

Evaluating outcomes - what should we measure?

Chris Liversage

INTRODUCTION

This question is really about measuring the effectiveness of urban animal management strategies. There are many ideas and approaches that are touted as being the solution to balancing people and pet needs in an urban area. Not many of these have any logical connection to positive outcomes, let alone the tools to measure them.

The outcomes or effects of any action are not always what was intended or expected. Some may be totally different from original expectations, or at worst, have little or no effect. The critical point is to ensure that at least some key indicators are in place to measure effects on whatever it is that is critical to your authority or organisation.

WHY EVALUATE OUTCOMES ANYWAY?

You could argue that the effort required to undertake a full and proper evaluation of any initiative is a waste of time as the results should be self evident. This is not always the case, as there may be some outcomes that are not easily perceived by those conducting a program, and further, they may also have a keen interest in ensuring that the most positive aspects are brought out. It is not easy to admit that a strategy into which a considerable amount of time and effort has been put is not really working, particularly when it has captured a lot of media or community attention. Nonetheless, the need to make the best use of scarce resources, coupled with increasing demands on services, means that some sort of measurement tool is necessary. This is particularly important in publicly funded programs and organisations.

Refining an initiative by building in feedback loops will also pay off when the real and desired results occur. The feedback gained from a proper outcome evaluation makes it very easy to do this. The establishment of a base line from which to work is a good start to conducting a thorough evaluation. But even before you think about this, the main task before devising brilliant and innovative initiatives is to formulate some objectives.

FORMULATING OBJECTIVES

Figuring out just what it is that you are really trying to do is one of the hardest but most important tasks, not just in animal management, but in any other program or initiative. Once you have some objectives, the rest of your strategy can fall behind it, and devising methods for measuring outcomes will be much easier.

Those of you who are involved in research will appreciate this sort of methodology, as it provides a logical and easily understood approach. The steps involved can be summarised as follows:

1. Formulate your objectives -exactly what is it that you are trying to do?

You may find that it is useful to formulate an overall statement of objective, around which your strategy can be framed. These types of people statements can range from being described as visionary to fanciful or even immaterial, but at least they provide some overall direction and get involved and thinking about directions.

More specific, sub objectives in terms of actual 'on the ground' actions should also be formulated to support the objective. These will be the things that count, that support your overall direction.

2. Establish a baseline and actually measure what your current performance is with respect to these objectives.

You will also need to devise some specific measurement tools at this stage.

3. Step back and look -do these devices actually relate to your objectives?
4. Devise your strategy to meet the agreed objectives.
5. Administer the strategy.
6. After a set period, conduct a formal appraisal of the strategy using the measurement tools devised earlier.

The time at which to do this will depend on how long your initiatives take to have effect and the cost of conducting the appraisal.

There may also be some external factors outside your control that have an effect on your measurement devices, so reliance on several tools is better than relying on simply one or two. However, the more devices you use, the more expensive it is to collect your data.

A CASE STUDY

The City of Stirling, an urban council in Perth, Western Australia, has tried to introduce a comprehensive strategy to effectively manage dog control over a long period (for further details of this strategy, please see the other chapter in this text relating to the City's integrated approach).

The City has a population of about 186,000 and about 22,000 dogs. Balancing the needs of dog owners with the rest of the community is a task that the City feels it has achieved reasonably well, given limitations on resources and legislative requirements.

Following a review of operations, the City decided that long term direction was needed in this area. Accordingly, a Long Term Dog Control and Management Strategy was formulated and had as its basic premise that urban animal management needs in this area were best served by an approach that attempts to combine education and legislation. This approach entails putting in place preventative measures (education), backed up by other measures (legislation) in the event that they are required. The strategy evolved following consultation with staff involved in the area, Council Members, a review of other ideas and initiatives in place in other local authorities, and from recognised experts in this field.

FORMULATING AN OBJECTIVE

The objective of the City's Long Term Strategy is:

To ensure that the community of the City of Stirling is not detrimentally affected by dogs kept by irresponsible owners.

(This is sourced from Murray and Penridge's book 'Dogs in the Urban Environment -A Handbook for Municipal Management' Chiron Media 1992. This text is highly recommended reading for anyone trying to devise a strategy for dog control. It provided a great deal of foresight and ideas for Stirling).

The aim of the strategy is to emphasise that dog owners, not dogs themselves, are usually the cause of problems in urban contexts.

This overall objective sets the direction for the whole strategy. It represents a different approach by Stirling, which had (and still has, but to a lesser degree) a priority of removing a dog that may have attacked someone as reducing the threat to the community. Dog owners were only usually prosecuted if they refused to surrender their dog for destruction.

Major sub-objectives to this are:

- to increase registration of dogs; and
- to educate dog owners as to their responsibilities to their pets and the community.

Just what the City of Stirling did (and has underway) to meet these objectives is detailed elsewhere in these proceedings, under the title of 'An Integrated System'. The methods used, and to be used to evaluate the strategy, are detailed here.

ESTABLISHING BASELINES

At this point, it is highly recommended that you establish some baselines. Not only will this give you a basis from which to measure the results of your strategy, but it will also give a great deal of valuable information and insights into the nature of your particular problem and some ideas on tactics to use. This part of the program is critical, as it really determines the success or failure in terms of measurement.

There are three broad groups of indicators that are used by Stirling:

- perceptions by residents and other stakeholders;
- 'hard' data such as financial costs, staff activity indicators, animal registration levels and so on; and
- moral outcomes such as the treatment of dogs by society.

PERCEPTIONS

The first baseline area is important as it indicates perceptions -what reality really is in the eyes of your clients. It doesn't really matter if your strategies and ideas are brilliant if they are not properly communicated, understood, or acted upon.

As the cornerstone of Stirling's strategy was to try and make the whole area of dog control more self managed by owners with a view to preventing problems such as attacks and wandering rather than reacting later, it was important for us to gauge residents' and dog owners' attitudes towards, and tolerance of, undesirable behaviour. To this end, a community survey of residents' attitudes to dogs was undertaken by the City in September 1993 (a copy of the survey questionnaire used appears as an appendix). The list of topics covered, and the questions used, were formulated after discussion with staff involved in the area. Some 3,500 questionnaires were sent out, of which over 1,600 were returned. Collection of the questionnaires and tabulation of the results was undertaken by a marketing research consultant, and the results analysed in-house.

This process was quite demanding and I recommend anyone considering doing this type of survey to use consultants to assist them wherever possible, particularly in conducting mail outs and evaluation of responses. These people are experts in the field of gathering 'market' information and should have considerable expertise in helping you to devise research objectives for your survey, as well as ensuring that the questions asked will in fact give you the information you want. Even with Stirling's size and resources, we were quite stretched here. The City is very 'light on' in terms of corporate resource staff, and does not employ public relations officers, or marketing staff.

The survey form used was a compromise between size and information needed, and worked reasonably well. It provides a great deal of base information about a range of issues, including:

- tolerance of dog behaviour such as wandering, fouling, barking and attacking;
- level of satisfaction with the City's Ranger Service;
- awareness of dog registration laws;
- dog ownership levels;
- dog registration levels;
- dog sterilisation levels;
- reasons why people obtained dogs, and major sources of them; and
- whether or not people would use dog faeces bins if provided.

As can be seen, this was an all encompassing approach to try and cover the whole range of subjects the City as a local authority was concerned with. As the City also comprised some 30 suburbs, information from all areas was sought.

In hindsight, whilst the information received was valuable, it may have been more beneficial to have a series of surveys, dealing with a lesser number of subject areas, but perhaps in more detail. Stirling's community survey was of considerable use as an information gathering tool, as well as a measurement of community attitudes. However, the information gathered gave the City many clues as to where it should be heading, particularly in terms of which geographic locations had the biggest problems from a resident's perspective. Some results are as follows:

Wandering dogs

- 70.3% of all residents had seen wandering dogs in their area in the past 3 months, of whom 81.0% were annoyed by this. Only 71.0% of residents who had seen wandering dogs, and who owned a dog themselves, advised that they too were annoyed.
- Dog owners in the 31-40 year old age group were more inclined than others to let their dog wander off their property -some 68% of dog owners in this age group said that their dog 'never' left their back yard, as opposed to 92.3% of residents aged 61 or over, and 80.2% of all dog owning residents.
- In addition, 87.8% of dog owners said that their dog was kept on a leash, except when in dog exercise areas such as parks or dog beaches. This question relied on the honesty of dog owners, and whether or not they could recall if their pet had left their property without being held on a leash. This result of 87.8% compliance seems to be a little high, particularly given the level of annoyance with wandering dogs expressed by the overall population.
- It appears that 20% of dogs probably cause 80% of problems. If dog owners effectively confined their animals to their property at all times, then problems such as fouling, wandering, digging and possibly attacking would be substantially reduced.

Barking dogs

- Some 49.6% of total respondents said that they were annoyed in some way by noise from barking dogs in the past 3 months. Interestingly, only 35% of respondents who owned dogs indicated annoyance, a significantly lower proportion of the overall response. Dog owners therefore appear to be more tolerant of barking than non owners.

Dog Faeces

- A large number of respondents (83%) were offended by dog faeces, of whom 57% were very much offended.
- Again, non dog owners who were offended (89.1%) outweighed dog owners who were offended (70.1%). It is pleasing to see that both groups are offended, but the large difference between those who own dogs and those who do not indicates that there is a need to educate dog owners about the negative effects that their pets have on the amenity of a neighbourhood.
- No significant differences in terms of income, age or geographical locations were readily apparent (ie generally, everyone across Stirling is offended). One question asked dog owners if they would use a special bin for dog faeces, using special plastic gloves supplied by the City. Overall, 89% of dog owners said that they would use them.

Registration

- Overall awareness that dogs must be registered was high (77.6% of total respondents).
- Awareness amongst dog owners was also very high (91.8% of dog owners said that they were aware of it), but only 79.7% said that their dog was registered. It was felt that some respondents were not answering correctly here, or held a mistaken belief that their dog's registration was still current when in actual fact it may well have expired, particularly when registration records held by the City indicated that only about 40% of dogs were currently registered. There may also be some degree of sampling error here, as dog owners whose pets were not registered may well have felt disinclined to complete the survey.

Other results were detailed in a full analysis presented to Council in November 1993.

STATISTICAL DATA

The second group of baseline indicators is made up of 'hard' data and statistics. These are more easily comparable, but care needs to be taken to ensure that those collecting the data do not spend more time filling out statistical returns than they actually do on the jobs they are supposed to be doing.

Measures that are used by Stirling are:

1. *Dogs with current registrations per household* -to measure the success of registration efforts. These are relatively easy to measure and comparisons on a regional or suburb basis are the most useful, as they indicate which areas need the most attention. Increasing registration levels is one of the best ways of improving owner accountability for dog behaviour.

Some figures are as follows:

November 1993: 0.14

November 1994: 0.23 (following registration drive)

November 1995: 0.20 (estimated)

Based on the survey, the perfect ratio is 0.27 (that is because 27 out of every 100 households has a dog).

2. *Complaints received per operational area* -as the City is divided into 4 areas, statistics are kept on complaints received from each area in terms of dog noise, wandering at large and dog attacks. This is not a particularly good performance measure to use, although statistics are relatively easy to keep.

This is really only a measure of matters reported to the City, not effectiveness. Not all infractions are reported and increased ranger activity in a particular area may actually mean complaints received go up, as people see that something is being done about others' calls. However, because of its ease of collection, it does give a broad indication of where attention should be given. As an ongoing tool for use in resource allocation such as manpower, we found this useful, but not greatly useful in terms of effectiveness of strategies.

3. *Percentage of complaints dealt with within minimum response time* -as a measure of responsiveness, measuring the time between which a complaint is received and when it is dealt with is useful. Time received is taken by Stirling to be the point at which complaint details are listed on an 'Action Report' (the form used to record all complaints received), and the time at which a ranger first attends the call is recorded, with the difference between the two listed as response time.
4. *Net pound costs per dog impounded* -this is quite a good measure of efficiency of your pound, particularly if income received (dog sales, pound charges) is deducted from costs incurred. It also has some valid indicators for registration program effects, as the number of registered dogs returned to their owners from your pound instead of being destroyed should rise if your registration program is working. You will also be in a better position to recover impounding costs from owners of dogs which are registered.

Some figures for Stirling are:

	1992/93	1993/94	1994/95
Income	35475	44971	62128
Expenditure	62622	59374	69950
Net cost per annum	27147	14403	7822
Dogs impounded	1554	1495	1553
Net cost per dog impounded	\$17.47	\$9.63	\$5.04

A word of warning however -ensure that your cost calculations include all relevant figures. There may be other factors that distort figures, such as inclusion of fees generated by other sources (eg Ranger issues fine for wandering, which is paid on collection of the dog from the pound).

5. *Net cost of your dog control service per household* -increasing registration levels means increasing income and hence reduced costs per rateable property. If, by dealing with complaints more quickly and efficiently, you can reduce the need for extra staff, then net costs can be reduced. This measure also has the effect of increasing other income from fines and penalties as staff sometimes strive to reduce the ratio. Be careful however, to have in place guidelines under which cautions instead of infringements should be issued, to avoid alienating dog owners from your strategy as a result of over enthusiastic rangers.

Formulation of staff costs for dog control is difficult where staff are also involved in other areas of municipal law enforcement, such as parking or litter control. This is the case at Stirling and to overcome it, staff filled out time sheets for a 3 monthly period indicating how much time is spent in each area. Three months was probably too long and onerous, but it indicated that 40% of time was spent in this area, for both field and office staff. From here, other costs such as electricity, water, insurance and vehicle expenses can also be calculated based on this percentage.

This area of strategy baseline measurement was not done particularly well at Stirling. A system of recording the number of matters attended to as an activity indicator was continued and has only recently been amended. For example, under this system, a single dog attack, which may have involved 6 or 8 visits to sites for interviews, checking of fencing and so on, was counted as 6 to 8 activity 'points' and classed under the heading of 'dog attacks'. This gave a distorted picture of the area, and I strongly advise you to check the methodology used by your staff in collecting their statistics.

Similarly, measurement of the minimum response time has also proved difficult. The actual time taken by staff to do calculations has been onerous, so in this area I suggest that a sample of (say) 10% or so a month (or even every second month) will give you a feel for how quickly your staff are responding to calls.

MORAL OUTCOMES

This baseline area is the most difficult of all outcomes to measure, but I have included it as I think it is important to look at some of the underlying reasons to have in place an approach and strategy that is, and can be shown to be, morally responsible and defensible.

The need to demonstrate that you have dealt with people fairly is critical. Balancing the requirements of all community groups is a difficult task, and as such whilst a dog owner may not be too happy with the outcome of a particular problem, they are usually more understanding if it can be shown that they have not been treated unfairly.

Outcomes here are difficult (if not impossible) to measure, as the judgements of complainants and dog owners are inevitably coloured by their involvement and views on the situation. You can, however, protect yourself from accusations of bias by reviewing guidelines and criteria and ensuring that they are relevant and reasonable. Ensure as well, that all your staff know and understand reasons why the various Acts and bye-laws you administer are the way they are, so that the offending dog owner can be shown that they haven't been singled out for special treatment.

It is possible to conduct an audit (or to employ a company to do so) of your staff customer relations skills, and I recommend that you do, on perhaps a once yearly basis. This has not been done at Stirling, but complaints about unfair treatment and heavy tactics have declined markedly since the City began its strategy, which involved talking with all staff and gave a common understanding of how things were to be done.

Consistency and fairness are relatively easy to achieve, and represent a positive outcome for you and the community.

The treatment of pets in society is an issue that many local governments do not feel they have a role in, however let's look at some facts:

- local councils can have an influence through programs such as AMREX (described in detail elsewhere in these proceedings) on how pets are treated;
- bye-laws and Acts regarding dog restraint and provision of exercise areas have an influence; and
- councils can play a big part in reducing unnecessary euthanasia of unclaimed dogs from pounds by increasing registration levels. Councils are really the only group in society who can really make improvements here, and who have the legislative backup to make registration rules stick.

These moral outcomes can be evaluated to some extent, and in doing so you can satisfy yourself and your staff that the job you are doing is not only morally right and defensible, but can actually give you a better sense of job satisfaction and self fulfilment through knowing that you have done your best and that it is the 'right thing to do'.

CONCLUSIONS

The question here was 'evaluating outcomes -what should we measure?'

This paper will not answer all of the questions that you may have about outcomes, but will hopefully stimulate some thought and action.

The outcomes for you to measure will depend entirely on your objectives. They will vary depending upon whether you represent a local authority, animal welfare agency, business, or community group. There are no easy 'fixits' for any urban animal management problems, but I hope that this paper at least inspires you to try, and gives you some hope that your results can be measured, evaluated and demonstrated to be useful to society.

I have listed some objectives and goals, and performance indicators below in terms of their ease of use and other relevant indicators:

City of Stirling

Dog Control and Management Strategy

OBJECTIVE

To ensure that the Community of the City of Stirling is not detrimentally affected by dogs kept by irresponsible owners.

SUPPORTING GOALS

- to increase registration of dogs; and
- to educate dog owners as to their responsibilities to their pets and the community.

EVALUATING OUTCOMES

TYPES OF INDICATORS	MEASURES	DEGREE OF DIFFICULTY IN OBTAINING DATA	COST TO OBTAIN	VALIDITY OR EASE OF COMPARISON	COMMENTS
Perceptions	Community survey to measure tolerance, awareness & satisfaction.	High	High	Moderate	This may be done periodically but comparisons with other authorities will be difficult.
Statistical Data	Dogs registered per household.	Low	Low	High	This is a good measure of effectiveness to use.
	Complaints received.	Low	Low	Low	Not a particularly good indicator to use on its own.
	Response time to complaints.	Moderate	Moderate	High	Useful in deflecting criticism about manpower and resources.
	Net pound costs per dog impounded.	Low	Moderate	High	Provides a good indicator of pound efficiency.
	Net cost of dog control service per household.	Moderate - high, depending upon current costing procedures.	Moderate	High	Provides a good inter Council comparison
Moral outcomes (moral justice, ethical treatment)	1. Fair dealings with your 'customers'.	High	Moderate	Low	
	2. Check to see if staff understand why things are, and if they can effectively communicate this.	Moderate	Moderate-high	Moderate	Comparisons are valid if the same basis is used.
	3. Reduction of health dogs euthanased	Low	Low	High	A good measure of high moral outcome

City of Stirling
COMMUNITY QUESTIONNAIRE ON DOG MANAGEMENT

INSTRUCTIONS

1. This questionnaire can be completed by anyone in your household, such as a parent, or the person who takes care of your dog (if you have one,) or anyone else who is interested in making a contribution.

EVEN IF YOU DO NOT HAVE A DOG PLEASE COMPLETE THIS SURVEY.

Please read each question carefully and circle the number of the response that best suits your situation.

2. Please put this questionnaire in the envelope provided and return it to us by 1 **SEPTEMBER 1993**.

(NO POSTAGE STAMP IS NEEDED).

3. **ALL RESPONSES ARE TOTALLY ANONYMOUS.**

You will notice the reply envelope is addressed to the consultants who are conducting this survey. They will provide a summary report to Council, your individual responses will not be identifiable.

Thank you for your time and consideration.

1. In the past three months, have you seen other people's dogs wandering unsupervised in your neighbourhood?

1 NO
 2 YES

Does this annoy you?

1. NO
 2. YES

2. In the past three months, have you been annoyed by other people's dogs barking?

1 NO
 2 YES

How annoyed where you?

1. No, not at all
 2. Yes, mildly
 3. Yes, moderately
 4. Yes, very much

3. Are you offended by the presence of dog faeces in public places such as footpaths and parks?

1 NO
 2 YES

How much?

1. No, not all all
 2. Yes, mildly
 3. Yes, moderately
 4. Yes, very much

4. In the past 3 months, have you had a problem with, or been annoyed by, dogs in your neighbourhood (such as wandering, barking, or attacking) but not reported it to the City of Stirling?

- 1 NO
- 2 YES

Why didn't you report the problem?

- 1. Didn't want to get involved
 - 2. Spoke to the dog's owner
 - 3. Can't see the point of doing so
 - 4. No particular reason
 - 5. Some other reason. Please specify this reason
-

5. Have you ever complained to the City of Stirling about a dog problem?

- 1 NO
- 2 YES

Was the matter resolved to your satisfaction

- 1. YES
- 2. NO

6. Prior to receiving this questionnaire, were you aware that all dogs over 3 months of age must be registered with local Councils?

- 1 YES
- 2 NO

7. Do you currently have a dog?

- 1 NO
- 2 YES - **please go straight to Question 10**

**** Questions 8 and 9 are only for people who do not own dogs.**

8. Is there any particular reason why you do not have a dog? (If more than one of these points applies to you, then please circle the most important reason)

- 1 Not allowed by landlord, parents, or person owning house.
- 2 Can't afford to keep it.
- 3 Don't want one.
- 4 Property not big enough.
- 5 No fences around property.
- 6 Other _____

9. Are you thinking about getting a dog?

- 1 NO
- 2 YES

Why? (Please circle main reason)

- 1. Security
- 2. Companionship for self
- 3. To take in a stray or unwanted dog
- 4. As a present for children or spouse
- 5. Other _____

**** If you do not currently have a dog - please skip to question 19**

10. Is your dog registered?

- 1 YES
- 2 NOT SURE
- 3 NO

Why not? (Circle main reason)

- 1. Didn't know it had to be registered
- 2. Can't afford to register it
- 3. Can't see why it has to be registered
- 4. Haven't got around to it
- 5. Other _____

11. How often does your dog leave your back yard or property by itself?

- 1 Never
- 2 Not often
- 3 Often
- 4 Whenever it wants to

12. Is your dog sterilised?

- 1 YES
- 2 NO

Why not? (Circle main reason)

- 1. Want to have pups
- 2. Sterilisation will make it grow fat
- 3. Can't afford operation
- 4. Sterilisation will change its character
- 5. Never thought about it
- 6. Other _____

13. Why did you get the dog? (Circle main reason)

- 1 Security
- 2 Companionship
- 3 To give it a home - rescued it
- 4 Given to you as a present
- 5 Other (please specify) _____

14. Where did it come from?

- 1 A specialised dog breeder (but not a Pet Shop)
- 2 Dog pound
- 3 A friend
- 4 Pet shop
- 5 Stray
- 6 Gift
- 7 Free from the newspaper
- 8 Other _____

15. If your dog is taken for a walk, it is kept on a leash, except in dog exercise areas such as parks or the dog beaches?

- 1 YES
- 2 NO

16. Do you pick up your dog's faeces if it defecates on any place except your property?

- 1 YES
- 2 NO

Why not?

- 1. Don't like to handle dog faeces
- 2. No convenient method of disposal
- 3. Dogs are allowed to do it
- 4. It doesn't bother me

Other (please specify) _____

17. If the city provided bins for dog faeces on popular reserves and free plastic gloves, would you pick up your dog's faeces and place it in these bins?

- 1 YES
- 2 NO

Why not? _____

18. What breed is your dog?

- | | | | |
|----|-----------------------|----|--------------------------|
| 1 | Afghan Hound | 25 | Kelpie |
| 2 | Alsatian/German Shep | 26 | King Charles Spaniel |
| 3 | Australian Terrier | 27 | Labrador |
| 4 | Australian Cattle Dog | 28 | Lhasa Apso |
| 5 | Basenji | 29 | Maltese Terrier |
| 6 | Beagle | 30 | Old English Sheepdog |
| 7 | Blue Cattle Dog | 31 | Pekingese |
| 8 | Border Collie | 32 | Poodle |
| 9 | Boxer | 33 | Red Setter |
| 10 | Bull dog | 34 | Rhodesian Ridgeback |
| 11 | Bull Terrier | 35 | Rottweiler |
| 12 | Chihuahua | 36 | Samoyed |
| 13 | Cocker spaniel | 37 | Schnauzer |
| 14 | Collie | 38 | Shetland Sheepdog |
| 15 | Dachshund | 39 | Shihtzu |
| 16 | Dalmatian | 40 | St. Bernard |
| 17 | Dobermann | 41 | Sydney Silky Terrier |
| 18 | Fox Terrier | 42 | Weimaraner |
| 19 | German S/hair Pointer | 43 | Welsh corgi |
| 20 | Golden Retriever | 44 | Yorkshire Terrier |
| 21 | Great Dane | 45 | Another Recognised Breed |
| 22 | Greyhound | 46 | Large Cross Breed |
| 23 | Irish Setter | 47 | Medium Cross Breed |
| 24 | Jack Russell Terrier | 48 | Small Cross Breed |

Questions 19-21 are for all people completing the questionnaire

19. Which suburb do you live in?

- | | | |
|---------------|---------------|------------------|
| 1 Balcatta | 11 Inglewood | 20 North Beach |
| 2 Balga | 12 Innaloo | 21 Osborne Park |
| 3 Carine | 13 Joondanna | 22 Scarborough |
| 4 Churchlands | 14 Karrinyup | 23 Stirling |
| 5 Coolbinia | 15 Maylands | 24 Trigg |
| 6 Dianella | 16 Menora | 25 Tuart Hill |
| 7 Doubleview | 17 Mirrabooka | 26 Waterman |
| 8 Glendalough | 18 Mt. Lawley | 27 Wembley Downs |
| 9 Gwelup | 19 Nollamara | 28 Woodlands |
| 10 Hamersley | | 29 Yokine |

20. What is the estimated income of your household per year?

- | | |
|---|----------------------|
| 1 | Under \$10,000 |
| 2 | \$10,001 to \$20,000 |
| 3 | \$20,001 to \$30,000 |
| 4 | \$30,001 to \$40,000 |
| 5 | \$40,001 to \$50,000 |
| 6 | \$50,001 and over |

21. What is your sex?

- | | | | |
|---|------|---|--------|
| 1 | MALE | 2 | FEMALE |
|---|------|---|--------|

22. How old are you?

- | | |
|---|----------------|
| 1 | Under 20 years |
| 2 | 20-30 |
| 3 | 31-40 |
| 4 | 41-50 |
| 5 | 51-60 |
| 6 | 61 or over |

23. How many children do you have living at home of the following ages?

- | | |
|---------------|-------|
| 0-6 years | _____ |
| 7 - 12 years | _____ |
| 13 - 18 years | _____ |

24. What is the main language spoken in your home?

- | | | | |
|---|----------------|----|------------------------------|
| 1 | Chinese | 6 | Polish |
| 2 | Serbo-Croatian | 7 | Spanish |
| 3 | English | 8 | Turkish |
| 4 | Greek | 9 | Vietnamese |
| 5 | Italian | 10 | Other (Please Specify) _____ |

25. Do you rent the property where you are currently living?

- | | |
|---|-----|
| 1 | Yes |
| 2 | No |

YOUR TIME AND EFFORT ARE VERY MUCH APPRECIATED. PLEASE RETURN THIS QUESTIONNAIRE IN THE ENVELOPE PROVIDED.

ABOUT THE AUTHOR

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Chris Liversage is a professional local government administrator and has worked for 3 councils in Western Australia over the past 12 years. He has a background in several areas of local council operations, and his qualifications include a Bachelor of Business (Management) and a Diploma in Local Government (Clerk). His role with respect to dog control and management at the City of Stirling is to provide as effectively and efficiently as possible an overall long term direction for the area.

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