

**COURT OF APPEAL
SUPREME COURT OF QUEENSLAND**

CA NUMBER: 9268 / 05
NUMBER: BD 4658 of 2004

APPLICANT/APPELLANT: **CAROL JEANETTE BOOTH**
FIRST RESPONDENT: **FRIPPERY PTY LTD (ACN 010 890 007)**
SECOND RESPONDENT: **MERVYN MEYER THOMAS**
THIRD RESPONDENT: **PAMELA ANN THOMAS**

APPLICANT/APPELLANT'S SUMMARY OF RELEVANT FACTS

1. The evidence in the Planning and Environment Court was largely uncontested and the issues raised in this appeal that depend on findings of fact do not rely on observations of witnesses that would place an appellate court at a disadvantage from the trial judge in making the findings.

Admitted killing of flying foxes between 1987 and 2004

2. The respondents admitted to operating various forms of electric grids since purchasing their farm in 1987, but the period relevant to the proceedings in the Planning and Environment Court concerned the period since 19 December 1994 when flying foxes became protected under the *Nature Conservation Act 1992* ("NCA").¹ The trial judge specifically allowed the originating application to be amended to cover this period at the commencement of the trial.²
3. It was not in dispute that the electric grids have been constructed on the land for the purpose of electrocuting, or delivering a non-lethal electric shock to, flying foxes that approach, fly between or depart from the lychee fruit trees on the land. The construction of the grids was also not in dispute. There are currently 6 electric grids constructed on the land for this purpose. The electric grids are constructed of 15 wires, spaced approximately 24 cm apart. The wires are positioned above the height of lychee fruit trees on the land and are strung horizontally between metal poles. The wires are electrified by supply of an electrical current.

¹ The NCA commenced generally on 19 December 1994 (1994 SL No. 472). Flying foxes that are indigenous to Australia became protected wildlife as common mammals on this date with the commencement of the *Nature Conservation (Wildlife) Regulation 1994* (see s 2 and Sch 5).

² The trial judge notes the amendment in his reasons at paragraph 2 (page A354). The Originating Application (Version 3) (page A229) sought to restrain the operation of the grids in the future and, as close as practicable, to return the population of flying foxes to the condition it was in immediately before the nominated offence commencing on 19 December 1994 and continuing until December 2004. Note, in particular, paragraphs 8B-10 of the Originating Application (Version 3) (see page A231).

APPLICANT/APPELLANT'S
SUMMARY OF RELEVANT
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4. The period between 1987 and 19 December 1994 is not controversial because it was prior to the commencement of the NCA and the operation by the respondents' of electric grids to kill flying foxes was lawful during that period. The second respondent admitted that there were two electric grids constructed to kill flying foxes on the farm when it was purchased in 1987.³ The original grids were removed⁴ and the second respondent admitted constructing two grids that were intended to kill flying foxes in 1989,⁵ then further grids until there were a total of 7 grids operating in 1994.⁶ The second respondent estimated that each of this model of the grid killed, on average, 30 flying foxes per night⁷ and was operated for approximately 55 nights each year,⁸ although this could vary between years with the number of flying foxes in the orchard and fruit availability. Based on the average number of flying foxes killed per night (30), and the number of grids⁹ constructed each year (2-7), and 55 nights of operation, the respondents admitted to killing in the order of 39,600 flying foxes between 1989 and 1994 using their electric grids.¹⁰
5. During the period between 19 December 1994 and 1997 the second respondent admitted to using 9 grids that were intended to kill flying foxes.¹¹ In 1997 the second respondent built another grid that was intended to operate at non-lethal levels but still killed "approximately" 5 per night.¹² Based on the number of grids operated in 1995, 1996 and 1997,¹³ an average kill rate of 30 flying foxes per night on each of 9 grids, an average kill rate of 5 per night on one grid in 1997, and the operation of each grid for 55 nights, the respondents admitted to killing in the order of 44,875 flying foxes between 19 December 1994 and 1997.
6. Commencing in 1997 and continuing until 2004 when the "MKVII" or "Mark VII" electric grid was developed, the respondents admitted to trialing various models of electric grids that they intended to be non-lethal to flying foxes.¹⁴ The various models were said to have progressively reduced the numbers of flying foxes that the second respondent observed to have been killed by the grids. The first (unnamed) model reduced observed mortality "from approximately 30 to 5

³ Page A99, lines 5-8 and page A101, lines 29-30.

⁴ Page A102, line 10.

⁵ Page A103, lines 3-20.

⁶ 2 grids in 1989, 1990, 1991; 6 grids in 1992 and 1993; 7 grids in 1994 (see pages A103-A104).

⁷ The second respondent used the figure of 30 deaths per night as the benchmark for the lethal grids in his affidavit (pages A107, lines 1-10, and A303-A304, paragraphs 16, 17, 20 and 23). At points in his evidence he contradicted this and stated it was a "maximum" (e.g. page A129, lines 1-30), but he ultimately he accepted that 30 was the "approximate" number killed each night on the early "Fyre Fox" lethal system (see pages A176-A178, particularly A177, lines 42-43).

⁸ Page A302, paragraph 11.

⁹ The second respondent stated in cross-examination that the figures in his affidavit were the death rate "per grid" rather than the total death rate across the whole farm (see page A106, lines 29-30 and page A129, lines 30-41).

¹⁰ The second respondent accepted that total flying foxes killed could be calculated by multiplying the average numbers killed by the number of nights of operation. For example in transcript, at page A93, lines 42-43, he makes the calculation that for "an average of five bats killed per night, so over 30 days that would be 150 bats." This statement was made when discussing "some matters about casualty the rates ... experienced of the bats in the early models" (page A92, lines 2-3) and the Mark VII grid. When the consequences of this calculation were raised with him in cross-examination, he thought that, "it wasn't as straightforward as that" (see page A155, line 24).

¹¹ In addition to the grids noted in footnote 6, two additional grids were constructed in 1995 (see page A104, lines 20-40).

¹² Page A303, paragraph 16.

¹³ 9 grids in 1995;

¹⁴ This is conveniently described in the second respondent's affidavit at A302-A304, paras 16-23.

per night”.¹⁵ The next model (the “MKIV”) reduced observed mortality “from approximately 30 to 4 per night”.¹⁶ The next model (the “MKV”) reduced observed mortality “from approximately 30 to 3 per night”.¹⁷ The next model (the “MKVI”) reduced observed mortality “from approximately 30 to just 1 or 2 per night”.¹⁸ Based on the number of grids operated between 1998-2004,¹⁹ the average kill rates per night of each of the models of the grids, and the operation of each grid for 55 nights, the respondents admitted to killing in the order of 8,745 flying foxes between 1998 and 2004.

7. The 2004 year provides the best example of how such large numbers are logically inferred from multiplying the admitted numbers of grids, approximate killing rates for each grid and number of nights of operation, as set out in the following table:²⁰

Table of flying fox deaths during 2004

Details of grids in use during 2004	No. killed
1 MKIV grid x 4 flying foxes killed/night x 55 nights	220
2 MKV grids x 3 flying foxes killed/night x 55 nights	330
2 MKVI grids x 1.5 flying foxes killed/night x 55 nights	165
1 MKVII grid x 0 flying foxes killed/night x 55 nights	0
<u>TOTAL</u>	<u>715</u>

Deaths observed by the applicant

8. The applicant and another witness gave evidence, which was accepted by the trial judge,²¹ that on 16 and 17 December 2004 they entered the respondents’ property and observed 29 dead flying foxes after searching only part of the property.²² There was no dispute that all of these animals were Black flying foxes (*Pteropus alecto*). These numbers are consistent with the rates of deaths that can be calculated from the respondents’ admissions set out previously.

Expert evidence of likely effects of MKVII grid on flying foxes

9. Objection was taken to the second respondent giving opinion evidence on whether the electric grids were lethal or caused harm or injury to flying foxes.²³ The only expert evidence on this topic was presented by Dr Hugh Spencer.²⁴
10. Dr Spencer agreed with a question from the trial judge that field testing of any system of theoretically “non-lethal” electric grid was “the only litmus test to see

¹⁵ Page A302, paragraph 16.

¹⁶ Page A302, paragraph 17.

¹⁷ Page A304, paragraph 20.

¹⁸ Page A304, paragraph 23.

¹⁹ An additional grid was constructed in 1997 (see page A104, line 33), making 10 grids in 1997. Some grids were joined in 1998, reducing the total number of grids to 6 (see page A112, lines 4-6). An additional grid was built in 2000 (page A104, line 35) making 7 grids in 2000-2002. The grids were all joined in 2003 (page A137, line 3), making 6 grids in total. Various models were installed after 1997 (see pages A134-A135 in particular).

²⁰ The layout of the electric grids on the farm in that year is shown on a map provided at page A331.

²¹ Reasons at page A359, paragraph 27.

²² Pages A259-A230, paragraphs 12-20 and

²³ The objections are set out in writing at pages A234-A236.

²⁴ Dr Spencer’s affidavit is at pages A292-A298 and his oral evidence is at pages A65-A88 and A238.

whether they work or not.”²⁵ Under cross-examination Dr Spencer also agreed that if the numbers observed by the second respondent to have contacted the MKVII grid without observed fatality were correct, this was a “favourable indicator” that the grid was non-lethal.²⁶

11. However, Dr Spencer stated that, “death does not have to occur immediately ... [It] can be quite delayed.”²⁷
12. Apart from questioning the need for field testing of any electric grid system to determine whether it was non-lethal, Dr Spencer was not challenged on his opinion that that the MKVII grid was likely to cause harm or injury to flying foxes.²⁸

Admissions concerning the purpose of trialing “non-lethal grids”

13. The respondents have known since 1996 of a requirement to hold a damage mitigation permit under the *Nature Conservation Regulation 1994* (“**the Regulations**”) to take flying foxes for the purpose of protecting their lychee crop (that requirement commenced on 19 December 1994).²⁹ The second respondent stated in cross-examination that he originally did not apply for a permit because he, “didn’t believe [the NCA] applied to freehold land.”³⁰ The respondents applied for a damage mitigation permit in late-2003, but withdrew the application before it was granted.³¹ It was not in dispute that the respondents have never held a damage mitigation permit.
14. The second respondent admitted that the “testing” of the electric grids³² or “research” into whether Mark VII damaged or injured bats³³ was not registered under the *Animal Care and Protection Act 2001*.³⁴ Indeed, it was a principal part of the respondents’ case that they had not contravened s 88 of the NCA because they were developing a non-lethal deterrent for flying foxes to protect fruit crops.³⁵ The second respondent has previously represented to the Environmental Protection Agency (“EPA”) he was conducting “research” into the mortality threshold of flying foxes in the trials of his “non-lethal” electric grids. In correspondence of 27 November 2001 from the second respondent to the EPA the second respondent stated in relation to an application for a damage mitigation permit under the Regulations:³⁶

“The mitigation permit submitted was to cover the few bats that could be lost during my research (mortality threshold) or over run of the trial low power fences that I am currently evaluating.”

²⁵ Page A118, lines 26-27.

²⁶ Dr Spencer agreed with this proposition (see page A84, line 15).

²⁷ Page A81, lines 15-16.

²⁸ Page A297, paragraph 27.

²⁹ Page A135, lines 40-45.

³⁰ Page A138, line 15.

³¹ See page R193-R205 of the respondents’ bundle of documents.

³² The second respondent referred repeatedly to “testing” the Mark VII grid (for example, see page A93, lines 1-30, page A95, lines 1-15).

³³ The second respondent referred to “research ... to see the effect [of the Mark VII electric grid] looking for damaged and injured bats” (page A135, lines 39-43).

³⁴ Page A101, lines 5-25.

³⁵ The second respondent intended the technology to be used by other fruit growers (see page A155, line 40-44).

³⁶ Exhibit JAB-9 to the affidavit of Jo-Anne Bragg of 17 June 2005 (see page R185 of the respondents’ bundle of documents).

15. In correspondence of 21 October 2003 from the second respondent to the EPA about the trial and specifications of the non-lethal electric grid the second respondent referred to his “research and development” work and even claimed intellectual property in the design of the grid (emphasis in original):³⁷

“Considerable effort expense and time has been expended in the research and development of this project and I expect reasonable security of MY intellectual property. **Please take note of this**”

16. One other fact that is relevant is that the electric grids protect a commercial operation and the respondents’ decision to expand the lychee orchard after purchasing the farm in 1987 was a commercial decision made in the knowledge there were flying foxes in the area.³⁸

Costs and benefits of different means of crop protection

17. The capital cost of constructing the electric grids was \$150,000³⁹ but there is also an ongoing cost due to loss of fruit because approximately 80-100% of the lychee crop is still lost when the grids are in operation. The second respondent estimated that during the years 1999-2004 the respondents’ farm lost 80-100% of the lychee crop (amounting to 226,000kg of fruit), due to flying foxes (other than in 1999/2000 and 2002/2003 when the crop failed due to rain and drought respectively).⁴⁰ The gross return on this fruit varies widely. The wholesale price can be as high as \$14.80,⁴¹ but the second respondent stated that a “medium price” in 2004 was \$3.60-\$4.00 per kilogram.⁴² Even if the low end of \$3.60 per kilogram is used, the loss of 226,000kg of fruit between 1999 and 2004 amounts to a loss due to flying foxes in the gross return of approximately \$813,600 over 6 years while the electric grid was operating.
18. An alternative method of preventing or controlling loss of fruit due to flying foxes is netting of the orchard using canopy nets. Objection was taken to the second respondent giving opinion evidence on the costs or benefits of netting and the only expert evidence on this topic was from Graham Minifie, a commercial net contractor.⁴³ While the cost of netting the orchard was estimated to be approximately \$700,000 plus GST,⁴⁴ the major benefit of this method of fruit control is that “netting is 100 per cent protective of the crop.”⁴⁵ It is a logical inference that, if the crop had been netted during 1999-2004, the respondents would not have suffered the approximate gross loss of \$813,600 of their crop due to flying foxes. The nets last for “realistically ... 14 to 15 years plus”⁴⁶ and can be insured against cyclones and other natural events.⁴⁷

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20 January 2006**

³⁷ Ibid, page R191.

³⁸ Page A99, lines 5-39, and page A132, lines 35-57.

³⁹ Reasons at page A360, paragraph 31.

⁴⁰ See, particularly, the oral evidence of the second respondent at page A171, lines 22-55.

⁴¹ Page A172, line 8.

⁴² Page A172, line 54.

⁴³ His affidavit is provided at pages A283-A291 and his oral evidence at pages A51-A59.

⁴⁴ Reasons at page A360, paragraph 28.

⁴⁵ Page A53, lines 21-35.

⁴⁶ Page A53, lines 54-55.

⁴⁷ Page A52, lines 38-50.