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Cat management for Magnetic Island

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ABSTRACT

Measuring outcomes in urban animal management has never been a strength. In fact, doing research and development of any kind in the field of animal management has had little support in the past. Animal management has tended to be seen as reactive, regulatory — something councils do because they have to, not because they want to.

Murray and Scriggins at the Adelaide UAM Conference in 1997, reported on research work the Townsville City Council was doing with animal management (principally cat management) on Magnetic Island. The project measured attitudes and indicators both before and after implementing a specific Local Law for the Island. It was also an opportunity to see how supportive this 'test' community was of both the need for animal management services and for the measures that were used in this case.

The main idea behind the Magnetic Island project was to test the notion that animal management can be shown in a positive light as a valuable community service — pro-community and pro-pet and pro-active. The authors think this has been achieved and venture to suggest that the 'unattractive' tag for animal management is today less relevant as a result.

The fact that Townsville City Council was prepared to invest some \$20,000 in this undertaking is in itself an indication of a new attitude. This has been a major undertaking in animal management research and development. It hopefully signals further evidence of an emerging infrastructure that has for so long been considered a forgotten duty in local government.

EXECUTIVE SUMMARY

To evaluate the level of public support for urban animal management strategies, including a cat management plan, on Magnetic Island, the Townsville City Council commissioned a questionnaire survey of residents. The survey was carried out in March 1999, 14 months after the implementation of the cat management plan. Of the 1081 questionnaires distributed, 623 questionnaires completed by residents 16 years and older were returned, a response rate of 60%.

Keeping of pets on Magnetic Island

Support for keeping dogs on Magnetic Island was high with 78% of residents in favour, but support for cats as pets on the island was much less strong at 56%.

The average number of pets per respondent was similar for the 1995 and 1999 surveys. This suggests that implementation of the pet management plan for Magnetic Island has not discouraged people from owning pets. This result indicates that the council's animal management program is supporting pet ownership.

Support for animal management measures

The support for 8 dog and 6 cat management measures was very high. For dogs activities currently controlled by local laws and actively implemented (leash restraint in public, dog registration, prosecution of owners of dogs that attack) had levels of support greater than 90%. Activities currently controlled by local laws but difficult to implement in practice (control of barking and fouling of public places) also had high levels of support. Provision of special areas had a high level of support, but not as high as the other strategies. 90% of respondents supported special 'no-dog' areas and 84% supported the concept of 'off-leash' areas. The support for all 8 dog management strategies was very high with all being supported by 80% or more of people surveyed.

Support for microchip identification of cats was very high at 96%. Support for strategies to limit breeding was also very high with 93% in favour of desexing of pet cats and 92% supporting owners of sexually entire cats being registered as breeders and having secure facilities. The levels of support for cat management measures have increased with the implementation of cat management strategies on Magnetic Island.

The Magnetic Island community has expressed a very high level of support for the council's current pet management strategies. They are in favour of new strategies dealing with provision of special areas to both prohibit dogs and allow dogs more freedom. The level of support for cat management strategies has in general increased with implementation of the cat management plan for Magnetic Island. This is a very encouraging response since it demonstrates that the plan has been implemented in a manner that has improved support for such measures.

Evaluation of animal management measures

The percentage of people who think that the council's animal control measures are not working well is reasonably low at 15%. However the proportion of residents who think they are working well is disappointingly low at 41%, owing to the majority of residents being undecided. Residents appeared to have a poor level of knowledge about council's animal control policies and how they are implemented. Residents of Magnetic Island showed a high level of uncertainty about evaluating the general performance of Townsville City Council in animal control.

The council itself rarely promotes animal management as a package to the public. It does promote individual components; dog registration, leashing in public, responses to dog attacks, cat microchipping, etc. However, if the council wishes residents to have an overall knowledge of its animal control programs, how these are implemented and how success of the programs can be evaluated, it should consider educating the public in this as well as some of the specific components.

Interaction with council animal control personnel

The percentage of people satisfied with the interaction with council animal control personnel differed with people who complained being less satisfied (48% satisfied) than people who were the object of complaints (82% satisfied). The majority of residents of Magnetic Island who interacted with animal control personnel over the preceding 6 months thought the animal control personnel were polite and competent. Performance was perceived as good in these features. The reason for the low level of satisfaction of people who complained should be investigated.

Evaluation of enforcement

The rating by respondents of the degree of enforcement by council of 6 dog control measures showed that a large percentage (>30%) wanted a firmer level of enforcement in all areas except registration of dogs where a firmer level of enforcement was also wanted, but by a lower percentage (19%). Overall if the responses to all 6 dog management measures are averaged, 40% of the residents of Magnetic Island want a firmer level of enforcement. Few residents rated enforcement as too strict. This illustrates that gains for all measures could be made in the 'OK' rating without a corresponding increase in the 'too strict' rating.

Similarly to enforcement of dog management measures a significant proportion of residents want firmer enforcement of cat identification, the major cat management measure. Since the percentage of people who consider enforcement to be too strict is very low, increased enforcement of cat identification will have popular support. Additionally, residents of Magnetic Island wanted council to enforce dog management measures to a greater degree than cat identification.

Getting the message to residents

Magnetic Island newspapers were the most useful medium for telling residents about council activities, followed by council mail or flyers. Public meetings rated low as a means of disseminating information to residents.

Nuisances on Magnetic Island

The majority of residents had no nuisances in their neighbourhood, less than 10% of residents experiencing a nuisance they rated as 'big'. However, pets were the issue responsible for the most aggravation. Most people complained about dogs. These results indicate that council's strategies are working, but that further effort at reducing nuisances caused by pets is required. The most common problem was barking which accounted for 31% of the nuisances. 57% of dog nuisances were due to a set of 6 nuisance behaviours which could be controlled by adequate fencing to keep dogs confined and owners ensuring that when dogs were in public places they were restrained on a leash and under control.

Of the nuisances caused by cats, council could possibly have played a role to solve about 80% since most were related to cats being allowed to move beyond the confines of their owners' properties. Council should determine how to enforce the local laws dealing with roaming of cats.

Residents reported many more nuisances in the questionnaire than they had reported to council animal management personnel. Council should investigate strategies to overcome residents' apparent reluctance to report nuisances. Basic research is needed on residents' attitudes, beliefs and behaviour in this area and on what obstruct official reporting.

The number, degree and frequency of nuisances caused by wildlife illustrate that some residents want all animals controlled, wild and domestic. However, control of wild animals even within built up areas is not the province of city councils, but is the concern of the Department of Environment.

Identification of cats

Cat owners found the procedure of identification by insertion of a microchip largely problem free with 93% having no problems while the other 7% had only slight problems. The owners who did not have their cats identified appeared not to have objected on a matter of principle. For these owners dissemination of correct information would have possibly solved the problem for 9%. If owners are asked to bear the full cost of microchipping, this could have a negative effect on compliance and council should look at strategies to reduce this factor.

Conclusion

Overall the animal management strategies have a very high level of support from residents, and appear to be working reasonably well. Residents would like a greater level of enforcement of Local Laws for both dogs and cats. Pet tolerance depends on pets causing minimal public nuisance, and residents of Magnetic Island are strongly in favour of this philosophy.

CATSCAN MAGNETIC SURVEY

Magnetic Island provides a unique and somewhat ideal testing ground for management strategies for domestic pets. While being a suburb of Townsville, it is remote from the mainland, has a relatively small community (873 residences) and has 54 per cent of the Island's land area designated as National Park (Murray, 1995). Many people choose to live on the Island for the unique lifestyle it offers and the close contact with the natural environment and its associated wildlife.

In May 1995 the Anton Breinl Centre, on behalf of the Townsville City, a survey, Catscan Magnetic, of all adult residents on Magnetic Island to determine public perception on cat behaviour pertaining to Magnetic Island. The survey was conducted as part of the long-term strategy to determine if the local residents would support a cat management program on Magnetic Island.

The 1995 survey clearly demonstrated overwhelming support for the proposal and as such Local Law Policy No. 10.1 (Keeping and Control of Animals on Magnetic Island) was passed in June 1997 and enacted in its entirety on Magnetic Island on 1 January 1998. The cat management plan was promoted widely on the Island and implementation included sessions where cats had microchips implanted at council's cost.

In the Catscan Magnetic survey residents had expressed a significant level of dissatisfaction with council's management of dogs on Magnetic Island. As a result Townsville City Council improved the standard of dog management even before the cat management strategy was implemented.

The current survey was carried out 14 months after the implementation of the cat management strategy and allowed us to obtain residents' perceptions on current animal management strategies. The survey was designed to evaluate both cat and dog management on Magnetic Island.

HOW THE SURVEY WAS DONE

Townsville City Council awarded the tender for the survey to a team led by Associate Professor Rick Speare of the Anton Breinl Centre for Public Health and Tropical Medicine, James Cook University.

On Saturday 6 March, a questionnaire was distributed by volunteers to residents in every part of Magnetic Island. The majority of questionnaires were collected the next day (Sunday 7 March), while the remainder were mailed in reply-paid envelopes to the Anton Breinl Centre. Data was coded, entered into a computerised data base (SPSS for Windows) and analysed using the same program.

AIMS OF THE SURVEY

This survey is a follow-up survey one year after implementation of Local Law Policy 10.1. The survey was considered necessary to:

- 1. quantify if the cat management strategy had been well accepted by the Magnetic Island community;
- 2. determine if the goals of the strategy had been achieved;
- 3. resolve if the module could be used in mainland Townsville as a cat management strategy; and
- 4. evaluate residents' perceptions of the council's animal management strategies.

RESIDENTS COMPLETING SURVEY

Six hundred and twenty three residents, 16 years and older, returned usable questionnaires. From the Australian Bureau of Statistics Census (1996) the population of Magnetic Island residents 16 years and over was 1500. If this figure is used as the denominator, the survey represents opinions from 41.5% of residents.

1. Characteristics of the respondents

- **a. Gender** Questionnaires were completed by 313 males and 310 females, 50.2% and 49.8% of respondents respectively, an exact gender balance.
- b. **Age** Table 1 compares the age of respondents by categories used in the questionnaire with that of the 1995 survey.

Table 1: Age profile of respondents to 1999 questionnaire compared to the age profile of respondents to 1995 questionnaire

Age Category	1999 Survey	1995 Survey
16 - 20 years	3.9%	5.8%
21 - 30 years	6.0%	11.2%
31 - 40 years	16.9%	24.4%
41 - 50 years	30.3%	24.5%
51 - 60 years	18.9%	17.0%
61 plus years	23.0%	17.1%

Respondents to the 1999 survey were older than respondents to the 1995 survey with the proportion of respondents older than 41 years being slightly higher.

c. Place of residence

Respondents lived at all the bays on the Island except Radical Bay which now has no residents (Table 2). The percentage of place of residence of respondents was similar to that of the 1995 survey with a slightly higher representation in the 1999 survey from Horseshoe Bay and Cockle Bay, and slightly lower representation from Arcadia, Nelly Bay and West Point.

Table 2: Site of residence of respondents compared to 1995

Bay of residence	Number of residents completing 1999 questionnaire	% of 1999 respondents	Number of residents completing 1995 questionnaire	% of 1995 respondents
Arcadia	85	13.9%	154	14.8%
Bolger Bay	7	1.1%	12	1.2%
Cockle Bay	7	1.1%	1	0.1%
Horseshoe Bay	138	22.6%	162	15.5%
Nelly Bay	252	41.2%	492	47.7%
Picnic Bay	120	19.6%	204	19.6%
Radical Bay	0	0.0%	1	0.1%
West Point	2	0.3%	26	0.1%
Total answering this question	611	99.8%	1052	100%
Questions not answered	12		10	

d. Pattern of residence

96% of respondents lived full-time on Magnetic Island. This demonstrates that the majority of people answering the questionnaire were genuine residents of Magnetic Island. The questionnaire responses will therefore reflect those of the intended target group. In the 1995 survey 94% of respondents were full-time residents of Magnetic Island.

e. Relationship to pet ownership

Of the respondents 19.3% owned a cat and 44.2% owned a dog. In the 1995 survey 14.5% of respondents owned cats, making the percentage of cat owners responding to this survey slightly higher than in the previous survey.

2. Minimal potential for bias

To be without bias a community survey must have a sample size large enough to be statistically representative. The Australian Bureau of Statistics (1991) recommends that at least 5% of the population should be sampled to avoid bias in the results. The sample size of 40% achieved with the current survey therefore makes the potential for any significant bias small. Response rates to questionnaires once distributed to potential respondents should be 60% or greater. In this survey we distributed 1041 questionnaires and received 623 completed responses, a response rate of 60%. The survey results therefore should be representative of the opinions of the adult resident population of Magnetic Island.

PETS ON MAGNETIC ISLAND

Three questions (Q5, Q6 and Q9) were designed to collect data on how many of the respondents lived with pets and the level of support of residents' for pet ownership in general.

1. Support for keeping pets

Residents were asked if they felt OK about people keeping dogs and cats on Magnetic Island (Q9). This question was designed to give an estimate of the general level of support for pet ownership. Support for keeping dogs was high at 78%, but support for cats as pets on Magnetic Island was much less strong (56%). In the 1995 survey there was no comparable question so the shift in attitude cannot be estimated.

2. Numbers of respondents living with pets

56% and 81% of the respondents did not live with a dog or cat respectively (Table 4, Figures 1 and 2 – over the page). In the 1995 survey the comparable figures were 60% and 75% (Table 4). The profile of respondents in terms of keeping of domestic pets has changed slightly in different directions (dogs up, cats down), but this degree of change is not statistically significant at this stage (Table 4). In the 1995 survey a few individuals had more than 3 dogs or cats, while in this survey no respondent reported more than 3 dogs or cats. This may be real or could be false with respondents in 1999 more aware of council local laws on the number of pets allowed and consequently less inclined to answer honestly or due to residents with larger numbers of pets refusing to answer the questionnaire.

Number of pets	Dogs: Number of responses	Dogs: Percent of respondents	Dogs: Percent in 1995 survey	Cats: Number of responses	Cats: Percent of respondents	Cats: Percent in 1995 survey
None	346	55.8%	60.0%	494	80.7%	75.5%
One	203	32.7%	28.7%	92	15.0%	17.1%
Two	68	11.0%	10.8%	25	4.1%	5.6%
Three	3	0.5%	0.3%	1	0.2%	1.0%
Four plus	0	0.0%	0.3%	0	0.0%	0.8%
Respondents with dog or cat	274			118		

a. Average number of pets

Respondents living with dogs. The 274 people living with dogs had a total of 338 dogs to give an average of 1.2 dogs per respondent living with one or more dogs. In the 1995 survey 412 of the total 1029 respondents to that question lived with 538 dogs to give an average of 1.3 dogs per respondent living with one or more dogs.

Respondents living with cats. For cats the comparable statistics were that the 118 people with cats had a total of 145 cats to give an average of 1.2 cats per respondent living with one or more cats. In the 1995 survey 252 respondents lived with 356 cats to give an average of 1.4 cats per respondent living with cats.

Total respondents to survey. Overall there were 620 respondents to Q5 "Are any dogs kept at this address?". **Figure** Since there were 338 dogs, for the survey population this surveys gives a mean of 0.55 dogs per respondent. The comparable figure for the 1995 survey was 0.33 dogs per respondent to the similar question.

612 people responded to Q6 "Are any cats kept at this address?". Since there were 145 cats, for the survey population this gives a mean of 0.24 cats per respondent. The comparable figure for the 1995 survey was 0.22 cats per respondent to the similar question.

Figure 1: Percent of people living with dogs in 1995 and 1999 surveys

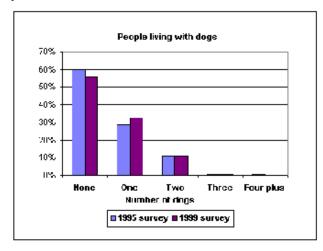
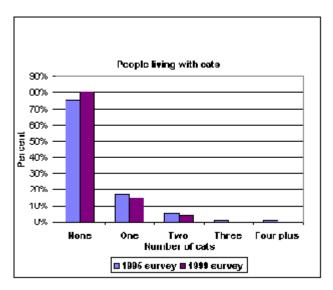
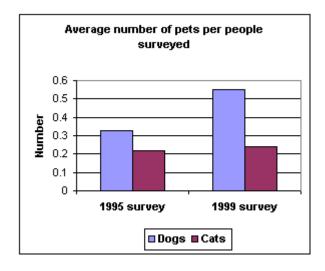


Figure 2: Percent of people living with cats in 1995 and 1999 surveys



The survey respondents in 1999 were more likely to own a dog or cat than those in 1995 (Fig. 3). This may not represent an increase in pet ownership on Magnetic Island, but could indicate that pet owners were more motivated to answer and return the questionnaire. It does mean, however, that the 1999 survey is a valid measure of the opinions of people who own pets on Magnetic Island. The average number of pets per respondent was similar for the 1995 and 1999 surveys. This suggests that implementation of the pet management plan for Magnetic Island has not discouraged people from owning pets. This result indicates that the pet management program is supporting pet ownership.

The survey respondents in 1999 were more likely to own a dog or cat than those in 1995 (Fig. 3). This may not and 1999 surveys



3. Other Pets

17% of respondents (131) had a pet other than a dog or cat (Q7). Pets with potential for public nuisance and subject to council by-laws included 6% with poultry, 1% with horses and 2 respondents each (0.3%) with pet goats and pet pigs. Pets with little potential for public nuisance included 5% with birds, 4% with pet rodents, 2% with fish, 2% with frogs and 1 who reported a possum as a pet.

SUPPORT FOR COUNCIL ANIMAL MANAGEMENT STRATEGIES

Support for the strategies of pet management by the Townsville City Council was assessed using 2 questions (Q14 and Q19). Support for the council's animal management strategies including local laws on control of domestic pets was very high, being greater than 83% for all 7 strategies for dogs and greater than 80% for all 8 strategies for cats.

1. Support for dog management strategies

People were asked to indicate their support for 7 strategies on dog management. The support for all 7 strategies was very high (Table 5, Fig. 4). Activities currently controlled by local laws and actively implemented (leash restraint in public, dog registration, prosecution of owners of dogs that attack) had levels of support greater than 90%. Activities currently controlled by local laws but difficult to implement in practice (control of barking and fouling of public places) also had high levels of support.

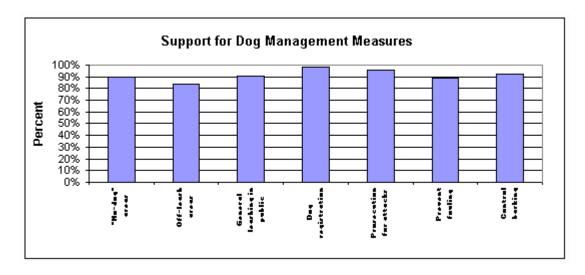
Provision of special areas had a high level of support, but not as high as the other strategies. 90% of respondents supported special 'no-dog' areas and 84% supported the concept of 'off-leash' areas.

Table 5: Support for dog management strategies (Q19)

Animal management strategy	Number of responses	"Yes": valid %	"No": valid %
Provision for special "no-dog" areas such as bathing enclosures / children's playgrounds / shopping malls	616	89.9%	10.1%
Provision for special "off leash" areas where dogs can run free	611	83.6%	16.4%
Require leash restraint of all dogs in all other public places	614	90.7%	9.3%
Require registration of all dogs	616	98.1%	1.9%

Prosecution of dog owners that attack people and animals	610	95.7%	4.3%
Require dog owners to prevent dog droppings in public places	611	89.2%	10.8%
Require owners to control their dog's barking	598	92.0%	8.0%

Figure 4: Support for measures to manage dogs (Q19)



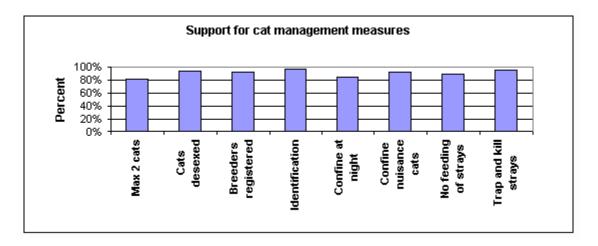
2. Support for cat management strategies

The questionnaire asked people to indicate their support for 8 strategies on cat management. The support for all 8 strategies was very high with all being supported by 80% or more of people surveyed (Table 6, Fig. 5).

Table 6: Support for cat management strategies (Q14)

Animal management strategy	Number of responses	"Yes": valid percent	"No": valid percent
A limit of 2 pet cats per residence	595	80.8%	19.2%
Requirement that pet cats be desexed (unless registered as breeders)	604	93.2%	6.8%
Requirement that people with sexually entire cats be registered as breeders and demonstrate facilities suitable to prevent public nuisance	593	91.6%	8.4%
Requirement that all pet cats be identified and recorded to distinguish them from strays/ferals	601	96.3%	3.7%
Requirement that all cats be confined indoors at night	600	85.3%	14.7%
Requirement that pet cats causing nuisance to a neighbour be confined to their own property	601	92.5%	7.5%
Regulation prohibiting feeding stray cats on Magnetic Island	599	88.5%	11.5%
Trapping and humane disposal (put down) of stray/feral cats	601	95.8%	4.2%

Figure 5: Level of support for measures to manage cats



The lowest level of support (81%) was for a limit of 2 cats per residence. From comments written by people on the questionnaire the lower level of support for this strategy is because some people want a limit of 1 cat per residence or no cats allowed. People were unable to formally give their opinion on these options.

In the 1995 Catscan survey 40% of respondents had supported a maximum of one cat per household, 41% two cats per household and 13% had wanted no cats allowed. In the 1995 survey only 5% of respondents had wanted more than 2 cats per household.

Support for microchip identification of cats is very high (96%). Support for strategies to limit breeding is also very high with 93% in favour of desexing of pet cats, and 92% supporting owners of sexually entire cats being registered as breeders and having secure facilities.

Confinement of cats has high support with 92% of those responding being in favour of confinement of nuisance cats to owners' properties and 85% in favour of cats being confined at night.

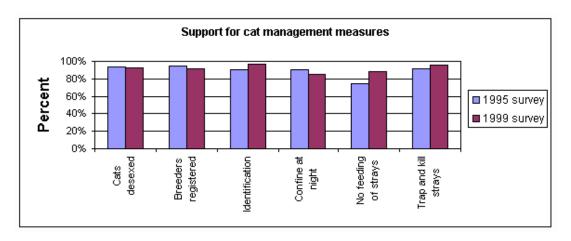
Strategies to manage stay cats also have high levels of support with 89% supporting local laws preventing feeding of strays and 96% being in favour of trapping and humane killing of stray cats.

In the 1995 Catscan Magnetic survey some of the same questions were asked prior to the implementation of the cat management strategy for Magnetic Island. The levels of support for most of these measures have increased with the implementation of cat management strategies on Magnetic Island (Table 7). In particular the level of support for compulsory identification is now 6% higher at 96%. The support for measures against stray or feral cats has also increased with a 13% increase in support for regulations preventing feeding of strays.

Table 7: Support for cat management strategies in current survey and in the 1995 Catscan Magnetic survey

Animal management strategy	Support for measure in 1999	Support for measure in 1995
Requirement that pet cats be desexed (unless registered as breeders)	93.2%	93%
Requirement that people with sexually entire cats be registered as breeders and demonstrate facilities suitable to prevent public nuisance	91.6%	95%
Requirement that all pet cats be identified and recorded to distinguish them from strays/ferals	96.3%	90%
Requirement that all cats be confined indoors at night	85.3%	90%
Regulation prohibiting feeding stray cats on Magnetic Island	88.5%	75%
Trapping and humane disposal (put down) of stray/feral cats	95.8%	92%

Figure 6: Support for cat management measures in 1995 and 1999 surveys



In the Catscan Survey in 1995, 82.8% were in favour of a cat management plan, 6.3% were against the idea, and 10.9% were undecided. In this survey we did not ask if people were in favour of a cat management plan overall. However, if one averages the responses for the 8 individual measures listed in Table 6 and uses this as an indication of support for cat management policies, 91% of resident's are in favour of cat management.

3. Comment on support for pet management strategies

The Magnetic Island community has expressed a very high level of support for the current pet management strategies. They are in favour of new strategies dealing with provision of special areas to both prohibit dogs and allow dogs more freedom. The level of support for cat management strategies has in general increased with implementation of the cat management plan for Magnetic Island. This is a very encouraging response since it demonstrates that the plan has been implemented in a manner that has improved support for such measures.

EVALUATION OF IMPLEMENTATION OF PET MANAGEMENT PROGRAMS

The steps in urban animal management were first to establish local laws and then to enforce them. Ten questions in the questionnaire were used to obtain residents' opinions on the Council's pet management programs and their satisfaction with the Council's performance.

1. General performance

Opinions on animal control measures in general were sought by Q24 which asked if residents agreed with 3 statements (Table 8). Six hundred and four people answered this question.

Table 8: Agreement with statements on performance (Q24)

Statement	"Yes": agree	"No": disagree	Undecided
Council's animal control measures were working well	40.9%	15.4%	43.7%
The Council's animal control laws are sufficiently backed by action against those who fail to comply	35.0%	24.0%	41.0%
I have enough information about the Council's dog and cat management plans	35.0%	24.0%	41.0%

The percentage of people who think that the council's animal control measures are not working well is reasonably low at 15%. However, the proportion of residents who think they are working well is disappointingly low at 41%, owing to the majority of residents being undecided. Two reasons could account for the majority of the undecided responses: respondents may 1) be unaware of the animal control measures and hence unable to comment; 2) be aware of the measures but not know how to evaluate if they are working. Both options highlight the need for the council to explain to people what the animal control measures are, how they are implemented and how residents can assess whether the measures are successful.

The poor level of knowledge of residents about council's animal control measures is highlighted by the low proportion (35%) that said they do have sufficient information about the council's dog and cat management plans. 24% said they did not have sufficient information and again the majority were undecided.

35% of respondents to this question agreed that the animal control laws were sufficiently backed up by action against those who failed to comply. 24% did not agree with this and the majority were undecided. The high percentage of undecided responses may again indicate that the public does not have the information to make an informed opinion. Possibly they do not have personal examples to draw upon and do not know of council's activities in enforcement. Responses to questions about specific issues (Q25) have a similar trend for the positive and negative responses with a slightly increased number being happy with current enforcement and a lower number wanting more enforcement (Section 3). In the 1995 Catscan Magnetic survey no questions were asked about what residents thought of the level of implementation of animal control measures.

a. Need to inform residents about animal control in general

Residents of Magnetic Island showed a high level of uncertainty about evaluating the general performance of Townsville City Council in animal control. The questions were easily understood but were apparently seeking opinions that many residents were unable to give. The most plausible explanation for this is that residents do not think of animal control as a general strategy, but rather have personal knowledge of specific components only. For example, dog owners know that they must register their dogs, but do not see this as a key component of dog control.

The council itself rarely promotes animal management as a package to the public. It does promote individual components; dog registration, leashing in public, responses to dog attacks, cat microchipping, etc. However, if the council wishes residents to have an overall knowledge of its animal control programs, how these are implemented and how success of the programs can be evaluated, it should consider educating the public in this as well as some of the specific components.

2. Interactions of residents with animal management personnel

a. Complaints made to council animal management personnel

One hundred and one people (16.2%) had made a complaint to the council about dogs or cats (Q20) over the six months preceding the survey. Of 93 responses for which details were given, the majority dealt with dogs; 32% were about dogs roaming the streets, dogs barking (18%), dogs chasing or attacking people in the street (11%) and dogs entering other premises (13%). 4% of these complaints were about dogs killing wildlife.

Complaints about cats were in the minority. 6% of complaints were about feral cats.

b. Discrepancy in number of complaints over preceding 6 months

Official council records show that for the 6 months preceding the survey, only 12 complaints were received from Magnetic Island residents. This is only 12% of the number of complaints survey respondents stated they made and the discrepancy would be 3 times greater if the number of responses by people answering the questionnaire are extrapolated to the total population of Magnetic Island . To be a 'complaint', in council's definition, residents have to describe the problem, where it occurred, which animal was involved and give owner of animal if known. Several reasons could account for the discrepancy between council records and residents' responses:

- 1. residents may have officially complained, but these were not recorded at City Hall official council records at City Hall may have been inadequate, complaints received at Magnetic Island by animal management personnel may not have been officially recorded and passed onto City Hall;
- 2. most residents may not have made a formal complaint, but consider their interaction with animal management personnel constitutes a complaint. If residents do not supply adequate details, the event will not meet council's criteria for a complaint and be officially logged;
- 3. residents may have made formal complaints, but most of these were prior to the 6 month period preceding the survey;
- 4. residents did not make a complaint, but have lied about doing so.

From the survey we are unable to nominate any main reason for the discrepancy. We suspect that a combination of reasons may account for the large difference. The possibility of inadequate recording of valid complaints should be looked into by council. We suspect that residents' idea of a 'complaint' and council's definition of a 'complaint' are not the same and that this category may account for much of the discrepancy. Given that residents seem to have a low level of knowledge about animal control as a philosophy (Sub-section 1.a), it seems highly likely that many residents do not understand the importance of making an official complaint and the fact that informal complaints cannot be captured and acted upon by council. If so, this highlights that council may not have adequately communicated to residents the necessity for complaints to be formal and why this is so. It seems likely that a percent of residents' responses referred to events outside the time frame specified by the question. We are unable to obtain data to confirm or reject this hypothesis. Finally, residents may have lied, but this seems unlikely.

c. Pet owners approached by council animal management personnel for alleged breaches

Twenty four people (3.8%) were approached by animal control personnel over the 6 months preceding the survey because of problems caused by their pets. Specific details were given by 23 of these. Most (87%) involved dogs; unleased dog in public place (44%), leased dog in Mall (26%), dog barking (13%), dog attacking people (4%). Other specified problem was wandering poultry (4%).

d. Residents' evaluation of interactions

The evaluation of the interaction was sought for both circumstances (Table 9).

Table 9: Percent of people responding "yes" to questions about their interaction with animal control personnel.

Question for response	Respondent requested a response from Council animal management personnel (complaint)	Pet owner approached by Council animal management personnel for alleged breech
Were you satisfied with the outcome?	48.4%	82.6%
Were the animal control staff polite?	91.5%	78.3%
Were the animal control staff competent?	77.9%	73.9%
Was the action prompt?	67.9%	n.a.

The percentage of people satisfied with the interaction with council animal control personnel differed with people who complained being less satisfied (48% satisfied) than people who were the object of complaints (82% satisfied). A very high percentage (92%) of those who complained thought that the staff were polite. A high percentage (78%) of those approached about problems thought that the animal control staff were polite. Competency was assessed at a good level (73-77%) by both groups.

Those complaining rated the action of animal control personnel as prompt in 68%. Perception of a slow response may have accounted for some of the lack of satisfaction. However, the large discrepancy in complaints discussed in sub-section 2.b may account for the low level of satisfaction. If council animal management personnel did not officially record a complaint (option 1), they may have been similarly lax in responding to the complaint. If residents did not make an official complaint (option 2), animal management personnel would not be obligated to respond and hence residents would have perceived council's performance as unsatisfactory since they expected a response. Complaints made outside the 6 month time frame of the question could possible affect satisfaction only if the urban management activities had not been perceived as adequate at that stage.

e. Comments on interactions

The majority of residents of Magnetic Island who have interacted with animal control personnel over the preceding 6 months thought the animal control personnel were polite and competent. Performance is perceived as good in these features.

The reason for the low level of satisfaction of people who complained should be investigated as far is possible. The reasons given above could account for this.

Also a low level of satisfaction of those complaining could be accounted for: if their expectations were unreasonable and unable to be met; if their expectations were reasonable, but 1) problems were difficult to control (e.g. barking dogs, aggressive dogs contained within yards); 2) able to be controlled, but inadequate action taken; 3) action is taken, but slowly. Indications that points 1 - 3 may be relevant are the high percentage of respondents that say action is not strict enough on specific problems (Section 3).

3. Implementation of animal control measures

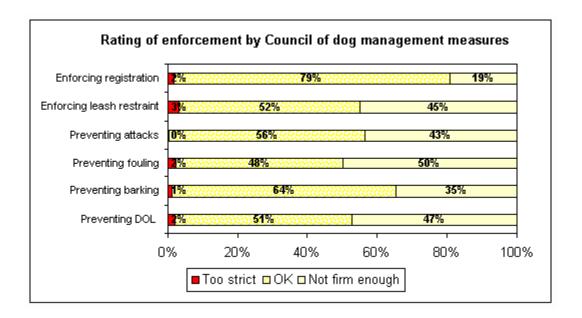
a. Implementation of dog control measures

The rating by respondents of the degree of enforcement by council of 6 dog control measures showed that a large percentage (>30%) wanted a firmer level of enforcement (Table 10) in all areas except registration of dogs where a firmer level of enforcement was also wanted, but by a lower percentage (19%).

Table 10: Rating of enforcement by council of dog management measures (Q25)

Animal Management	Number of responses	Too strict	ок	Not firm enough
Preventing dogs from roaming at large	583	2.1%	50.8%	47.2%
Preventing excessive barking	558	1.1%	64.3%	34.6%
Preventing dog droppings in public open space	564	2.3%	47.9%	49.9%
Preventing dog attacks	556	0.4%	56.3%	43.3%
Enforcing leash restraint of dogs in public places	522	3.0%	52.1%	44.9%
Enforcing registration of dogs	562	1.6%	79.2%	19.0%

Figure 7: Rating of enforcement by council of 6 dog management measures (Q25)



Overall if the responses to all 6 dog management measures are averaged, 40% of the residents of Magnetic Island want a firmer level of enforcement (Figure 8).

The converse of increased enforcement is an increase in the percentage of people who perceive that measures are too strict. Currently no measure is perceived as being enforced too strictly, indicating that the community will accept a greater degree of enforcement with little risk of a negative reaction. The other indication that a greater degree of enforcement will be accepted is the current rating of enforcement of dog registration. This has the best result with 79% rating enforcement as OK, 19% as not firm enough and 1.6% as too strict. This illustrates that gains for all measures could be made in the 'OK' rating without a corresponding increase in the 'too strict' rating.

b. Implementation of cat control measures

82% of respondents (512/623) were aware that the council had a cat control strategy on Magnetic Island (Q15). 63% rated the cat management strategy as good or OK (Table 11). Some of the respondents to this question had said they were unaware of the strategy in Q15 and their responses are invalid. However those people unaware of the council's management strategy probably gave their opinion on cat management overall.

Table 11: Rating of cat management (Q18)

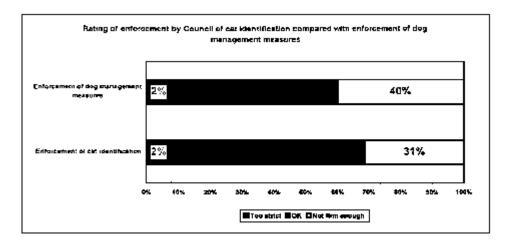
Rating	Percent		
Poor	11.9%		
OK	32.0%		
Good	31.1%		
Undecided	25.0%		

Enforcement of the local laws on identification of pet cats was rated as OK by 67% of people who responded to Q25 (Table 12 and Fig. 8). This level of response was similar to the rating of the cat management strategy derived from Q 18, demonstrating that respondents were being consistent in their responses.

Table 12: Rating of enforcement by council of cat identification measures (Q25)

Animal Management	No. of responses	Too strict	OK	Not firm enough
Identification of pet cats	551	2.0%	66.8%	31.2%

Figure 8: Rating of council's enforcement of local laws on cat identification compared with average rating of council's enforcement of 6 dog management measures (Q25)



Similarly to enforcement of dog management measures a significant proportion of residents want firmer enforcement of the major cat management measure. Since the percentage of people who consider enforcement to be too strict is very low, increased enforcement of cat identification will have popular support. Additionally, residents of Magnetic Island have expressed a desire to have council enforce dog management measures to a greater degree than cat identification.

c. Reaching the Magnetic Island community

Of the respondents who knew of the cat control strategy on Magnetic Island the majority (79%) found out through the local island newspapers (Table 13). The next most significant routes were via council flyers (42%) and word of mouth (40%). Only 9% found out through public meeting.

Table 13: How people who knew about the Magnetic Island cat control strategy found out

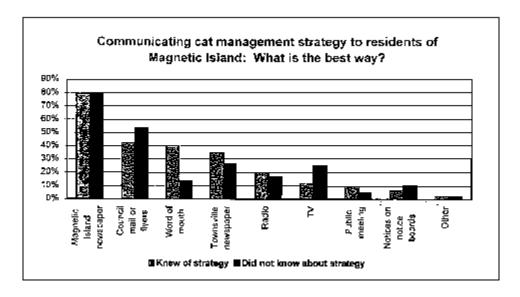
Route information received	Valid %
Magnetic Island newspaper	79.3%
Council mail or flyers	42.0%
Word of mouth	40.0%
Townsville newspaper	34.6%
Radio	18.4%
TV	11.5%
Public meeting	8.8%
Notices on notice boards	6.4%
Other (TCC staff; 1995 Catscan Survey)	2.0%

Table 14: How people who did not know about the Magnetic Island cat control strategy could be be informed

Best route for information	Valid %
Magnetic Island newspaper	79.6%
Council mail or flyers	53.1%
Townsville newspaper	26.5%
TV	24.5%
Radio	16.3%
Word of mouth	13.4%
Notices on notice boards	10.2%
Public meeting	5.1%
Other: incl. In rates notice; unspecified	2.1%

Ninety nine people who did not know about the Magnetic Island cat control strategy indicated how they could be best informed (Table 14). The profile was similar to those who knew with Magnetic Island newspapers being the most useful medium, followed by council mail or flyers (Figure 9). One obvious difference was that TV was rated as more useful and word of mouth was rated less useful than by the people who knew of the strategy. Public meetings again rated low as a means of disseminating information.

Figure 9. How residents who knew about the cat management strategy found out (Q16) and how those residents who didn't would like to be told (Q17)



NUISANCES ON MAGNETIC ISLAND

An important goal of urban pet management is to minimise nuisances caused by pets. In the 1999 survey of Magnetic Island residents we wanted to find out how successful the council's pet management strategies had been in minimising pet nuisance. To put this into perspective we asked residents to compare nuisances due to pets to other nuisances in their environment. Finally the survey asked for residents opinions on nuisances caused by wildlife. In an attempt to get responses that reflected the current state of pet management on Magnetic Island we asked residents to limit their responses to the 6 months preceding the survey.

1. General nuisances

In an attempt to put nuisances caused by animals into perspective, we asked people to list any general problems they experienced in the preceding 6 months. 245 respondents, 39.3% of total, identified neighbourhood problems. In subsequent analyses we have assumed that if a person did not list a nuisance they had no problems, meaning that 60.7% of people completing the questionnaire had no neighbourhood nuisances.

The 39.3% who had problems listed 388 nuisances in their neighbourhood, an average of 1.6 per respondent experiencing nuisances.

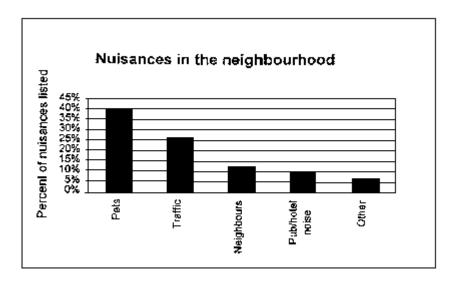
a) Type of nuisance

Nuisances caused by pets made up 40% of the nuisances given (Table 15, Fig. 10). Traffic as a source of nuisances rated next, but with only 65.6% of the number of nuisances listed for pets.

Table 15: Broad categories of neighbourhood nuisances (Q 10)

Nuisance	Percent of all nuisances
Pets	40%
Traffic	26%
Neighbours	12%
Pub/hotel noise	10%
Other	7%

Figure 10: Nuisances in the general neighbourhood (Q9)



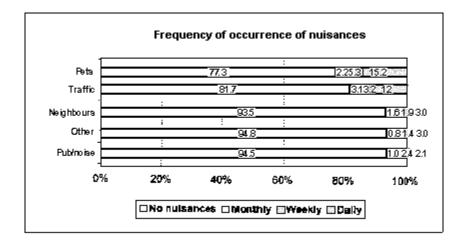
b. Frequency of nuisances

Of the people who listed a nuisance, 348 gave frequencies for the occurrence of the nuisance The frequencies have been calculated for the total respondents to the questionnaire assuming that people who listed no nuisance, had no nuisance (Table 16, Figure 11)

Table 16: Frequency of nuisances as a percent of total survey respondents

	Pub/noise	Other	Neighbours	Traffic	Pets
No nuisances	94.5%	94.8%	93.5%	81.7%	77.3%
Monthly	1.0%	0.8%	1.65	3.1%	2.2%
Weekly	2.4%	1.4%	1.9%	3.2%	5.3%
Daily	2.1%	3.0%	12.0%	12.0%	15.2%

Figure 11: Frequency of nuisances as a percent of total survey respondents



Although over 77% of residents have not experienced nuisances in the 6 months prior to the survey, pets are the cause of nuisances on a daily basis for 16% of the respondents. Traffic is also comparable being cited as a cause of daily nuisance for 12% of respondents.

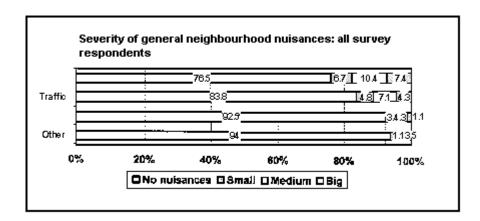
c. Severity of neighbourhood nuisances

The respondents rated the severity of the nuisances. To put this into perspective we have assumed that a "no response" is equivalent to "no nuisances", and have calculated the severity of neighbourhood nuisances for all the respondents (Table 17, Fig. 12).

Table 17: Severity of general neighbourhood nuisances for all survey respondents (Q9)

	Other	Neighbours	Traffic	Pets
No nuisances	94.0%	92.5%	83.8%	76.5%
Small	1.9%	3.4%	4.8%	6.7%
Medium	0.6%	3.0%	7.1%	10.4%
Big	3.5%	1.1%	4.3%	7.4%

Figure 12: Severity of neighbourhood nuisances for all survey respondents



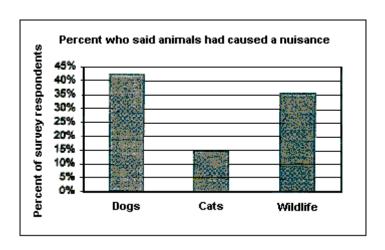
This is an encouraging result with over 76% of people experiencing no nuisances in their neighbourhood, and less than 10% of residents experiencing a nuisance they rate as 'big'. However, pets are the issue responsible for the most aggravation. These results indicate that council's strategies are working, but that further effort at reducing nuisances caused by pets is required.

2. Nuisances caused by animals

48.9% of survey respondents stated that domestic pets had caused a nuisance in the preceding 6 months. 42.3% complained specifically about dogs and 15.0% complained about cats, with some complaining about both dogs and cats (Fig 13). 36% of survey respondents reported that wildlife had caused a nuisance (Fig 13).

The majority of respondents who said pets had caused a nuisance nominated dogs as the problem animal. About one third this number had experienced a nuisance from cats. Nuisances caused by wildlife were intermediate between those due to cats and dogs, but much closer to the number of respondents reporting problems from dogs (85% of this number).

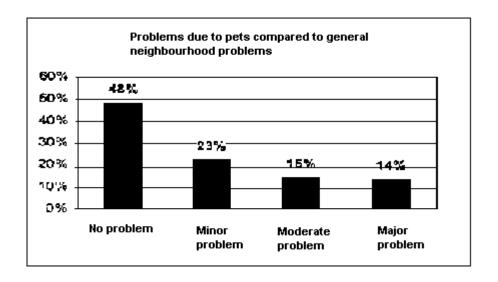
Figure 13: Number of residents reporting that animals had caused a nuisance in the 6 months preceding the survey (Q9 and Q11)



3. Problems caused by pets

The questionnaire asked people to put problems caused by pets into the perspective of general neighbourhood problems. 24% of survey respondents had no neighbourhood problems including those due to pets. 48% had no problems from pets while 14% said pets were a major part of the general problems (fig 14). 52% of survey respondents who answered this question had problems caused by pets. Animal management can play a role in reducing these problems.

Figure 14: Problems due to pets compared with other neighbourhood problems (591 responses) (Q12)



4. Nuisances due to dogs

The 264 people who stated dogs had caused a nuisance over the preceding 6 months gave 350 specific examples, an average of 1.3 types of nuisance per person. If the assumption is made that people who reported no nuisances from domestic pets did not have any, we can estimate the average nuisance per 623 survey respondents as 0.56 nuisances caused by dogs per Magnetic Island resident for the preceding 6 months.

a) Severity of nuisances due to dogs

The 264 people who stated dogs had caused a nuisance over the preceding 6 months, rated the severity for 332 of the 350 problems they experienced. In 28% of instances the nuisance was perceived as a big problem (Fig. 15). Of the dog nuisances rated in terms of severity, the majority (71.7%) were medium or small.

b) Frequency of nuisances due to dogs

Frequency of the problem was given for 315 of the 350 types of nuisance given by the 264 people who had experienced nuisances due to dogs. The majority of the problems (54.6%) occurred daily (Fig. 16).

Figure 15. Severity of 332 nuisances caused by dogs (Q9)

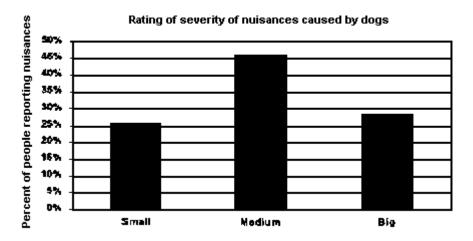
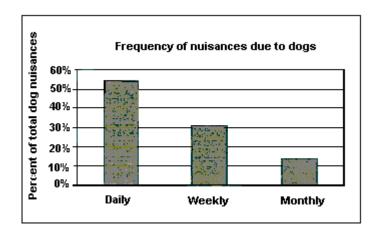


Figure 16. Frequency of nuisances due to dogs as percent of total dog nuisances (Q9)



c) Types of nuisances due to dogs

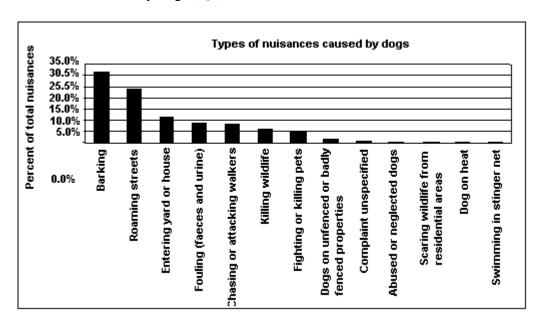
For the 350 nuisances caused by dogs, respondents gave specific details about 346 which could be assigned to 12 nuisance behaviours (Table 18, Figure 17). The most common problem was barking which accounted for 31% of the nuisances. Barking is a vexatious issue for neighbours, animal management personnel and often for owners as well, being persistent and difficult to control.

A set of 6 nuisance behaviours related specifically to the failure of owners to stop their dogs from being at large, and not under leash restraint. This set made up 57% of nuisances and included roaming, entering other properties, chasing or attacking people, dogs on inadequately fenced properties, dogs interacting negatively with other pets and dogs killing wildlife. These problems could be controlled by adequate fencing to keep dogs confined, and owners ensuring that when dogs were in public places they were restrained on a leash and under control.

Table 18. Types of nuisances caused by dogs (Q9)

Type of Nuisance	Frequency
Barking	31.2%
Roaming the streets	24.0%
Entering yard or house	11.6%
Fouling (faeces and urine)	8.7%
Chasing or attacking walkers	8.4%
Killing wildlife	6.4%
Fighting or killing pets	4.3%
Dogs on unfenced or badly fenced properties	2.0%
Complaint unspecified	1.4%
Abused or neglected dogs	0.9%
Scaring wildlife from residential areas	0.3%
Dog on heat	0.3%
Swimming in stinger net	0.3%

Figure 17: Type of nuisances caused by dogs (Q9)



d) Mismatch between people who experience nuisances and official complaints

Although 264 people nominated 350 nuisances caused by dogs and 28% of these nuisances were rated as severe and over 50% occurred on a daily basis, only 101 respondents had made any form of complaint to the council's animal management personnel (See Evaluation Of Implementation Of Pet Management Programs Section 2: Interactions Of Residents With Animal Management Personnel a. Complaints made to council animal management personnel) and a mere 12 had made an official complaint. This illustrates that residents are reluctant to involve council in solving nuisances caused by dogs. If the residents could be encouraged to report the major nuisances to council, one would expect major decreases in the frequency of nuisances and a marked improvement in residents' rating of council's enforcement. Council should investigate strategies to overcome residents' apparent reluctance to report nuisances. Basic research is needed on residents' attitudes, beliefs and behaviour in this area, and what obstruct official reporting.

5. Nuisances caused by cats

The 94 people who stated cats had caused a nuisance over the preceding 6 months gave 112 specific examples, an average of 1.2 types of nuisance per person. If the assumption is made that people who reported no nuisances from domestic pets did not have any, we can estimate the average nuisance per 623 survey respondents as 0.15 nuisances caused by cats per Magnetic Island resident for the preceding 6 months. Cats caused only about 40% of the nuisances caused by dogs.

. Severity of nuisances due to cats

The 94 people who stated cats had caused a nuisance over the preceding 6 months, rated the severity for 99 of the 113 problems they experienced. In 33% of instances the nuisance was perceived as a big problem (Figure 18). Of the cat nuisances rated in terms of severity, the majority (67%) were medium or small.

Frequency of nuisances due to cats

Frequency of the problem was given for 92 of the 112 types of nuisance given by the 94 people who had experienced nuisances due to cats. The majority of the problems (49%) occurred daily (Figure 19).

Figure 18: Severity of 99 nuisances caused by cats (Q9)

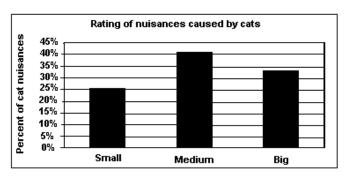
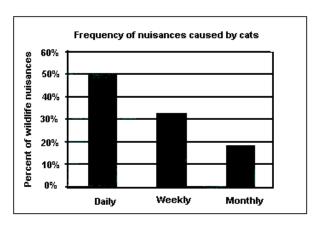


Figure 19: Frequency of nuisances due to cats as percent of total cat nuisances (Q9)



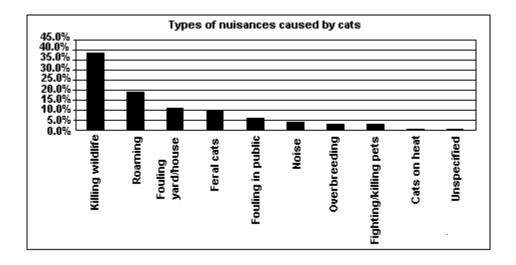
c. Types of nuisances caused by cats

For the 112 nuisances caused by cats, respondents gave specific details about 106 of which could be assigned to 10 categories of nuisance behaviours (Table 19, Fig 20)

Table 19: Types of nuisances caused by cats (Q9)

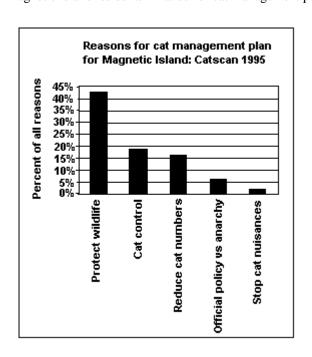
Type of nuisance	Percent of cat nuisances
Killing wildlife	38.6%
Roaming	18.9%
Fouling yard/house	11.3%
Feral cats	10.3%
Fouling in public	6.6%
Noise/yowling	4.7%
Over breeding	3.8%
Fighting/killing pets	3.8%
Cats on heat	0.9%
Unspecified	0.9%
	99.80%

Figure 20: Types of nuisances caused by cats (Q9)



The most common problem was killing wildlife which accounted for 39% of the nuisances listed. This behaviour is a manifestation of cats not being confined. Roaming, fouling personal property and, in public, fighting and killing pets accounted for 41% of the nuisances. All these 5 behaviours are related to cats not being confined or controlled and accounted for 80% of the reported nuisances. Problems related specifically to entire cats included over breeding, cats on heat and possibly noise and yowling and accounted for 9% of the nuisances. Feral cats were the subject of 10% of nuisances. In the 1995 Catscan Survey the major reason given to support of a cat management strategy for Magnetic Island was to protect wildlife, particularly in the context of a National Park (Fig. 21). Perceived harm to wildlife still remains the major aggravation caused by cats

Figure 21: Reasons given in 1995 Catscan survey by 82% of Magnetic Island residents in favour of cat management plan



d) Nuisances caused by cats and council's role

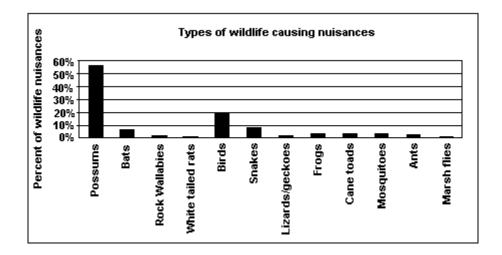
Of the 112 nuisances caused by cats council could have possibly played a role in solving about 80% since most were related to cats being allowed to move beyond the confines of their owners' properties. Council should determine how to enforce the local laws dealing with roaming of cats.

6. Nuisances due to wildlife

On the other hand 36% (225) of survey respondents said wildlife had caused a nuisance in the preceding 6 month. These 225 people nominated 345 nuisances, an average of 1.5 complaints each.

The wildlife causing these nuisances included representatives of all classes of vertebrate fauna (mammals [64%], birds [20%], reptiles [9%] and amphibians [4%] as well as some invertebrates [4%]) (Fig 22).

Figure 22: Types of wildlife responsible for 345 nuisances (Q12)



The two species of wildlife most nominated as responsible for nuisances were possums (brush tailed possum, *Trichosurus vulpecula*) at 56% and the curlew (bush stone curlew, *Burhinus grallarius*) at 7.5%, two of the native animals which give Magnetic Island its unique character of suburbia closely mingled with National Park. The nuisance caused by curlews was solely due to noise, a distinctive and piercing cry. Possums nuisances included noise, entering houses, walking on roofs, droppings and eating garden fruit, vegetables and plants.

The nuisances caused by wildlife were perceived as a big problem in 41% of the 292 responses rating the nuisance behaviour (Table 20).

Table 20: Degree of nuisances due to wildlife (292 responses) (Q11)

Degree of nuisance	Percent of responses rating nuisances
Small	277%
Medium	31.1%
Big	41.0%

The nuisances caused by wildlife occurred daily in 74% of the 281 responses that gave frequency of the nuisance behaviour (Table 21).

Frequency of nuisance	% of responses rating nuisances	
Nuisances occurring daily	74.0%	
Nuisances occurring weekly	16.7%	
Nuisances occurring monthly	9.2%	

Table 21: Frequency of wildlife nuisances (281 responses) (Q11)

The number, degree and frequency of nuisances caused by wildlife illustrate that some residents want all animals controlled, wild and domestic. However control of wild animals, even within built up areas, is not the province of city councils but is the concern of the Department of Environment.

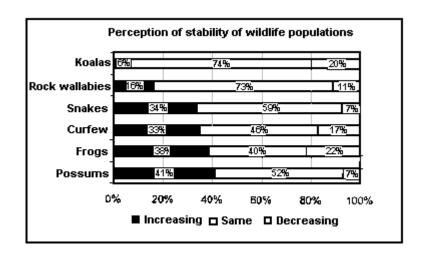
WILDLIFE DYNAMICS

In the 1995 Catscan survey residents gave protection of wildlife as the major reason for a cat management plan (See Figure 21). In the 1999 survey we were interested to see whether residents thought wildlife dynamics were changing and asked residents to comment on some species and classes of wildlife (Table 22 and Fig. 23).

Table 22: Respondents' perceptions of change in wildlife numbers (Q17)

Animal	No of responses	Increasing	Same	Decreasing
Possums	538	41.1%	52.0%	6.9%
Koalas	488	6.4%	73.6%	20.1%
Rock wallabies	500	16.0%	72.8%	11.2%
Curlew	535	33.4%	46.0%	16.6%
Snakes	507	33.7%	59.0%	7.3%
Frogs	523	38.4%	39.8%	21.7%

Figure 23: Respondents perception in changes in numbers of wildlife



The general trend is that most populations are stable or increasing.

In the 1995 Catscan survey 25% of respondents had said that they thought birds were declining with curlews being the major species in decline. The figure from this survey for curlews shows that a lower percent of respondents think numbers of curlews are decreasing.

DATA ON INDIVIDUAL CATS

Respondents provided data on 93 individual cats owned by them. 12 of the 93 cats were less than 1 year of age. 44% were male and 56% female. 79% were desexed.

1. Identification by microchip

Of the 61 owners who responded to the question about microchipping, 68% of the cats had a microchip. Of the owners whose cats had been microchipped, only 7% of owners reported any problems with the insertion of the chip. All these problems were rated as 'slight' problems (Q25). The 8 problems reported included difficulty in accessing the vet, distress of the cat at the veterinary surgery, errors in council records, microchip working out of the skin and cost. Owners who had not had their cat identified by microchipping gave 23 reasons (Table 23).

Table 23: Reasons for not microchipping cats

Reason	Number of responses	Valid %	
Too young or recently acquired	8	34.8	
Cost	7	30.4	
Owner or cat transport	2	8.7	
No information on how to get microchip	1	4.3	
No information available at Council counter	1	4.3	
Cat never leaves house	3	13.0	
Cat too old	1	4.3	

2. Comment on microchipping

Cat owners have found the procedure of identification largely problem free with 93% having no problems while the other 7% had only slight problems. The owners who had not had their cats identified appeared to have not objected on a matter of principle.

Dissemination of correct information possibly would have solved the problem for 9%. If owners are asked to bear the full cost of microchipping, this could have a negative effect on compliance. Council should look at strategies to reduce this factor.

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Management for some 20 years now. While he owns and works in a busy veterinary practice, Dick's all consuming his TAFE Certificate of Animal Control Practices 'extra-curricular' activity is UAM. If better UAM means better quality of life for pets, pet owners and indeed the whole community, it has to be a worthwhile exercise.

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Dick Murray has been heavily involved in Urban Animal Shane Scriggins started working in animal control with the Brisbane City Council in 1983. Shane has obtained qualification and his TAFE Certificate of Business Management. He is the Townsville City Council's Technical Officer for Animal Management as well as a member of the UAM conference committee

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