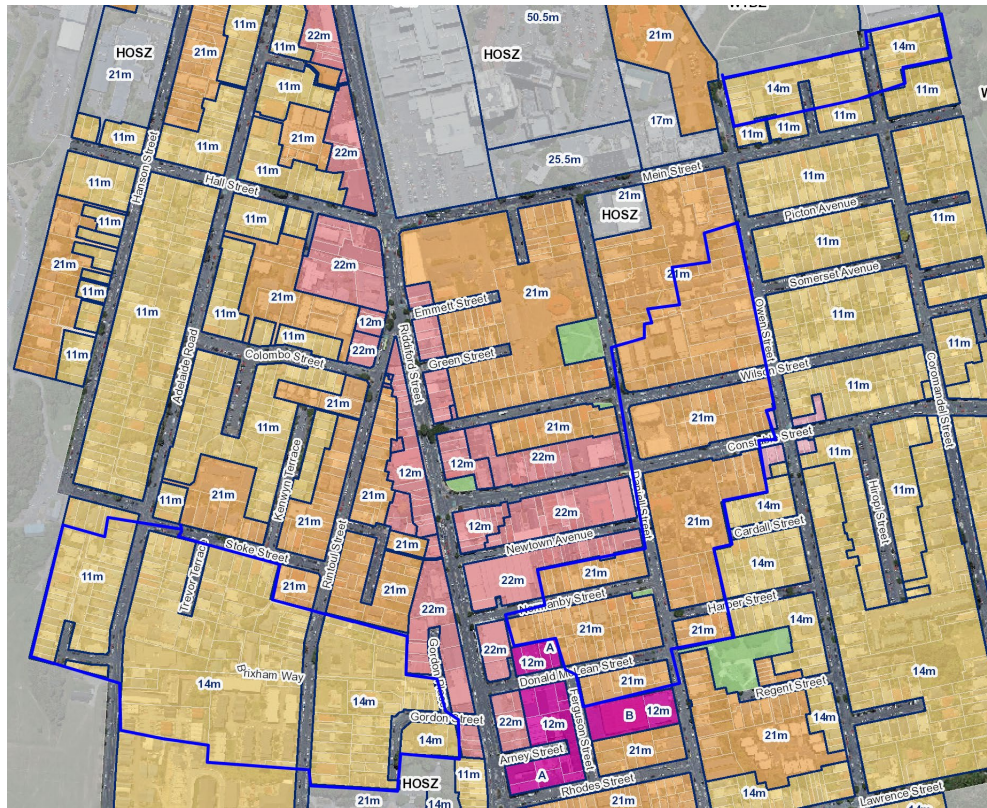
33 The factors summarised above for and against Johnsonville Line being rapid transit are finely balanced. The ‘for’ points above focus on: regional transport planning and integration, national and regional guidance, and comparison of its characteristics with other existing rapid transit services. The ‘against’ points above focus on: the Council’s decision when notifying the Plan, overall City growth planning, and the practical difficulties of increasing service frequency beyond one per 15 minutes.

34 On balance after considering these factors, I retain my recommendation that the Johnsonville Line is classified as rapid transit for implementing NPS-UD Policy 3(c)(i) in the Plan from a technical planning perspective, while acknowledging the Council’s decision on 23 June 2022 that the Johnsonville Line will not be included in the Plan as a rapid transit line. Recommendation HS1-Rec7 remains for the Panel to use if it decides the Johnsonville Line should continue to not be classified as rapid transit.

Effect of City Centre Zone walkable catchment on Newtown HRZ

35 Submitters from Newtown expressed concern about enabling six storey buildings generally beyond the shopping centres and main roads. For the Panel’s information, the blue outline below shows the Newtown residential areas between the 10 to 15 minutes City Centre Zone walkable catchment (excluding character housing precincts in the notified Plan). The Plan already zones part of the blue outlined area for six stories under NPS-UD Policy 3(d). If the Panel retains the City Centre

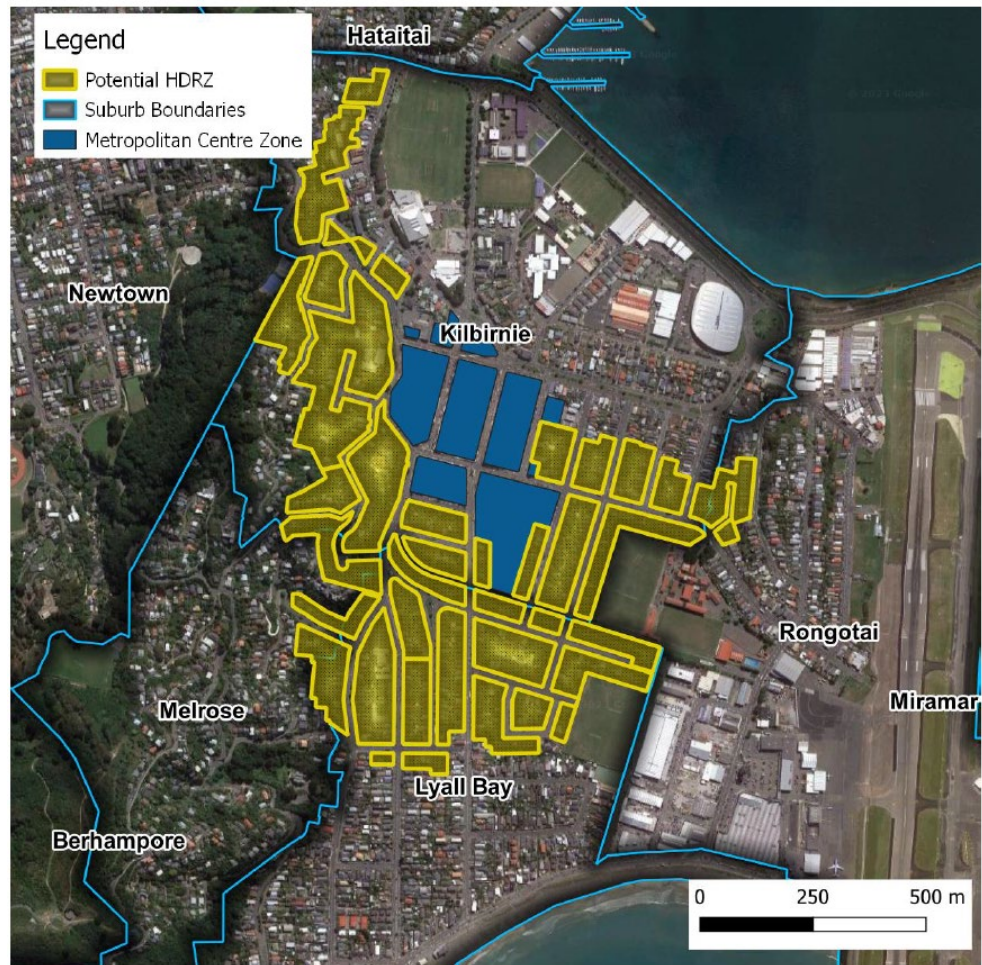
Zone's 10 minute walkable catchment, this would not (by itself) affect this existing high density zoning.



High Density Residential Zone around the Kilbirnie Metropolitan Centre Zone – effect on housing capacity

36 Regarding the Kilbirnie Metropolitan Centre Zone walkable catchment issue I raised in the Section 42A Report paras 367–377, during Hearing 1 Property Economics sent me an assessment of commercially feasible and realisable housing capacity that would result from the up-zoning around the Kilbirnie Metropolitan Centre. This evidence is provided below. The housing numbers are additional to the houses enabled by the notified Plan and its existing qualifying matters.

FIGURE 2: POTENTIAL HIGH DENSITY RESIDENTIAL ZONE AROUND KILBIRNIE



Source: Property Economics, WCC, Google Maps

TABLE 5: IMPACT OF THE KILBIRNIE HIGH DENSITY RESIDENTIAL ZONE ON CAPACITY AFTER ACCOUNTING FOR ALL QFM SCENARIO

All QFM	Kilbirnie HDRZ	Theoretical	Apartment	Standalone	Terraced	Total
Feasible	Without	208,399	8,468	16,072	40,349	64,889
	With	211,788	10,163	16,046	40,389	66,598
	Difference	+ 3,389	+ 1,695	- 26	+ 40	+ 1,709
Realisable	Without	208,399	4,956	19,350	26,761	51,067
	With	211,788	5,243	19,350	26,756	51,349
	Difference	+ 3,389	+ 287	+ 0	- 5	+ 282

Source: Property Economics, WCC,

37 This increase in realisable capacity is relatively low. For comparison, the equivalent realisable housing capacity increase from potential up-zoning around the Johnsonville Line (excluding Johnsonville Station) was 951.

FEEDBACK ON MATTERS THAT THE PANEL RAISED IN MINUTE 11

Mr Whittington (legal counsel)

38 *During the presentation of the Council case, counsel suggested that there was authority for the proposition that “and” might be read as “or” in the context of the definition of Rapid Transit Service in the NPSUD. Mr Ballinger, for WCCT responded to that proposition, suggesting that the situations where that might be appropriate were limited. Can counsel for the Council kindly identify, with reference to authority, what circumstances it would be appropriate to read “and” to mean “or” and comment on whether those circumstances apply in this instance (i.e. the definition of Rapid Transit Service in the NPSUD).*

39 *In discussions with counsel for Kāinga Ora, the Chair asked if the identification of a rapid transit service might be regarded as analogous to identification of an ONL, in respect of which, the Court of Appeal (in *Man O’War Station Limited v Auckland Council*¹) had indicated that the correct approach was to treat the identification of ONLs as a technical issue, from which planning consequences flow, rather than consider the planning consequences at the initial identification stage. Counsel for Kāinga Ora has filed a Memorandum on the subject. We request that counsel for the Council provide his view on the question, responding as appropriate to Counsel for Kāinga Ora’s memorandum.*

40 Responses to these questions are addressed in Attachment 2.

Mr Osborne (Property Economics)

The responses to the following points and questions are in Attachment 1 – Phil Osborne Response to Stream 1 Panel Questions in Minute 11.

In the economic sphere, can Mr Osborne please comment on the following issues:

- 41 *What are the implications of the drop in property values commencing March/April 2022 for the cost benefit evaluation around further intensification, and for the predicted surplus of realisable enabled supply to meet demand over the short, medium and long term time horizons In relation to the former, is there potential (as suggested by Mr Spargo) for the enablement for intensification in the PDP to cause property values to drop further than would otherwise be the case, and for consequential adverse social and economic effects that have not to date been considered?*
- 42 *Mr Cullen’s evidence (for Kāinga Ora), that Tawa, Miramar and Newtown Centres exhibit a significantly greater level of retail and commercial activity and employ significantly more people than do the other local centres that have been identified in the PDP.*
- 43 *Mr Cullen’s evidence (at paragraph 8.5) derived a current dwelling shortfall in Wellington City of 10,222: could Mr Osborne comment on that calculation, and discuss the implications of such a shortfall should that view be substantially correct.*
- 44 *Across the city as a whole, what proportion of predicted realisable capacity is dependent on access to the additional capacity provided by the HDZ over and above MDRS? As a subset of that question, can Mr Osborne please advise what additional realisable capacity the walkable catchments around the Johnsonville line stations other than Johnsonville itself provide compared to that provided by the MDRS (refer the evidence of Dr Helm on the latter point)?*

45 Responses to these questions are addressed in Attachment 2.

Mr McCutcheon (Section 42A author)

46 *Can Mr McCutcheon please advise the status of submissions struck out (refer paragraph 59). In particular, are they beyond objection?*

47 I confirm that the statement in the s42A is a templated statement which was not picked up as requiring modification. I confirm that no submissions have been struck out. All submissions were accepted as detailed in the Overview S42A report and their content addressed in relevant Hearing Streams.

48 *Can Mr McCutcheon please advise whether there are submissions seeking material amendments to the definition of Regionally Significant Infrastructure in Change 1 to the Wellington RPS, and if so, what the changes sought are.*

49 There are several submissions on the definition of regionally significant infrastructure. In my view there are many that do seek material amendments, such as deleting the definition in its entirety, and including aggregate extraction. See [RPS-Summary-of-Decisions-Requested-By-Chapter-by-Provision.pdf \(gw.govt.nz\)](https://www.gw.govt.nz/rps-summary-of-decisions-requested-by-chapter-by-provision.pdf)

50 *Can Mr McCutcheon please advise the extent to which the PDP contains heritage listings that were not in the draft Plan circulated for consultation.*

51 No heritage listings were added between the Draft Plan consultation and the Proposed Plan being notified.

52 *Can Mr McCutcheon please advise his final view on the issue discussed at 4.16 of the Section 42A Report [cross-boundary matters].*

53 I agree that there is a distinction between joint processing and joint hearings. On that basis I recommend that HS1-REC38 be amended as in Appendix 4.

54 *In relation to Mr McCutcheon's recommendation regarding revisions to the definition of "reverse sensitivity", is it necessary or desirable to qualify the extent to which upgrading of existing infrastructure is taken into account?*

55 Reverse sensitivity as a concept refers to effects on an existing, established activity, not effects on an activity caused by its expansion or significant change. The "upgrading" definition in the notified Plan is: *as it applies to infrastructure, means the improvement or increase in carrying capacity, operational efficiency, security or safety of existing infrastructure, but excludes maintenance, repair and renewal.* As such, upgrading infrastructure may fit within existing uses, such as new electrical technology to improve a service. Or, it may increase the scale and impact of the use, such as adding two new vehicle lanes to an arterial road. New complaints by residents from the effects of two new vehicle lanes is not a reverse sensitivity effect.

56 In my view, I agree it is desirable to qualify the extent of 'upgrading', and also 'development', which both could also expand the scope and effects of an activity. To keep the focus on existing uses, I recommend adding to the definition the qualification in RMA Section 10(1)(a)(ii), limiting 'development' and 'upgrading' of existing activities to where the effects are the same or similar in character, intensity, and scale to those which existed before the development or upgrade. Suggested wording is contained in Appendix 4.

57 *Can Mr McCutcheon please comment on whether clarification of the meaning and application of Qualifying Matters is better done by way of explanatory note than definition;*

- 58 I would be comfortable if the Panel decided that an explanatory note would be more appropriate to provide clarity on what is a qualifying matter.
- 59 *Can Mr McCutcheon please clarify his reasoning in paragraph 719?*
- 60 In this paragraph I have attempted to explain, perhaps less eloquently than was desired, that the provisions of 'qualifying matters' impact on development capacity and the building height and densities of policy 3 and the MDRS in different ways.
- 61 Some do this by way of lowering building heights than otherwise required by the NPS (such as character precincts which have a height limit of 11m as opposed to the default height limit of 21m under Policy 3).
- 62 Others do this by way of triggering the need for a resource consent to address the value, feature or risk of the qualifying matter, where the MDRS would otherwise see three residential units as a permitted activity on the site (Such as the high coastal hazard area). This is explained more clearly in response to the below question from the Panel.
- 63 *Can Mr McCutcheon please comment whether and how the relationship of Muaūpoko with sites and other taonga within Wellington City should be addressed in light of the evidence presented by Muaūpoko Tribal Authority.*
- 64 I have acknowledged at paragraph 776 of my s42A report that Muaūpoko have a traditional rohe that includes the Wellington City area.
- 65 In preparing the PDP the iwi authorities of Taranaki Whānui ki te Upoko o te Ika and Ngāti Toa Rangatira were consulted as tangata whenua of

the area who may be affected for the purposes of Clause 3(1)(d) of Schedule One of the Act

66 The definition of an ‘iwi authority’ under section 2 of the RMA means:
“the authority which represents an iwi and which is recognised by that iwi as having authority to do so.”

67 Section 2 of the RMA states that ‘tangata whenua’ “in relation to a particular area, means the iwi, or hapū, that holds mana whenua over that area.”

68 ‘Mana whenua’ is also defined in section 2 as: “customary authority exercised by an iwi or hapū in an identified area.”

69 The RMA does not define ‘customary authority’, but this has been come to generally be understood as being determined by reference to tikanga Māori, meaning Māori customary values and practices.³

70 This means that:

70.1 in order to be consulted under Clause 3A(1)(b) an iwi authority must represent ‘tangata whenua’; and

70.2 to be ‘tangata whenua’, that group must hold ‘mana whenua’ over that area; and

70.3 to hold ‘mana whenua’, that group must exercise ‘customary authority’ over that area.

³ Guidelines for consulting with tangata whenua under the RMA: an update on case law (Ministry for the Environment, 2003) section 6.3.

- 71 Muaūpoko were not consulted under Clause 3A(1)(b) of the Act in the development of plan provisions including those for the Sites and Areas of Significance to Māori and Tangata Whenua chapters in contrast to Taranaki Whānui ki te Upoko o te Ika and Ngāti Toa Rangatira who have their mana whenua status recognised in Treaty of Waitangi Settlements and as a matter of tikanga.
- 72 Considering the question asked of me with respect to s6(e) of the Act where Council shall recognise and provide for the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga – My view is that ancestral sites and areas of significance to Muaūpoko could be identified in the plan given the broad scope of ‘Māori’ in the broadest sense, unconstrained by mana whenua status. I note though that no sites have been identified by Muaūpoko in their submission which may present a potential scope issue for addressing this matter in the current plan making process.
- 73 Related to this request, the Panel asked me to comment on when the definition or glossary term for *Ahi kā* will be added so submitters can comment on it. I suggest that if the timeframe is agreeable to mana whenua, that this be developed in time for the ‘wrap-up hearing’ for the IPI, scheduled to take place starting 19 September 2023.
- 74 *Can Mr McCutcheon please provide a narrative explanation (along with a tabular presentation) as to how the Plan has addressed Clause 3.32(a)-(g) of the NPSUD. In particular, how have each of those matters been addressed in both a plan making context and how will they be applied in a resource consenting context. The Hearing Panel understands from the case presented for the Council that the Plan takes a different view regarding the appropriate mechanism for management of natural hazards compared with the management of built heritage. Assuming our understanding is correct, the Hearing Panel is interested as to why these matters have been treated differently in this regard.*

- 75 I refer to my commentary at paragraphs 73 – 80 of my s42A report. In my view the most contested implication of plan provisions being identified as qualifying matters at present is the interim significance they have during the period in between notification and decisions on an IPI where they stop the MDRS from having immediate legal effect.
- 76 The substance of all plan provisions and whether they are appropriate or not considering the strategic objectives of the plan and higher order direction will be determined in subsequent hearing streams irrespective of whether that provision is known as a qualifying matter or not.
- 77 The same will be true of the intended relationship between provisions (such as the enabling MDRS provisions being limited by the national grid yard or heritage building provisions) applying irrespective of whether they have been identified and notified as qualifying matters or not.
- 78 I note that in most cases, qualifying matter provisions will be contained in district wide chapters (ie 'overlay' type provisions), while some are contained within the residential zone chapters which otherwise implement the MDRS (eg character precincts). This is due to the plan drafting approach required by the National Planning Standards, which specifies that those matters that are managed on a district wide basis be contained in Part 2 'district wide matters' chapters of a district plan, while precinct provisions (refinements to zone based provisions) are to be dealt with within the relevant Part 3 zone chapter. Ultimately, qualifying matters in both parts of the plan have the effect of engaging policy 4 of the NPS-UD or curtailing the MDRS.
- 79 I briefly state below how different plan provisions impact development potential in different ways. NPS-UD Policy 4 directs that Policy 3's

building height and density requirements can only be modified to the extent necessary to accommodate a qualifying matter.

80 Attached at Appendix 5 a tabular presentation as to how the Plan has addressed Clause 3.32(a)-(g) of the NPSUD.

Example one: Natural hazards

81 Natural hazards risks vary in degree and extent. Lower risk hazards such as ponding can be addressed in the natural hazard overlay through resource consent conditions without needing to reduce building height and density. Some high risk hazards such as stream corridors and overland flowpaths usually only affect part of a property, so do not need to reduce building height and density elsewhere on the property. Cumulative medium/high coastal flooding and tsunami risk, on the other hand, generally covers the whole property. The Plan reduces building height and density here to reduce overall natural hazard risk and future potential mitigation costs.

Example two: Historic Heritage

82 Protection for historic heritage buildings, structures and areas typically cover an entire property. Where they do not, higher density urban development elsewhere within the property is likely to adversely affect the historic heritage value. Resource consent assessments need to be more stringent to address this, and Policy 3 should not be applied to those properties with identified historic heritage value.

83 Other historic heritage overlays such as notable trees or viewshafts do not cover the whole site and Policy 3 can be applied elsewhere on the site without affecting these values. Sites and areas of significance to Māori can often be protected and enhanced within a development, so Policy 3 can be applied with the overlay provisions taking priority.

Resource consenting process implications until decisions are made on ISPP and QFM content

- 84 If a site has a qualifying matter on it then the provisions of the operative district plan apply rather than those of the MDRS should the development proposal be for 1-3 residential units. This is detailed on the Council's website: [Plans, policies and bylaws - Medium Density Residential Standards - Wellington City Council](#).
- 85 Once decisions are made on the ISPP and QFM content the provisions of what will be the then operative in part PDP will apply with development enabled by zone provisions restricted by those overlay/district wide provisions.
- 86 *Can Mr McCutcheon please provide a discussion as to what matters have been addressed under Clause 3.32(h) of the NPSUD – in particular, the Panel would like Mr McCutcheon to provide a road map as how that clause has been implemented with references back to the Section 32 evaluations as appropriate?*
- 87 This matter was discussed at length in hearing stream 2. This may have already been clarified.
- 88 The Character Precincts and Mount Victoria North Townscape Precincts (referred to here collectively as 'character precincts') are matters which have been addressed under Clause 3.32(h) of the NPS-UD.
- 89 This is because they do not enable the MDRS as a permitted activity (a resource consent is required for any new building in the character precincts) and do not enable six storeys per policy 3(c) of the NPS-UD.
- 90 Per 3.33(2)(b) of the NPS-UD an assessment of development capacity required can be found here: [Wellington City Qualifying Matters Capacity Assessment November 2022](#) on page 50.

- 91 Specific economic costs and benefits of Character Precincts are detailed on page 41 of the same report.
- 92 The reason that these development capacity impacts are not addressed within the [relevant section 32 report](#) is that the development capacity modelling work was not able to be delivered until after the notification of the PDP and release of the section 32 report. This is noted on page 46 and 47 of that document.
- 93 Per 3.33(2)(c) the broader environmental, social, cultural and economic costs and benefits of the character precincts are identified and assessed on page 56 onwards of the section 32 report.
- 94 Considering the site specific analysis required under 3.33(3)(b) all sites that are subject to the qualifying matter have had their characteristics identified and validated per the [Pre-1930s character area review](#). The resultant character precincts are accordingly identified on the planning maps.
- 95 Considering 3.33(b)(iii) and (iii), the section 32 report in '9.0 Qualifying Matters' page 41 onwards has identified that the generally 1-3 storeys height and density of the character precincts is a characteristic which requires management to ensure that character values are maintained. Accordingly, the report (reflected in the notified provisions) determines that the MDRS height and density standards are generally appropriate (with some modification) for the character precincts, while the six storey requirement of Policy 3(c) is inappropriate.
- 96 *A number of submitters referred us to the work undertaken by Boffa Miskell for the Council, arguing that Boffa Miskell's recommendations as to identification of character areas should have been followed. Can Mr McCutcheon please advise in summary why the Boffa Miskell recommendations were not fully adopted, with appropriate references*

to the Section 32 evaluation and with an accompanying map showing the spatial differences.

97 This matter has been addressed in detail at the Stream 2 hearing and in that section 42A report. The maps requested are attached at Attachment 3.

98 *In relation of the definition of “supported residential activity” can Mr McCutcheon please advise the justification of treating this activity differently to large residential households. In addition, can Mr McCutcheon please advise his view as to how the discretion reserved, if the relevant restricted discretionary activity is triggered for a supported residential activity, should be exercised – what matters, in particular, should be taken into account?*

99 After hearing the presentation of Ara Poutama I am of the view that the definition of supported residential care activities can be removed from the plan and the ‘higher order’ definition of residential activity relied upon instead. That is to say that I now agree that the effects of supported residential care activities are not dissimilar from residential activities more generally.

100 I suggest that the panel also consider the removal of the definition of ‘boarding house’ and related rules throughout the plan on the same basis if they agree with me. This matter was also addressed at the Stream 2 hearing.

Mr Wharton (Section 42A author)

101 *Can Mr Wharton please advise what proportion and number of Johnsonville Line train passengers travel from the lower five stations (i.e. from Box Hill and closer) to the CBD.*

102 The Council, Metlink and Greater Wellington Regional Council do not have data counting how many people board at individual train stations on the Johnsonville Line, only the total number as counted by Metlink staff on the train. I had hoped with the advent of Snapper card payments that Metlink would at least have a proportional estimate based on Snapper tag-on tag-off data. However, Metlink responds: “Unfortunately our current reporting tools have not yet been fully adjusted for Snapper on Rail data, so we cannot give you reliable information. We are working on this being rectified, but have no ETA to date.”

103 Related to this written question, the Panel asked me during Hearing 1 whether the Johnsonville Line could be rapid transit only from Wellington Station to Box Hill Station, or to another rapid transit stop along the Line.

104 This looks to be a possible interpretation of “rapid transit service” in the NPS-UD. Regardless, I recommend that the Panel treat the Johnsonville Line’s full 23 minute journey as one public transport service (rapid transit or not), because:

- The service does not change its characteristics from one station to another. This is different from the train services to Upper Hutt Station vs to the following Maymorn Station, or to Waikanae Station vs to the following Ōtaki Station. In these examples, the public transport service changes from a frequent electrified Matangi-carriage service to an infrequent, diesel-carriage services with more comfortable seats and tables for long-distance commuter service.
- While most passengers use the Johnsonville Line to get to Wellington City as a destination, others use it to get to schools near Raroa Station, and to shops in Johnsonville. As Johnsonville grows and develops, more people living near

train stations are likely to use the train service to access destinations in Johnsonville and around other stations.

105 *Can Mr Wharton please supply a map of the Johnsonville [High Density Residential Zone within the Johnsonville Centre's] 10 minute walking catchment if Johnsonville [Line Centre] is not a rapid transit service. If it is identical to the currently identified area, confirmation of that fact is sufficient.*

106 I have added in square brackets what I think the Panel's request is. Yes, I confirm that the High Density Residential Zone around the Johnsonville Centre will not change whether or not the Johnsonville Line is rapid transit. The Johnsonville Rail Station's 10 minute walkable catchment is fully within the Johnsonville Metropolitan Centre Zone's 10 minute walkable catchment, as shown in the Johnsonville map sent to you on 2 March 2023.

107 *Can Mr Wharton please comment on the appropriate interpretation of the word "adjacent" in the context of Policy 3(d) of the NPSUD and explain how that has been applied spatially to the Tawa, Newtown and Miramar Centres.*

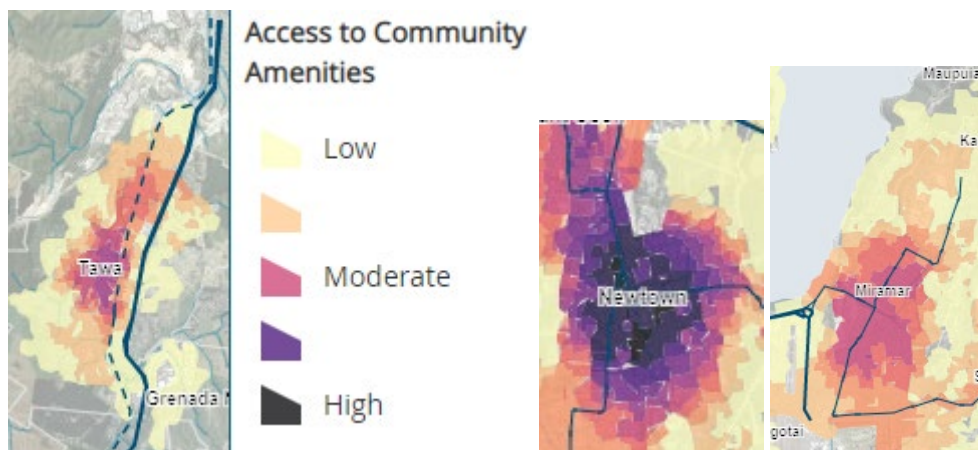
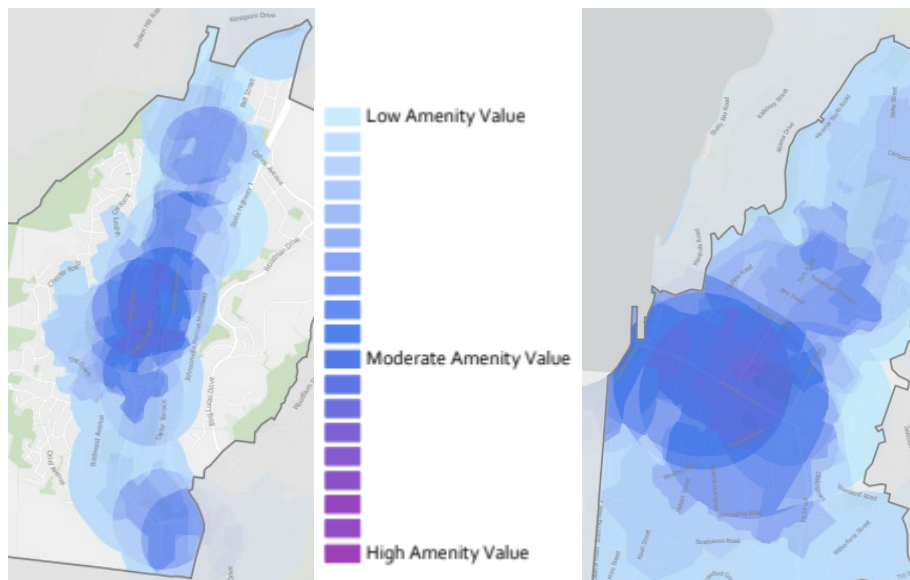
108 "Adjacent" used the dictionary definition which is: next to, or near. For building heights and adjacent areas for Tawa, Newtown and Miramar, Council staff applied the methodology in the Wellington Outer Suburbs Assessment and Evaluation (see from page 14)⁴ for the Tawa and Miramar centres⁵⁶. Newtown was part of a wider city amenity

⁴ <https://wellington.govt.nz/-/media/your-council/plans-policies-and-bylaws/plans-and-policies/a-to-z/spatial-plan/introduction.pdf?la=en&hash=49F9857F3A4EAB78D835956244CDD36806FAB9A6>

⁵ <https://wellington.govt.nz/-/media/your-council/plans-policies-and-bylaws/plans-and-policies/a-to-z/spatial-plan/northern-suburbs-assessment.pdf>

⁶ <https://wellington.govt.nz/-/media/your-council/plans-policies-and-bylaws/plans-and-policies/a-to-z/spatial-plan/southern-and-eastern-suburbs-part-2.pdf>

assessment using a similar methodology but that applied walkable catchments around amenities instead of buffers, included high-frequency bus stops and other transport modes, and added criteria to identify “good quality” open spaces.⁷ Examples of the maps produced from these two evaluations are shown below, however I recommend reading the full reports referenced in the footnotes to understand the variables that went into assessing density adjacent to local centres.



⁷ This city-wide methodology is not published publicly, but is available if the Panel requests it.

- 109 These assessments were done just before the NPS-UD was published, so did not fully account for its new objectives and policy direction. However, Council staff found the assessment for proposed density around Wellington City's suburban centres fitted well with NPS-UD Policy 3(d).
- 110 This is consistent with my advice in the Stream 1 S42A report paras 379 and 381, and my supplementary planning evidence para 37.
- 111 *On the premise that the City Centre walking catchment is limited where it intersects with Hay Street on account of steepness and/or safety considerations, where in Mr Wharton's opinion would be a defensible boundary in the lower part of the Street? Similarly, Bolton Street, Aurora Terrace, Everton Terrace, Devon Street and Raroa Road.*
- 112 For safety matters unrelated to slope, such as footpath condition and lighting, I do not support limiting walkable catchments based on these matters, because they can be changed comparatively easily with path upgrades. If an area zoned for high density is redeveloped with denser larger buildings, Council priorities and development contributions are typically allocated to improve the pedestrian level of service for these new residents.
- 113 For steepness, I rely on the evidence from Ms Hammond and Professor Mandic in Appendix 2 and 3 of this Reply. From their extensive analysis, I advise that the sections of Hay Street, Bolton Street, Aurora Terrace, Everton Terrace and Devon St that are between the City Centre Zone boundary and the 15 minute walkable catchment from that boundary are all walkable. This is because:
- The street sections are all walkable from an exercise science perspective.

- Slope steepness is only one factor of many that influence whether people will walk that street. Proximity, pleasantness, safety, weather etc. are other factors.
- Steep streets become more “walkable” by walking them more slowly as they become steeper – which the walking catchment model already includes in its measures.
- Walking the short stretches of the identified streets for a few minutes provides moderate everyday healthy physical activity for all ages – this is not a “negative” activity.
- People who do not want to walk, or cannot walk, steeper streets regularly can still choose to live in other neighbourhoods (affordability notwithstanding).

114 Raroa Road is fully outside the City Centre Zone’s 15 minute walkable catchment already. I note that even Kāinga Ora’s map of extended preferred maximum heights and zones does not include Raroa Street (refer Kāinga Ora map 718448, sheet 16 of 24).

115 For clarification, the City Centre’s 15 minute walkable catchment already ends part way up Hay Street, as shown by the black line in the diagram below.



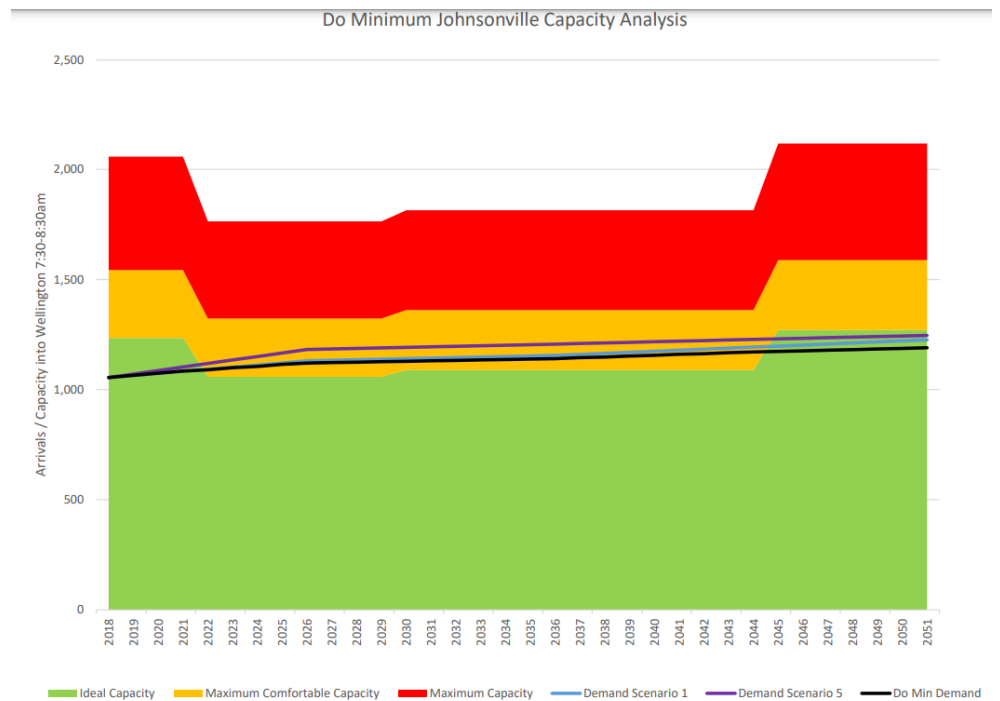
116 *Can Mr Wharton please comment on the evidence of Mr Georgeson to the effect that the Wellington Rail Programme Business Case (July 2022) indicates an intention to undertake off-peak frequency improvements to the Johnsonville line from 2032 and whether such improvements might be considered “planned” in the RLTP.*

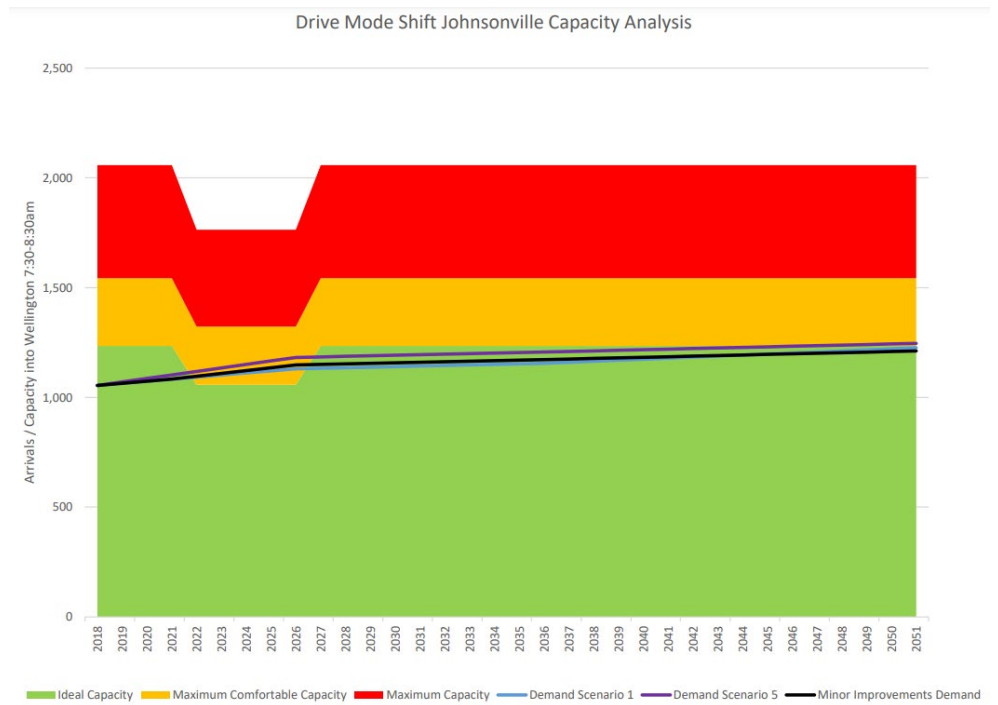
- 117 For background, the Wellington Rail Programme Business Case (PBC) was submitted to Waka Kotahi’s Investment Team in August 2022. It has an ambitious (\$11 billion +) 30 year investment programme. The PBC is expected to go to the Waka Kotahi Board requesting approval in the next few months. The next step would be for separate business cases to test the priority projects in the PBC. Decisions on funding some of these business cases are scheduled for this budget round.
- 118 Mr Georgeson directed me to PBC Figure 10-2 which lists off-peak service frequency improvements to four trains per hour enabled on all lines. Unlike the peak service frequency improvements for the Hutt and Kapiti Lines to be completed in 3 and 10 years respectively⁸, Figure 10-2 plots this workstream from 2032 to 2051 [or more]. Enabling four off-peak trains per hour on all lines appears to be a long-term goal to be achieved as circumstances permit rather than a defined work programme. The PBC Executive Summary Preferred Programme also mentions “progressive service frequency improvements ... with an improved 15-minute off-peak frequency within the electrified area” (pg. viii).
- 119 The 2021 RLTP references this 30 year PBC in passing, as the PBC was being prepared at the time. Future iterations of the RLTP are likely to include specific rail upgrade investments that are approved by the relevant funding and delivery agencies. In my view, options in a broad programme business case does not constitute “planned” in the RLTP, in the same way that LGWM’s mass rapid transit project is not yet “planned” in the RLTP. Instead, the Rail PBC gives a useful perspective on what public transport agencies see as the optimal long-term

⁸ This frequency upgrade for Hutt and Kapiti Lines is dependent on other enabling works occurring on these lines.

investment in the Wellington rail network, and their expectations for its development.

120 I would like to mention one other part of the PBC as it relates to an earlier Panel question about capacity. The PBC’s preferred programme option is “Drive Mode Shift”. This option had the highest direct cost but lowest transport system and environmental cost. The PBC predicts that whether the 30 year Do-Minimum programme or Drive Mode Shift (i.e. most extensive) programme is selected, the Johnsonville Line patronage is projected to remain within ideal or maximum capacity during peak hour, shown below.





121 Related to the Panel question, during the Hearing Stream 1 a Panel member mentioned that upgrades for reliability (e.g. new sleepers, new poles and wiring) for the Johnsonville Line are not planned or funded." I clarify that the reliability upgrades listed in Stream 1 Section 42A report para 185 are funded, and are happening now. During the Hearing, I said there are no planned upgrades for *frequency* or *capacity* on the Johnsonville Line in the 2021 RLTP.

122 *On a related point, can Mr Wharton provide advise on what the word "planned" in Policy 3(c) of the NPSUD means – in particular does it require a financial commitment?*

123 I understand the word "planned" in Policy 3(c) of the NPS-UD has not been tested legally yet. From my planning perspective, the word "planned" does not necessarily need an exact financial commitment. This can be approved and itemised in other documents such as Long Term Plans and government Budget. However, "planned" would require the RLTP to at least list, or reference in another document, the

specific rapid transit service, its characteristics and general station locations, that are approved by the funding/delivery agency.

CLARIFICATION ON POINTS RAISED DURING THE STREAM 1 HEARING - MR MCCUTCHEON

- 124 **Weight given to Proposed Natural Resources Plan provisions:** The Panel Chair noted that paragraph 486 of the Stream 1 Section 42A report referred to the weight given to the Proposed Natural Resources Plan (PNRP) being to “give effect to”, which is incorrect. RMA Section 75(b) applies because the relevant PNRP provision is beyond challenge: “A district plan must not be inconsistent with a regional plan for any matter specified in section 30(1) [regional council functions]. This correction does not change the Section 42A Report recommendation.
- 125 **Mātauranga Māori:** As noted by the Panel, HS1-Rec 132 should be amended to clarify that mātauranga Māori is included within the term “best available information”.
- 126 **Increased height in and around Town Centres:** Commissioner McMahan asked for my view on Kāinga Ora wanting increased heights in and around Town Centres, and whether that is a reason to introduce the Town Centres, in case he misunderstood the Kāinga Ora relief. [Day 3, 9:02]
- 127 The issue of whether the plan include a town centre zone in stream 1 is reflective of the ‘top down’ rather than ‘bottom up’ way in which submissions are being heard. The submissions addressed in hearing stream 1 related to a single Strategic Objective setting out a centres hierarchy, in isolation from the suite of provisions to implement it (e.g. building heights within that zone).
- 128 I was aware of the requests to increase heights in what would be the ‘town centre zone’ if introduced, but those provisions are the subject of

Hearing Stream 4, which I did not have the ability to delve into. I did not have the ability to consider Mr Wharton's related recommendation on walking catchments around centres. No increased walking catchment around what would be 'town centre zones' was recommended. Accordingly, my recommendation was not to include such a zone.

129 I note that increased heights around centres was discussed at length in hearing stream 2, and heights for centres will be discussed in stream 4. Kainga Ora's proposals have changed since its submission was lodged based on the view of its urban design expert Mr Rae and agreement by Mr Zamani for the Council. I suggest that the panel need to revisit this strategic objective with the benefit of a detailed discussion on the merits of including a Town Centre Zone in Stream 4.

130 In hindsight it would have been clearer to 'park' addressing Strategic Objective CEKP-O2 until Stream 4.

131 **Nesting tables (e.g. for heavy industrial):** I confirm that the introduction of nesting tables for definitions will be presented as part of the Wrap-Up ISPP Hearing Section 42A Report, so that changes to definitions directed by the Panel and otherwise recommended can be incorporated into these tables.

132 **Mercury Energy SCA-O1:** The Panel asked whether I support Meridian Energy's request to amend SCA-O1. On reflection and having been reminded of national direction on renewable energy generation, I am.

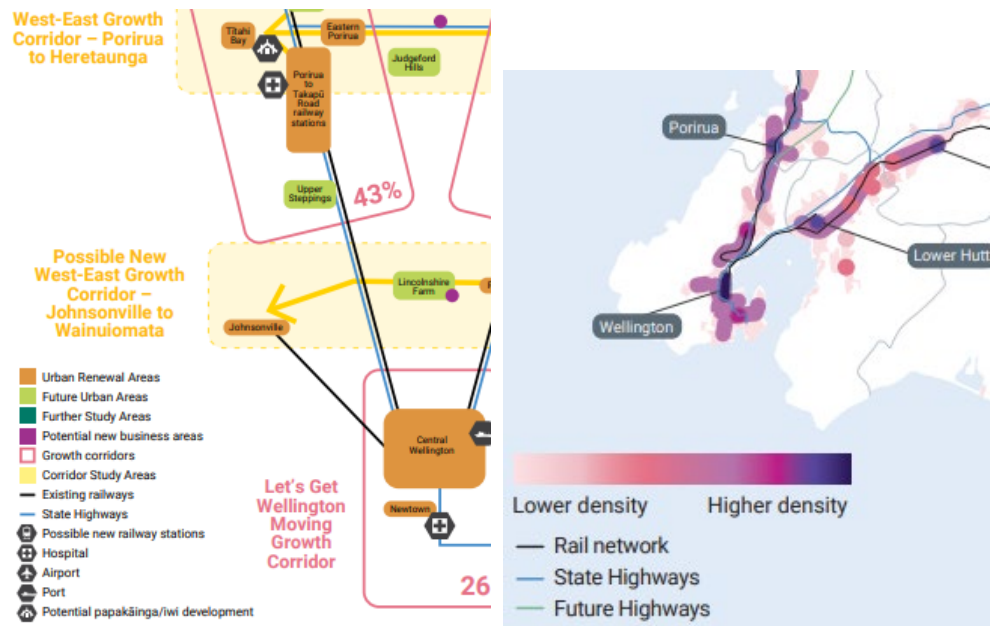
133 **Grammar edits:** As noted by the Panel, I agree that the drafting of CC-O2 as per HS1-Rec135 be amended to fix grammatical errors with a minor rephrase. This is contained in Appendix 4 to this Right of Reply.

CLARIFICATION ON POINTS RAISED DURING THE STREAM 1 HEARING - MR WHARTON

- 134 **Johnsonville Line passing loops:** A Panel member mentioned that the Johnsonville Line has no passing loops. The Line currently has three passing loops: in the Ngaio Gorge, at Ngaio Train Station and at Khandallah Train Station. This is why the Johnsonville Line can run at 15 minute frequencies in both directions. The new overbridge on Broderick Road also future-proofs for any future double-tracking into Johnsonville Station.
- 135 **Public transport transfers:** A Panel member referenced that people on the Johnsonville Line have to transfer to buses at Wellington Station to get to other destinations. That is the case for all Wellington and Auckland train services, and in my view is not relevant to whether the service itself is rapid transit.
- 136 **Six-car platforms:** I referenced comments from submitters that not all Johnsonville Line stations can cater for 6-car passenger trains. I have since confirmed from the Metlink Rail Asset manager that when the Line was upgraded, all the platforms were rebuilt to 6 car length. Since then a new buffer stop has been put in at Johnsonville which required more space, so that platform may be too short now. I note that if this platform cannot cater for 6 cars, boarding/alighting at Johnsonville Station would need adjusting (e.g. last door locked).
- 137 **Rapid transit definition descriptors:** Panel members occasionally quoted me as saying not all the descriptors in the NPS-UD rapid transit service definition need to be met. Confirming my comment at the Hearing, *all* six descriptions in the definition are important and need to be met for the service *overall*. The Section 42A report para 174 discusses the nuance: what to do if the service generally meets the definition, but perhaps not for all stations at all times. This is common

for other commuter train services too. For example, just because the Kapiti Line runs every half hour on weekends does not mean it is not a “frequent” service overall. Just because it is faster to take the bus from Kingsland Station to Britomart Station (11 minutes by bus vs 21-24 minutes by train) does not mean the Western Line is not “quick” overall.

- 138 **Wellington Regional Growth Framework (RGF) classification of Johnsonville Line:** During Hearing Stream 1, Mr Ballinger noted that Map 6 of the RGF had associated text (pg. 44): *“Map 6 identifies frequent bus services, the passenger rail network and the parts of the rail network that could be considered rapid transit (when higher-frequency services are introduced around 2025, generally increasing service frequency to 10-15 minutes).”* He questioned whether the Johnsonville Line was not rapid transit under this description.
- 139 In my reading from the RGF context, the “parts of the rail network ...” text and the 2025 date apply primarily to the investments in the Kapiti and Hutt lines to enable a higher service frequency, such as those outlined in the Wellington Rail PBC (ref: Figure 10-2 page 92). The Johnsonville Line already has service frequency at 15 minutes peak times.
- 140 The RGF has mixed messages about higher density around the Johnsonville Line. Diagram 1 has the Johnsonville Line corridor as outside the RGF growth corridors. Diagram 3 on the other hand shows higher density around the Johnsonville Line corridor over time. Clips from these two diagrams are shown below.



- 141 **Onehunga Line vs Johnsonville Line:** Some Panel members and submitters referred to the Johnsonville Line being similar to the Onehunga Line which is not classified as rapid transit. The Panel Chair asked for my view on this.
- 142 The Auckland RLTP does not classify the Onehunga Line as rapid transit because: *“The key criteria that the service fails on is frequency – the Onehunga line only operates services half-hourly, and there are no plans to change this in the next 10 years (i.e., the timeframe of the RLTP).”*⁹ This is in contrast to all other Auckland commuter train services which will operate at least every 15 minutes (7 am to 7 pm, 7 days a week) once the City Rail Link opens.
- 143 On frequency, the Johnsonville Line is different to the Onehunga Line as it already operates every 15 minutes in both directions during morning and afternoon weekday peak hours. While the Wellington Rail PBC has a general ambition to extend this 15 minute frequency period

⁹ Quote from Hamish Bunn (Group Manager Investment, Planning and Policy) letter to Tony Randle 17 December 2021, tabled by the Johnsonville Ratepayers Association.

into off-peak (refer Figure 10-2), these are not yet “planned” in the RLTP or Wellington Regional Public Transport Plan. Regarding the 15 min 7 days 7 am – 7 pm Auckland frequency standard, no Wellington rail service meets these frequency components¹⁰. This arguably makes the Auckland Baseline a goal, but not a definition, for Wellington’s rapid transit classification.

144 **Demand for high density living in the western suburbs:** The Panel Chair asked me about the preference for high density living in Crofton Downs, Ngaio and Khandallah. Because the current district plan’s maximum height limit in these residential areas is only 8 m high, it is difficult to know what the preference for living in higher, smaller apartments in these areas would be if they were allowed. This is also a separate question from whether high density development is commercially feasible.

145 I refer to the 2017 PhD thesis *A Quarter Acre Pavlova Paradise Lost? The Role of Preferences and Planning in Achieving Urban Sustainability in Wellington, New Zealand* by Nadine Dodge¹¹. It found four housing preference groups based on the interactions of preferences for six attributes: neighbourhood density, outdoor space, dwelling type, car parking availability, transport accessibility, and price. The four Wellington City groups preferred: very low density (21%), low density (26%), medium density (24%) and high density (28%). The high density group has a very strong preference for destination accessibility (living close to downtown and local amenities). With a slight preference for

¹⁰ For example, the Kapiti Line stations (except Porirua and Wellington Central stations) have peak services around every 20 minutes during weekdays, and every half hour on weekends.

¹¹ Source: <http://hdl.handle.net/10063/6211> The thesis helpfully summarises earlier research on housing preference and undertakes its own stated choices survey of 454 Wellington City residents.

townhouses over apartments, they are most likely to choose high density living within a five minute car drive of the CBD.

- 146 A Trade Me search on 13 March found a few new-build apartments in Auckland being sold in suburban locations similar to the Johnsonville Line suburbs, for example: four storeys at Meadowbank¹², Takapuna¹³ and Glen Innes¹⁴, six stories at Mt Wellington¹⁵ and Northcote¹⁶. These locations are generally in desirable highly valued suburbs, within walking distance of train or bus stops, near local shops and schools, and are in quieter suburban environments with attractive outlooks.
- 147 **High Density Residential Zone** along Porirua Stream: During Hearing Stream 1, the Tawa Community Board presenters discussed their concerns about flooding. They noted that properties along Willowbank Road within a walkable distance of Takapu Road Station were not proposed to be rezoned to High Density Residential, presumably because of the Porirua Stream channel through them. However other residential areas in Tawa with the Porirua Stream through them are recommended for High Density Residential in the Section 42A report. The Panel Chair asked me to review this discrepancy.
- 148 The Proposed District Plan currently does not account for stream channels as a qualifying matter to limit NPS-UD Policy 3 application.

¹² <https://www.trademe.co.nz/a/property/new-homes/new-apartment/auckland/auckland-city/meadowbank/listing/3959295259>

¹³ <https://www.trademe.co.nz/a/property/new-homes/new-apartment/auckland/north-shore-city/takapuna/listing/4018040613>

¹⁴ <https://www.trademe.co.nz/a/property/new-homes/new-apartment/auckland/auckland-city/glen-innes/listing/3761407075>

¹⁵ <https://www.trademe.co.nz/a/property/new-homes/new-apartment/auckland/auckland-city/mount-wellington/listing/3955503583>

¹⁶ <https://www.trademe.co.nz/a/property/new-homes/new-apartment/auckland/north-shore-city/northcote/listing/3842387932>

Instead, the channels are an overlay that stops development wherever it is shown on a property.

149 I have discussed this policy approach with Mr Jamie Sirl, the Section 42A reporting officer for natural hazards topic in Stream 5, and Mr James Beban, the natural hazards expert advising the Council on this topic. Messrs Sirl and Beban may have more specific recommendations on submission points relating to flood hazards and rezoning across the City, and I defer to their report due on 2 July where it differs from my conclusion and recommendation.

150 I limit my comment to the effect of the Porirua Stream on NPS-UD Policy 3(c)(i) walkable catchments in Tawa. The Porirua Stream's larger size and volume within residential areas, ongoing erosion in the channel, and adjacent flooding risk, is unique in Wellington City. Other stream channels through residential zones in Wellington City are much smaller or are ephemeral. These have a lower flooding risk which is likely to be manageable within a high density redevelopment of a site.

151 The Tawa Community Board's submission asks for Porirua Stream development setbacks and more stringent measures in the Plan to provide greater protection against increased erosion events along the Porirua Stream. The submission refers to the report *Ecological restoration priorities for the Porirua Stream and its catchment*¹⁷. This report recommends:

- [rec 8] Increase the width of the riparian corridor, where possible, along the main stem of the stream to reduce the slope of the stream bank, reduce erosion, increase the

¹⁷ <https://gwrc.govt.nz/assets/Documents/2009/05/Eco-rest-for-web.pdf>. May 2009 report prepared by Blaschke and Rutherford Environmental Consultants on behalf of Wellington City Council, Porirua City Council and Greater Wellington Regional Council.

capacity of the floodway, and allow more vegetation to shade the stream.

- [rec 9] Develop a feasible floodway building/yard restriction that recognises access requirements for maintenance and owner obligations for erosion control work.

152 I recommend that for the purpose of mapping walkable catchments around rapid transit stops under the NPS-UD:

- Residentially-zoned properties in Tawa with the Porirua Stream through them should not have a higher density than the Medium Density Residential Zone (11 m max height).
- The above should not apply where most of the opposing property boundary is at least 30 m from the Porirua Stream corridor¹⁸.
- Residentially-zoned properties in Tawa that do not have the Porirua Stream channel in them but have their opposing property boundary within 30 m of the Porirua Stream channel should also not have a higher density than the Medium Density Residential Zone (11 m max height).

153 The recommendation will mean that high density residential development is not enabled on properties next to the Porirua Stream where high density development is unlikely to feasibly be set back from the stream corridor. This will reduce overall costs if the riparian corridor is moved or widened in the future, and/or improves space and access to maintain and construct better flood protection structures. This is a consistent planning approach with the Plan's approach of downzoning to MRZ for NPS-UD Policy 3(c) walkable catchments near

¹⁸ The 30 m was measured in Council's GIS system using a 30 m buffer from the Porirua Stream corridor mapped in the Plan. More than half of the opposing property boundary (typically the street boundary) needed to be outside this 30 m buffer to be unaffected by the qualifying matter.

the fault hazard overlay in Thorndon, and for northern Kilbirnie's flood hazard that will worsen with climate change.

- 154 Medium density residential development is still enabled next to the Porirua Stream corridor. However, this lower, lighter form of development is generally cheaper to elevate, move or dismantle than a high density 4-6 storey building. This particular qualifying matter limits building density near the Stream to reduce the cost to current and future generations to manage the Stream corridor and attendant natural hazard risks and ecological restoration projects – not to avoid the risk altogether.
- 155 This recommendation does not address the specific natural hazard flooding risks and their effect on development controls in the natural hazard overlay. As noted above, the Stream 5 42A report will provide detailed recommendations on the submission points requesting development setbacks from the Porirua Stream. All this Stream 1 recommendation does is identify a qualifying matter for why NPS-UD Policy 3(c)(i) should not apply to certain properties.
- 156 Maps identifying the properties that would not be up-zoned to High Density Residential Zone based on the criteria bullets above are in Appendix 1.
- 157 The 30 m measure applied to the properties to create the Appendix 1 maps is not precise, but in my opinion is a useful rule of thumb for enabling a 4-6 storey apartment building on the site while still allowing space for future stream flood mitigation and restoration works, and access to them, to occur. Other factors influencing this metric include:

- The Planning for Residential Amenity report¹⁹ for Wellington City recommended limiting 4-6 storey building length to 20 m (typically perpendicular to the street due to narrower residential lot shapes). 4-6 storey building footprints are typically wider and deeper than a typical stand-alone house to make them commercially feasible and efficient use of foundations.
- A 10 m riparian setback from a stream is best practice to allow for a more natural stream bank, increase flood volume carrying capacity, and indigenous vegetation restoration. 20 m is ideal for a self-sustaining ecological corridor.²⁰

158 **Unclear LGWM rapid transit recommendation:** Commissioner McMahon said the current HS1-Rec4 implies the Panel should be waiting until the routes and stops are identified and then changing the Plan, or perhaps that the Plan should not change at all until these routes and stops are identified. This could be clarified.

159 I agree the Stream 1 S42A Report recommendation is unclear: *HS1-Rec4: The plan provisions should not be changed in advance of the proposed LGWM mass rapid transit routes and stops being identified in the RLTP.*

160 I advise that the Plan will not have the LGWM MRT stops confirmed until after the ISPP hearing is completed, so will need to be given effect

¹⁹ Boffa Miskell, July 2021. <https://wellington.govt.nz/-/media/your-council/plans-policies-and-bylaws/plans-and-policies/a-to-z/spatial-plan/planning-for-residential-amenity-report-july-2021.pdf>

²⁰ For more information on riparian margin best practice in urban areas, refer to: <https://www.aucklanddesignmanual.co.nz/regulations/technical-guidance/wsd/guidance/conceptdesign/enhancingthereceivingenvironment/riparianbuffers>

through a later plan variation or change instead. The recommendation is reworded in Appendix 4.

161 **Council staff input to RLTP classification:** At the beginning of Hearing Stream 1, the Panel Chair asked for my comment on the Johnsonville Community Association (JCA)'s comment that Council staff had "pressured" the Johnsonville Line to be classified as rapid transit in the RLTP. I have subsequently reviewed JCA's evidence and emails from Council staff to Greater Wellington. I believe that Council staff acted appropriately and did not inappropriately influence the RLTP drafting or rapid transit classification. I note:

- The Greater Wellington email referenced by JCA was an early consideration only of pros and cons of whether the Johnsonville Line should be rapid transit.
- The Council had identified the Johnsonville Line as rapid transit in the Draft Spatial Plan, Spatial Plan, and Draft District Plan. During this time, Council staff gave technical input to RLTP drafting, and represented the Council's position on many issues: lower carbon emissions, mode shift, investment in public transport capacity, as well as the status of the Johnsonville Line.
- After 23 June 2022, the Council changed its position on the Johnsonville Line to not be classified rapid transit in the Proposed District Plan. Staff implemented that decision from that point.
- The Council only has one vote of 12 in the Regional Land Transport Committee, which oversees the RLTP collaboratively.

Date: xxx/2023

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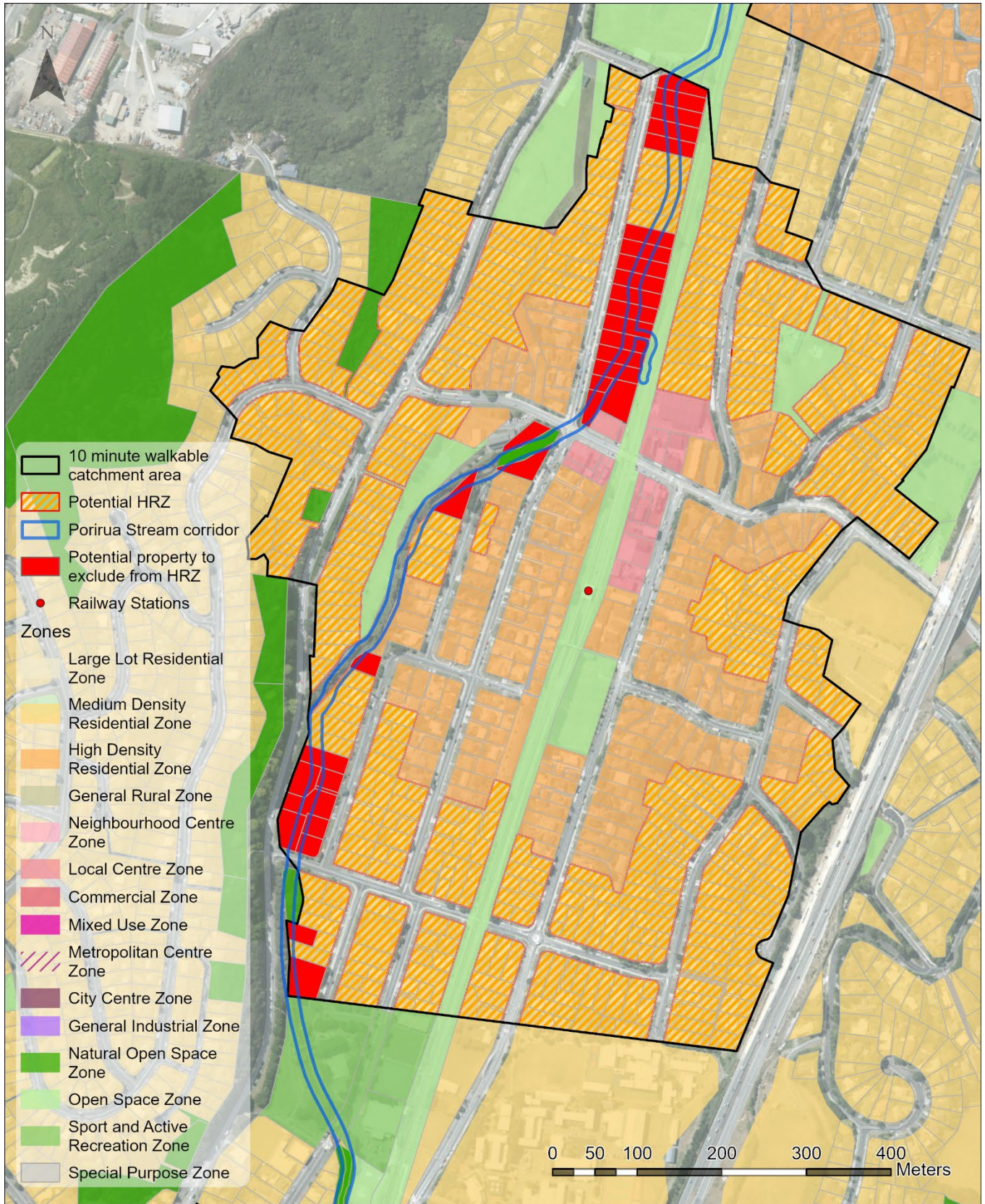
APPENDIX 1 – TAWA PROPERTIES IN WALKABLE CATCHMENTS BUT ADJACENT TO THE PORIRUA STREAM

The maps below the Evaluation identify the Tawa properties that are within the NPS-UD Policy 3(c)(i) walkable catchments, but are adjacent to the Porirua Stream according to the criteria in para 151, so are recommended to be zoned Medium Density Residential Zone (11 m height) and not High Density Residential Zone.

RMA Section 32AA and NPS-UD clause 3.33 Evaluation of the new qualifying matter

- 162 This analysis relates to using NPS-UD Policy 4 to modify the direction in Policy 3(c)(i) for the specific properties identified in red above. It adds to the existing Section 42A assessment on Policy 3(c)(i) walkable catchments in Tawa, and is at a relatively low level of detail (RMA Section 32AA (1)(c)) because of the scale and significance of the change.
- 163 The proximity of these properties to the Porirua Stream corridor make them incompatible with the direction to enable at least six stories. The Porirua Stream has the highest flood flow adjacent to medium and high density residential housing areas in Wellington City. There is ongoing channel erosion and adjacent flooding risk. Greater Wellington Regional Council, and many in the community, want to enhance the riparian margins and overall ecology in and adjacent to the Stream.
- 164 Enabling at least six stories near to the Stream channel would significantly increase overall flooding and erosion risk to the new residents in high density housing, would limit options to widen and plant the stream banks to manage flooding and increase riparian ecological integrity, and would increase costs of removing buildings where needed for flood protection or to avoid flood risk.

- 165 The 30 m metric identified in this Right of Reply would ensure that High Density Residential Zone properties adjacent to the Porirua Stream are deep enough to enable six-storey buildings to be set back from the Stream channel.
- 166 Fifty-three residential properties are identified in red in the maps below. Property Economics' latest assessment (December 2022 email) found that no apartments are commercially realisable in Tawa's residential areas, based on current construction costs and property prices. This may change in the future, but indicates that the effects of this qualifying matter on overall development capacity in Wellington City is less than minor.
- 167 The main cost of this measure would be to limit future high density development options for landowners with properties close to Porirua Stream without the depth to enable appropriate location of these buildings away from the Stream. The main short-term benefit will be to be consistent with an overall approach that development close to the Stream should be avoided or designed and located to mitigate flooding, improve stream accessibility for flood works, and to improve the riparian ecology. The main long-term benefit would be to reduce costs for future generations to manage Porirua Stream flooding and improve its ecology.



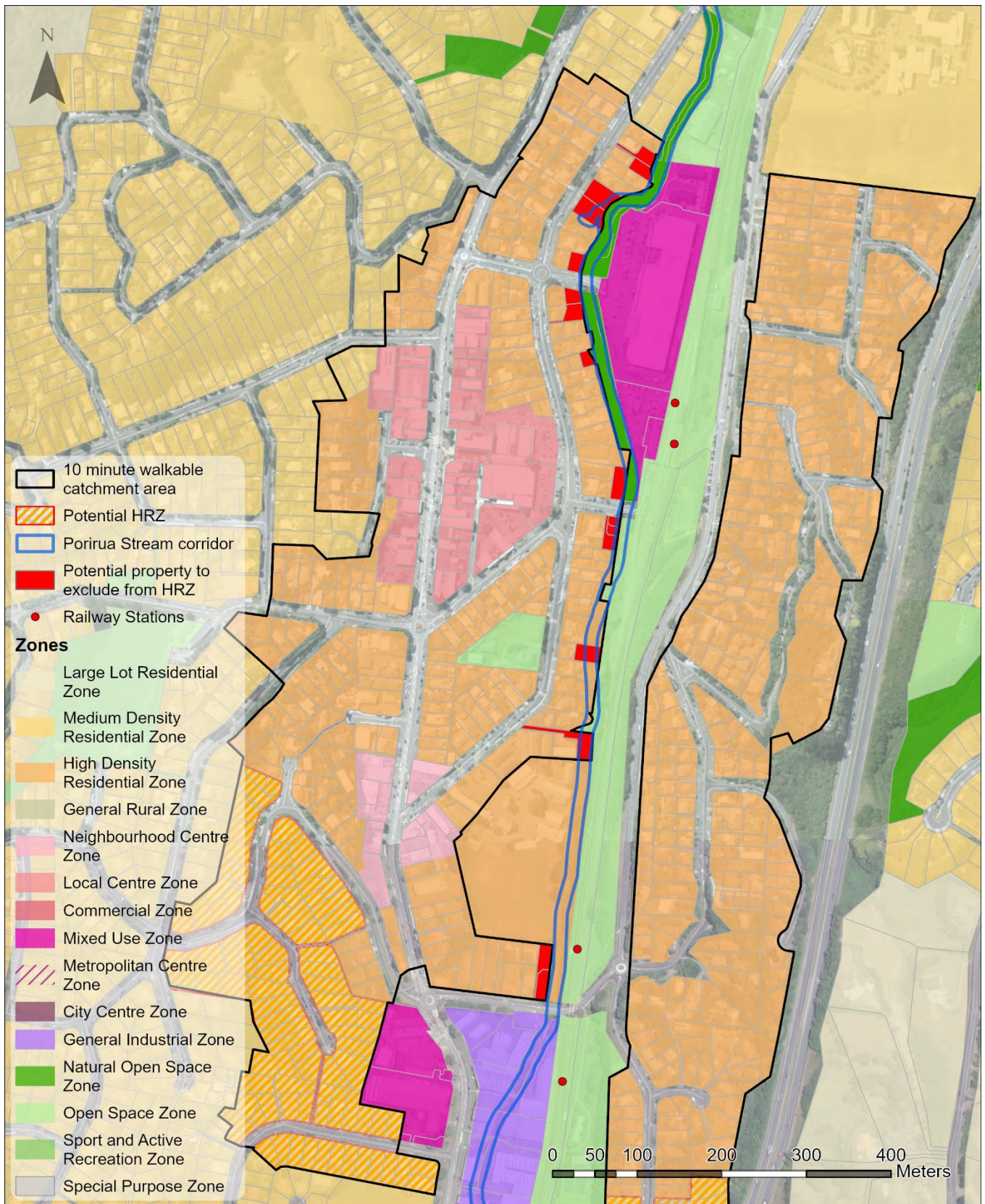
Linden Railway Station and High Density Residential Zone

This map shows the Potential High Density Residential Zone (HRZ) within the 10 minute walkable catchment from Linden railway station. Properties within the Porirua Stream corridor that are residentially zoned are excluded from the HRZ

Basemap credits: Esri Community Maps Contributors, LINZ, Stats NZ, Esri, HERE, Garmin, Foursquare, METI/NASA, USGS, Porirua City Council, Maxar

Date: 13/04/2023
Credit: City Insights GIS Team

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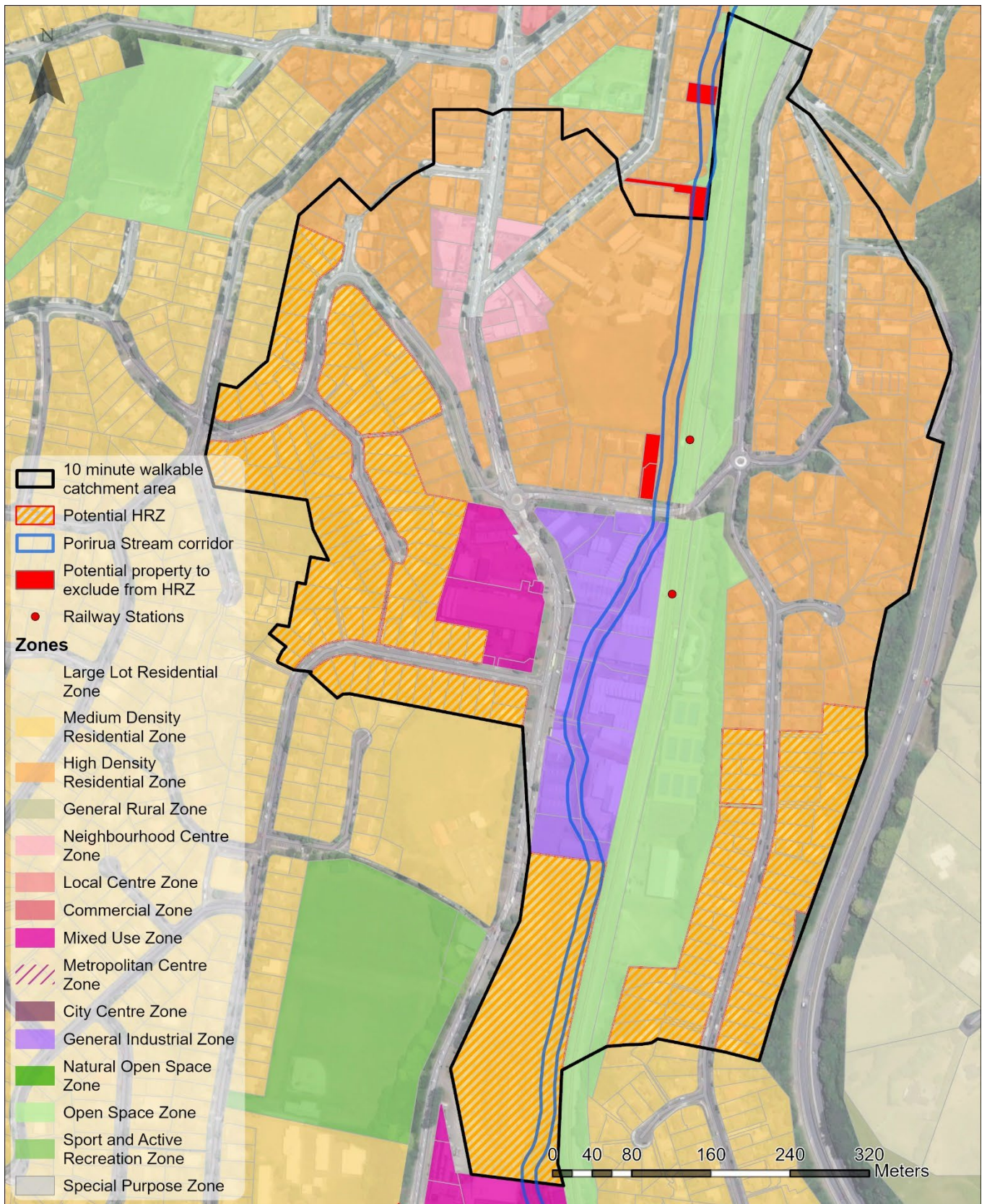
Tawa Railway Station and High Density Residential Zone

This map shows the High Density Residential Zone (HRZ) within the 10 minute walkable catchment from Tawa railway station. Properties within the Porirua Stream corridor that are residentially zoned are excluded from the HRZ.

Basemap credits: Esri Community Maps Contributors, LINZ, Stats NZ, Esri, HERE, Garmin, Foursquare, METI/NASA, USGS, Maxar

Date: 13/04/2023
Credit: City Insights GIS Team

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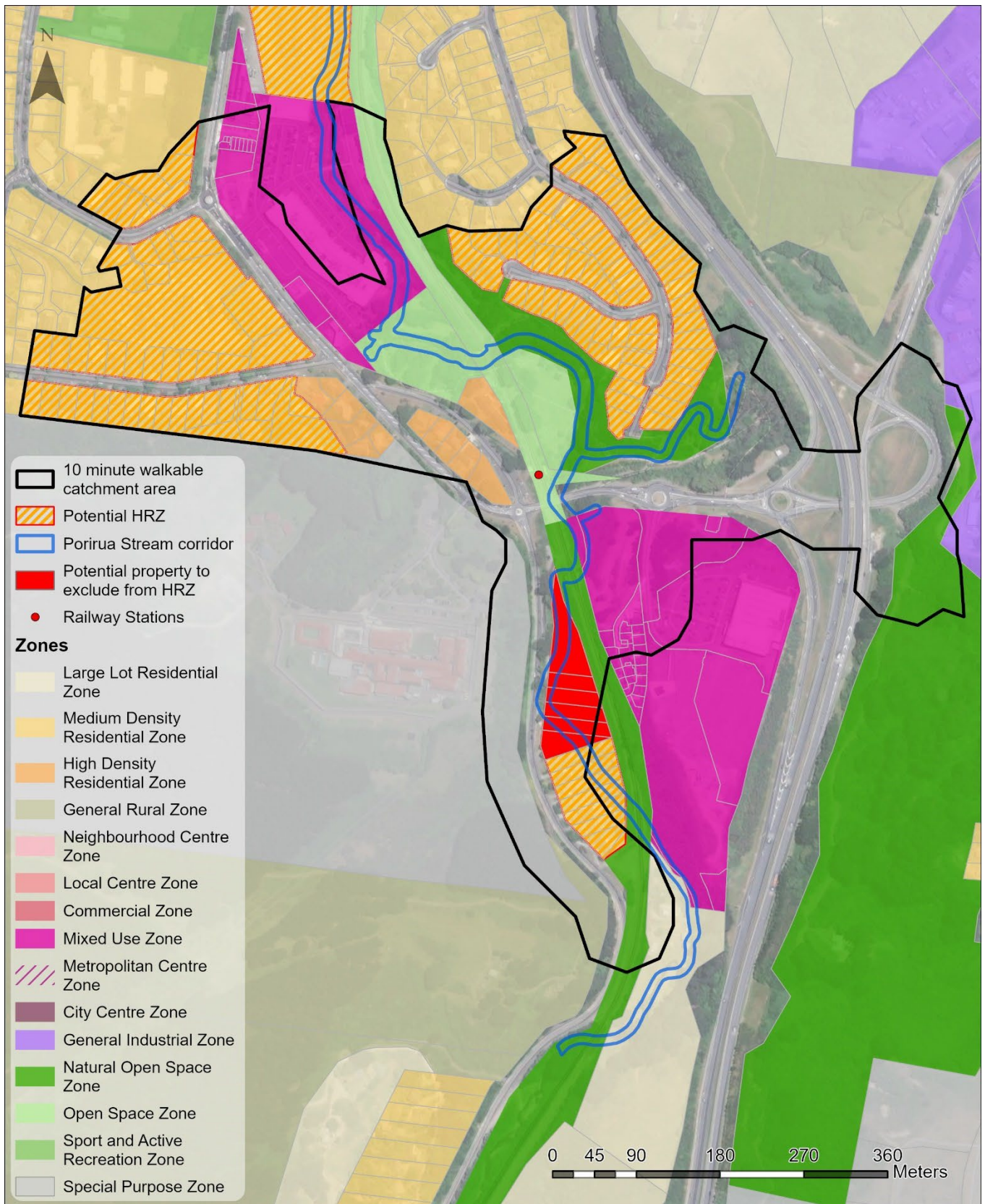
Redwood Railway Station and High Density Residential Zone

This map shows the Potential High Density Residential Zone (HRZ) within the 10 minute walkable catchment from Redwood railway station. These HRZ areas are in addition to the HRZ areas around Tawa railway station. Properties within the Porirua Stream corridor that are residentially zoned are excluded from the HRZ.

Basemap credits: Esri Community Maps Contributors, LINZ, Stats NZ, Esri, HERE, Garmin, Foursquare, METI/NASA, USGS, Maxar

Date: 13/04/2023
Credit: City Insights GIS Team

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Takapu Railway Station and High Density Residential Zone

This map shows the Potential High Density Residential Zone (HRZ) within the 10 minute walkable catchment from Takapu railway station. Properties within the Porirua Stream corridor that are residentially zoned are excluded from the HRZ.

Basemap credits: Esri Community Maps Contributors, LINZ, Stats NZ, Esri, HERE, Garmin, Foursquare, METI/NASA, USGS, Maxar

Date: 13/04/2023
Credit: City Insights GIS Team

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APPENDIX 2 – SANDRA MANDIC EVIDENCE ON WALKABILITY OF STEEP STREETS

This evidence is to support Mr Wharton’s response to the Panel’s question 5(g) in Minute 11:

On the premise that the City Centre walking catchment is limited where it intersects with Hay Street on account of steepness and/or safety considerations, where in Mr Wharton’s opinion would be a defensible boundary in the lower part of the Street? Similarly, Bolton Street, Aurora Terrace, Everton Terrace, Devon Street and Raroa Road

Factors Related to Walking for Transport

1. Walking for transport is influenced by a wide range of individual, social, environmental and policy factors. People’s willingness to walk for transport in any setting – such as Wellington City – is influenced by an interplay of those factors. Therefore no single factor such as topography/slope or safety by itself will determine individual’s willingness to walk to transport.
2. Proximity to urban destinations is an important motivator for people to walk.²¹
3. Walkable distance for walking for transport vary across studies with average distance ranging from 0.8 km to 2 km.^{22,23} Some researchers argue that it is feasible for most people to walk up to 15-20 minutes which translates into a distance of 1.6 km.²⁴

²¹ Tsiompras AB and Photis YN. What matters when it comes to “Walk and the city”? Defining a weighted GIS-based walkability index. *Transportation Research Procedia*. Volume 24, 2017, Pages 523-530 <https://doi.org/10.1016/j.trpro.2017.06.001>

²² Neves A and Brand C. Assessing the potential for carbon emissions savings from replacing short car trips with walking and cycling using a mixed GPS-travel diary approach. *Transportation Research Part A*. 2019; 123:130–146. DOI: <https://doi.org/10.1016/j.tra.2018.08.022>

²³ Cole R, Turrell G, Koohsari MJ, Owen N, and Sugiyama T. (2017). Prevalence and correlates of walkable short car trips: A cross-sectional multilevel analysis. *Journal of Transport & Health*, 4, 73-80. <https://doi.org/10.1016/j.jth.2016.11.007>

²⁴ Neves A and Brand C. Assessing the potential for carbon emissions savings from replacing short car trips with walking and cycling using a mixed GPS-travel diary approach.

4. There is no universal consensus on what constitutes a walkable distance since walkable distance varies depending on people's characteristics such as their age, gender, fitness / exercise capacity, characteristics of the environment (such as topography) and the purpose of walking (walking for transport or walking for recreation).²⁵
5. Most previous studies that examined walkable distance for transport in urban areas did not consider the effect of topography slope on the decision to walk and walking distance.
6. Recent research by Rahman A (2022)²⁶ conducted developed the terrain-sensitive walkability model which showed that topography (measured as number of contour lines) was negatively correlated with pedestrian counts in Sydney (Australia). However, this research had limited availability of pedestrian surveys to validate and further finetune the proposed walkability index and did not have information about age, gender or health status of pedestrian survey respondents.
7. Recent research by Jano-Reiss et al.²⁷ conducted in Jerusalem (Israel) demonstrated a linear negative effect of slope on walking for transport distance. For every 1-unit increase in the percentage of topography slope, distance walked for transport decreased by 43 to 54 meters. In the same study, researchers reported that sociodemographic characteristics such

Transportation Research Part A. 2019; 123:130–146. DOI:
<https://doi.org/10.1016/j.tra.2018.08.022>

²⁵ Jano-Reiss M, Anat T and Shlomit F-A. Walkability and Hilly Cities: The Non-Linear Effect of the Slope. Available at SSRN: <https://ssrn.com/abstract=4127644> or <http://dx.doi.org/10.2139/ssrn.4127644>

²⁶ Ashikur Rahman. A GIS-based, microscale walkability assessment integrating the local topography. *Journal of Transport Geography*, Volume 103, July 2022, 103405; <https://doi.org/10.1016/j.jtrangeo.2022.103405>

²⁷ Jano-Reiss M, Anat T and Shlomit F-A. (2022) Walkability and Hilly Cities: The Non-Linear Effect of the Slope. Available at SSRN: <https://ssrn.com/abstract=4127644> or <http://dx.doi.org/10.2139/ssrn.4127644>

as age and gender were associated with the distance covered in walking for transport trips.

8. No research is available on people's **willingness** to walk in Wellington City that also takes into account residents' sociodemographic characteristics and topography.

Walking for Transport Seen Through an Exercise Science Lens

9. Since walking is a form of physical activity, walking at different speeds and steepness of the terrain could be analysed from an exercise science perspective. Exercise science enables calculation of energy expenditure associated with walking and the perceived intensity of walking at different speeds and grade of the terrain.
10. Exercise intensity can be expressed in metabolic equivalents (METs). One MET is the amount of energy that body uses when sitting quietly. One MET corresponds to oxygen consumption of 3.5 ml of oxygen per kilogram of body mass per minute.
11. Based on metabolic equivalents, exercise intensity of various forms of physical activity for adults can be classified into low, moderate and vigorous intensity exercise/activity:
 - Low intensity exercise (less than 3.0 METs),
 - Moderate intensity exercise (3.0 to 6.0 METs) and
 - Vigorous intensity exercise (more than 6.0 METs).

Low intensity activities require minimal effort, are perceived as “very light” or “light” and can be performed for a long time.

Moderate intensity activities are those that get an adult moving fast enough or strenuously enough to use three to six times as much energy per minute compared to sitting quietly. Therefore, moderate intensity

exercises for adults range from 3 to 6 METs. Moderate intensity exercise is perceived by individuals as “somewhat hard”. Individuals are still able to hold a conversation while exercising at moderate intensity. Individuals are able to exercise at moderate intensity for a prolonged period of time (such as 30 minutes or longer). Moderate intensity physical activity represents a comfortable exercise intensity for adults.

Vigorous intensity activities have energy expenditure of more than 6 METs. Vigorous activities are perceived by individuals as “hard” or “very hard”. While exercising at vigorous intensity, individuals are breathing deep and rapidly and are not able to hold a conversation. In general, vigorous intensity activities are performed for shorter periods of time than moderate intensity activities (for example, 2 to 5 minutes) and are usually followed by brief periods of moderate or low intensity exercise before body is ready to engage again in another bout of vigorous intensity activity.

12. Both moderate and vigorous intensity physical activities are recommended for adults. The current World Health Organization’s physical activity guidelines²⁸ state that “all adults should undertake 150-300 min of moderate-intensity, or 75-150 min of vigorous-intensity physical activity, or some equivalent combination of moderate-intensity and vigorous-intensity aerobic physical activity, per week” to meet physical activity recommendations.

13. Compendium of Physical Activities²⁹ provides energy cost of various physical activities. Energy costs for various forms of walking are

²⁸ Bull FC, Al-Ansari SS, Biddle S, et al. World Health Organization 2020 guidelines on physical activity and sedentary behaviour. *Br J Sports Med.* 2020 Dec;54(24):1451-1462. DOI: 10.1136/bjsports-2020-102955

²⁹ Ainsworth BE, Haskell WL, Whitt MC, Irwin ML, Swartz AM, Strath SJ, O'Brien WL, Bassett Jr DR, Schmitz KH, Emplaincourt PO, Jacobs Jr DR, Leon AS. Compendium of physical activities: an update of activity codes and MET intensities. *Med Sci Sports Exerc.* 2000 Sep;32(9 Suppl):S498-504. DOI: [10.1097/00005768-200009001-00009](https://doi.org/10.1097/00005768-200009001-00009)

presented in Table 1. Energy cost of walking ranges from 2.0 METs for walking very slowly (less than 3.2 km/h) on flat surface to 8 METs for walking at the speed of 8 km/h. Energy expenditure for various forms of walking are also colour-coded within Table 1 with blue indicating low exercise intensity, green indicating moderate exercise intensity and yellow indicating vigorous exercise intensity.

Table 1. Energy cost of various forms of walking (source: Compendium of Physical Activities – 2000 Update⁹)

Energy cost of activity (in metabolic equivalents (METs))	Activity description
2.0	Walking, less than 2.0 mph (less than 3.2 km/h), level ground, strolling, very slow
2.0	Bird watching
2.5	Walking, 2.0 mph (3.2 km/h), level, slow pace, firm surface
2.5	Walking from house to car or bus, from car or bus to go places, from car or bus to and from the work site
2.5	Walking to neighbour's house or family's house for social reasons
3.0	Walking the dog
3.0	Loading/unloading a car
4.0	Pushing a wheelchair, non-occupational setting
8.0	Walking, 5.0 mph (8.0 km/h)

Exercise intensity of various forms of walking:

* blue = low intensity exercise (less than 3 METs),

* green = moderate intensity exercise (3-6 METs)

* yellow = vigorous intensity exercise (more than 6 METs)

14. A metabolic calculation of energy cost of walking (calculated as oxygen consumption by human body) takes into account both walking speed and grade of the terrain:

$$VO_2 = 3.5 + (0.1 \times \text{speed}) + (1.8 \times \text{speed} \times \text{grade})$$

where VO_2 is oxygen consumption (calculated in millilitres of oxygen per kilogram of body mass per minute), speed is expressed in meters per minute ($m \cdot \text{min}^{-1}$) and grade is percent grade expressed as fraction (e.g., 2% grade = 0.02).³⁰

15. Tables 2 and 3 presents metabolic costs of walking for three different walking speeds (very slow: 3.0 km/h; slow: 3.3 km/h; moderate: 4.0 km/h; and fast: 4.9 km/h) at level ground and uphill slopes ranging from 2% to 20%. Metabolic costs of walking were calculated using the metabolic calculation for oxygen consumption (see previous point).

In Table 2, metabolic costs of walking are presented as oxygen consumption.

³⁰ Bushman, B. A. Metabolic Calculations in Action Part 2. ACSM's Health & Fitness Journal 24(4):p 5-8, 7/8 2020. | DOI: 10.1249/FIT.0000000000000577 (Available at: https://journals.lww.com/acsm-healthfitness/Fulltext/2020/07000/Metabolic_Calculations_in_Action_Part_2.4.aspx#:~:text=Metabolic%20equations.%201%20Walking%3A%20VO%20%20%3D%203.5,%2B%20%283%20%C3%97%20W%20%C3%B7%20M%29%20More%20items)

Table 2. Metabolic costs of walking expressed as oxygen consumption and metabolic equivalents (METs) for different walking speeds and various uphill slopes

	Walking speed (km/h)			
	Very slow (3.0 km/h)	Low/slow (3.3 km/h)	Moderate (4.0 km/h)	Fast (4.9 km/h)
Energy cost: VO_2 (oxygen consumption) (ml O_2 /kg/min)*				
% grade (uphill)				
0%	8.5	9.1	10.1	11.6
2%	10.4	11.1	12.5	14.5
4%	12.2	13.1	14.9	17.4
6%	14.0	15.1	17.2	20.3
8%	15.8	17.1	19.6	23.3
10%	17.6	19.1	22.0	26.2
12%	19.4	21.1	24.4	29.1
14%	21.2	23.1	26.7	32.0
16%	23.1	25.2	29.1	34.9
18%	24.9	27.2	31.5	37.8

20%

26.7

29.2

33.9

40.8

In Table 3, metabolic costs of walking are presented using metabolic equivalents (METs) (1 MET corresponds to oxygen consumption of 3.5 ml of oxygen per kilogram of body mass per minute). In this table, energy expenditure for walking at different speed and grades are colour coded based on absolute exercise intensity for adults as follows: blue indicates low exercise intensity, green indicates moderate exercise intensity and yellow indicates vigorous exercise intensity.

Table 3. Metabolic costs of walking expressed as metabolic equivalents (METs) for different walking speeds and various uphill slopes

		Walking speed (km/h)			
		Very slow (3.0 km/h)	Low/slow (3.3 km/h)	Moderate (4.0 km/h)	Fast (4.9 km/h)
Energy expenditure in METs					
% grade (uphill)					
0%	2.4	2.6	2.9	3.3	
2%	3.0	3.2	3.6	4.1	
4%	3.5	3.7	4.2	5.0	
6%	4.0	4.3	4.9	5.8	
8%	4.5	4.9	5.6	6.6	
10%	5.0	5.5	6.3	7.5	
12%	5.6	6.0	7.0	8.3	
14%	6.1	6.6	7.6	9.1	
16%	6.6	7.2	8.3	10.0	
18%	7.1	7.8	9.0	10.8	
20%	7.6	8.3	9.7	11.6	

Notes: Blue indicates low exercise intensity (less than 3.0 METs).

Green indicates moderate exercise intensity (3.0 to 6.0 METs).

Yellow indicates vigorous exercise intensity (more than 6.0 METs).

16. Based on metabolic costs, walking on flat ground at very slow (3.0 km/h), slow (3.3 km) and moderate speed (4.0 km/h) represent low intensity exercise for most adults.
17. For adults, walking on flat ground at fast speed (4.9 km/h) would be moderate intensity exercise.
18. For most adults, walking on uphill grades up to 12% at very slow speed, up to 10% at slow speed, up to 8% grade at moderate speed and up to 6% grade at fast walking speed would be moderate intensity exercise.
19. Based on results presented in Tables 2 and 3, walking uphill at grade of 14% or higher at very slow speed and at grade of 12% or higher at slow speed would be considered vigorous intensity exercise for most adults. At higher walking speeds, lower grades would result in vigorous exercise intensity: uphill grade of 10% or higher at moderate walking speed and uphill grade of 8% or higher at fast walking speed.
20. It is important to keep in mind that individuals naturally adjust their walking speed to the terrain (i.e., slowing down as the uphill grade increases which also reduces the exercise intensity associated with walking uphill).
21. Exercise intensity of a particular physical activity depends on gender, age and person's fitness or exercise capacity. On average women have lower exercise capacity than men. In both genders exercise capacity peaks between ages of 30 and 50 years and declines afterwards. Percentiles of average exercise capacity (expressed as metabolic equivalents (METs)) for

healthy men and women are presented in Table 4 below (calculated based on data from Kaminski et al. (2021)³¹).

Table 4. Average exercise capacity for healthy men and women expressed as metabolic equivalents (METs) achieved on cardiopulmonary exercise test conducted on a treadmill (calculated based on oxygen consumption data presented in Kaminski et al. (2021)¹¹)

³¹ Kaminski LA, Arena R, Myers J, Peterman JE, Bonikowske AR, Harber MP, Medina Inojosa JR, Lavie CJ, Squires RW. Updated Reference Standards for Cardiorespiratory Fitness Measured with Cardiopulmonary Exercise Testing: Data from the Fitness Registry and the Importance of Exercise National Database (FRIEND) Mayo Clin Proc. 2022. DOI: [10.1016/j.mayocp.2021.08.020](https://doi.org/10.1016/j.mayocp.2021.08.020)

Percentile of exercise capacity	Age group (years)							
	20-29	30-39	40-49	50-59	60-69	70-79	80-89	
Males								
90	16.7	15.9	14.5	12.4	10.6	8.4	6.5	
80	15.6	14.3	12.9	10.9	9.1	7.4	6.1	
70	14.8	13.3	11.7	9.8	8.2	6.8	5.7	
60	14.0	12.4	10.8	9.1	7.6	6.3	5.3	
50	13.3	11.3	10.1	8.3	7.0	5.9	5.0	
40	12.5	10.6	9.3	7.7	6.5	5.5	4.7	
30	11.4	9.6	8.5	7.0	5.9	4.9	4.6	
20	10.1	8.5	7.6	6.3	5.3	4.5	4.2	
10	8.2	7.1	6.3	5.3	4.5	3.9	3.7	
Females								
90	14.0	12.0	10.8	9.3	7.8	6.5	5.9	
80	12.8	10.6	9.4	8.1	6.9	5.9	5.3	
70	11.9	9.6	8.6	7.5	6.4	5.6	4.9	
60	11.1	8.9	7.9	7.0	6.0	5.2	4.6	

50	10.5	8.1	7.3	6.5	5.6	4.9	4.4
40	9.7	7.5	6.8	6.1	5.2	4.6	4.2
30	8.8	6.9	6.2	5.7	4.9	4.3	3.9
20	7.8	6.3	5.6	5.3	4.4	4.0	3.6
10	6.4	5.3	4.9	4.7	3.8	3.5	3.3

22. It is important to note that exercise intensities of 40% to 60% of person’s exercise capacity are considered to be moderate intensity exercise for that person (perceived by individuals as “somewhat hard”). Activities between 61% and 80% of person’s exercise capacity represent vigorous intensity activities for that person (perceived by individuals as “hard” or “very hard”). Given that exercise capacity declines with age, activities that are moderate intensity for middle-aged individuals can become vigorous intensities activities for older adults.

Applying an Exercise Science Lens to Inform Consideration of a Defensible Boundaries for Walking for Selected Wellington City Streets

23. Tables presented in this paragraph show the results of the analysis of the energy expenditure expressed as metabolic equivalents (METs) and exercise intensity as an exercise science perspective to inform consideration of a defensible boundary for walking for Hay Street (Table 6), Bolton Street (Table 7), Aurora Terrace (Table 8), Everton Terrace (Table 9) and Devon Street (Table 10) in Wellington City.

Raroa Road was not included since this road is located beyond the 15-minute catchment area.

Table 6. Hay Street

Hay Street				
Street segment from the start of the street	Walking time at slow speed of 3.3 km/h (55 m/min)	Slope (% grade)	Metabolic equivalents of walking (METs)	Exercise intensity (based on METs)
1-50 m	1 min	13.6%	6.6	Vigorous
51-100 m	1 min	13.6%	6.6	Vigorous
101-150 m	1 min	14.1%	6.6	Vigorous
Analysis:				
Total street length considered:	150 meters		Total walking time:	3 minutes
Conclusion: Walkable street				
Rationale:	<ul style="list-style-type: none"> • Street length considered from the start of the street is only 150 metres. • Walking uphill at very slow (3.0 km/h) and slow speed (3.3 km/h) would be vigorous exercise for most adults and would last less than 5 minutes, which is doable for most adults. • Individuals could further reduce exercise intensity of walking up this street by reducing walking speed to below 3 km/h which would not significantly extend the total walking time given the short distance. 			

Table 7. Bolton Street

Bolton Street				
Street segment from edge of Central City Boundary	Walking time at slow speed of 3.3 km/h (55 m/min)	Slope (% grade)	Metabolic equivalents of walking (METs)	Exercise intensity (based on METs)
1-50 m	1 min	19.7%	8.3	Vigorous
51-100 m	1 min	13.7%	6.6	Vigorous
101-150 m	1 min	16.3%	7.2	Vigorous
151-200 m	1 min	15.2%	6.9	Vigorous
201-206 m	10 sec	12.1%	6.0	Vigorous
Analysis				
Total street length:	206 m		Total walking time:	4 - 5 min
Conclusion: Walkable street				
Rationale:	<ul style="list-style-type: none"> • Only 206 metres of street length from the Central City Boundary up to the end of the 10- and 15-minute walkable catchment. • Walking uphill at very slow (3.0 km/h) and slow speed (3.3 km/h) would be vigorous physical activity for most adults and would last less than 5 minutes, which is doable for most adults. • Individuals could further reduce exercise intensity of walking up this street by reducing their walking speed to below 3 km/h which would not significantly extend the total walking time given the short distance. 			

Table 8. Aurora Terrace

Aurora Terrace				
Street segment from edge of Central City Boundary	Walking time at slow speed of 3.3 km/h (55 m/min)	Slope (% grade)	Metabolic equivalents of walking (METs)	Exercise intensity (based on METs)
1-50 m	1 min	18.7%	8.0	Vigorous
51-100 m	1 min	26.1%	9.2	Vigorous
101-150 m	1 min	20.4%	8.3	Vigorous
151-197 m	1 min	20.5%	8.6	Vigorous
Analysis				
Total road length:	197 m		Total walking time:	4 min
Conclusion:		Walkable street		
Rationale:	<ul style="list-style-type: none"> • Only 200 metres of street length from the Central City Boundary. • Walking uphill at very slow (3.0 km/h) and slow speed (3.3 km/h) would be vigorous physical activity for most adults and would last less than 5 minutes, which is doable for most adults. • Individuals could further reduce exercise intensity of walking up this street by reducing their walking speed to below 3 km/h which would not significantly extend the total walking time given the short distance. 			

Table 9. Everton Street

Everton Street				
Street segment from edge of Central City Boundary	Walking time at slow speed of 3.3 km/h (55 m/min)	Slope (% grade)	Metabolic equivalents of walking (METs)	Exercise intensity (based on METs)
1-50 m	1 min	17.7%	7.8	Vigorous
51-100 m	1 min	17.7%	7.8	Vigorous
101-150 m	1 min	14.7%	6.9	Vigorous
151-158 m	10 sec	18.9%	8.0	Vigorous
Analysis:				
Total street length:	158 m		Total walking time:	3 - 4 min
Conclusion: Walkable street				
Rationale:	<ul style="list-style-type: none"> • Only 158 metres of street length from the Central City Boundary. • Walking uphill at very slow (3.0 km/h) and slow speed (3.3 km/h) would be vigorous physical activity for most adults and would last less than 5 minutes, which is doable for most adults. • Individuals could further reduce exercise intensity of walking up this street by reducing walking speed to below 3 km/h which would not significantly extend the total walking time given the short distance. 			

Table 10. Devon Street

Devon Street				
Street segment from the start to the 10-min walkable catchment boundary	Walking time at slow speed of 3.3 km/h (55 m/min)	Slope (% grade)	Metabolic equivalents of walking (METs)	Exercise intensity (based on METs)
1-50 m	1 min	4.8%	4.0	Moderate
51-100 m	1 min	19.0%	8.0	Vigorous
101-150 m	1 min	14.2%	6.6	Vigorous
151-200 m	1 min	13.9%	6.6	Vigorous
201-250 m	1 min	14.1%	6.6	Vigorous
251-300 m	1 min	15.0%	6.9	Vigorous
301-350 m	1 min	13.4%	6.3	Vigorous
351-400 m	1 min	12.9%	6.3	Vigorous
401-433 m	1 min	15.1%	6.9	Vigorous
Analysis:				
Total street length:	433 m		Total walking time:	9 min
Conclusion: Walkable street				
Rationale:	<ul style="list-style-type: none"> • Only 433 metres of street length from the Central City Boundary. • Walking uphill at slow speed (3.3 km/h) would be vigorous physical activity for most adults and would last up to 8 minutes, which is doable for most adults. 			

-
- Individuals could further reduce exercise intensity of walking up this street by reducing walking speed to 3 km/h or less which would not significantly extend the total walking time given the short distance.
-

24. The results presented in Tables 7 to 10 show that Hay Street, Bolton Street, Aurora Terrace, Everton Terrace, and Devon Street in Wellington City are walkable streets when analysed through an exercise science lens.
25. Walking uphill on Hay Street, Bolton Street, Aurora Terrace and Everton Terrace at very slow (3.0 km/h) and slow speed (3.3 km/h) would be vigorous intensity exercise for most adults and would last less than 5 minutes, which is doable for most adults. Walking uphill on Devon Street would be also vigorous intensity for most adults and would last less than 10 minutes, which is also doable for adults.
26. Individuals could further reduce exercise intensity of walking uphill by reducing walking speed to below 3 km/h which for short walking distances would not significantly extend the total walking time to reach a destination. The Walkable Catchment Model already accounts for a reduction of speed walking up the steeper slopes.
27. It is important to reiterate that as per recommendations from the World Health Organization³² both moderate and vigorous intensity physical activities undertaken regularly are recommended for adults to achieve health benefits (see paragraph 14 for further details).
28. It is also important to acknowledge that choice of residential location requires a consideration of and compromises with respect to a wide range of individual and household-related needs and preferences as well as consideration of financial constraints and other factors such as a stage

³² Bull FC, Al-Ansari SS, Biddle S, et al. World Health Organization 2020 guidelines on physical activity and sedentary behaviour. *Br J Sports Med.* 2020; 54(24):1451-1462. DOI: <https://doi.org/10.1136/bjsports-2020-102955>

in life cycle (as summarised by Kajosaari, Hasanzadeh and Kyttä (2019)).³³ Therefore, it is likely that some urban residents will be able to choose their neighbourhood environments according to their personal preferences.

29. Finally, walking for transport has multiple health benefits - it contributes to increasing or maintaining physical activity and better mental and physical health³⁴ - and therefore should be supported and encouraged in urban environments.

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³³ Kajosaari A, Hasanzadeh K, Kyttä M. Residential dissonance and walking for transport. *Journal of Transport Geography*. 2019; 74:134–144. DOI: <https://doi.org/10.1016/j.jtrangeo.2018.11.012>

³⁴ Mindell JS, Mandic S. (2021) Transport Modes and Health. In Roger Vickerman (Ed): *International Encyclopedia of Transportation*. Pp. 106-117. UK: Elsevier Ltd. DOI: <https://doi.org/10.1016/B978-0-08-102671-7.10413-0>

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APPENDIX 3 – ORLA HAMMOND EVIDENCE ON WALKABILITY OF STEEP STREETS

This evidence is to support Mr Wharton's response to the Panel's question 5(g) in Minute 11:

On the premise that the City Centre walking catchment is limited where it intersects with Hay Street on account of steepness and/or safety considerations, where in Mr Wharton's opinion would be a defensible boundary in the lower part of the Street? Similarly, Bolton Street, Aurora Terrace, Everton Terrace, Devon Street and Raroa Road

1. The walking network model calculates functional walking catchments for different walking speeds. It allows for slope to be used as part of these calculations. Including the effect of slope on walking speed is important because international guidance does not include slope and Wellington has a very hilly topography. The walking model is used across the Council for different applications such as emergency route planning and emergency management, designing new pedestrian routes, assessing the accessibility of open spaces, and speed management and transport planning.
2. The walking model is based on research on how people behave in the real world. It is not aspirational for how they should behave: e.g., the model includes official crossing points (controlled and uncontrolled) as well as unofficial crossing points where pedestrians were likely to cross the road.

How the model uses slope

3. The walking network model uses slope and elevation in two ways:
 - i. 1m contour lines were used to split the line network into segments.
 - ii. These segments were mapped to a 1m Digital Elevation Model, or DEM, (the highest accuracy available). The DEM was used to calculate a slope value for each line segment.

4. After a slope value was calculated for the line segments, the travel rate (i.e. walking speed) calculations described in my Statement of Evidence were applied to the line segments as part of the model build.

Slope and bridges

5. A Digital Elevation Model is an electronic, 3D representation of the bare earth's topography (Esri, 2023a). When a DEM is being built, it strips away anything that sits on top of the Earth's surface, such as vegetation and infrastructure, so it represents the ground topography as closely as possible.
6. This created a problem for the walking network model where the network contained bridges – which tend to cross valleys. The DEM followed the valley that the bridges cross rather than the bridge itself. To solve this problem, the slope of bridges was calculated separately to the rest of the network and added before the walking speed calculation stage. The elevation for the 'start' and 'end' point of the bridges was measured using the DEM. The slope of the bridges themselves was calculated using the height of the bridge at the 'start' and 'end' point and the length of the bridge.

Slope in degrees vs slope in percentage grade

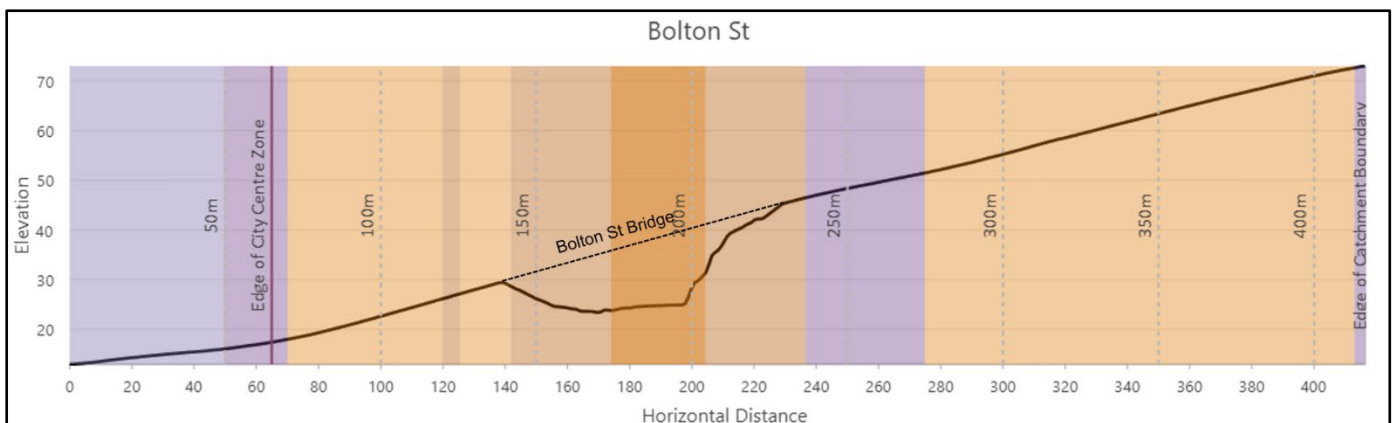
7. Slope degree and percentage grade are two common measures used to describe the steepness of a surface or incline. Slope degree refers to the angle of incline in degrees, while percentage grade is a measure of slope expressed as a percentage.
8. While both slope degree and percentage grade can be used to describe the steepness of a surface or incline, they are not interchangeable. Slope degree provides a more precise measure of angle, while percentage grade is often easier to understand and interpret for non-technical users.
9. The walking network model uses slope degree in its calculations for a more accurate result. For this response, the slope was converted into percentage


grade which is commonly used in transportation and civil engineering to describe road grades and other types of inclines

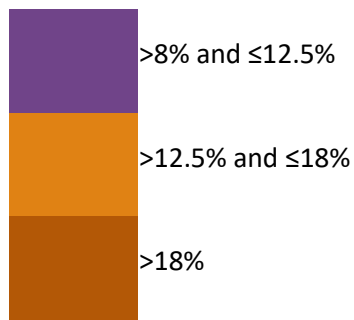
Additional analysis of the walking network model slopes

10. Mr Wharton requested that I perform some analysis to help answer the question put forward by the Hearing Commissioners. This analysis involved examining the average slope for each segment of road as they are used in the walking network model, and the overall elevation of the road.

11. Of the six roads examined, four of them (Aurora Terrace, Bolton Street, Devon Street, and Everton Terrace) have bridges that cross State Highway 1. The average slope for these roads is accurately represented because this information is taken directly from the walking network model. The elevation profile for the roads uses the DEM directly with no modifications. Because of this, the elevation profile includes the valley containing State Highway 1. Figure 1 below shows the elevation profile for Bolton Street. The vertical, dashed lines show 50m breaks along the road. This feeds into the work Sandra Mandic is doing on energy cost associated with walking. The segment colours correspond with the slope percentage grade. The edge of the City Centre Zone boundary and the walking catchment boundaries are also noted on the elevation profile.



 >0% and ≤8%



Adapting the walking network model

12. The WCC walking network model is custom built using Wellington specific data. It is designed to be flexible because different teams in Council using the model will have different needs. This flexibility includes:

- Changing the travel rate (i.e., walking speed) used to generate the walking catchments
- Changing between using time or distance to generate the walking catchments
- Excluding the use of certain feature (for example, avoiding tunnels or walking tracks)
- Adding restrictions to the model so it will avoid parts of the network.

30. Adding restrictions to the model can determine if a route is completely prohibited, to be avoided, or preferred (Esri, 2023b). Restrictions can be turned on or off when the model is being run, depending on the analysis. No restrictions were used when calculating the walking catchments for the District Plan review.

13. Restrictions are most effective when there are specific requirements, for example pedestrians cannot walk along the edge of a highway so a walking model should prohibit that. As seen in the elevation profile above, slope is not constant along a road. If a restriction was created based on a certain gradient, this could create gaps in the mode and break

the connectivity of the network.

14. If a slope- or gradient-based restriction is required of the model, I would recommend analysis to identify all the roads/pathways in Wellington that exceed a certain slope over a certain distance and exclude them from the model accordingly. This would be a lengthy piece of work and could possibly take many months to complete.

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APPENDIX 4 – AMENDMENTS TO THE HEARING STREAM 1 SECTION 42A REPORT

Amendments to recommendations in the Hearing Stream 1 Section 42A Report, from when the Report was published to when the Stream 1 Hearing finished, are shown in blue text (with underline and ~~strike-out~~ as appropriate).

HS1-Rec4: The plan provisions should not ~~be changed in advance of the proposed LGWM mass rapid transit routes and stops being identified in the RLTP~~ apply the NPS-UD Policy 3(c)(i) direction to the proposed LGWM mass rapid transit lines east and south.

HS1-Rec11: Rezone M~~D~~RZ to H~~D~~RZ (i.e. enabling six storey buildings) within the walkable catchment changes in red text below, as shown in the relevant ‘potential H~~D~~RZ’ maps in this report, and as updated by the ‘potential HRZ’ maps around Takapu Road Station, Redwood Station, Tawa Station and Linden Station in the Right of Reply.

HS1-Rec38: That amendments be made to the ‘Cross Boundary Matters’ chapter as detailed below and in Appendix A.

...

3. Where appropriate, joint processing of resource consents and the undertaking of hearings with adjoining territorial authorities and/or the Greater Wellington Regional Council.

HS1-Rec93: Amend the definition of Reverse Sensitivity as follows: *“means the potential for the development, upgrading, operation and maintenance of an existing lawfully established activity to be compromised, constrained or curtailed by the more recent establishment or alteration of another activity which may be sensitive to the actual, potential or perceived environmental effects generated by the existing activity. ‘Development’ and ‘upgrading’ of an existing activity in this definition are limited to where the effects are the same or similar in character, intensity, and scale to those which existed before the development or upgrade.”*

HS1-Rec132: Add a new objective to the 'Ānga Whakamua – Moving into the future' chapter as set out below and in Appendix A.

AW-05 Resource management decisions are informed by best available information ~~and~~ including mātauranga Māori.

HS1-Rec135: Amend the wording of CC-02 as set out below and detailed in Appendix A.

CC-02

2. The social, cultural and economic ~~and environmental~~ wellbeing of current and future residents, ~~and the environment~~ within environmental limits is supported;

5. Innovation and technology advances that support the social, cultural, and economic ~~and environmental~~ wellbeing of existing and future residents and supports the environment ~~are~~ is promoted; and

**APPENDIX 5 – TABULAR PRESENTATION OF QUALIFYING MATTERS REQUESTED
IN PARAGRAPH 5(O) OF MINUTE 11**

<p>1. Qualifying matters identified in 3.32 of the NPS-UD</p> <p><i>In this National Policy Statement, qualifying matter means any of the following:</i></p>	<p>2. Does a Qualifying Matter identified under clause 3.32 of the NPS-UD modify the building height or densities of policy 3 or the MDRS withing the PDP?</p>	<p>3. How does the Qualifying Matter identified under clause 3.32 of the NPS-UD modify the building height or densities of policy 3 or the MDRS within the PDP?</p>	<p>4. Plan making process the qualifying matter provisions are following:</p> <p>See May 2022 Planning and Environment Committee paper for decisions pathway.</p>
<p>(a) a matter required in order to give effect to any other National Policy Statement, including the New Zealand Coastal Policy Statement</p>			
<p>(b) a matter of national importance that decision-makers are required to recognise and provide for under section 6 of the Act</p>	<p>the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development – Yes</p>	<p><u>Very High and High Coastal Natural Character Areas</u></p> <p><i>Within the extent of the Very High and High Coastal Natural Character Areas the MDRS cannot be undertaken as a permitted activity – A restricted discretionary resource consent is required under the rules of the Coastal Environment Chapter. These provisions apply to all zones</i></p>	<p>P1SCH1.</p>
	<p>the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development – No</p>		
	<p>the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna – No</p>		

<p>1. Qualifying matters identified in 3.32 of the NPS-UD</p> <p><i>In this National Policy Statement, qualifying matter means any of the following:</i></p>	<p>2. Does a Qualifying Matter identified under clause 3.32 of the NPS-UD modify the building height or densities of policy 3 or the MDRS withing the PDP?</p>	<p>3. How does the Qualifying Matter identified under clause 3.32 of the NPS-UD modify the building height or densities of policy 3 or the MDRS within the PDP?</p>	<p>4. Plan making process the qualifying matter provisions are following:</p> <p>See May 2022 Planning and Environment Committee paper for decisions pathway.</p>
	<p>the maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers – No</p>		
	<p>the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga – Yes</p>	<p><u>Sites and Areas of Significance to Māori</u></p> <p><i>Within the extent of Sites and Areas of Significance to Māori the MDRS cannot be undertaken as a permitted activity – A restricted discretionary resource consent is required under the rules of the sites and areas of Significance to Māori Chapter. These provisions apply to all zones.</i></p>	<p>P1SCH1.</p>
	<p>the protection of historic heritage from inappropriate subdivision, use, and development – Yes</p>	<p><u>Heritage buildings, heritage structures and heritage areas</u></p> <p><i>On the site of a heritage listed building and everywhere within heritage areas the MDRS cannot be undertaken as a permitted activity – A restricted discretionary resource consent is required under the rules of the Historic Heritage Chapter. These provisions apply to all zones.</i></p> <p><i>On the site of a heritage building in the city centre zone, maximum development capacity cannot be achieved. This is because the heritage provisions constrain and limit the building height and density which could otherwise be achieved in absence of the building.</i></p>	<p>ISPP</p>

<p>1. Qualifying matters identified in 3.32 of the NPS-UD</p> <p><i>In this National Policy Statement, qualifying matter means any of the following:</i></p>	<p>2. Does a Qualifying Matter identified under clause 3.32 of the NPS-UD modify the building height or densities of policy 3 or the MDRS withing the PDP?</p>	<p>3. How does the Qualifying Matter identified under clause 3.32 of the NPS-UD modify the building height or densities of policy 3 or the MDRS within the PDP?</p>	<p>4. Plan making process the qualifying matter provisions are following:</p> <p>See May 2022 Planning and Environment Committee paper for decisions pathway.</p>
		<p>Demolition is only possible by way of a Discretionary resource consent. This is more restrictive than the restricted discretionary status considered the upper limit of ‘enabling’ under the NPS-UD.</p> <p><u>Viewshafts</u></p> <p>Development cannot intrude <i>within the extent</i> viewshaft - therefore maximum development capacity (policy 3(a)) cannot be achieved.</p>	
	<p>the protection of protected customary rights – No</p>		
	<p>the management of significant risks from natural hazard – Yes</p>	<p><u>Flood Inundation, Flood overland path and Stream corridor</u></p> <p><i>Within the extent of</i> the Flood Inundation, Flood overland path and Stream corridor overlays the MDRS cannot be undertaken as a permitted activity – A resource consent A resource consent with a status of restricted discretionary through to Non-complying is required under the rules of the Natural Hazards Chapter. These provisions apply to all zones.</p> <p><u>Fault Hazard Overlays</u></p> <p><i>Within the extent of</i> the Fault Hazard overlays the MDRS cannot be undertaken as a permitted activity – A resource consent with a status of Non-complying is required under</p>	<p>ISPP</p>

<p>1. Qualifying matters identified in 3.32 of the NPS-UD</p> <p><i>In this National Policy Statement, qualifying matter means any of the following:</i></p>	<p>2. Does a Qualifying Matter identified under clause 3.32 of the NPS-UD modify the building height or densities of policy 3 or the MDRS withing the PDP?</p>	<p>3. How does the Qualifying Matter identified under clause 3.32 of the NPS-UD modify the building height or densities of policy 3 or the MDRS within the PDP?</p>	<p>4. Plan making process the qualifying matter provisions are following:</p> <p>See May 2022 Planning and Environment Committee paper for decisions pathway.</p>
		<p>the rules of the Natural Hazards Chapter. Areas where six storey development would otherwise be required to be enabled has been downzoned to 11m.</p> <p><u>Medium and High Coastal hazard areas</u></p> <p><i>Within the extent of</i> the medium and high coastal hazard areas (coastal inundation and tsunami) the MDRS cannot be undertaken as a permitted activity – A resource consent with a status of restricted discretionary through to Non-complying is required under the rules of the Costal environment Chapter.</p>	
<p>(c) any matter required for the purpose of ensuring the safe or efficient operation of nationally significant infrastructure</p>	<p>Airport Noise overlay provisions – Yes</p>	<p><u>Inner Air Noise Overlay</u></p> <p><i>Within the extent of</i> the Inner Noise Overlay the MDRS cannot be undertaken as a permitted activity - A resource consent is required under the rules of Noise chapter which make 2 residential units an RD activity, and three or more discretionary.</p> <p>NB: Discussion was had at hearing stream 1 and addressed in paragraphs 73-80 of the s42A for hearings stream 1 whether the ‘National Grid Yard’ provisions are a ‘Qualifying Matter’ despite not being identified as such in the PDP, s32 or Council’s website. I have agreed that they could well have been but were not. Recognizing this the Council is exercising discretion to continue to implement and treat the operative district plan controls for ‘high voltage</p>	<p>ISPP</p>

<p>1. Qualifying matters identified in 3.32 of the NPS-UD</p> <p><i>In this National Policy Statement, qualifying matter means any of the following:</i></p>	<p>2. Does a Qualifying Matter identified under clause 3.32 of the NPS-UD modify the building height or densities of policy 3 or the MDRS withing the PDP?</p>	<p>3. How does the Qualifying Matter identified under clause 3.32 of the NPS-UD modify the building height or densities of policy 3 or the MDRS within the PDP?</p>	<p>4. Plan making process the qualifying matter provisions are following:</p> <p>See May 2022 Planning and Environment Committee paper for decisions pathway.</p>
		<p>transmission line buffers' akin to a qualifying matter to avoid any perverse outcomes in this transitional period.</p>	
<p>(d) open space provided for public use, but only in relation to the land that is open space</p>	<p>No</p>		
<p>(e) an area subject to a designation or heritage order, but only in relation to the land that is subject to the designation or heritage order</p>	<p>No</p>	<p>NB: Discussion was had at hearing stream 1 whether the Wellington Internal Airport Designation #1 (Obstacle Limitation Surfaces). which covers essentially the entire urban area is a 'qualifying matter'. It is clear in 3.32 of the NPS-UD that designations are indeed qualifying matters. In this case though there is no specific planning response (eg downzoning) in the PDP to respond to the designation, which otherwise requires approvals to penetrate the Obstacle Limitation Surface. It therefore is not treated as a qualifying matter.</p>	
<p>(f) a matter necessary to implement, or ensure consistency with, iwi participation legislation</p>	<p>No</p>		
<p>(g) the requirement to provide sufficient business land suitable for low density uses to meet expected demand under this National Policy Statement</p>	<p>No</p>		

<p>1. Qualifying matters identified in 3.32 of the NPS-UD</p> <p><i>In this National Policy Statement, qualifying matter means any of the following:</i></p>	<p>2. Does a Qualifying Matter identified under clause 3.32 of the NPS-UD modify the building height or densities of policy 3 or the MDRS within the PDP?</p>	<p>3. How does the Qualifying Matter identified under clause 3.32 of the NPS-UD modify the building height or densities of policy 3 or the MDRS within the PDP?</p>	<p>4. Plan making process the qualifying matter provisions are following:</p> <p>See May 2022 Planning and Environment Committee paper for decisions pathway.</p>
<p>(h) any other matter that makes higher density development as directed by Policy 3 inappropriate in an area, but only if the requirements of clause 3.33(3) are met.</p>	<p>Character Precincts – Yes</p> <p>Mount Victoria North Townscape Precinct - Yes</p>	<p><u>Character Precincts and Mount Victoria North Townscape Precinct</u></p> <p>Within the Character Precincts and Mount Victoria North Townscape Precinct the MDRS cannot be undertaken as a permitted activity - A restricted discretionary resource consent is required under the rules of precincts for any new building. In addition, these areas should have 21m height limits and be zoned High Density Residential under policy 3(c) of the NPS-UD, but have been zoned Medium Density Residential and have had 11m heights applied instead.</p>	<p>ISPP</p>

**ATTACHMENT 1 – PHIL OSBORNE RESPONSE TO STREAM 1 PANEL QUESTIONS IN
MINUTE 11**

Attached is Phil Osborne's responses to the Hearing Panel's economic questions in Minute 11.

**ATTACHMENT 2 – NICK WHITTINGTON RESPONSE TO STREAM 1 PANEL
QUESTIONS IN MINUTE 11**

Attached is Nick Whittington's responses to the Hearing Panel's legal questions in Minute 11.

ATTACHMENT 3 – MAPS REQUESTED IN PARAGRAPH 5(Q) OF MINUTE 11

Attached are maps requested in paragraph 5(q) of Minute 11.