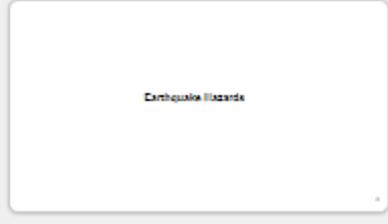
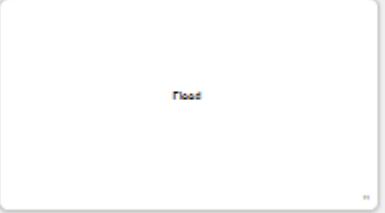


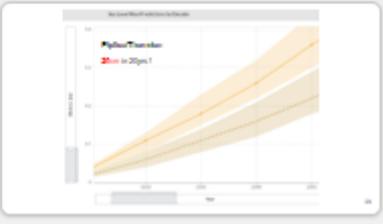
20230804 PDP Hearing Stream 5 – TRA and Richard Murcott presentation notes

<p>1</p> 	<p>Richard Murcott, Chair of the Thorndon Residents' Association Accompanied by Melissa Ludlow, Secretary, and Lance Gunderson, Committee member.</p>
<p>2</p> 	<p>We seek more relief from the PDP in the community resilience context. We seek a plan that actively and prudently safeguards residential Thorndon, given the high likelihood of consequences from known natural and other hazards.</p> <p>We run through some of our community's challenges related to this Hearing Stream.</p>
<p>3</p> 	<p>The is PDP map provides an insight to some of the hazards, threats and challenges in this dynamic residential corner of the city. Note the location of the fault & the PDP character areas.</p> <p>Regardless of this the PDP proposes to:</p> <ul style="list-style-type: none"> - upsized part of the eastern residential Thorndon to High Density Residential Zone (HDZ) (the Hobson area) - sprawl the City Centre Zone (CCZ) into parts of residential Thorndon i.e. rezone the Selwyn and Portland residential enclaves. <p>The Commission has previously heard this Association's appeals, based on other things our community values about residential character and heritage for example.</p> <p>Today we submit on reasons the PDP should <i>tread lightly</i> regarding intensification based upon the matters relevant to this Hearing Stream.</p> <p>We're seeking a resilience contribution from the Plan.</p>
<p>4</p> 	<p>The consequences of the Kaikōura upheaval in 2016 can be found all around the city, but they were/are amplified in Thorndon/Pipitea.</p> <p>The Post, 29 July 2023 (last Saturday): https://www.thepost.co.nz/a/nz-news/350043108/retailer-exodus-why-are-so-many-central-wellington-stores-empty "... cited events such as the 2016 Kaikōura earthquake ..."</p>

<p>5</p>  <p>The updated 10-year review of the Wellington Fault... A list of the resulting risks are presented in Thorndon: - Road network - Landslide - Superstition - Tourism - Fire - Other risks: - Flooding - Infrastructure challenges We're in a place where vertical (submarine residential buildings) face a risk of becoming vertical columns (no lift, water etc), or compromised to a degree that can immediately displace from a single property, 100s of people and families. The CP can be more prepared to mitigate some of these risks, improve Thorndon's existing resilience. From both a safety standpoint and an overall resilience viewpoint, we challenge High Density residential zoning being provided as appropriate for Thorndon.</p>	<p>Since 2014 the Association has worked with WREMO on developing and maintain a community response plan.</p> <p>We seek the PDP to be extra careful (cautious) and err on helping, rather than hindering resilience in Thorndon.</p>
<p>6</p> 	<p>The Chief City Planner confirmed when briefing Councillors recently that the Wellington Fault has a "... <i>relatively high likelihood and consequence of fault rupture</i> ..."</p> <p>A large proportion of residential Thorndon, including character areas, are vulnerable in the deformation zone.</p> <p>Here's another benefit for the PDP to recognise all of Thorndon's residential character, especially those areas that are not encumbered in this way on the east side of the suburb.</p>
<p>7</p>  <p>LANDSLIDE caused by earthquake over Wellington, January 1855. (Photograph courtesy of the New Zealand Library, Auckland)</p>	<p>Landslide over the Hutt Rd in 1855</p> <p>Like the steep slopes of Te Ahumairangi Hill above the fault deformation zone.</p>
<p>8</p>  <p>Figure 8. 8. Earthquake-induced landslide hazard map of the Wellington to Pōhara area and potential quantity of 200, 500 and 1000 cubic metres (m³) (1992)</p>	<p>GNS Science appraise susceptibility to landslips on the hill as high and very high</p> <p>The PDP is silent about these hazards and risks for residential Thorndon.</p>
<p>9</p> 	<p>The Kaikōura sequence of 14 November 2016 produced strong waves that got "trapped" beneath Wellington.</p> <p>It caused significant damage in Pipitea/Thorndon. The commercial buildings broken were well publicised. But residences were impacted too. The city has a long recovery.</p> <p>Ground deformation occurred (vertical and horizontal movement) on residential properties, including in eastern side of Thorndon where the PDP proposes a High Density Residential Zone (HDZ), Evidence EQC payments for land remediation.</p> <p>This degree of ground shaking may have disturbed buried infrastructure .</p>

<p>10</p> 	<p>Those fault deformation boundaries are mere fuzzy 'lines on maps'; approximations representing where a feature is or might be with degrees of variability. Nature has a propensity for variability; thus wicked surprises.</p> <p>Note how inner residential Thorndon is, relatively, intensely subdivided. Now assume a quake interrupts access to adequate water supply for fire-fighting.</p> <p>By the time 3 houses are fully engulfed they would radiate enough energy for spontaneous combustion of wooden dwellings across streets.</p> <p>BTW In a drought season, the Hill itself could become a wildfire hazard.</p>
<p>11</p> 	<p>Another hazard is too much water.</p> <p>With infrastructure that is unable to adequately handle it.</p>
<p>12</p> 	<p>Historic residential flooding.</p> <p>The historic worker cottages depicted on the Heritage Trail are in the fault deformation zone. Today this is a row of townhouses.</p> <p>The other image (taken 100yrs later) is of flooding at current residences when an overflow event occurred at the location of the historic Tiakiwai stream.</p>
<p>13</p> 	<p>We used a heavy rain event in 2021 to test WCC's flood mapping predictions.</p> <p>There's a risk these may be conservative.</p> <p>It's known that that infrastructure owners don't even know where all the old assets are actually located.</p>
<p>14</p> 	<p>Wet weather overflow events like this have the hazardous potential of mixing untreated wastewater and stormwater; if that is happening here then we're looking at potential contamination of school grounds and buildings in a secondary college, and also one of the city's larger/popular supermarkets.</p> <p>Extract from this Wellington Water website: https://storymaps.arcgis.com/stories/cbcf01912ff54c6e905efbbecc4cae73 "... these networks originated in the 1890s to reduce outbreaks of illness, such as typhoid and dysentery, that swept through the urbanised areas."</p>
<p>15</p> 	<p>Some comments on climate change.</p>

<p>16</p> 	<p>That weather event approached from the west, and Wellington was on the edge of the most impacted region; Buller District; at least 200 homes in Westport were deemed uninhabitable</p>
<p>17</p> 	<p>What about the phenomenon of highways of water vapour snaking 1000's of kilometres from the tropics; capable of carrying 200 times the flow of the Clutha River.</p> <p>Atmospheric rivers are another natural hazard the PDP also needs to account for.</p>
<p>18</p> 	<p>Experts are alerting us that we need to account for new likelihoods. We need to add these to our plan.</p>
<p>19</p> 	<p>We observe that not all open spaces are that permeable. Here's a recent example on a playing field at Thorndon School recorded after a recent downpour. The photo taken an hour afterwards.</p> <p>The ponding lingers for a long time. It illustrates that other storm water interventions may be necessary even in such 'open' places.</p>
<p>20</p> 	<p>We also need to account for the land is subsiding around Wellington, while the sea is rising i.e. we have a double whammy.</p>
<p>21</p> 	<p>This graphic illustrates that among urban areas, Wellington is special i.e. sinking faster than any other urban area</p>
<p>22</p> 	<p>This is a screen shot from the online resource we've used to obtain these insights.</p>

<p>23</p> 	<p>Even small differences matter.</p> <p>An assessment in 2019 found that for every 10 cm of sea level rise, 1000's of people and billions of dollars worth of houses - plus more roads, pipes and infrastructure - become exposed to potential flooding during extreme events around NZ.</p> <p>In our vicinity predictions indicate we're looking at a sobering ~20 cm sea level rise during the lifecycle of this plan.</p>
<p>24</p> 	<p>3 Waters</p>
<p>25</p> 	<p>We've experienced sink holes. Here's a record of the Pipitea Stream's underground tunnel/pipe collapse in 2013, opposite the Ambulance station at the end of Hobson St.</p> <p>We suspect that the Kaikoura sequence in 2016 may have contributed to aged water pipes leaking around the suburb.</p>
<p>26</p> 	<p>This report gave Thorndon an unenviable ranking with regard to the state of play with 3 Waters or current capacity.</p>
<p>27</p> 	<p>When we reflect on what we know about the matters within the scope of this Hearing Stream, we think the PDP could do better to align to supporting resilience for Thorndon, and the city.</p> <p>Leave a 'buffer zone' by not overly intensifying this challenging area; this northern gateway in/out of the city. That's a risk-based approach.</p>
<p>28</p> 	<p>This morning we've tabled some of our 'lived' experiences and evidence.</p> <p>We assert that the PDP hasn't got the balance right for residential Thorndon. The matters we submitted on haven't been approached as 'qualifying matters'.</p>
<p>29</p> 	<p>Since 2013 (post Canterbury quakes) our community has evolved a body of knowledge which we maintain in collaboration with the Wellington Region Emergency Management Office (WREMO).</p> <p>The PDP could usefully align by avoiding unnecessary intensification or 'overcrowding' this important corner of the city.</p>

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Here's a summary of the relief sought.

More residential intensification is perceived as both unnecessary, and incompatible with the vulnerabilities.

Thorndon is already relatively densely populated and with mostly small residential land parcels.

We also have a fair share of 'vertical streets' (apartment buildings). If those buildings are seriously compromised lots of people/families become displaced.

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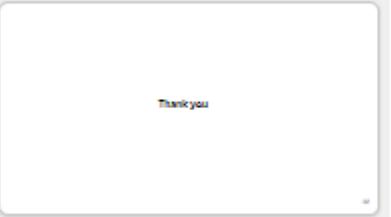


In closing.

In earlier Hearing Streams we presented on various criterion and community values that would enhance the PDP and outcomes desired for Thorndon **and the city**.

This is the 5th and final hearing stream we will contribute to. We trust that the matters we've highlighted through the different lenses of each Hearing Stream will be assessed **collectively**, as a whole.

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We thank you for the opportunities to be heard.