

Submission on PDP Presentation to Hearing 1

Paul Botha – 27 September 2021

Submitter number 118

My background

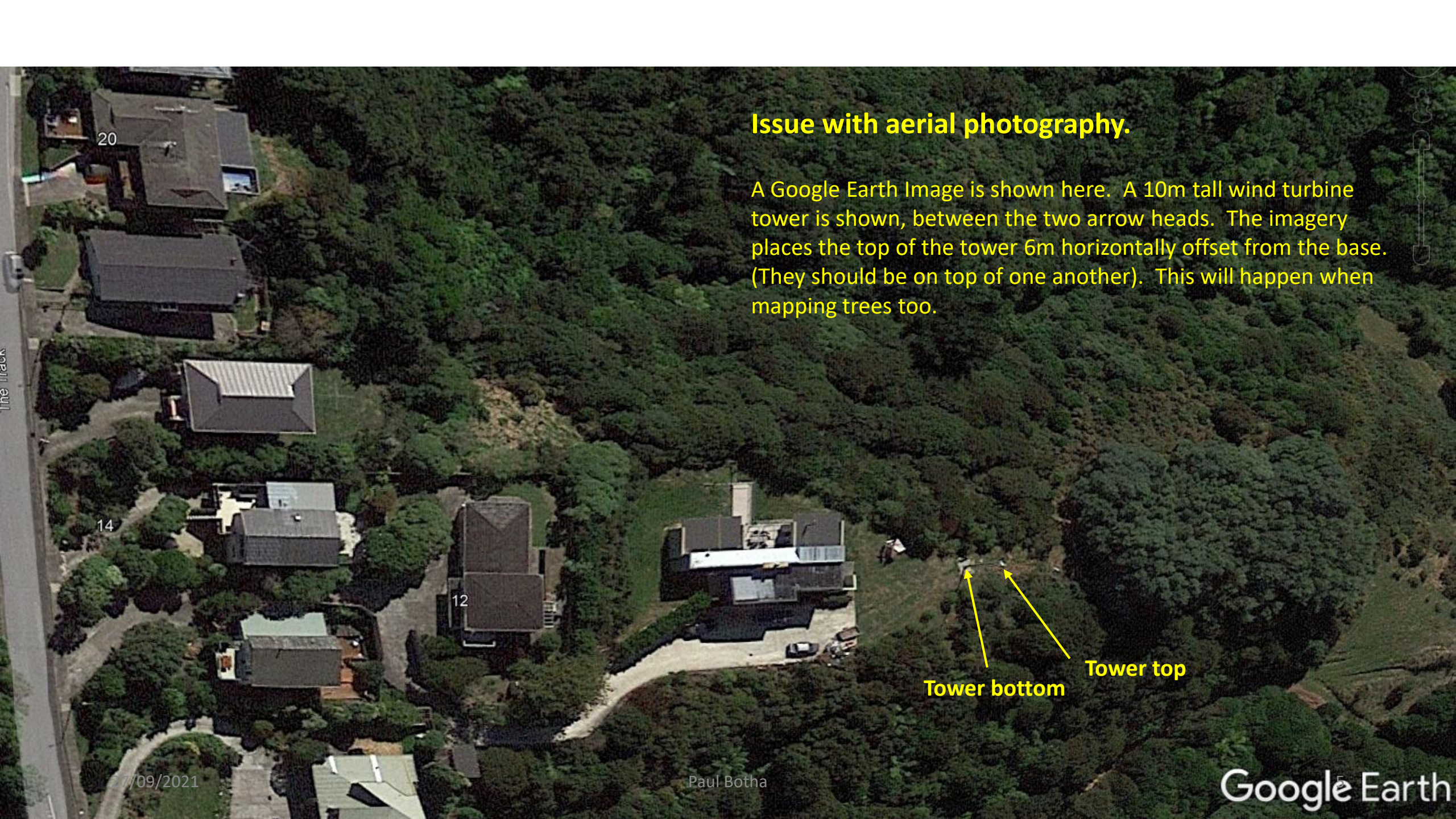
- I have lived in Plimmerton for 27 years and owned the rural property at 10A The Track for 21 years.
- I am chartered mechanical engineer (CEng) holding a BSc(Mech)Eng and a MScEng(Energy Studies). I am a member of the Institute of Mechanical Engineers (MIMechE) and a member of the Institute of Acoustics (MIOA), both of the UK.
- I work in the wind energy industry and my work in NZ over the last 27 years has included gaining resource consents for wind farms and compliance assessments of operational projects.

Submission points/issues

- My submission on the PDP covers a number of topics, however, what I cover here is:
 - Accuracy of lines and shapes included in the referenced GIS mapping, which forms part of the proposed plan.
 - Practicalities of working with these non-surveyed boundary lines/areas.
- This is discussed in Section 5 of my original submission.

Accuracy of derived lines in GIS

- The three layers inaccurately mapped over our land are:
 - Noise corridors
 - Flood mapping areas
 - SNA's
- While some of these can be corrected now, I suggest that other inaccuracies will arise as others in the district examine the detail on their land at some point in the future.
- The Kiwirail noise corridor is defined as being a distance from the rail line, it is mapped from their property boundary.
- The flood mapping has been based on modelling with a culvert shown in the incorrect position. This will have an impact on the flood mapping shown which is therefore inaccurate.
- The SNA boundary has been digitised from aerial photography/Google Earth and doesn't accurately define the situation "on the ground". To date, I have seen 3 versions of the SNA boundaries on our property.



Issue with aerial photography.

A Google Earth Image is shown here. A 10m tall wind turbine tower is shown, between the two arrow heads. The imagery places the top of the tower 6m horizontally offset from the base. (They should be on top of one another). This will happen when mapping trees too.

Tower bottom Tower top

20

14

12

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More accurate aerial image is shown here, however there is still 1.5m offset in the horizontal dimension of the turbine tower.

There will be accuracy/precision issues with the derived mapping and I believe it needs to be acknowledged in the plan.

Tower top

Tower bottom



An example of inaccuracies and imprecise zones.

- To date, I have seen 3 versions of the SNA mapping on our property.
- The fact that the 3 versions are not the same means that they are not precise.
- The fact that all versions don't match what is "on the ground" means that they are inaccurate.

Practicality of working with mapped zones

- A number of the zones identified in the PDP mapping are simply “lines on a page”.
- Those lines have not been surveyed or marked on the ground. They also don’t necessarily follow identifiable features on the ground, e.g. contour, edge of bush.
- It is impossible to accurately transfer the location of the “lines on a page” or map, onto the ground without a survey and I don’t believe that the council plan to fence or survey these areas.
- A hand-held GPS could be used however accuracy is about 5m or more.
- Where council has not surveyed zones of lines, I believe a tolerance should be included, e.g. +/- 5m.

Remedy sought

- Mapping accuracy/inaccuracy should be acknowledged.
- If inaccuracies are determined later, to include a mechanism for correction without having to undertake a plan change.
- A tolerance be included on non-surveyed zones and lines for example $\pm 5\text{m}$.