

Before the Independent Hearings Panel

In the matter of the Resource Management Act 1991 (**RMA**)

And

In the matter of Plan Change 78: Intensification (**PC78**) to the
Auckland Unitary Plan Operative in Part (**AUP**)

**Memorandum of counsel on behalf of Auckland Council in response
to the Minute and Direction from the Independent Hearing Panel
dated 1 July 2024**

Date: 31 July 2024



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MAY IT PLEASE THE PANEL

Introduction

1 This memorandum is filed on behalf of Auckland Council (**Council**) in response to the Minute and Direction from the Independent Hearings Panel (**Panel**) dated 1 July 2024 (**Minute**).

2 In its Minute, the Panel indicated that it required further information from the Council on flooding risk before it makes a decision on whether to hold hearings on submissions on the PC78 Business – Metropolitan Centre Zone provisions and related precincts. The Minute states:¹

4. The Panel would like to know the extent to which any updating of flooding risk assessments show a material increase from what was in the notified version of PC78 and whether any increase in areas falls on public land or private land. To assist with this information the Panel has prepared the below table for the Council to complete for each of the metropolitan centre zones, along with any other relevant information that will assist the Panel in making a decision whether to proceed with hearing any one or more of the Metropolitan Centre zone provisions.

3 The Panel directed that the Council provides its response by Tuesday 30 July 2024.

Metropolitan Centres flooding table

4 In response to the Panel's directions, attached to this memorandum as **Attachment 1** is a table prepared by the Council which includes further information about flooding in each Metropolitan Centre included in PC78 as notified.

5 We are instructed:

¹ Minute at [2]-[4].

- 5.1 The table identifies for the Panel for the zoned areas of each Metropolitan Centre the change in geographical extent between the mapped floodplains in PC78 as notified and the most recent mapping of floodplains as at 9 July 2024, as published on Geomaps (the Council's Geographic Information System (GIS) viewer containing spatial and non-spatial information from across Auckland).
- 5.2 The table prepared by the Council also includes two additional columns relating to flood prone areas. Column 5 identifies the geographical extent in m² of mapped floodplains together with flood prone areas, and column 6 identifies the change in geographical extent between the mapped floodplains in PC78 as notified and the most recent mapping, which identifies both floodplains and flood prone areas.
- 5.3 The table in Attachment 1 only depicts changes to the geographic extent of the flooding hazard. It does not identify the level of flood risk in each location. The actual level of risk posed by flooding within each Metropolitan Centre can only be determined by also understanding the likely consequences of flooding. The Council is in the process of undertaking 2D flood modelling that identifies the anticipated depth and velocity of floodwaters within mapped floodplains that could be used to determine likely consequences. This is an on-going process but the modelling has been completed for the geographic area (Urban Unit A) that includes the New Lynn Metropolitan Centre.

Floodplains and flood prone areas

6 Counsel for the Council are also advised that:

- 6.1 Floodplain mapping is usually modelled at an individual catchment level. The Council has a rolling programme of updating flood models at a catchment level with the latest best available information, including climate change projections.
- 6.2 The modelling for some of the catchments within which the Metropolitan Centres lie has been updated since August 2022 and this has resulted in changes in the geographical extent of some floodplains in some centres. The Botany Metropolitan Centre is an example of this change where the previous 2009 floodplain modelling was superseded by the 2024 floodplain modelling, which has now factored in infrastructure and the latest LiDAR contour data.
- 6.3 The floodplains are mapped from hydraulic modelling results and there are assumptions that are used to generate these results (including the extent of development in the catchment and what climate change scenario to accommodate). The mapping is indicative only as there are aspects and interactions, such as fencing blocking overland flow paths, that are not feasible to be incorporated in the modelling.
- 6.4 Flood prone areas are identified potential ponding areas, assuming that stormwater outlets are blocked. This mapping layer is not based on hydraulic modelling but was developed using GIS techniques and underlying LiDAR data and was last updated in 2021.
- 6.5 The modelling used for the floodplain mapping in PC78 as notified used predominantly a 2.1 degree temperature rise climate change scenario. An updated 3.8 degree temperature rise climate change scenario is now being used by the Council. This corresponds to the latest climate change research undertaken by NIWA

and aligns with Te Tāruke-ā-Tāwhiri: Auckland's Climate Plan 2020, which states that Auckland needs to plan for a future with at least 3.5 degrees of warming by 2110.

6.6 As the modelling assumptions (particularly relating to climate change) vary across the catchments due to the rolling flooding modelling update cycle, the Council's Healthy Waters department is in the process of undertaking a 2D flood modelling exercise to ensure greater consistency across the region with regard to incorporating the 3.8 degree temperature rise climate change scenario. This has been completed for rural catchments (already publicly available in Geomaps) and is currently being completed for urban catchments.

6.7 The first tranche of information for urban catchments is currently in draft form and this includes information about New Lynn Metropolitan Centre. This has been used for the analysis in Attachment 1 and has resulted in the more noticeable changes in extent for New Lynn Metropolitan Centre shown in the table, compared to some other Metropolitan Centres.

6.8 As part of the 2D flood modelling for urban areas, information on anticipated depth and velocity of the floodplain is being developed.

7 In light of the above, we understand that for the future natural hazards plan change (or variation to PC78) the Council intends to categorise the risk of flooding (and identify land parcels in associated locations) based on thresholds formulated by the Council using the anticipated depth and velocity of the floodwaters, linked to the risk that that level of depth and velocity might pose to people of different demographics/physical ability.

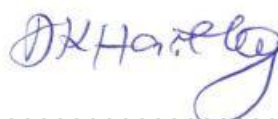
8 The information in the table in Attachment 1 indicates that in the case of New Lynn Metropolitan Centre, the area of flooding has

expanded significantly since August 2022. Counsel for the Council are advised that those expanded areas identified in the draft Urban Unit A 2D flood modelling are subject to review with final reporting and mapping expected by 31 October 2024.

- 9 In light of the above, we are advised that while there is some updated information available about flooding the Council does not have the full picture regarding risk assessments for flooding within Metropolitan Centres. We are advised that the position is the same for the walkable catchments, for which the Minister has asked the Council to provide the Panel with information in relation to areas of "little or no risk of flooding". This is because the updated information is currently principally about the geographical extent of flooding and work is ongoing in respect of other factors which materially contribute to risk assessment, including the depth and velocity of flood waters modelling.
- 10 Of relevance to this is that even where the geographical extent of flooding may not have changed or may have in fact reduced in the latest modelling, we are advised that the flooding risk profile for a particular location may still have changed where the depth and velocity of modelled flooding may have increased or is not yet known.
- 11 The Council acknowledges that in paragraph [7] of its Minute and Direction dated 1 July 2024, the Panel indicated it had decided to defer all Plan Change 78 topics that were not covered in its Minute (in relation to Metropolitan Centres) or in the upcoming City Centre Outstanding Matters hearing. The Panel indicated that it intended to review its position on the deferral in early 2025, unless something arises in the meantime.
- 12 We are also advised that the Council has had initial discussions with officials from the Ministry for the Environment in respect of the direction from the Minister in relation to areas of "little risk of flooding" and will be meeting with them again to seek their input

before providing the Panel with the further information the Minister has directed the Council to provide.

Date: 31 July 2024

A handwritten signature in blue ink, appearing to read 'DK Hartley'.

.....
D K Hartley / A F Buchanan
Counsel for Auckland Council for
PC78

Appendix 1 - Council's table regarding flooding

Zone	Flood Plains as at 18 August 2022 (m2) *2	Flood Plains as at 9 July 2024 (m2)	Difference (m2)	Area of zoned land affected by flooding (flood plain + flood prone) identified in updated modelling (m2)	Difference (as notified vs latest mapped flood plain + flood prone) (m2)
Albany (No new Floodplain Data Available)					
Business - Business Park Zone	492	492	0	1312	820
Business - Metropolitan Centre Zone	586	586	0	10600	10014
Open Space - Community Zone	28746	28746	0	29384	638
Open Space - Informal Recreation Zone*1	3513	3513	0	9317	5804
<i>Total Zoned Area Land</i>	<i>33337</i>	<i>33337</i>	<i>0</i>	<i>50613</i>	<i>17276</i>
<i>Total Zoned Land Albany Precinct</i>	<i>29820</i>	<i>29820</i>	<i>0</i>	<i>45359</i>	<i>15539</i>
Botany					
Business - Metropolitan Centre Zone	109664	18950	-90714	42146	-67518
<i>Total Zoned Area Land</i>	<i>109664</i>	<i>18950</i>	<i>-90714</i>	<i>42146</i>	<i>-67518</i>
Henderson					
Business - Metropolitan Centre Zone	48979	52410	3431	62663	13684
Open Space - Conservation Zone*1	20657	20657	0	20657	0
Open Space - Informal Recreation Zone*1	2791	3109	318	3531	740
Open Space - Civic Spaces Zone	0	0	0	0	0
<i>Total Zoned Area Land</i>	<i>72427</i>	<i>76176</i>	<i>3749</i>	<i>86851</i>	<i>14424</i>
Manukau (No new Floodplain Data Available)					
Business - Metropolitan Centre Zone	245343	245343	0	253624	8281
Open Space - Informal Recreation Zone*1	16245	16245	0	17284	1039
Open Space - Conservation Zone	0	0	0	0	0
<i>Total Zoned Area Land</i>	<i>261588</i>	<i>261588</i>	<i>0</i>	<i>270908</i>	<i>9320</i>
<i>Total Zoned Area Land - Manukau Precinct</i>	<i>34212</i>	<i>34212</i>	<i>0</i>	<i>36292</i>	<i>2080</i>
New Lynn (Latest Floodplain data - Whau - Not yet Public)					
Business - Metropolitan Centre Zone	13268	26535	13267	38316	25048
Business - Mixed Use Zone	275.5	362	86.5	469	193.5
Open Space - Civic Spaces Zone	176	0	-176	176	0
Open Space - Conservation Zone	16726	20088	3362	24041	7315
Open Space - Informal Recreation Zone	9232	13650	4418	18959	9727
Residential - Terrace Housing and Apartment Building Zone	10521	10515	-6	20265	9744
Open Space - Community Zone	0	0	0	0	0
<i>Total Zoned Area Land</i>	<i>50198</i>	<i>71100</i>	<i>20902</i>	<i>102226</i>	<i>52028</i>
<i>Total Zoned Area Land - New Lynn Precinct</i>	<i>49337</i>	<i>70515</i>	<i>21178</i>	<i>103846</i>	<i>54509</i>

Newmarket (No new Floodplain Data Available)					
Business - Metropolitan Centre Zone	57398	57398	0	157861	100463
Open Space - Civic Spaces Zone*1	0	0	0	1651	1651
Open Space - Informal Recreation Zone*1	0	0	0	124	124
<i>Total Zoned Area Land</i>	<i>57398</i>	<i>57398</i>	<i>0</i>	<i>159636</i>	<i>102238</i>
Papakura (No new Floodplain Data Available)					
Business - Metropolitan Centre Zone	53110	53110	0	55577	2467
Open Space - Informal Recreation Zone*1	0	0	0	0	0
<i>Total Zoned Area Land</i>	<i>53110</i>	<i>53110</i>	<i>0</i>	<i>55577</i>	<i>2467</i>
<i>Total Zoned Area Land - Papakura Precinct</i>	<i>1587</i>	<i>1587</i>	<i>0</i>	<i>1587</i>	<i>0</i>
Sylvia Park (No new Floodplain Data Available)					
Business - Metropolitan Centre Zone	67662	67662	0	82366	14704
Total Zoned Area Land	67662	67662	0	82366	14704
<i>Total Zoned Area Land - Sylvia Park Precinct</i>	<i>66314</i>	<i>66314</i>	<i>0</i>	<i>81018</i>	<i>14704</i>
Takapuna					
Business - Metropolitan Centre Zone	5673	4957	-716	14307	8634
Open Space - Informal Recreation Zone*1	2276	2159	-117	2159	-117
Open Space - Civic Spaces Zone	0	0	0	0	0
<i>Total Zoned Area Land</i>	<i>7949</i>	<i>7116</i>	<i>-833</i>	<i>16466</i>	<i>8517</i>
<i>Total Zoned Area Land - Takapuna 1 Precinct</i>	<i>5673</i>	<i>4957</i>	<i>-716</i>	<i>14307</i>	<i>8634</i>
Westgate / Massey North					
Business - General Business Zone	10670	7102	-3568	7103	-3567
Business - Light Industry Zone	29985	13832	-16153	15679	-14306
Business - Metropolitan Centre Zone	7373	6917	-456	36475	29102
Business - Mixed Use Zone	2253	2043	-210	2211	-42
Open Space - Informal Recreation Zone	104450	110535	6085	110562	6112
Residential - Terrace Housing and Apartment Building Zone	4037	5307	1270	5976	1939
Open Space - Civic Spaces Zone	0	0	0	0	0
<i>Total Zoned Area Land</i>	<i>158768</i>	<i>145736</i>	<i>-13032</i>	<i>178006</i>	<i>19238</i>
<i>Total Zoned Area Land - Westgate Precinct</i>	<i>158768</i>	<i>145736</i>	<i>-13032</i>	<i>178006</i>	<i>19238</i>

*1 Judgement Call made on zones at edge of Centre