## Hi Stephen,

Additional evidence of the earthquake hazard to the Turitea wind farm right on fault lines has become available only in the last few hours. The story in the Manawatu Standard identifies 109 buildings in Palmerston North which constitute a major hazard in a <a href="major-not-ent-type-earthquake">moderate</a> earthquake, with a further 400 plus yet to be assessed. The city has also recently been identified as a major liquefaction risk, as most of it is on the flood plain of the Manawatu River and hence on deep river silt. Note there has not been a M8 earthquake in the Manawatu to my knowledge in living memory and if the 150 year time scale quoted is accurate then we are due for one any time.

It is an absolute disgrace that the judicial and political process has trumped common sense to the extent that an amateur such as myself can find a PNCC policy spelling out the earthquake hazard to the city but which ignores the blatantly obvious risk to Mighty River Power's massively expensive infrastructure proposals.

I trust this information will assist the FMA in its deliberations.

Kind regards Paul Stichbury

http://www.stuff.co.nz/manawatu-standard/news/6887089/Quake-risk-sites-listed

http://static.stuff.co.nz/files/earthquakebuildings.pdf

## Seismic Hazards

There are scattered earthquake sources that have been identified throughout the Manawatu region and beyond.[1] The Wellington and Wairarapa fault systems are major earthquake sources, and the Wellington system in particular can seriously affect Palmerston North. The Report of the Manawatu-Wanganui Regional Lifelines Project in January 2005 indicates that there is a strong probability that Palmerston North will be affected by an earthquake of magnitude 8 at least once every 150 years.

The sources of some of the smaller or moderate events that can affect the City are sometimes less easy to identify. There is no complete map showing all faults and folds within the Manawatu as not all parts of the region have been studied in detail. Also, geological and human processes will have removed any evidence of some features.

[1] Manawatu-Wanganui Regional Council, Hazard Analysis Manual, Volume II Seismic Analysis.
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Good morning Paul
Thank you for this additional information. I will forward it to the FMA staff member currently reviewing the information you have provided.
Regards
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