

Rethinking approaches to urban animal management : a review and integration of the strategies available

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ABSTRACT

Traditionally we have relied on regulatory approaches to urban animal management. However, on its own, regulation doesn't work. It needs to be supplemented by a range of non-regulatory approaches that emphasise voluntary and passive compliance with the standards we set for responsible behaviour by pet owners. In the last decade a lot of progress has been made in the use of non regulatory approaches to urban animal management. However investigations have necessarily proceeded on a hit-and-miss basis due to the infancy of the field. A framework for future policy development is now clearly needed.

The paper follows on from the author's introductory review of regulatory compliance at last year's conference. It reviews the tools available for use in urban animal management with the aim of developing an overarching framework within which future strategies can be developed, tested and ultimately judged.

INTRODUCTION

Urban animal management (UAM) in Australia is at a turning point. It has matured to a point where there are more common understandings than there were 10 years ago. We now recognise the limits of regulation and are actively developing complementary approaches. One of these, education, is almost universally held up as a panacea, and rightly so, because it offers the most promise for lasting behavioural change. Yet for all its maturity there is still a bewildering array of non-regulatory strategies, programs and services being trialed and implemented right across the country. Forums like this help us to disseminate the results of this valuable work. However what is needed is a framework to help us make sense of the confusion, identify gaps and ensure we target efforts in the most effective way.

This paper is a first step towards the development of such a framework. I present the available tools, discuss their potential in UAM and highlight lessons learned in comparable areas of urban policy. I don't evaluate any of the programs individually. That is not my intention. Rather, my aim in building the framework is to help us make policy choices on the basis of a more complete understanding of the full range of tools available. As a policy sector I think we are ready for that now.

A distinguishing feature of my approach is to integrate the benefits of owning pets into the policy context. This hasn't been done to date because the benefits have only really come to light in the last decade, well after the regulatory and institutional frameworks were established. In practice this means pet ownership tends to be seen as a 'problem' that needs to be controlled rather than something worthwhile that needs to be 'managed'. Integrating the benefits into UAM policy is a further reason to rethink our approach.

The first section of this paper examines the changing nature of UAM in Australia and why there is now so much interest in alternative approaches. The second section looks at what we mean by compliance in UAM. The third section looks at the range of strategies available and the final section discusses the findings of a limited case study of the City of Stirling (W.A.).

THE DEVELOPMENT OF URBAN ANIMAL MANAGEMENT IN AUSTRALIA

Urban animal management today is a far cry from the first early days of registration and a few stray dogs. Back then defecation by dogs was largely a maintenance issue, excessive barking was something that neighbours sorted out between themselves and cats and wildlife weren't on the agenda at all. While most states had a Dog Act of sorts the control mechanisms were often vague and half-hearted. How things have changed! Each state now has an established legal framework covering, in some cases, both dogs and cats and the ambit of control has grown into what seems like an ever-expanding array of contexts. These new concerns are not all as straightforward as their earliest cousins. Many are inherently subjective. Others we don't yet know a lot about. And just about all of them are complex and multi-faceted, requiring knowledge of animal behaviour, the various triggers to compliance by humans and management of tolerance. In my paper to this conference last year I documented the limitations of applying a regulatory approach to complex problems such as these (Jackson 1995a). If you add to this heightened expectations for cost-effective use of public resources, it is understandable that more effort is being made to develop alternatives to the traditional command and control approach.

In this paper I don't attempt to define UAM as it stands today because it varies from state to state, even Council to Council. For the most part, though, we are talking about the management of urban dogs and cats in both the domestic and public realms.

COMPLIANCE DEFINED

It needs to be emphasised that most pet owners are typically responsible. The part of the management task of animal control is with the few who don't act responsibly.

The reasons why people do and don't comply with UAM standards are obviously of central interest. What follows below is a tentative model of compliance in UAM, adapted from the generalised model first suggested by Troy in 1989. Thus non-compliance in UAM may be :

Inadvertent due to :

1. Ignorance (1) - people aren't aware that the rules exist or apply to them.
2. Ignorance (2) - people are aware of the rules but don't know that they don't comply (excessive barking happens while they are at work)
3. Ignorance (3) - people are aware of the rules but don't know how to comply.
4. Indifference, forgetfulness or oversight.

Deliberate due to :

1. A game approach to rules - implies no serious rejection of the rules but sees it as acceptable for people to try to get by without complying and seeing it as a 'fair cop' when caught.
2. Rejection of the rules - non-compliance within 'safe' limits, private protest, non-specific, unorganised and may simply be a challenge to authority.
3. Political/moral protest on specific issues - may be an individual setting an example or more organised protest by groups.
4. General civil disobedience or refusal to cooperate (often across all kinds of rules and regulations).

We don't yet know the significance of any of these dimensions of compliance in UAM. Nevertheless this tentative model is a useful starting point for rethinking our approach to UAM. Quite clearly different strategies are appropriate for different dimensions of non-compliance.

THE STRATEGIES

So what strategies are available? The list below is not necessarily exhaustive but it contains those considered in most change campaigns. Some of them are obvious. Others you may use already but won't think of as strategies per se. Still others may be new to you altogether. Considering them together allows us to better understand their strengths and weaknesses and the circumstances in which each is most appropriately used.

The first strategy considered below is to change people's attitudes. This is important because it offers the most promise for lasting voluntary change. However changing attitudes is hard to do and can be expensive. Evaluation of past programs and lessons from other policy areas is crucial to ensure real progress is made.

The remaining techniques are known collectively as behaviour-change techniques. They target the behaviour itself irrespective of the attitudes associated with it. Regulation is the behaviour-change technique we are most familiar with but there are several others and I look at their potential in UAM. I then look at integrating the benefits of owning pets into the policy equation and why this can help everyone, not just pet owners.

Changing Attitudes

It is understandable that there is so much interest in changing attitudes. If people are made aware of their actions it follows they will be more likely to act in the responsible way. However there has been a lot of controversy about the validity of the attitude concept, in particular whether or not attitudes influence behaviour. Much of the early research showed weak attitude-behaviour links. However during the late 1970s and early 1980s more sophisticated studies led to wider acceptance of the attitude-causes-behaviour explanation. Thus in a review of attitudinal research, Cialdini, Petty and Cacioppo wrote "no longer are researchers questioning if attitudes predict behaviour, they are predicting when attitudes predict behaviour" (1981, p.366).

Much of this new work warrants application to UAM. One approach, for example, examines how variability in "attitude accessibility" affects the attitude-behaviour relationship. Each of us holds a multitude of attitudes. Some we have thought through and feel strongly about. These attitudes are accessible because we can call on them to guide us in responding to a given situation. Other attitudes we're only vaguely aware that we hold. These attitudes are inaccessible because we can't necessarily call on them to guide us when we need to. For example a person may keep his or her dog leashed in areas where it is required because it is the responsible thing to do. In this case the attitude about responsible behaviour is accessible and it guides behaviour.

Conversely, when the attitude is inaccessible, other factors will guide behaviour (Vincent and Fazio 1992). In the example above the person may be only vaguely aware of the requirement. He or she may fail to keep the dog leashed because the apparent norm (other unleashed dogs in this park or other parks) is that letting your dog off the leash is acceptable. If, instead, the park was clearly signposted (refer prompts in a following section) and other dog owners are observing the leash laws, then the apparent norm is different and will more likely result in that person observing the leash requirement.

Fazio has identified two critical determinants of attitude accessibility (Fazio 1986). The first is repeated expression: the more an attitude is associated with an object, the greater the strength of association and the greater the likelihood this attitude is accessible. In the example above, if the person has read about the leash requirements and why they are important, the association would be stronger and would have greater chance of being accessed when this person is presented with the decision about whether or not to observe the requirement. The second determinant of attitude accessibility is the manner of attitude formation. Attitudes formed through direct experience are more likely to readily accessible than attitudes formed by other means such as reading about it (Fazio 1986; Fazio, Herr and Olney 1984).

It is clear that changing attitudes is not simple. It requires an understanding of the attitude concept, in particular when attitudes influence behaviour. It also seems that it needs to be part of an overall planned strategy to change behaviour. In a subsequent section I will reflect on what we can learn from change campaigns in other policy areas.

Behaviour-Change Techniques

Behaviour-change techniques target a change in the behaviour rather than the attitudes associated with it. The argument in their favour is not that changing attitudes doesn't work, but that it can be expensive and slow to show results. In the meantime we often need to call on other techniques. Geller, Winnett and Everett (1982) take the argument further and say that when the consequences of a behaviour are unclear, vague or remote we should not expect many people to change their behaviour as a result of a change in attitudes alone. They believe people need to experience the change in behaviour as well and that this can be achieved through the use of appropriately selected and designed behavioural techniques.

Behaviour-change techniques are usually classified as either antecedent or consequence techniques depending on whether they encourage or stop a behaviour from happening in the first place (antecedents) or encourage or stop a behaviour from happening again in the future (consequences).

ANTECEDENT STRATEGIES

Antecedents include:

1. provision of information
2. verbal or written messages (prompts)
3. environmental design
4. community involvement, and
5. commitment and goal setting.

One final antecedent, relevant to faeces management, is the existence of prior litter.

Information

A problem like excessive barking will not be solved if people don't know how to solve it. A heavy handed enforcement approach, even changing people's attitudes, will be ineffectual if people don't know what to do. Thus the first technique for overcoming ignorance is to show people how.

Rollin (1991) argues that many North American dog owners have no notion of training animals and work on folk misinformation (rub his nose in it if he urinates in the house) or patent absurdities (beat or reprimand the dog for not coming when it finally comes). Many, he believes, don't realise that problem behaviours can be eliminated or prevented by proper training and understanding of the animal's natural behaviour. He says it is hard to blame people for their ignorance when pet care is not taught in schools but says some mechanism now needs to be put in place for providing the requisite information. The question is how.

In Australia lack of information is one component of the management task especially with the newer, more complex dimensions of UAM. Great progress is being made already with programs that provide people with the information they need to be responsible pet owners (eg Pet Pep, Canine Good Citizen, Selectapet and so on). However other innovative ways can be sought to get the information across. In the United States Rollin cites the example of the veterinarian who reserves one evening a week for clients who don't have animals. They pay him to advise on sundry matters such as species and breed selection, training, housing, health, nutrition and behaviour. These people, in turn, become clients so everyone wins (Rollin 1991).

Formal programs, however, are only part of the story. Councils should be tapping away at the educative function in all their dealings with the public. It should be an explicit objective of every aspect of the UAM function whether it be out on patrol, dealing with a complaint, or issuing a citation. Increasingly the vision will be one of friendly adviser rather than patrolling inspector. It implies training in pet care and animal husbandry and is a far cry from their feared status as "dog catcher" in years gone by.

Prompts

Prompts can be written (signs, brochures, flyers) or verbal. Verbal information delivers the same types of information as written messages but in face to face contacts. Obviously prompts have information value however what I am interested in here is their use as triggers to appropriate behavioural responses.

Geller et al (1982) examined the impact of prompts and conclude that, to be effective, they should have the following characteristics:

1. The prompt should be administered close to the opportunity to provide the associated response,
2. The prompt should specifically state the desired response,
3. The desired response should be relatively convenient, and
4. The prompt should be conveyed in polite non-demanding language.

Follow-up studies generally support these criteria. In studies of litter disposal Geller et al (1982) showed that identifying a particular disposal location with specific instructions was more effective than were non-specific instructions. Thus signs that said "Clear you own table" in a cafeteria were clearer and most effective when disposal sites were visible (Durden, Reeder and Hecht 1985). Even better in this study were signs that read "Place your trays and dishes in the tray holders along the west wall".

The politeness and positive nature of the message has also been shown to be significant. In three studies by Reich and Robertson (1979) messages making explicit commands prohibiting litter (eg Don't litter) actually generated more littering. More effective were normative appeals (Help Keep Your Pool Clean).

A study by Oliver, Roggenbuck and Watson (1985) studied the difference between written and verbal appeals to reduce littering and damage to trees in a forest campground area. Brochures were given to two different groups of campers. One group received the brochures only, a second group was given the brochure with a personal appeal to reduce littering and tree damage. A third group was used as a control (ie no prompts were given to them). Compared to the control group, both treatment groups exhibited markedly less littering behaviour. The group receiving a personal appeal also displayed significantly fewer problem behaviours than did the brochure only group.

The parallels with responsible behaviour by dog owners in public parks are obvious. It suggests an important role for appropriately designed and sited signs. It also suggests that an effective way to disseminate written information may be in the field itself.

If this conclusion can be extended to UAM, and intuitively it would seem that it can, then it has implications for the day to day activities of the patrolling ACO. Built into their work would be the use of a battery of verbal and written prompts. This happens already, I know. It is cost effective and can be absorbed into day to day operations. However it needs to be spelled out explicitly and supported with training and encouragement from senior rangers/administrative staff. Otherwise it will only happen by chance.

Environmental Design

This involves making changes to the environment that :

- Make it easier or more convenient for people to be responsible,
- Provide cues to indicate appropriate behaviour in a particular setting, or
- Minimise the incidence of inappropriate behaviour/conflict in the first place.

In Australia we have already guidelines for pet-friendly housing (Jackson 1993) and pet-friendly public open space (Jackson 1995b); both of which were designed with these three criteria in mind. I call it passive compliance. The challenge here, however, is institutional not behavioural. It depends on whether Council town planners are planning for pets and I will have more to say on this later.

Another form of environmental alteration is the design and siting of rubbish bins. It has been well documented, for example, that increasing the availability of rubbish bins can lead to substantial reductions in rubbish (Huffman, Grossnickle, Cope and Huffman 1995). It would also seem that attractively or brightly decorated bins increase proper disposal. For example, a hat-shaped bin lid that displayed the words "Thank-you" when depressed to take rubbish was found to markedly increase rubbish disposal in a football stadium at an American University (O'Neill, Blanck and Joyner 1980). While the findings of these studies can't be applied directly to faeces disposal, they obviously lay the ground work for further research.

Community Involvement

Three studies in the US examined the problem of removing dog faeces using a community group as part of the intervention strategy. Jason, Zolik and Matese (1979) used a collaborative effort between an ad hoc community group and a university based research team to reduce the amount of dog faeces deposited in the street. The strategy involved group members patrolling the street and asking dog owners to pick up litter. Interventions that lasted only a day merely brought about temporary changes. In contrast when the intervention lasted four consecutive Sundays, carryover effects were noted up to 4 weeks later.

Commitment and Goal Setting

This intervention involves obtaining promises or agreements from people to change their behaviour eg by obtaining a commitment from car drivers to take the bus two times per week for a specified period. Commitments can be obtained in any number of ways to suit the situation at hand. People are usually approached personally and the approach can be either random (in their home or at parks, shopping centres etc) or non-random (names can be obtained from records, membership of clubs, interest groups etc). The commitment itself might be written and explicit eg they may be given a card to tick off on a daily basis. Or it can involve simple verbal promises. Its most noteworthy aspect is its success at producing durable behaviour change compared to other strategies. In explaining the success of commitment in one recycling study, Pardini and Katzev (1983-84) argue that commitments and goal setting mean that people may find their own reasons for recycling. They may even begin to even like doing it and, as a result, continue to perform these behaviours on their own. Their findings support the notion that internal sources of control have a stronger and more lasting influence on behaviour than external forces such as rewards and penalties.

Obtaining commitment is already integral to enforcement in UAM although, unlike the examples above, it is applied to mandatory not discretionary behaviours. There is little research available from allied policy areas. However it seems logical to look for ways to refine the use of commitment and goal setting as a specific technique in UAM.

Prior Litter

It has been well documented (see Geller et al 1982 for a review) that littering is significantly more likely to occur in a littered setting than in a clean setting. The implications of this for local authorities is that maintenance clean-ups should be integral to the overall faeces management strategy.

CONSEQUENCE STRATEGIES

Consequences occur after a behaviour. They include:

1. rewards and other incentives and
2. penalties

Available evidence suggests that consequence strategies are effective for as long as they are maintained but are lost soon after the consequence contingencies are withdrawn.

Rewards and Other Incentives

Rewards and other incentives can be monetary or non-monetary. They include direct subsidies, reduction or waiving of fees, gifts, prizes and awards. The advantages of this approach are that it is less coercive, less intrusive and less likely to alienate subjects than mandatory approaches. They also have educative value. Recipients of awards, for example, can be promoted as role models.

Parramatta City Council rewards responsible dog owners in an effort to encourage them to keep doing the right thing. Good behaviour means owners have their dogs on a lead in 'public places', keep their dog out of prohibited areas, clean up after their dogs, prevent them from barking excessively and register them at Council. When an ACO sees a responsible dog owner he or she gives them a free 'doggie' bag containing a nutritious bag of puppy food, shampoo trial packs, Allwormer tablets and Council's information booklet to help dog owners to become better equipped in the day-to-day management of their pets. Obviously these packs are a way to get the information message across as well.

Penalties

Penalties (regulation backed up by sanctions) will probably always be the backbone of UAM in Australia. However they are not intrinsically suited to all aspects of animal control. In my introductory paper on compliance at last year's conference I documented these limitations in greater depth (Jackson 1995a).

INTEGRATING THE BENEFITS INTO THE POLICY EQUATION

The human-animal bond is now substantiated. We also agree that it needs to be integrated into the policy equation. But does this actually happen or is it just a lot of rhetoric that's dished out at conferences like these and then put away for another year? Are pets something we tolerate in the urban environment or have we really come to accept that a person's relationship with their pets is inherently worthwhile? My own feeling is that the balance is starting to shift. More Councils are looking at what they can do to support their pet owning community. Graham Raine and Terry-Ann Pert have shown us just two examples.

What needs to be pointed out, however, is that these initiatives are more than just positive statements of support to even up the balance. They are actually rational responses to the more sophisticated task environment. We already know that strategies which encourage permanent and loving bonds between owners and pets can reduce relinquishment and abandonment by pet owners (Olsen, Moulton, Nett and Salman 1991). If people have a positive relationship with their pets they are likely to be responsible in other ways too - by providing them with an enriched environment, keeping them inside at night for their own protection etc - all of which make the task of animal control easier. Thus strengthening the bond between people and their pets should be an integral part of UAM - for everyone's benefit, not just pet owners.

Local authorities tend to focus on complaints and their management. This is how animal control started and is basically where it remains today. But increasingly and at a broader corporate level, municipalities are examining their competitive advantage relative to other areas. A big part of that advantage is quality of life and a lot of effort is now being directed at ways to enhance it. I firmly believe that pet ownership will be part of this new approach. Owning a pet adds a wonderful dimension to quality of life, in more ways than one, and these benefits should be fleshed out and integrated into the corporate planning process.

PUTTING IT ALL TOGETHER : MOVING TOWARDS INTEGRATED URBAN ANIMAL MANAGEMENT

Change campaigns are now a feature of Australian environment, health and social policy. They use a range of tools, as described in the previous section, but they are implemented systematically as part of an overall strategy. Amongst the national success stories are Life. Be in it and Keep Australia Beautiful. Victoria too, has had some well-publicised successes with the Quit campaign, the Sunsmart campaign and the Transport Accident Commission's (TAC) road safety campaign. What we don't hear so much about are the failures. In Victoria, both the 100 Ways to Keep Vic Fit and the Don't be a Wally with Water campaigns experienced uncertain, if not disappointing results (Cosgrove, Evans and Protachio 1996). It is useful to reflect on what we can learn from these campaigns. Cosgrove et al (1996) have done this recently and the following discussion is based on their findings.

Messages will be more effective if segmentation strategies are used. Thus part of the reason for the success of the TAC ads is their segmentation (the first ads were aimed specifically at 18-25 year olds and their families). The Quit campaign too has been highly segmented.

Campaigns promoting prevention of some future problem are less likely to succeed than those dealing with immediate consequences. Cosgrove et al say that this was not sufficiently appreciated in the design of the two environmental programs.

The tone and the values espoused are also important. The Quit and road safety campaigns emphasise values to do with family relationships and responsibilities. They made extensive use of scare tactics but the negative message was accompanied by a clear indication of the actions to be taken to prevent the problems. By contrast the 100 ways to Keep Vic Fit campaign emphasised broader conservation goals and, implicitly, an associated guilt. Its language was slightly negative and painted the picture of the average Victorian as unthinking, careless and unimaginative. Cosgrove et al say it is almost a model of how not to undertake a change campaign.

THE CASE OF THE CITY OF STIRLING

To test some of the ideas advanced in this paper, I undertook a limited case study with the City of Stirling in Perth, WA. Stirling was selected because of its strategic approach to UAM (for a review of Stirling's approach see Liversage 1995a and Liversage 1995b). It is also known as something of a success story in UAM. The aim of the case study was to probe their experiences generally and some of the new approaches in particular. Being qualitative, the results cannot be generalised to other areas but they provide useful insights into some of the realities and future directions of the field.

The research included two and a half days with the municipality. Investigations included examination of the documentary record (reports, policies, correspondence etc), in-depth interviews and focus group discussions with staff from a range of departments and interest group representatives, a tour of the municipality and accompanying one of the rangers on patrol.

The following discussion is a precis of my findings arranged into key themes.

Education

The importance of public education was recognised both in the strategic review of UAM and by staff at all levels of the organisation. Allocating funds for formal programs is another story. UAM has not traditionally been a high priority at Stirling and elected officials are wary of committing resources to programs with apparently uncertain results. These realities are not isolated to Stirling and they confirm that a lot more thought needs to be given to the institutional mechanisms by which education is put in place (how it is constituted, funded and monitored). Elected officials may be more easily convinced if they can purchase 'proven' programs from organisations with recognised expertise, if they can contract these organisations to educate on their behalf or if education can be achieved on a user pays basis. Stirling is now working closely with Garth Jennens' AMREX program on each of these education components. (Further information on the AMREX program can be found in Jennens 1994).

Alternatively (or additionally?) it makes sense for regional groupings of Councils to undertake common education programs, even employ an Education officer. There is a recognition at Stirling that this is an area where it makes sense for local authorities to work together. In Victoria the introduction of the Domestic Animals Act prompted a regional group (mostly bayside councils) to be established that meets once a month to share experiences and approaches. The group is now trying to develop consistent signage and enforcement approaches as well. A forum like this could be extended to adopting common education programs.

Given these limitations with formal education it seems logical to promote more proactively the use of informal education - by making attitude change and information provision an express part of all day-to-day operations. This seems to happen in an ad hoc way at Stirling as it does in most municipalities throughout the country, however it could be exploited to greater potential with more attention, encouragement and support.

Managing complaints

What the case study brought home is the level of attention that needs to be paid to managing complaints and to tolerance. To be sure, Stirling has its share of irresponsible dog owners. However complainants often have unrealistic expectations of what can and should be achieved. For example neighbourly disputes about dogs often overlay long standing disputes about other matters, people who are sick or confined to their house may be sensitised to nuisance way beyond what is considered a reasonable complaint. Other people expect the letter of the law to be observed to an obviously ridiculous degree. To these people a serious problem exists and unless it is handled sensitively it consumes vast resources through on-going complaints and calls for action. Stirling has integrated complaints management into their Dog Noise Strategy as detailed below and I believe their approach is a model for other local authorities to consider.

The dog noise strategy

Prior to implementing the Dog Noise strategy in May 1995, it was recognised that staff spent too much time and effort investigating complaints about dog noise that lacked substance, were possibly vexatious and which couldn't reasonably have been proven. Complainants were requested to keep a diary outlining their complaints but the process was flawed on a number of accounts. What was needed was a more systematic approach that enabled officers to deal more effectively with the genuine problems that did exist.

The new procedure is comprehensive and deals simultaneously with both sides of the complaint. Essentially it provides for an improved and more comprehensive diary system providing information about the alleged problem such as the time, duration and possible causes of barking. Complainants are provided with 4 sets of a 7 day diary. The complainant and at least 2 other households who are affected by the noise must complete them. If less than 3 diaries are received, or if they are not complete, Council does not take any action. Complainants are told that completion of the diaries will greatly help to prove a case should it proceed to court.

The diaries are neither difficult nor onerous to complete and the package includes instructions about process and what to do. Once the 3 completed forms and diaries are returned Council officers visit the dog owner and advise them about the problem. They then visit them 7 days later to see what they intend to do about it. If the dog owner cooperates they can either resolve it on their own using the information contained in the diary and with help from Council staff. Alternatively they can seek professional help through the new Barkline service or by individual consultation with AMREX representatives. After 60 days Council contacts the complainants to see if a problem still exists (this allows time for problem correction).

If the owner refuses to cooperate the process becomes quite formal with Notices to abate the noise served on the dog owner and ultimately legal action if required. Further diaries are required to be completed and the complainants are advised that Council will not proceed unless this is done.

The Dog Noise Strategy has been successful. Council received 13 formal complaints/diaries returned for investigation between June 1995 and February 1996. Over a similar period before the adoption of the new procedures approximately 40 complaints/diaries were received.

To summarise, the positive features of the new system are as follows:

1. Its capacity to screen complaints that lack substance or are vexatious.
2. The detail provided in the diary. This helps dog owners solve the problem. It also gives the rangers more information, meaning they have to rely less on instinct and hearsay.
3. The assistance and support provided to the dog owner to resolve the problem.
4. The process - which means that those few cases that do proceed to court are more likely to be defended.

There is a residual concern by staff that some genuine complaints are not being resolved by the strategy. This has been recognised and will be addressed in future evaluation.

Overcoming departmental barriers

Departmental barriers are formidable in any organisation. Local government (and indeed Stirling too) is no exception. Effective communication between departments is often impossible because of differing concerns, priorities and a lack of understanding on both sides. Getting the town planners to plan for pets is an almost herculean task no matter how many sound reasons you give them to do so. To be fair, planners have a limitless number of issues to contend with. However even when we can provide them with a document like *Pets in Urban Areas*, which encourages pet-friendly housing design and which was devised as a resource tool for town planners, it is surprising the level of reluctance from that profession. Over time I think this will change but in the meantime other windows of opportunity need to be found. The Rangers can't require planners to plan for pets - it doesn't work that way. It needs to come from a higher level, from people who hold sway and have an overview of the workings of all departments in the organisation. At Stirling I found a clear appreciation at the executive level of the importance of good design in UAM stemming, it would seem, from the strategic review undertaken in 1992. *Pets in Urban Areas* was not available for use as a resource document at that time, however it is available now and the impetus to drive its implementation would appear to lie at the executive level.

Integrating the benefits into the policy equation

The benefits of owning pets appear to be well understood across the organisation. At one level, this means a balanced approach to either side of the debate. At another more implicit level there is an emerging understanding that pets contribute to quality of life; a positive that should perhaps be fostered by local government. At this stage, fostering the positives in an explicit way would still be something of a quantum leap, focussed as the Council is on handling complaints. However there is recognition that, over time, the strategy may be adjusted gradually to integrate an explicit consideration of the benefits of owning pets in UAM policy.

SUMMARY AND IMPLICATIONS FOR POLICY AND PRACTICE

This review suggests a need for more attention to be paid to developing appropriate models for attitudinal and behavioural change in UAM. The changed task environment and the more complex nature of the issues we face inevitably means less reliance on regulatory approaches and more emphasis on sophisticated non-regulatory interventions. This is happening in other areas of urban policy and it should happen in UAM.

This paper is a first step towards the development of such a model. It presents a range of strategies that can be developed for use in UAM. What is important is that we get them right for UAM and then put them together in the most effective way. Rarely, if ever, will one intervention work on its own.

The following general factors summarise key findings of this paper and have implications for future directions.

- UAM strategies need to be systematic, well planned and integrated. This means a package of complimentary techniques designed for the target behaviour in which we are interested and which pays attention to both short and long term approaches.
- Changing attitudes has the most promise for lasting voluntary changes in people's behaviour. However it is not easy and change tends to occur in the long term. Evaluation and lessons learned from other policy contexts are a crucial component.
- Behaviour change techniques aim to change behaviour in the short term but can also augment long term attitudinal change by allowing people to experience and find their own ways of adapting. A range of behaviour change techniques is available, not all of which are used in UAM at the moment.
- There is considerable confusion over the strategies that presently exist. A central register updated on a regular basis that lists and describes all the programs would overcome much of this confusion.
- More research is required into the nature of compliance and non-compliance in UAM and the efficacy of different interventions.
- Management of tolerance will become an integral part of UAM in the future, as a way to manage unrealistic community expectations. This can be done with approaches that more effectively screen the complaints that lack substance or are vexatious. Stirling's Dog Noise Strategy is one successful example.

- The benefits of owning pets will, in the future, be integrated into UAM policy. This will be a rational approach to animal control. It will also be used in the search for ways to improve quality of life and thus be a part of the corporate plan. An important first step is to ensure the UAM philosophy statement and mission balances the positives as well as the negatives of owning pets. Too often I find these statements addressing only the problems caused by irresponsible dog owners.
- The training programs now being developed for ACOs should include instruction in the use of the strategies considered in this paper. ACOs also need training in enforcement psychology for improved communication with both pet owners and complainants.
- Attention to future direction is required from the rest of the UAM community as well. Trialing, evaluation and dissemination of results is limited by the fragmented nature of local government, the small size of geographic units and the politicised nature of the task environment. We need to ensure that other mechanisms are found to support local authorities. This is happening already but further efforts are required, for example with more regional groupings of Councils and leadership from peak bodies and specialist organisations.

¹ *The ideas advanced in this section are the authors and not those of any representative of the City of Stirling unless specified.*

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