

Waterloo Wind Farm Survey April 2012 - Part 2 Graphs Version 4

M Morris. 2012.

This document is to be read in conjunction with “Waterloo Wind Farm Survey April 2012 – Select Committee “ by M Morris which can be found on line at:

www.wind-watch.org/news/wp-content/uploads/2012/07/Waterloo-Wind-Farm-Survey-April-2012-Select-Committee.pdf

These graphs serve to demonstrate the extent of electromagnetic interference, noise disturbance, sleep disturbance and self described adverse effects from the Waterloo wind farm in SA.

Method and Results

An anonymous self reporting survey and letter of introduction explaining why the survey was being conducted, was posted or delivered to all households within or near a 10 kilometre zone of the Waterloo Wind farm.

Of the 230 surveys delivered 93 households returned completed surveys. 40% response rate.

For the 93 households located approximately within a **radius of 10 kilometres** of the Waterloo Wind farm, 49% were disturbed by impacts including noise, visual flicker or television reception interference.

Daytime Noise disturbance, which in some cases varied with weather, was reported in 39% of households surveyed.

Night time noise disturbed 40 % of households and of those surveyed, 27 households or 29% of households surveyed reported sleep disturbances.

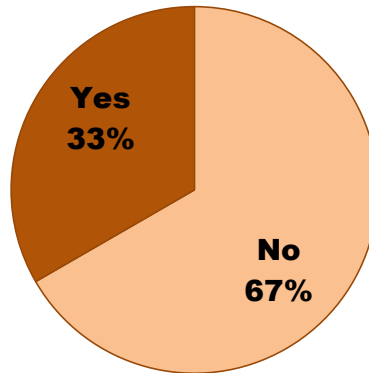
Upon examining the responses from within **5 km of the turbines** , 56 % of households were disturbed by day time noise, 56 % disturbed by night time noise and 39 % experienced sleep disturbance.

The following graphs show results for the 0 - 10 km range in brown and 0 - 5 km in green.

It must be concluded that current setback distances and noise pollution governance (with this size turbine, in this layout, in this location) are inadequate to protect a significant percentage of residents rest and repose and amenity.

Question 5. (i) 0- 10 km Figure 5A. Does the wind farm affect your household watching tv or listening to the radio or other electronic devices?

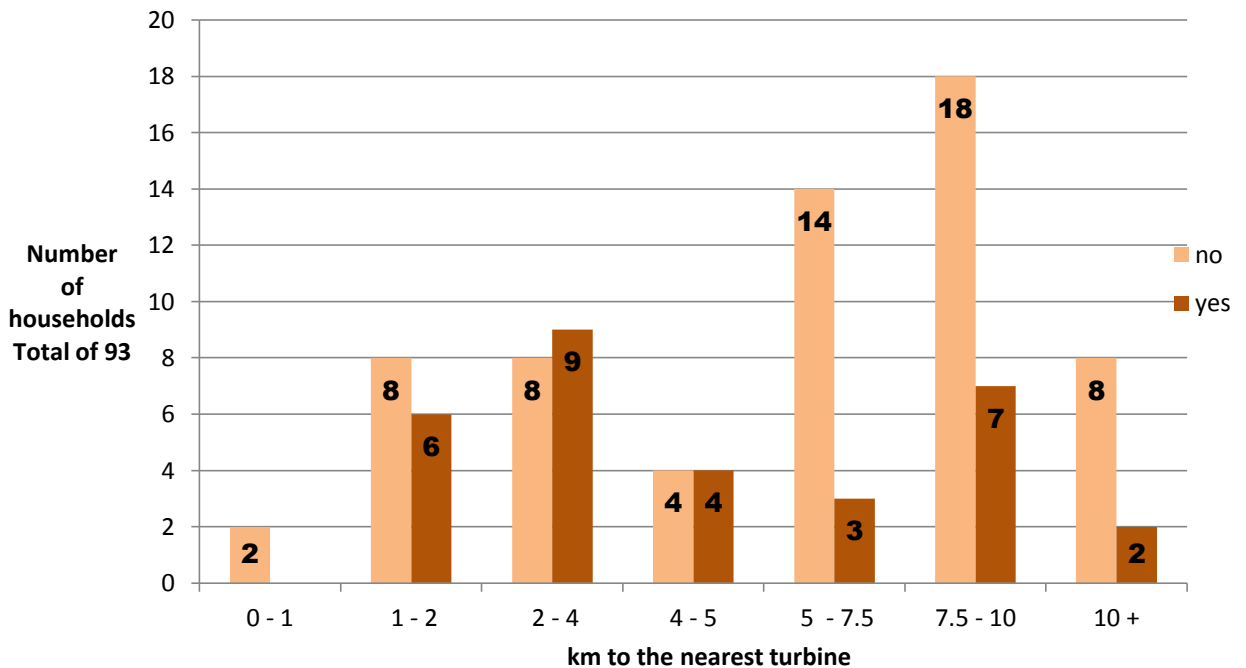
Fig. 5A. Does the wind farm affect your household tv, radio or other electronic devices? 0 - 10 km



Total of 93 households Yes 31 (33%) No 62 (67%)

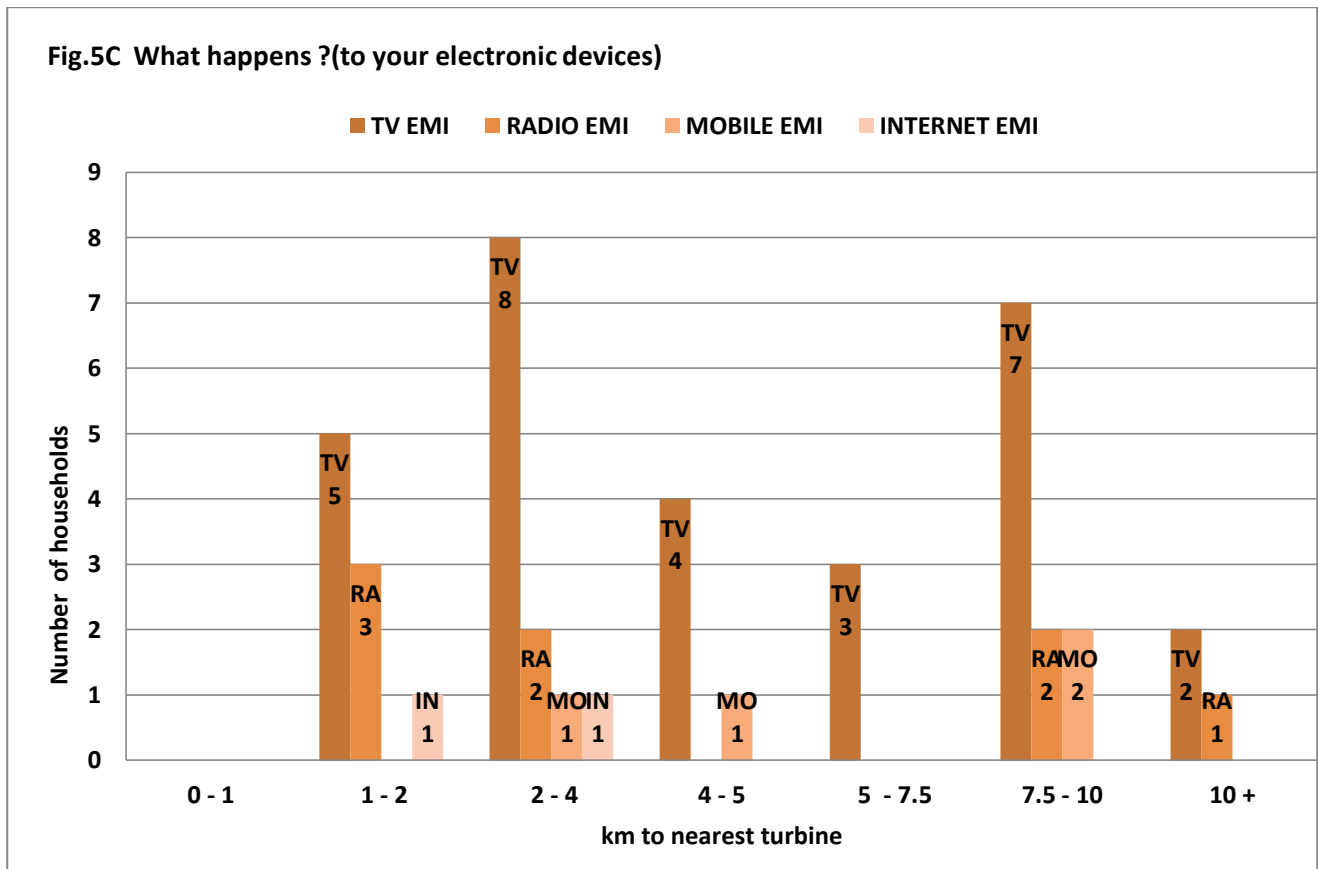
Question 5. (i) 0- 10 km Figure 5B. Distribution - Does the wind farm affect your household watching tv or listening to the radio or other electronic devices?

Figure 5B. Does the wind farm affect your household watching tv or listening to the radio or other electronic devices? 0 - 10 km



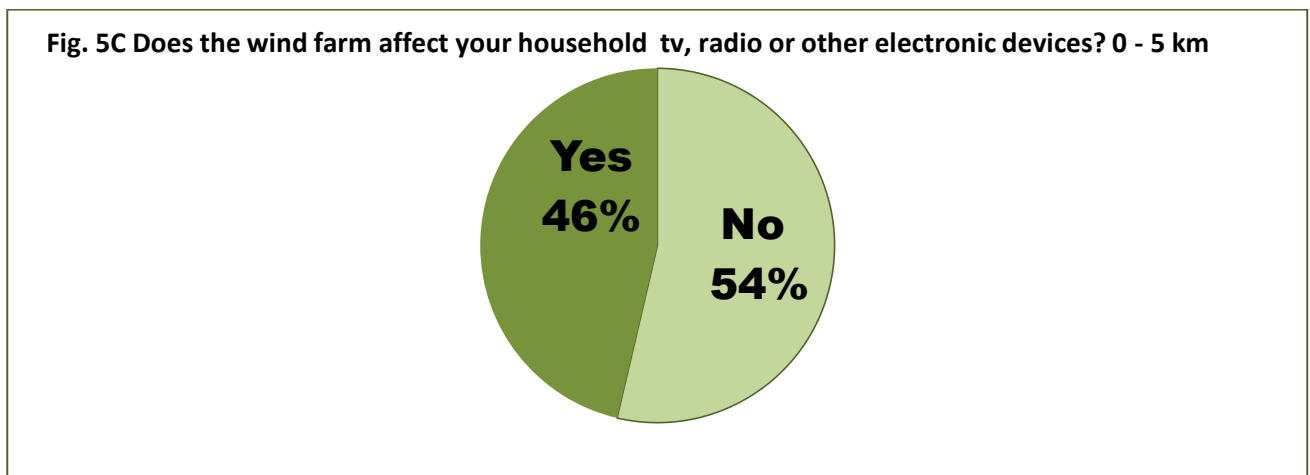
Total of 93 households Yes 31 (33%) No 62 (67%)

Question 5 (ii) Figure 5C. What happens? (to your electronic devices)



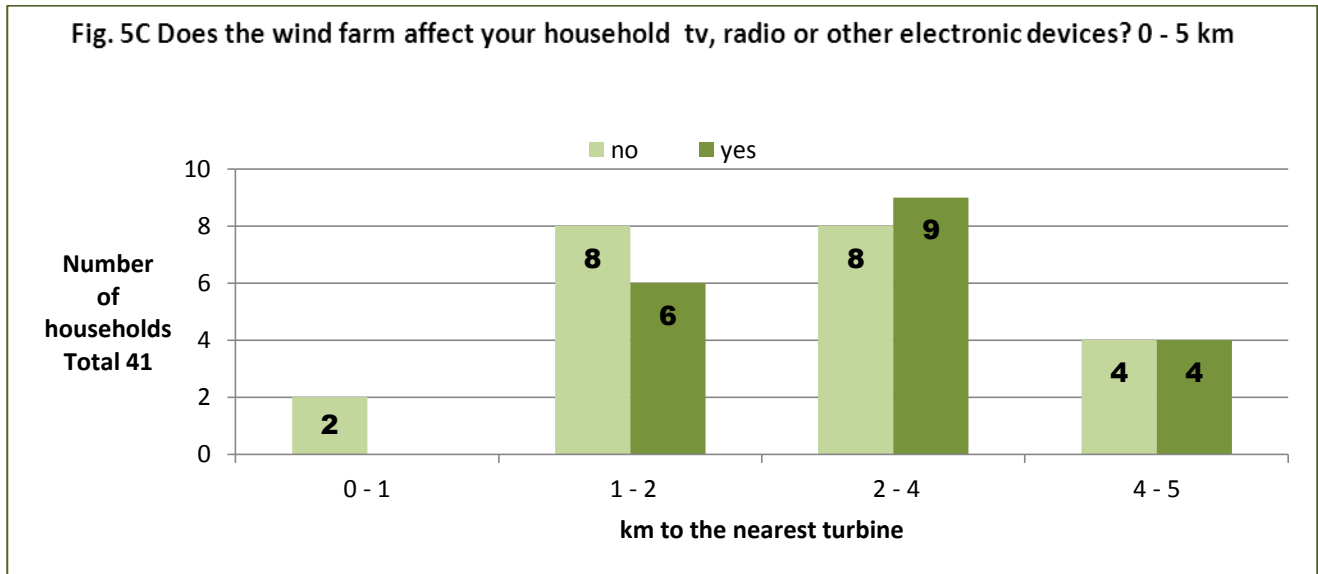
EMI = electromagnetic interference. TV 29, Radio 8, Mobile phone 4, Internet 2

Question 5. (i) 0- 5 km Figure 5C. Does the wind farm affect your household watching tv or listening to the radio or other electronic devices?

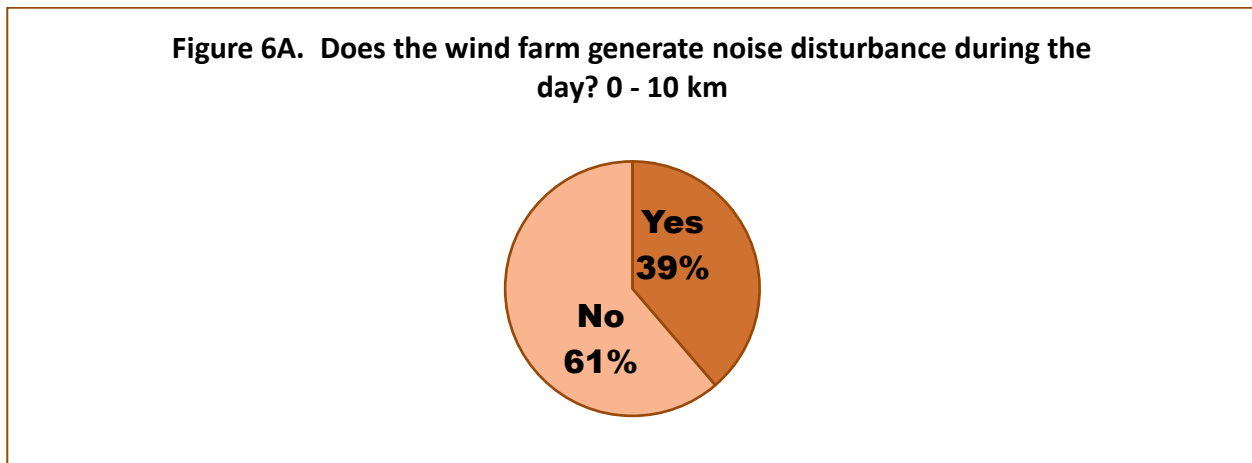


Total of 41 households Yes 19 (46%) No 22 (54%)

Question 5. (i) 0 – 5 km Figure 5D. Distribution - Does the wind farm affect your household watching tv or listening to the radio or other electronic devices ?



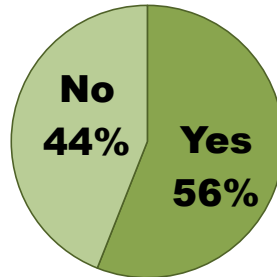
Question 6 (i) 0 – 10 + km from the wind farm Fig. 6A Does the wind farm generate noise disturbance during the day?



Total of 93 households Yes 36 (39%) No 57 (61%)

Question 6 (i) 0 – 5 km from the wind farm Fig. 6B Does the wind farm generate noise disturbance during the day?

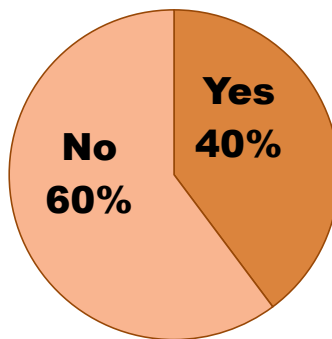
Figure 6B. Does the wind farm generate noise disturbance during the day? 0 -5 km



Total of 41 households Yes 23 (56%) No 18 (44%)

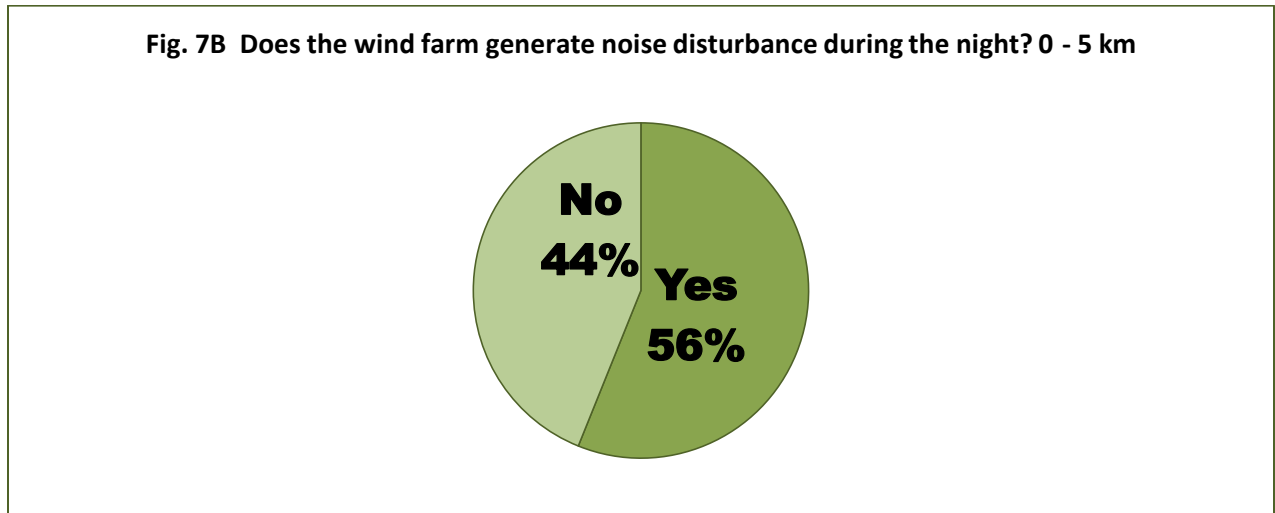
Question 7 (i) 0 – 10 + km from the wind farm Fig. 7A. Does the wind farm generate noise disturbance during the night?

Fig7A Does the wind farm generate noise disturbances during the night?
0 -10 km



Total of 93 households Yes 37 (40 %) No 56 (60 %)

Question 7 (i) 0 – 5 km from the wind farm Figure 7B. Does the wind farm generate noise disturbance during the night?



Total of 41 households Yes 23 (56 %) No 18 (44%)

Questions 6 & 7 (iii) Does the Waterloo wind farm generate noise in the day? night? How does it disturb your household during the day & night?

37 households disturbed out of 93 respondents

21 households described being disturbed by vibration type noise

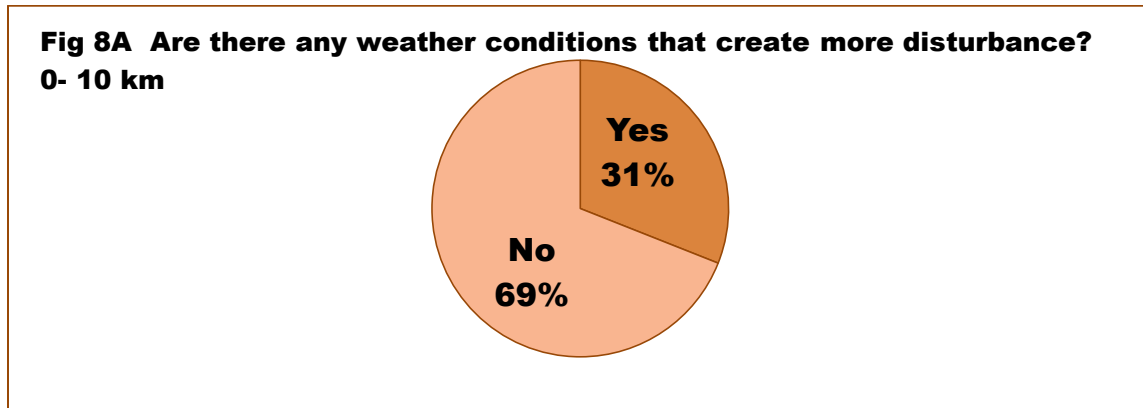
11 households described being disturbed by sounds like a vehicle or storm approaching

19 households described being annoyed by droning, humming, throbbing, whining, drumming, thumping, grinding type noises

5 households were annoyed by vibration of their sheds/farm buildings/fences making it impossible or unpleasant or difficult to work there at times.

Question 8 (i). 0 - 10 + km from the Waterloo wind farm

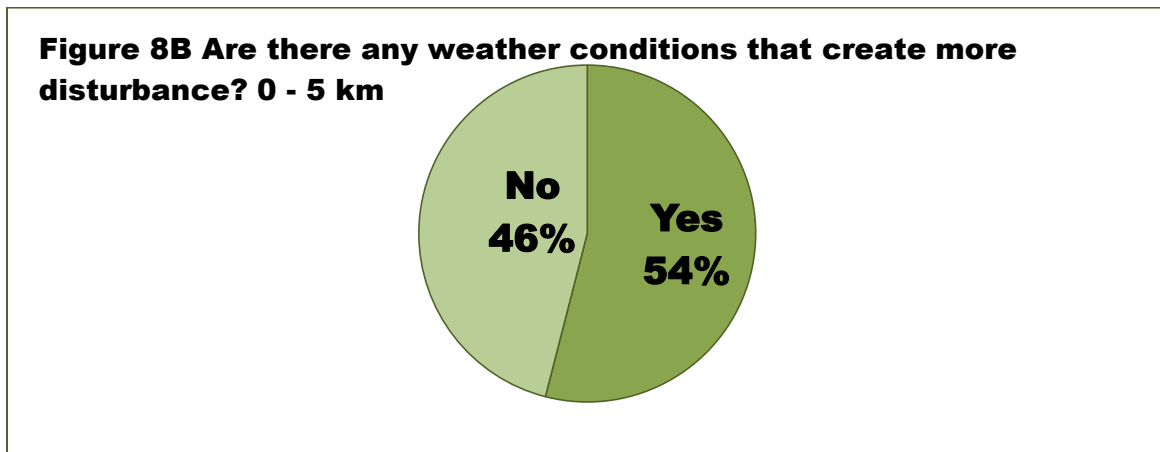
Fig 8A. Are there any particular weather conditions that create more noise disturbance?



Total of 93 households Yes 29 (31%) No 64 (69%)

Question 8 (i). 0 - 5 km from the Waterloo wind farm

Fig 8B Are there any particular weather conditions that create more noise disturbance?

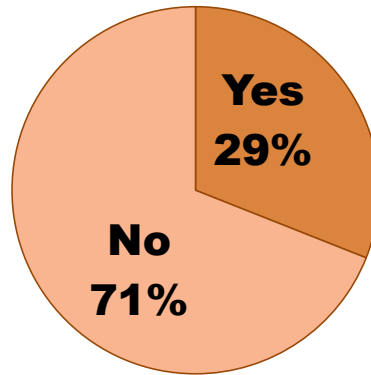


Total of 41 households Yes 22 (54%) No 19 (46%)

See Page 10 for graph of weather conditions which create more disturbance.

Question 9 (i) Fig 9A Is your household's sleep disturbed? 0 – 10 km

Fig. 9A Is your household's sleep disturbed? 0 - 10 km



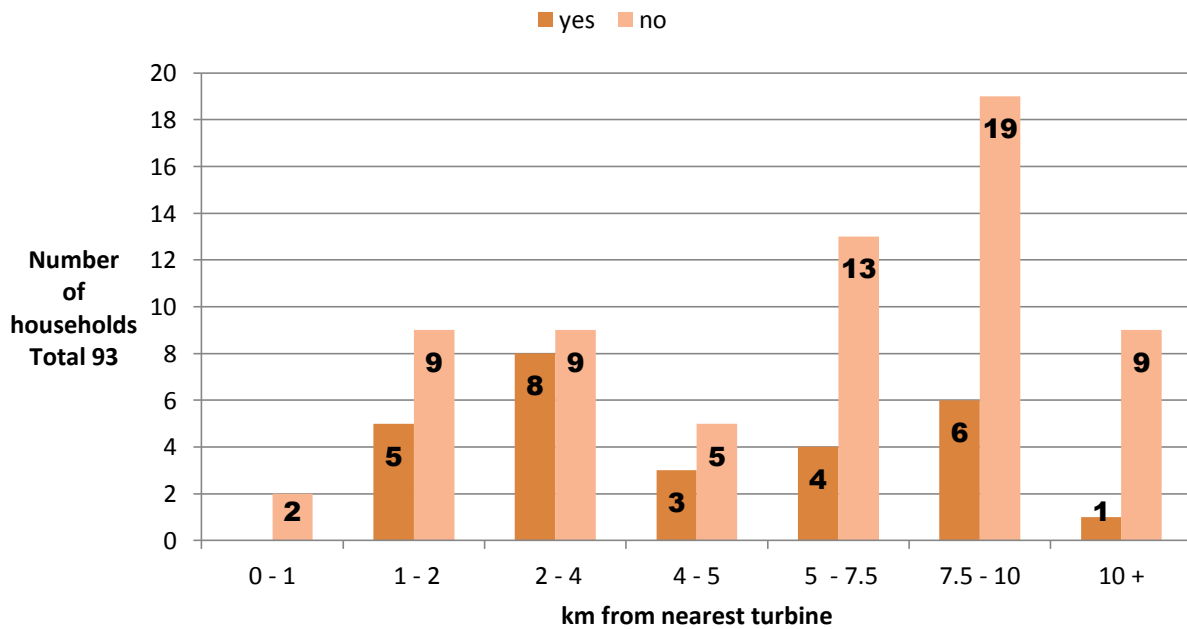
Total 93 Yes 27 (29%) No 66 (71%)

How many nights per week is your sleep disturbed? 0 - 10 km

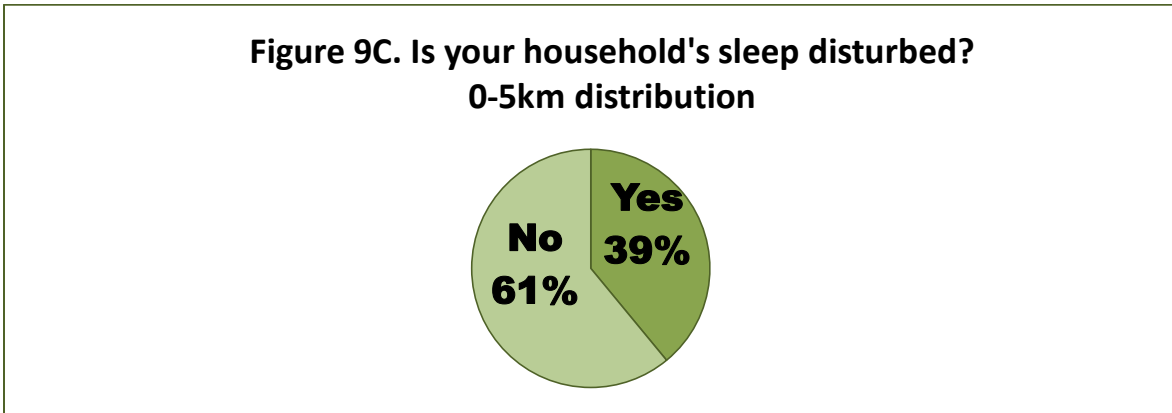
Difficult to quantify – varies with the weather 1 – 7 , many 3 - 7.

Question 9 (i) Fig 9B Is your household's sleep disturbed? 0 – 10 km

Fig 9B Is your household's sleep disturbed?- 0-10 km distribution



Question 9 (i) Is your household’s sleep disturbed? 0 – 5 km

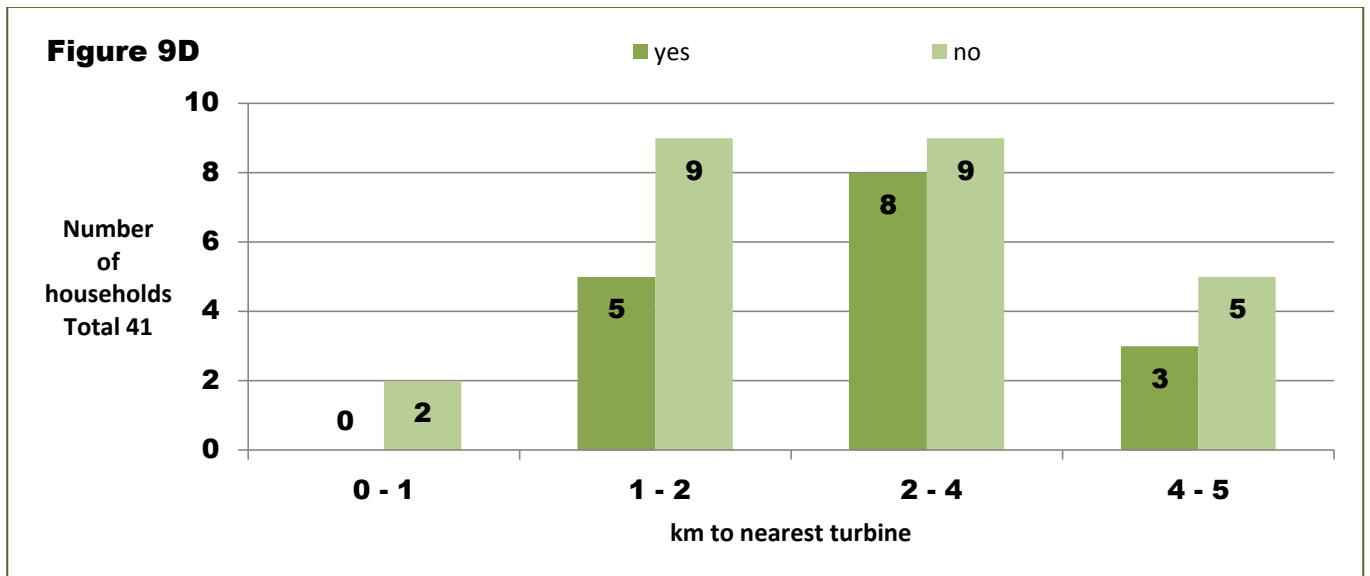


Total of 41 households Yes 16 (39%) No 25 (61%)

How many nights per week is your sleep disturbed? 0 – 5 km

Difficly to quantify – varies with the weather 1 – 7, up to 7 .

Question 9 (i) Figure 9D Is your household’s sleep disturbed? 0 – 5 km

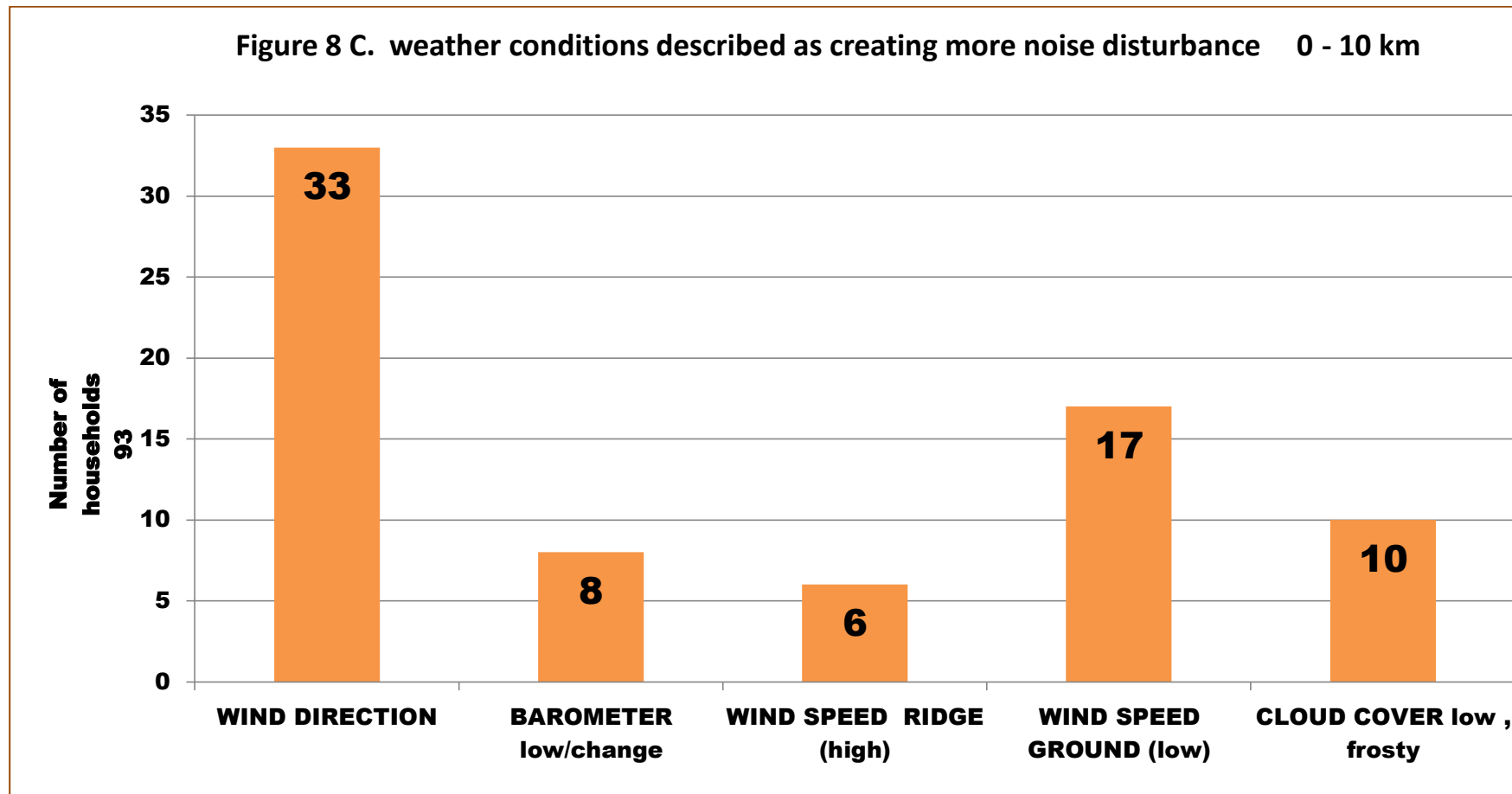


Total 41 Yes 16 (39%) No 25 (61%)

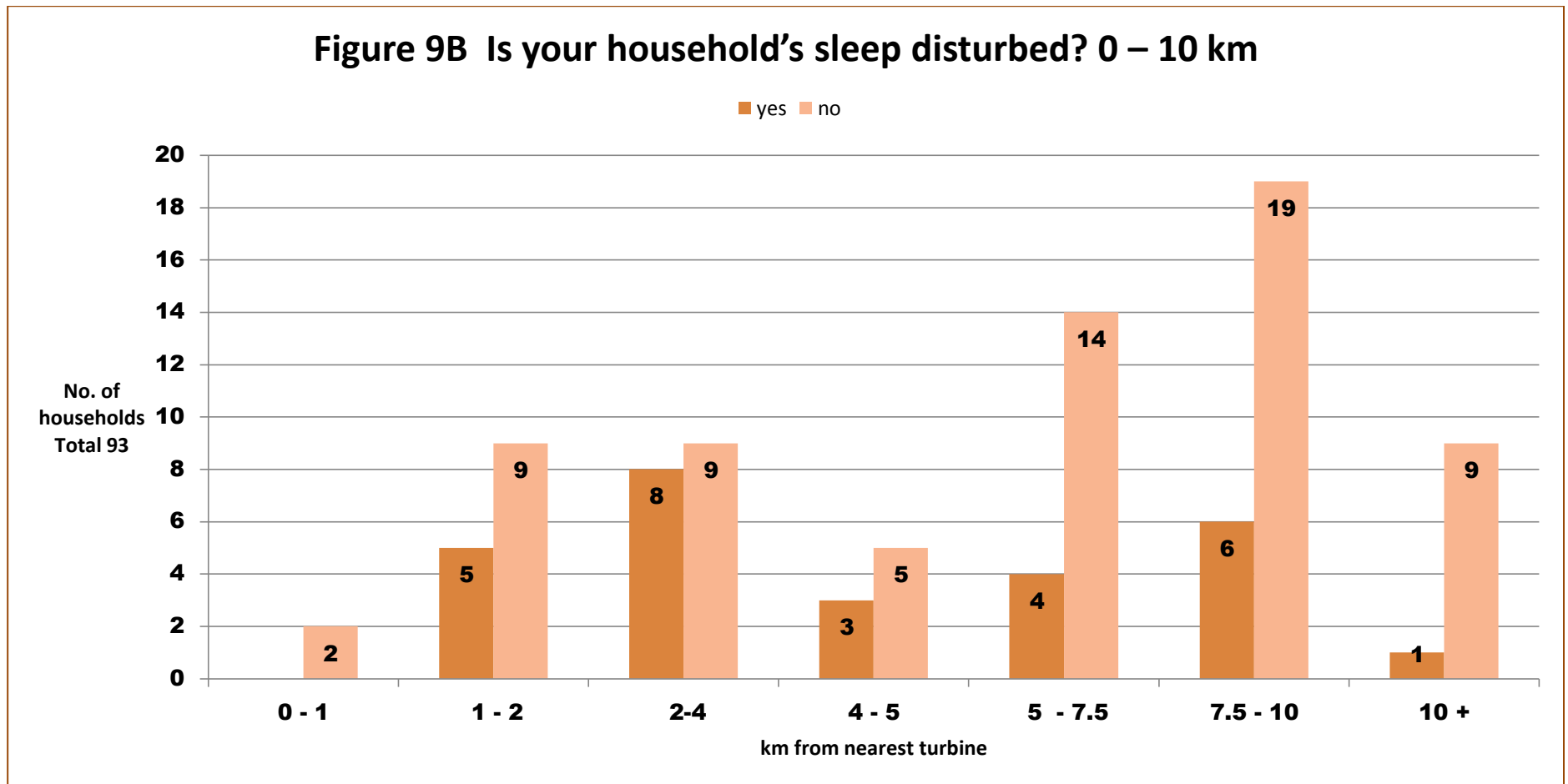
How many nights per week is your sleep disturbed? 0 - 5 km

Difficly to quantify – varies with the weather 1 – 7, many up to 7.

Question 8 (ii) For households who answered *yes* to Question 8 - Are there any particular weather conditions that create more noise disturbance? What happens?



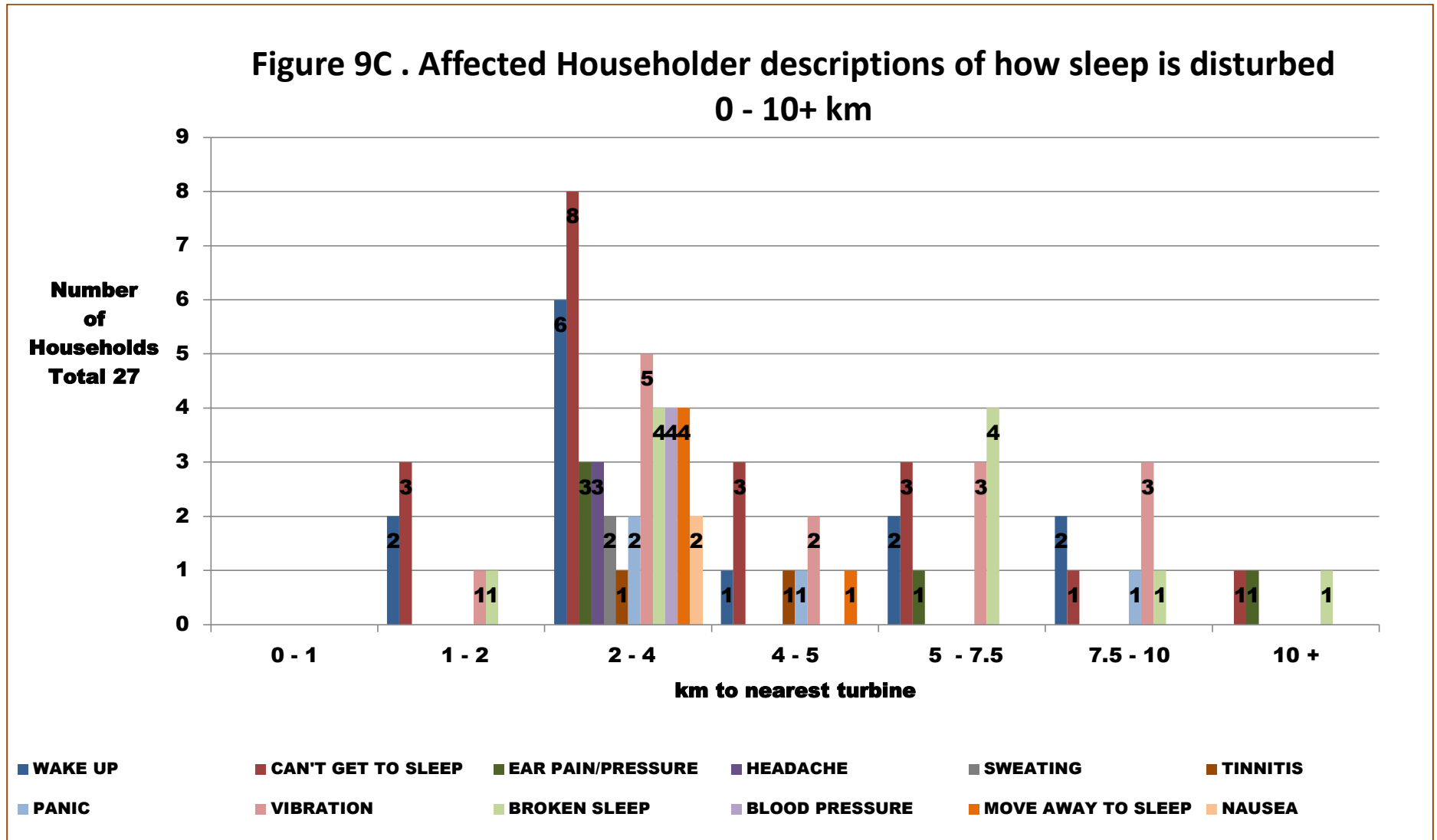
Question 9 (i) Figure 9B . Is your sleep disturbed? 0 - 10 km



Total 93 Yes 27 (29%) No 66 (71%)

9 (ii) How many nights per week is your sleep disturbed? - Difficult to quantify – varies with the weather 1 – 7 , many 3 – 7.

Question 9 (ii) Figure 9C. How are your household disturbed? 0 – 10 km



More information:

www.wind-watch.org/news/2012/07/18/open-letter-to-the-premier-of-south-australia-re-new-survey-at-waterloo-wind-farm/

www.windturbinesyndrome.com/2012/gutsy-woman-takes-aim-at-the-big-wind-goliath-australia/

<http://www.wind-watch.org/documents/evaluation-of-wind-farm-noise-policies-in-south-australia/>

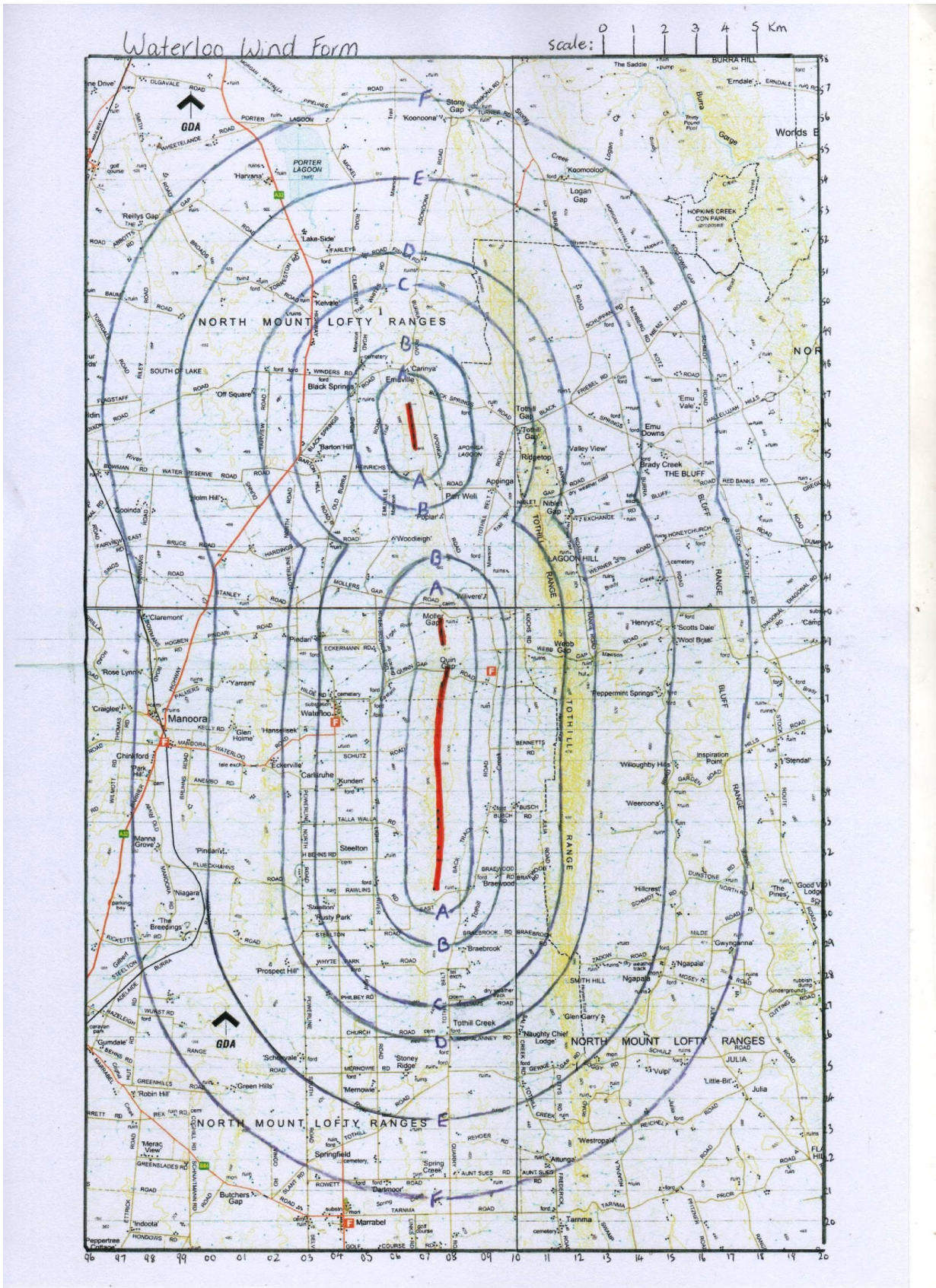
<http://www.wind-watch.org/documents/reviews-of-noise-impact-assessments-stony-gap/>

<http://docs.wind-watch.org/Laurie-Mt-Bodangora-WF-submission.pdf>

Mary Morris

Dip T Science SACAE

GRAD Dip AG. RAC.



Morris, M. Waterloo Wind Farm Survey April 2012 Part 2 – Graphs V4