

## What breeds of dogs are the most ballistic barkers and why?

### CAM DAY

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Barking behaviour is a problem for local authorities, dog owners and for those members of a community who live near a dog that barks persistently.

However, little work has been done to identify which dog breeds are over-represented for barking behaviour and other forms of excessive vocalising and, therefore, which breeds are likely to cause the most disharmony in a community.

The author, a full-time veterinary behaviourist, conducted a retrospective analysis of the barking data of a Local Authority to determine which breeds are over-represented for barking complaints.

#### **Method**

To determine a breed-type popularity rank, the dog registration database of the Gold Coast City Council was reviewed (Gold Coast City Council 2010). Data that was not able to be analysed was eliminated. This gave a listing of almost 60,000 dogs (n=59914).

The breed descriptions, mostly provided by the dogs' owners, were standardised and, where a dog was identified as a cross-bred, the data was pooled with the pure-bred equivalent to create a breed-type rather than a true breed. This created an owner-based morphological description of the types of dogs owned in the study area.

From this, a standardised list of 147 breed-types was created. This allowed a breed-type popularity rank to be created. This list, after data correction (see below), appears in Appendix A, Table 1 and Table 1a below.

This breed-type list was then used to analyse those barking complaints received by the Gold Coast City Council during the period 28th July 2010 to the 28<sup>th</sup> July 2011 (Gold Coast City Council 2010/2011).

That allowed the creation of a breed-type rank which was used to determine the breed-types most commonly featuring in the barking complaints data. (Appendix A, Table 3 and Table 3a).

It should be noted that barking complaints do not necessarily indicate that an individual dog is confirmed to display nuisance barking. Some complaints are of a vexatious or trivial nature. There is no data available to indicate the proportion of vexatious or trivial complaints and the data below is analysed with this bias accepted.

#### **CORRECTING THE DATA**

Using the breed-rank popularity data, the least popular 5% of breeds were eliminated from the data pool because the low ownership level would make results meaningless leaving 95% of the data on which analysis was conducted.

That resulted in a list of 81 breed-types and a population of 59,395 dogs of which 4111 were reported for barking. The average barking frequency of the entire population was 6.92%.

#### **Results**

##### **WHAT BREED-TYPE IS THE MOST POPULAR IN THE GOLD COAST (QUEENSLAND, AUSTRALIA) AREA?**

Table 1 in Appendix A gives the full listing of the modified Breed-type Popularity Rank for the study group.

Table 1a is a subset of Table 1 which, for convenience of display, lists only the 20 most popular breed-types. To allow easy tracking of popular breeds, the popularity rank of each breed is placed beside the breed-type description in column 1.

This data shows that breed-types identified by their owners as resembling Staffordshire Bull Terriers and the Maltese are the two most popular breeds in the Gold Coast Council catchment (Rank 9.98% and 9.31%)

The Labrador is a distant third in popularity (Rank 6.53%).

**Table 1a** BREED-TYPE POPULARITY RANK  
Gold Coast City Council 2010

	BREED-TYPE (Popularity rank in brackets)	POP'N FREQUENCY	POP'N %
1	Staffordshire Bull Terrier (1)	5982	9.98%
2	Maltese (2)	5579	9.31%
3	Labrador (3)	3910	6.53%
4	Poodle (4)	3363	5.61%
5	Border Collie (5)	3258	5.44%
6	Jack Russell Terrier (6)	3110	5.19%
7	Fox Terrier (7)	2900	4.84%
8	Australian Cattle Dog (8)	2867	4.79%
9	Shih Tzu (9)	2110	3.52%
10	German Shepherd (10)	2048	3.42%
11	Australian Kelpie (11)	1796	3.00%
12	Chihuahua (12)	1567	2.62%
13	Golden Retriever (13)	1500	2.50%
14	Cavalier King Charles Spaniel (14)	1426	2.38%
15	Rottweiler (15)	1354	2.26%
16	Cocker Spaniel (16)	1112	1.86%
17	Australian Silky Terrier (17)	1069	1.78%
18	Bichon Frise (18)	991	1.65%
19	Pomeranian (19)	904	1.51%
20	Boxer (20)	815	1.36%
	Subtotal	47661 (80.2%)	
	<b>Total</b>	<b>59395</b>	

*This list of 20 breed-types comprises 24.6% of the breed-type list but 80.2% of the owned dogs in the study area.*

### **What Breed-type is most commonly reported for barking?**

Table 2 in Appendix A gives the full listing of the Barking Frequency Rank of the study population.

Table #2a is a subset of Table 2 which, for convenience of display, lists only the 20 most highly represented breed-types for barking.

These tables show which breed-types deliver the most 'community noise' by their numbers in the community but, at this stage, ignores their popularity and the effect that has.

**Table 2a BARKING FREQUENCY RANK**  
Gold Coast City Council July 2010-July 2011

	BREED-TYPE	POP'N FREQUENCY	BARKING FREQUENCY GCC	% THAT BARK
1	Staffordshire Bull Terrier (1)	5982	416	6.95%
2	Maltese (2)	5579	373	6.69%
3	Labrador (3)	3910	296	7.57%
4	German Shepherd (10)	2048	294	14.36%
5	Border Collie (5)	3258	230	7.06%
6	Jack Russell Terrier (6)	3110	224	7.20%
7	Australian Cattle Dog (8)	2867	201	7.01%
8	Fox Terrier (7)	2900	182	6.28%
9	Poodle (4)	3363	168	5.00%
10	Australian Kelpie (11)	1796	164	9.13%
11	Shih Tzu (9)	2110	157	7.44%
12	Dachshund (21)	812	110	13.55%
13	Chihuahua (12)	1567	101	6.45%
14	Rottweiler (15)	1354	88	6.50%
15	Pomeranian (19)	904	86	9.51%
16	Cavalier King Charles Spaniel (14)	1426	77	5.40%
17	Cocker Spaniel (16)	1112	46	4.14%
18	Australian Silky Terrier (17)	1069	46	4.30%
19	Golden Retriever (13)	1500	45	3.00%
20	Siberian Husky (23)	620	42	6.77%
	Sub total		3346 (81%)	
	<b>TOTAL</b>	<b>59395</b>	<b>4111</b>	<b>Pop average 6.92%</b>

Table 2a shows that this list of 20 breed-types represents 24.6% of the breed-types owned but 81% of the community barking complaints ('community barking noise') for this region.

The three most popular breed-types (Staffordshire Bull Terrier, Maltese, and Labrador) maintain their popularity rank when the data is sorted for barking frequency rather than popularity frequency. However, the proportion of each of these breed-types that bark (6.95%, 6.69%, 7.75% respectively) is not that much different from the average barking proportion for the whole population (6.92%).

Of note is that the German Shepherd breed-type (popularity ranking 10) climbs to the fourth rank in this list with a barking proportion of 14.36%. This proportion is more than double the population average of 6.92%.

The Daschund breed-type (ranking 21) jumps into the top 20 list of barking dogs and takes position 12 on the list with a barking frequency of 13.55%.

The Siberian Husky breed-type (popularity rank 23) jumps into this top 20 list as well, although its barking frequency is less than the population average.

Looking at the popular breed-types which are under-represented for barking, the Golden Retriever moves down 6 rank points and has a barking proportion of 3%.

The Poodle moves down 5 rank points with a barking proportion of 5%.

The Australian Silky Terrier and the Cocker Spaniel also rank low in barking proportion statistics.

**What Breed-type is most over-represented for barking?**

Table 3 in Appendix A gives the full listing of the Barking Proportion Rank of the study population.

This represents the ratio between the number of breed-types listed in the barking complaints compared to the proportion of that breed-type owned in the study area.

Table 3a is a subset of Table 3 which, for convenience of display, lists only the 20 most highly represented breed-types according to their barking proportion.

Table 3a BARKING PROPORTION RANK  
Gold Coast City Council July 2010-July 2011

BREED-TYPE	POP'N FREQUENCY	BARKING FREQUENCY	% PROPORTION BARK
French Bulldog (75)	36	11	30.56%
Akita (77)	33	8	24.24%
Maremma Sheepdog (58)	92	18	19.57%
American Bull Dog (63)	62	12	19.35%
Wolfhound (58)	131	24	18.32%
Bull Arab (51)	132	22	16.67%
Hungarian Vizsla (62)	68	10	14.71%
Papillion (39)	201	29	14.43%
German Shepherd (10)	2048	294	14.36%
American Pit Bull Terrier (61)	73	10	13.70%
Dachshund (21)	812	110	13.55%
Samoyed (49)	140	18	12.86%
Dobermann (35)	305	37	12.13%
Belgian Shepherd (60)	85	10	11.76%
American Staffordshire Terrier (38)	224	25	11.16%
German Koolie (82)	27	3	11.11%
Mastiff (68)	50	5	10.00%
Pomeranian (19)	904	86	9.51%
Australian Kelpie (11)	1796	164	9.13%
Dogue De Bordeaux (66)	55	5	9.09%
Sub total		901 (22%)	
<b>TOTAL</b>	<b>59395</b>	<b>4111</b>	<b>Pop average 6.92%</b>

While this data is interesting, this pool of dogs (n=901) represent only 22% of the barking complaint population.

The majority of breed-types that rank highly in this list are not commonly owned. Therefore, most do not represent a community concern.

However, there are three breed-types that stand out as being important.

These breed-types are the German Shepherd (popularity rank 10, barking proportion 14.36%), the Kelpie (popularity rank 11, barking proportion 9.13%) and the Pomeranian (popularity rank 19, barking proportion 9.51%). These popular dogs are also highly represented for barking complaints.

### ***What are the most popular breed-types that are also over-represented for barking?***

Table 4 condenses the population data by extracting those breeds-types from the 20 most popular owned which are also above the population average (6.92%) for barking.

This sub-population of nine breed-types at 11% of the breeds represented creates half (50.3%) of the barking complaints. These breed-types represent only 43% of the owned dogs in the study area.

The German Shepherd breed-type stands out as being the tenth most popular breed-type (popularity rank 10) but is the most common reported in complaints (14.36%) in this sub-group, moving up the list by 10 rank positions.

**Table 4 THE MOST POPULAR DOGS THAT ARE OVER-REPRESENTED FOR BARKING**  
Gold Coast City Council July 2010-July 2011

BREED-TYPE	POP'N FREQUENCY	BARKING FREQUENCY	% PROPORTION BARK
German Shepherd (10)	2048	294	14.36%
Pomeranian (19)	904	86	9.51%
Australian Kelpie (11)	1796	164	9.13%
Labrador (3)	3910	296	7.57%
Shih Tzu (9)	2110	157	7.44%
Jack Russell Terrier (6)	3110	224	7.20%
Border Collie (5)	3258	230	7.06%
Australian cattle dog (8)	2867	201	7.01%
Staffordshire Bull Terrier (1)	5982	416	6.95%
Sub total	25985 (43%)	2068 (50.3%)	
<b>TOTAL</b>	<b>59395</b>	<b>4111</b>	<b>Pop average 6.92%</b>

**Table 5 THE MOST POPULAR DOGS THAT ARE UNDER-REPRESENTED FOR BARKING**  
Gold Coast City Council July 2010-July 2011

Maltese (2)	5579	373	6.69%
Rottweiler (15)	1354	88	6.50%
Chihuahua (12)	1567	101	6.45%
Fox Terrier (7)	2900	182	6.28%
Cavalier King Charles Spaniel (14)	1426	77	5.40%
Poodle (4)	3363	168	5.00%
Boxer (20)	815	40	4.91%
Australian Silky Terrier (17)	1069	46	4.30%
Cocker Spaniel (16)	1112	46	4.14%
Golden Retriever (13)	1500	45	3.00%
Bichon Frise (18)	991	28	2.83%
Sub total		1194 (29%)	
<b>TOTAL</b>	<b>59395</b>	<b>4111</b>	<b>Pop average 6.92%</b>

However, while the Pomeranian takes second place on this list, it is notable because it ranks at 19 in the top 20 popular breed-types. This means its propensity to bark jumps it 18 positions to take second place.

**What are the most popular breed-types that are under-represented for barking?**

Table 5 presents the opposing data to Table 4 and condenses the remainder of the top 20 most popular breed-types – all of which rank less than the population average for barking.

This list represents those in the ‘most popular’ list that are the least represented for barking, because they are below the population average.

The Poodle breed-type is notable here because it is the fourth most popular breed type but still ranks with a low barking proportion. Its reduced propensity to bark moves it down in this rank 11 positions from a popularity rank of 4 to a barking rank of 15 in this list.

The Golden Retriever and the Bichon Frise breed-types are remarkable because they rank the lowest on the barking proportion list but are still within the twenty most popular breed-types.

## Discussion and Conclusions

### DATA BIAS

The bias in the above data has been partly referred to above.

The Gold Coast City Council lists contain only those dogs registered with the Gold Coast City Council. Registration is compulsory.

While the dog listing is useful, that the data does not include those in the community who choose not to register their dog could create a bias.

Secondly, by creating a breed-type, we are relying on the breed description provided by the owner. Some owners will not be accurate in their determination of the breed of their dog, particularly when the dog is a cross-bred.

Thirdly, the creation of a breed-type is done by relying only on the first-choice description of the breed given by the owner.

For instance, a dog described as a Cattle Dog cross Kelpie would be identified in this data as an Australian Cattle dog breed-type whereas a dog described by the owner as a Kelpie cross Cattle Dog would be described as a Kelpie breed-type.

Thus, the breed-types mentioned should be regarded as a general morphological guide to the appearance of the dogs rather than a true indication of pure-bred dog traits.

Further, the barking dog list is created from community complaints regarding barking. Some of these dogs will not be barking above the community average and some may not be barking at all. Vexatious and trivial complaints are likely to form part of this data but that bias cannot be quantified at this time.

Lastly, the population studied only represents the data of the dogs in the Gold Coast City Council area.

If an analysis was done in other areas of Queensland or Australia and if done overseas, the data and results would be different.

For instance, in a rural community, the breed-type emphasis may be skewed more towards working breeds such as the Cattle Dog and Kelpie, than, for instance, lap dogs like the Pomeranian.

Certainly if the study was done overseas, the data would be different. For instance, in *Worst Breeds for Excessive Barking* (Hart, B and L, 2011) cites the Yorkshire Terrier, Cairn Terrier, Miniature Schnauzer, West Highland White Terrier, Fox Terrier and Beagle as being the most excessive barkers.

### What this data tells us

The most notable findings in this report are:-

1. The Staffordshire Bull Terrier and the Maltese breed-types are the two most commonly owned breeds in the study and the Labrador and Poodle breed-types come in a distant third and fourth. (Table 1a)
2. The most popular 20 breed-types at 14% of all breed-types are responsible for 81% of the barking complaints in the study area (Table 2a).
  - a. Conclusion: - Targeting the owners of such breeds to assist them with barking remedies could substantially reduce community barking noise. (Also refer to point 5 below)
3. The 20 most popular breed-types create the most 'community noise' from barking although some of this group bark much less than the population average.
4. The 20 breed-types which are the most over-represented for their barking proportion (Table 3a) mostly include breed-types which do not rank highly in popularity with the notable exception of the German Shepherd, the Kelpie and the Pomeranian.
  - b. Conclusion: - Being a small group, the owners of such breeds will be easy to target to inform them of their breeds' barking tendency and to render assistance for barking behaviours.
5. Within the top 20 of popular dogs there are nine breed-types which bark more than the population average (Table 4) and these cause half of the barking load in the community.
  - a. Conclusion: - Targeting the owners of these nine breeds to assist them with barking remedies could effectively reduce community barking noise. (Also refer to point 2 above)
6. While the German Shepherd, the Pomeranian and the Kelpie are the worst of the top 20 owned breed-types by their barking proportion (Table 4), the Pomeranian is the one which jumps up this rank most significantly (by 18 rank positions) indicating this breed-type is a problem for barking.
  - a. Conclusion: - These three breed types should be specifically targeted for assistance to ensure the potential for barking is reduced.
7. Encouraging ownership of breeds which are in Table 5, in particular the Golden Retriever and the Bichon Frise, would be an unusual way of reducing some barking noise.

## References

- 1 Gold Coast City Council 2010, Extract of dog registration data. Data on file.
- 2 Gold Coast City Council 2010/2011, Extract of barking dog complaints. Data on file.
- 3 Hart, B and L., *Worst Breeds for Excessive Barking* (cited in BarkingDogs.net , <http://www.barkingdogs.net/excessivebarking.shtml>, viewed 20<sup>th</sup> August 2011)

## Appendix A

Table 1 BREED-TYPE POPULARITY RANK  
Gold Coast City Council 2010

BREED-TYPE	POP'N FREQUENCY	POP'N %
Staffordshire Bull Terrier	5982	9.98%
Maltese	5579	9.31%
Labrador	3910	6.53%
Poodle	3363	5.61%
Border Collie	3258	5.44%
Jack Russell Terrier	3110	5.19%
Fox Terrier	2900	4.84%
Australian cattle dog	2867	4.79%
Shih Tzu	2110	3.52%
German Shepherd	2048	3.42%
Australian Kelpie	1796	3.00%
Chihuahua	1567	2.62%
Golden Retriever	1500	2.50%
Cavalier King Charles Spaniel	1426	2.38%
Rottweiler	1354	2.26%
Cocker Spaniel	1112	1.86%
Australian Silky Terrier	1069	1.78%
Bichon Frise	991	1.65%
Pomeranian	904	1.51%
Boxer	815	1.36%
Dachshund	812	1.36%
Rhodesian Ridgeback	725	1.21%
Siberian Husky	620	1.03%
Beagle	611	1.02%
Lhasa Apso	604	1.01%
Schnauzer	503	0.84%
Bull Terrier	418	0.70%
West highland Terrier	406	0.68%
Bull Mastiff	402	0.67%
Tibetan Spaniel	396	0.66%
Pug	361	0.60%
Shar Pei	360	0.60%
Dalmatian	311	0.52%
Dobermann	305	0.51%
Great Dane	273	0.46%

BREED-TYPE	POP'N FREQUENCY	POP'N %
Australian Terrier	238	0.40%
American Staffordshire Terrier	224	0.37%
Papillion	201	0.34%
Bulldog	199	0.33%
Collie	197	0.33%
Corgi	182	0.30%
Neapolitan Mastiff	179	0.30%
Alaskan Malamute	174	0.29%
German Shorthaired pointer	167	0.28%
Sheltie	161	0.27%
Tenterfield Terrier	161	0.27%
Greyhound	158	0.26%
Samoyed	140	0.23%
Whippet	134	0.22%
Bull Arab	132	0.22%
Weimaraner	132	0.22%
Springer Spaniel	131	0.22%
Wolfhound	131	0.22%
Cairn Terrier	114	0.19%
Keeshond	113	0.19%
Yorkshire Terrier	98	0.16%
Maremma Sheepdog	92	0.15%
Japanese Spitz	90	0.15%
Belgian Shepherd	85	0.14%
American Pit Bull Terrier	73	0.12%
Hungarian Vizsla	68	0.11%
American Bull Dog	62	0.10%
Basenji	56	0.09%
Chow Chow	56	0.09%
Dogue De Bordeaux	55	0.09%
Australian Shepherd	50	0.08%
Mastiff	50	0.08%
Basset Hound	49	0.08%
Italian Greyhound	49	0.08%
Airedale Terrier	47	0.08%

**Appendix A • CONTINUED****Table 1 BREED-TYPE POPULARITY RANK • CONTINUED**  
Gold Coast City Council 2010

BREED-TYPE	POP'N FREQUENCY	POP'N %	BREED-TYPE	POP'N FREQUENCY	POP'N %
Pekingese	44	0.07%	Old English Sheepdog	33	0.06%
Scottish Terrier	44	0.07%	Chinese Crested Dog	32	0.05%
Miniature Pinscher	40	0.07%	Boston Terrier	28	0.05%
French Bulldog	36	0.06%	Sheba Inu	28	0.05%
St Bernard	34	0.06%	German Koolie	27	0.05%
Akita	33	0.06%	n = 81		
			<b>TOTAL</b>	<b>59395</b>	

**Table 2 BARKING FREQUENCY RANK**  
Gold Coast City Council July 2010-July 2011

BREED-TYPE	POP'N FREQUENCY	BARKING FREQUENCY GCC	% PROPORTION BARK
Staffordshire Bull Terrier	5982	416	6.95%
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Shih Tzu	2110	157	7.44%
Dachshund	812	110	13.55%
Chihuahua	1567	101	6.45%
Rottweiler	1354	88	6.50%
Pomeranian	904	86	9.51%
Cavalier King Charles Spaniel	1426	77	5.40%
Cocker Spaniel	1112	46	4.14%
Australian Silky Terrier	1069	46	4.30%
Golden Retriever	1500	45	3.00%
Siberian Husky	620	42	6.77%
Boxer	815	40	4.91%
Dobermann	305	37	12.13%
Beagle	611	35	5.73%
Schnauzer	503	33	6.56%
Lhasa Apso	604	31	5.13%
Rhodesian Ridgeback	725	29	4.00%
Papillion	201	29	14.43%
Bichon Frise	991	28	2.83%
Tibetan Spaniel	396	28	7.07%
Shar Pei	360	28	7.78%



**Appendix A** • CONTINUED

**Table 2** BARKING FREQUENCY RANK • CONTINUED  
Gold Coast City Council July 2010-July 2011

BREED-TYPE	POP'N FREQUENCY	BARKING FREQUENCY GCC	% PROPORTION BARK
West highland Terrier	406	25	6.16%
Pug	361	25	6.93%
American Staffordshire Terrier	224	25	11.16%
Great Dane	273	24	8.79%
Wolfhound	131	24	18.32%
Bull Mastiff	402	22	5.47%
Bull Arab	132	22	16.67%
Bull Terrier	418	19	4.55%
Samoyed	140	18	12.86%
Maremma Sheepdog	92	18	19.57%
Neapolitan Mastiff	179	16	8.94%
Collie	197	15	7.61%
Corgi	182	12	6.59%
American Bull Dog	62	12	19.35%
French Bulldog	36	11	30.56%
Dalmatian	311	10	3.22%
Australian Terrier	238	10	4.20%
Alaskan Malamute	174	10	5.75%
Belgian Shepherd	85	10	11.76%
American Pit Bull Terrier	73	10	13.70%
Hungarian Vizsla	68	10	14.71%
Sheltie	161	9	5.59%
Akita	33	8	24.24%
Tenterfield Terrier	161	7	4.35%
Cairn Terrier	114	7	6.14%
German Shorthaired pointer	167	5	2.99%
Greyhound	158	5	3.16%
Japanese Spitz	90	5	5.56%
Dogue De Bordeaux	55	5	9.09%
Mastiff	50	5	10.00%
Bulldog	199	4	2.01%
Springer Spaniel	131	4	3.05%
Basenji	56	4	7.14%
Australian Shepherd	50	4	8.00%
Basset Hound	49	4	8.16%
Weimaraner	132	3	2.27%
Airedale Terrier	47	3	6.38%
German Koolie	27	3	11.11%
Whippet	134	2	1.49%
Keeshond	113	2	1.77%
Miniature Pinscher	40	2	5.00%
St Bernard	34	2	5.88%
Old English Sheepdog	33	2	6.06%

**Appendix A • CONTINUED**Table 2 BARKING FREQUENCY RANK • CONTINUED  
Gold Coast City Council July 2010-July 2011

BREED-TYPE	POP'N FREQUENCY	BARKING FREQUENCY GCC	% PROPORTION BARK
Yorkshire Terrier	98	1	1.02%
Italian Greyhound	49	1	2.04%
Chinese Crested Dog	32	1	3.13%
Sheba Inu	28	1	3.57%
Chow Chow	56	0	0.00%
Pekingese	44	0	0.00%
Scottish Terrier	44	0	0.00%
Boston Terrier	28	0	0.00%
n = 81			
<b>TOTAL</b>	<b>59395</b>		

Table 3 BARKING PROPORTION RANK  
Gold Coast City Council July 2010-July 2011

BREED-TYPE	POP'N FREQUENCY	BARKING FREQUENCY	% PROPORTION BARK
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American Bull Dog	62	12	19.35%
Wolfhound	131	24	18.32%
Bull Arab	132	22	16.67%
Hungarian Vizsla	68	10	14.71%
Papillion	201	29	14.43%
German Shepherd	2048	294	14.36%
American Pit Bull Terrier	73	10	13.70%
Dachshund	812	110	13.55%
Samoyed	140	18	12.86%
Dobermann	305	37	12.13%
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Neapolitan Mastiff	179	16	8.94%
Great Dane	273	24	8.79%
Basset Hound	49	4	8.16%
Australian Shepherd	50	4	8.00%
Shar Pei	360	28	7.78%
Collie	197	15	7.61%

**Appendix A • CONTINUED**

**Table 3 BARKING PROPORTION RANK • CONTINUED**  
Gold Coast City Council July 2010-July 2011

BREED-TYPE	POP'N FREQUENCY	BARKING FREQUENCY	% PROPORTION BARK
Labrador	3910	296	7.57%
Shih Tzu	2110	157	7.44%
Jack Russell Terrier	3110	224	7.20%
Basenji	56	4	7.14%
Tibetan Spaniel	396	28	7.07%
Border Collie	3258	230	7.06%
Australian cattle dog	2867	201	7.01%
Staffordshire Bull Terrier	5982	416	6.95%
Pug	361	25	6.93%
Siberian Husky	620	42	6.77%
Maltese	5579	373	6.69%
Corgi	182	12	6.59%
Schnauzer	503	33	6.56%
Rottweiler	1354	88	6.50%
Chihuahua	1567	101	6.45%
Airedale Terrier	47	3	6.38%
Fox Terrier	2900	182	6.28%
West highland Terrier	406	25	6.16%
Cairn Terrier	114	7	6.14%
Old English Sheepdog	33	2	6.06%
St Bernard	34	2	5.88%
Alaskan Malamute	174	10	5.75%
Beagle	611	35	5.73%
Sheltie	161	9	5.59%
Japanese Spitz	90	5	5.56%
Bull Mastiff	402	22	5.47%
Cavalier King Charles Spaniel	1426	77	5.40%
Lhasa Apso	604	31	5.13%
Miniature Pinscher	40	2	5.00%
Poodle	3363	168	5.00%
Boxer	815	40	4.91%
Bull Terrier	418	19	4.55%
Tenterfield Terrier	161	7	4.35%
Australian Silky Terrier	1069	46	4.30%
Australian Terrier	238	10	4.20%
Cocker Spaniel	1112	46	4.14%
Rhodesian Ridgeback	725	29	4.00%
Sheba Inu	28	1	3.57%
Dalmatian	311	10	3.22%
Greyhound	158	5	3.16%
Chinese Crested Dog	32	1	3.13%
Springer Spaniel	131	4	3.05%
Golden Retriever	1500	45	3.00%

**Appendix A • CONTINUED**

**Table 3 BARKING PROPORTION RANK • CONTINUED**  
Gold Coast City Council July 2010-July 2011

BREED-TYPE	POP'N FREQUENCY	BARKING FREQUENCY	% PROPORTION BARK
German Shorthaired pointer	167	5	2.99%
Bichon Frise	991	28	2.83%
Weimaraner	132	3	2.27%
Italian Greyhound	49	1	2.04%
Bulldog	199	4	2.01%
Keeshond	113	2	1.77%
Whippet	134	2	1.49%
Yorkshire Terrier	98	1	1.02%
Chow Chow	56	0	0.00%
Pekingese	44	0	0.00%
Scottish Terrier	44	0	0.00%
Boston Terrier	28	0	0.00%
n = 81			
<b>TOTAL</b>	<b>59395</b>		

**BIOGRAPHY**

***Dr Cam Day***

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 BVSc BSc MACVS (Animal Behaviour)  
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Dr Cam Day is a full-time veterinary behaviour consultant. He consults with dog and cat owners on a daily basis, helping to solve complex behavioural problems including aggressive behaviours and excessive barking.



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