RESEARCH REPORT:

# NSW NATIONAL PARKS AND WILDLIFE SERVICE RESEARCH PROJECT

## *URBAN WILDLIFE RENEWAL*

## *"GROWING CONSERVATION IN URBAN COMMUNITIES"*

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# FOREWORD

Conservation outcomes in urban environments are influenced, in a large part, by the choices we make as individuals - the plants we have in our gardens; the garden chemicals we use; and the way our pets are managed. Community involvement in conservation includes people taking everyday, local actions to help protect and conserve local native wildlife. The cumulative effect of individual action can significantly contribute to the overall health of urban ecosystems and to the survival of threatened species and conservation of biodiversity, maintaining that special “living” quality enjoyed in many urban areas of New South Wales.

To engage people and inspire positive action, education and involvement initiatives need to reflect an understanding of the current needs, attitudes and practices of the communities we are seeking to reach. A research-based approach can inform the design, implementation and evaluation of initiatives and programs that can engage the broader community.

Research into community environmental understandings has informed education and involvement programs for waste management, pollution and stormwater issues. However, little reliable information about community understandings of conservation has been available.

The NSW National Parks and Wildlife Service (NPWS), with the support of the NSW Environmental Trust, has undertaken new research which, for the first time, investigates the knowledge attitudes, needs and practices in the community specifically relating to conservation of wildlife and their habitats in urban environments. The findings are a valuable tool, revealing key elements that are important to keep conservation initiatives relevant and meaningful to a mainstream audience.

NPWS is using the research to improve the effectiveness of conservation policy, education programs and community involvement initiatives. A number of projects have already been undertaken in partnership with local government, state agencies and community organisations to invite communities to feel good about their actions to renew urban wildlife in cities, suburbs and towns of NSW.

Other organisations are encouraged to use this important resource in achieving conservation outcomes in urban areas of NSW. I commend this report to you in the spirit of conservation partnerships.

Brian Gilligan

Director-General

**NSW National Parks and Wildlife Service**

# OVERVIEW

## 1. OBJECTIVE OF THE STUDY

**The central purpose of The Study was to investigate current community knowledge beliefs, attitudes and behaviour with respect to urban wildlife.**

**The study results will inform the development of community education and involvement initiatives which can engage and involve the broader community, to achieve enhanced conservation outcomes.**

### RESEARCH DESIGN

The brief required a study that was both exploratory in nature and capable of establishing baseline data. To achieve this the study combined both qualitative and quantitative methodologies. The qualitative component comprised a series of n=20 indepth interviews and n=10 mini group discussions. The quantitative component involved a large scale questionnaire completed by l,006 people 18 years plus in NSW.

To discover a wide range of views both the qualitative and quantitative research drew respondents from urban areas of differing population density, that is high density city, medium density city, ¼ acre city, city fringe, large town medium town and small town. Respondent segmentation for the qualitative component further took into account attitudes toward fauna and native plant conservation. That is whether they are committed, moderate or strongly against *(see Appendix A Qualitative Component for Recruiting Definitions).*

## 2. UNDERLYING NEEDS OPERATING IN THE AREA OF WILDLIFE RENEWAL

Understanding human needs is crucial to developing effective strategies to change the behaviour of the community in favour of contributing to urban wildlife renewal. The most important of needs to arise from this research tended to centre around the need for independence and freedom and safety and security.

Also important are the needs for self-actualisation, social interaction and the need to be a nurturing person.

All human behaviour tends to be driven by the desire to satisfy underlying need states. Participation is expected to be greatest when a program is felt to satisfy needs and does not prevent other underlying needs being met.

## 3. THE URBAN RESIDENT'S CONCEPT OF A NICE PLACE TO LIVE

The "sense of place" that the surrounding environment brings to where people live is important to understand in terms of the value placed on the living ecosystems in an urban environment of which humans are part. In order to understand this, qualitative and quantitative research was conducted to ascertain people's construction of what was considered a "nice place to live". Through the conscious identification of elements which compose this construction, a current notion of a "quality of life" could be established. Relaxation, leafy surrounds and the sound of birds were key elements to contributing to perceptions of having a "nice place to live".

In the quantitative study respondents were asked to indicate the importance that 9 of these elements have in making somewhere a "nice place to live".

The top four aspects were mainly centred around having peaceful and attractive surroundings.

- "a place that's leafy and green with lots of tree lined streets and parks" (61% "extremely/very important"),
- "a place that's not too close to busy streets or shopping centres" (53% "extremely/very important"),
- "a relaxing place where you'd hear the sounds of lots of birds" (47% "extremely/very important"), and
- "a place with parks close by where kids can play" (50% "extremely/very important").

Aspects that described wildlife and bushland more definitely were given less importance in contributing to a "nice place" to live despite being closely related to some of the most important.

- "a place with lots of natural bushland close by (43% "extremely/very important"), and

- "a place where you could live close to native animals and birds" (31%"extremely/very important").

The least important in the choices given was;

- "a place that's close to lots of cafes, resturants and bars" (12%"extremely/ very important") .

On balance a garden was preferred when it had a combination of lawns or paved areas and garden beds. The garden beds could contain mostly Australian Native plants—"a native garden" or ornamental plants like azaleas, camellias and roses— "a traditional garden".

Words selected to describe an Australian native garden and a traditional garden, were quite different. Australian native gardens were most often described as:

- "right for Australia",
- "natural",
- however also "relaxing".

In comparison, traditional gardens on the other hand, were seen as:

- "fashionable",
- "adding value",
- "neat" and "tidy", and
- "soft".

## 4. URBAN PEOPLE AND "THE OUTDOORS"

Study participants expressed a liking for outdoor activities as they were perceived to be healthy, relaxing, and something different to their usual workplace and/or home. As such, sitting in the backyard, sport, picnics, fishing, and walking were very popular. In terms of a fantasy outdoor setting, the most commonly described settings related to secluded beaches, rainforest, and riverbanks.

The most popular and regularly undertaken activities were those most easily accessed or performed, such as walking along beaches or river fronts (88% "enjoy"), going to picnics (81%) and bushwalks though national parks (78%).

## 5. THE RELATIONSHIP BETWEEN NATURE AND URBAN AREAS

The degree to which people were attitudinally positive to conserving wildlife and felt that they were in a position to contribute tended to relate to dwelling type and location. Those living on acreages at the city fringe were more likely to show interest in adopting positive behaviours with regard to the environment, than those in houses or apartments/townhouses. Those in apartments were seemingly not against wildlife, although they perceived there was little they could do to help encourage wildlife into urban areas.

In terms of the attitude statements relating to wildlife conservation, those generating more than 50% strong agreement were:

- "cats are a real threat to our native animals in our cities and towns" (agree strongly - 69%),
- "you can really feel at one with nature in an Australian bush garden (agree strongly - 54%),
- "I'd love to think that my back yard was suitable for lots of native Australian wildlife" (agree strongly - 52%), and
- "I would love to be able to feed native birds and animals in my own yard" (agree strongly - 50%).

Within the qualitative phase of the study it emerged that people have a partitioned concept of the world in which they conceive of areas that are considered "right for humans" and others that are "right for wildlife".

When asked if native animals should be encouraged into "local bushland" and "unspoilt bushland", the majority of respondents believed that they should be definitely encouraged (65% and 87% "definitely encouraged" respectively). When asked if native animals should be encouraged into "suburban backyards" and "local parks", 14% and 23% respectively felt they should "definitely be encouraged", and an additional 50% and 52% (respectively) felt this should be "encouraged to some extent".

**Extent to Which Wildlife Should be Encouraged Into Specific Areas**

| | Total Encouraged % | Definitely Encouraged % | Encouraged to Some Extent % | Not encouraged at all % |
|---|---|---|---|---|
| A. Suburban backyards | 64 | 14 | 50 | 36 |
| B. Local parks | 75 | 23 | 52 | 25 |
| C. Local bushland | 93 | 65 | 28 | 7 |
| D. Unspoilt bushland | 99 | 87 | 12 | 1 |

All respondents – QA10

The circumstances where people were happy to encourage wildlife into their own backyards tended to be when the animals were not dangerous, unattractive, dirty or harmful and as long as the type of wildlife was felt capable of living unthreatened in an urban environment. That is, so long as people's need for safety and security and their need for control and order were not challenged they were open to encouraging wildlife into their area. Desirable attributes of animals therefore were as follows:

- cute appearance,
- good "image" or "reputation",
- recognised positive contribution to the urbanised environment, and
- perceived status value.

The types of animals that were selected as being the type that people would like to have in their own backyards included, small birds, butterflies, lorikeets, earth worms and kookaburras. Those that tended to not be liked by respondents were snakes, spiders, moths and bats.

## 6. THREATS TO WILDLIFE IN THE URBAN SITUATION

From the research, it was clear that there was a strong recognition of the threats to wildlife. To a large extent the major threat to wildlife was seen as urbanisation itself, and as such there was little that people felt could be done to minimise the threat, other than having wildlife "out of harms way". There was however agreement that there could be greater controls on domestic pets such as cats and to a lesser extent, dogs.

The most commonly mentioned urban related threats included:

- The low tolerance of insects in an urban lifestyle leading to usage of insecticides.
- Urban pollution.
- Physical threats: from people themselves, cats, dogs and motor vehicles.
- Lack of a suitable habitat: shortage of the right food, trees and other vegetation and living areas.
- Introduced or dominant species.

Knowledge of endangered or extinct Australian animals seemed unreliable with some common animals being included amongst those identified by respondents.

## 7. URBAN COMMUNITY UNDERSTANDING OF CONSERVATION CONCEPTS

In the quantitative survey study participants were asked what the term "environment" meant to them personally. Responses that contained similar ideas and language were grouped together for analysis. The most popular meanings related to nature/natural surroundings (45% net), native animals/plants (36% net), being free from pollution (32% net), and looking after the environment/for the future (21% net).

There is a tendency to place a boundary between the natural environment and the urban spaces (the partitioning concept and proximity effect). While proximity of nature will be tolerated by some, many understand and expect the natural environment is kept separate from urban areas.

As a corollary, the natural elements in urban areas are thought of as left over bits and pieces, rather than the visible expression of the ecosystem operating, albeit in a modified way, in urban areas.

When raising the issue of urban wildlife in the groups and depth interviews, few expressed interest in the specifics of urban wildlife. It was not an issue that crossed their minds on a daily or even regular basis. For the majority it lacked personal relevance. In that sense concepts such as biodiversity, natural ecosystems, wildlife, and the natural environment were distant issues that most placed under some global category, thought to only be of relevance to environmental "experts".

There was little or no knowledge of the existence of particular native trees or particular native animals that were only able to survive in their local area, so in that regard there was no sense that perhaps the very survival of particular native plants or animals may depend on our ability to live with them or to maintain their habitat within urban environments.

Environmental issues that were top of mind and of greatest concern, such as pollution, urbanisation and over population tended to be big picture global issues over which people felt they had little control or influence. They tended not to be close-to-home local issues that people can do something about in their own backyards and neighbourhoods.

## 8. URBAN CONSERVATION WITHIN THE BROADER RANGE OF ENVIRONMENTAL CONCERNS

Although there is a high level of claimed concern for the environment, very few respondents had actually actioned this concern becoming involved in any kind of environmental action. However, action is blocked in part by people's belief that the issues tend to be global and the sense that local initiatives or behaviours are likely to have little impact. Better waste management, composting and better energy usage and efficiency were however seen as behaviours that individuals could adopt in order to have some positive impact on our natural environment.

When asked about their overall concern for environmental issues, 90% of respondents claimed to be "concerned about the environment" (around 20% claimed to be "extremely concerned" and 40% "very concerned").

The biggest problems facing the Environment were seen to be:

- Pollution (44% net),
- Urbanisation (33% net),
- Over population (28% net), and
- Forest degradation (27% net).

Whilst pollution and degradation of water/land were of greatest concern to respondents, loss of native plants and animals from the urban environment was the issue most likely to be perceived as being of 'least concern'.

These findings indicate that for greatest effect urban wildlife issues need to be linked to the issues that are of greatest concern. At the same time education about the global issues should establish the relevance of the issues at a local level.

When asked what they could do to help, the actions identified most often as having some impact were:

- not putting oil down the sink,
- recycling waste, and
- keeping cats locked in at night.

## 9. TAKING ACTION

A high percentage of respondents (78%) claimed to be "very likely" to contribute to helping the environment through the recycling of waste. Given the right context one third of the sample indicated a strong likelihood to get involved by helping with such initiatives as conserving native plants and animals.

When a list of conservation measures that could be taken was read out to study participants, the majority of the sample (96%) claimed they would be either "very likely" (78%) or "quite likely" (18%) to recycle waste. One third of the sample (33%) stated they would be were "very likely" to "support council to regenerate some parks back to natural bush" (33%) and "seek out information to better

understand how to live with native birds and animals" (32%). Three in ten respondents would be "very likely" to "help look after native animals", whilst 21% had similar feelings towards getting "involved in conservation of native plants and animals".

The qualitative phase of the research revealed that having environment and wildlife information on hand was not enough to drive interest within the community, it was more a matter of providing motivators that create relevance to encourage participants to actively seek information.

There were four segments identified requiring different motivational prompts including the:

1. Keen and knowledgeable,
2. Interested and could become keen,
3. Uninterested but committed either for or against,
4. Uninterested but negative.

The first segment simply required the provision of accessible information to encourage contribution to urban renewal. The "interested and could become keen" would need to understand the role information plays in enhancing enjoyment in pursuing interests. The last two groups would need to be actively marketed to, to encourage participation in a way that allows them to discover the big picture in a meaningful way.

The demographic of people with a high likelihood to adopt conservation behaviour tended to have a native garden, were "extremely concerned" about the environment, over 35 years of age and household income of $20K-$29K or $100K plus.

Local councils and wildlife conservation groups appear to be the most widely nominated groups whom respondents perceive need to be taking an active role in conserving native plants and animals. Respondents ranked "individuals like yourself" as least responsible for taking an active role.

These findings indicate the importance of engaging people where they expect to find action and expect to have access to information. They indicate the importance of strategic partnerships between organisations to better engage communities in urban wildlife renewal.

# 1. INTRODUCTION AND RESEARCH METHODOLOGY

The brief provided by the NSW National Parks and Wildlife Service (NPWS) requested that an assessment be conducted by way of research to establish a benchmark of community knowledge, attitudes and behaviour with regard to urban wildlife renewal.

The work of the NPWS includes integrating the efforts of people and communities in protecting and conserving natural and cultural heritage in the New South Wales landscape. That is, the NPWS recognise that there is an individual and collective responsibility in conservation, and their approach incorporates natural, cultural and community values.

As a result of this research, the NSW National Parks and Wildlife Service is in a better position to develop initiatives to facilitate broader community involvement in urban wildlife renewal. Further, the level of success of these initiatives can be measured against the benchmarks established in this study.

Research conducted by the Environment Protection Authority (EPA), in the area of community environmental knowledge, attitudes, skills and behaviours was taken into account prior to conducting this study. Woolcott Research also recently evaluated the *"Sustainable Behaviour"* education campaign on behalf of EPA.

The following sections of the report outline the key objectives for the research program and the research design.

## PROJECT TASK

**The key project task was to understand current community knowledge, attitudes and current behaviour with respect to urban wildlife renewal. Results will be used to inform the development of community education and involvement initiatives which can facilitate behavioural change and achieve enhanced conservation outcomes.**

In essence, the research aimed to provide an actionable background to:

1. The needs, attitudes and behaviours of the community toward urban wildlife renewal,

2. The key messages that communication should contain to ensure the community finds relevance and recognises benefits in urban wildlife renewal.

Each of these areas involved detailed exploration as follows:

## 1. NEEDS, ATTITUDES AND BEHAVIOURS

As a platform for formation of future communication and program design it was considered imperative to fully understand the current needs operating, the attitudes constraining behaviour and the opportunities to prompt action once the attitudinal factors had been addressed. In a broad sense, the research uncovered:

- Feelings toward urban wildlife renewal, the perceived challenges, how important it is as an environmental issue, its contribution to quality of life, what role people perceive for themselves in urban wildlife renewal.

- What does it mean to them, how committed are they to nature and wildlife, are they comfortable with it in their backyards, are they prepared to contribute to urban wildlife renewal,

- What knowledge and understanding is there currently regarding urban wildlife renewal, is it accurate,

- Awareness of organisations responsible for urban wildlife renewal, is there seen to be information available, what and where do they access information,

- How do these feelings differ by segments such as age, sex, life stage socio-economic status, cultural background, city and regional communities.

## 2. WHAT ARE THE KEY MESSAGES THAT COMMUNICATION SHOULD CONTAIN TO ENSURE RELEVANCE AND USEFULNESS IN MOTIVATING INVOLVMENT AND PARTICIPATION

Key motivators emerged as we uncovered important needs or concerns currently affecting the community with regard to wildlife renewal, however the study also probed further on such issues as:

- The most effective motivational cues or triggers that would encourage enquiry and/or participation, the emotional and rational *"hot buttons"* that would prompt action,

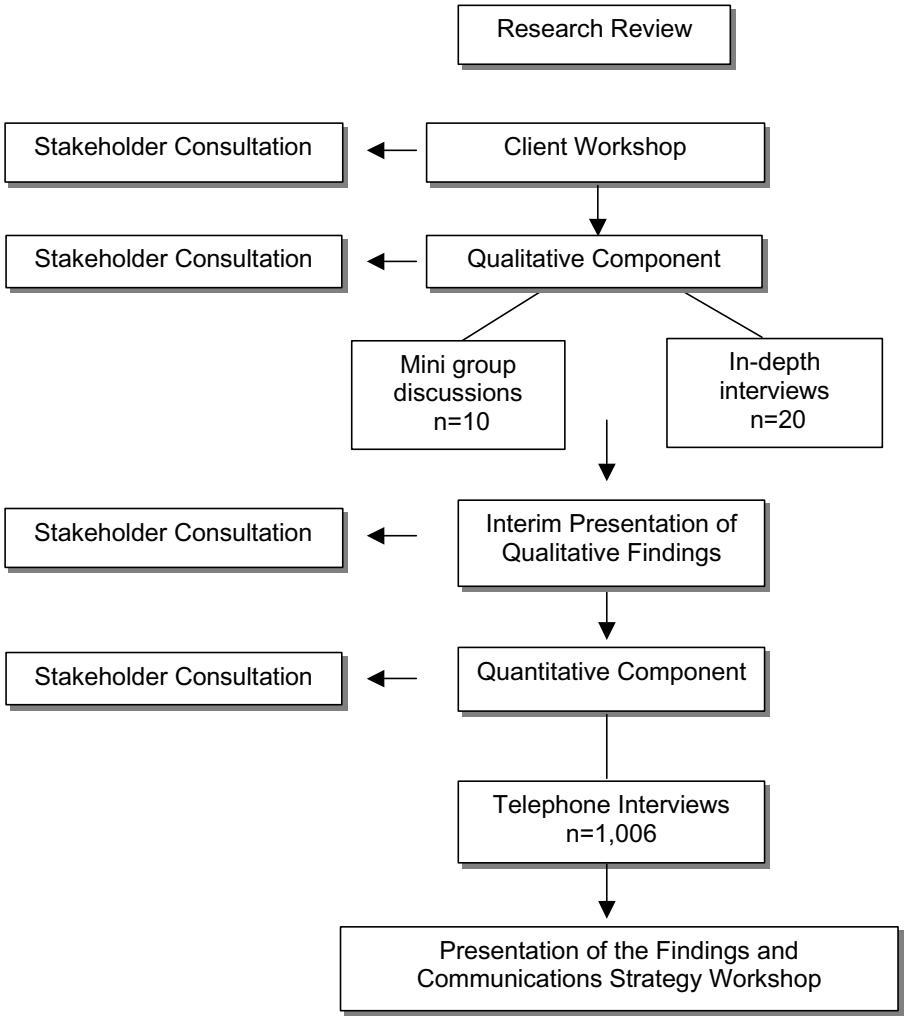
- What people want to know, how they expect to find information,

- What barriers exist to contributing to urban wildlife renewal, and

- Levels of support for a range of propositions for behavioural change.

## RESEARCH DESIGN

The research involved an initial review of existing research, a workshop with NPWS incorporating stakeholder consultation followed by both qualitative and quantitative components, conducted in the order shown in the outline below. Stakeholder consultation included representatives of a wide range of groups and organisations working to involve the community, including Local and State governments and non-government organisations. This section of the report includes an explanation of each part of the research program.



## A SENSITIVE APPROACH TO MEASURING ATTITUDES AND KNOWLEDGE

The research design takes account of one of the major problems with attitude measurement, and an issue which is particularly relevant in the urban wildlife renewal context. Namely, respondents often develop attitudes in response to questioning—even though they actually didn't hold that opinion prior to the research. If we were to ask respondents the extent to which they agreed or disagreed with a statement such as "its important to minimise the use of garden pesticides, because of the harm they can do to native wildlife", we would presumably get answers but:

- Many people may have actually never thought about this issue before, and may be simply developing an opinion on the spot, and
- Many people who agree with the statement may in reality do nothing to reduce their use of pesticides, and feel no sense of concern over it.

It is critical that the approach to measurement of attitudes towards urban wildlife renewal and its associated topics is sensitive to this issue. In particular, the approach needs to:

a) encourage respondents to express their opinions in a less directive, *"free response"* context initially—rather than relying solely on traditional, structured attitude scales,

b) ensure that we strive to measure all three of the basic components of the community's attitudes, namely:

- *"Cognitive"* - the *"knowledge"* component,
- *"Affective"* - the emotional, *"feeling"* component, and
- *"Behavioural"* - the action tendency that results.

c) design our measuring instruments so that we can effectively determine whether or not respondents actually have an attitude, rather than simply causing them to develop one in response to our questions.

Given that attitudes and behaviours related to urban wildlife renewal are likely to be strongly influenced by a need to feel socially acceptable, the research will need to employ a range of projective techniques. Projective techniques allow respondents to comment on the beliefs, feelings, motivations and behaviours of others, and hence reveal a lot of information about their own attitudes and behaviours. Eg, What type of person has a garden like the one in this photograph.

## 1. REVIEW OF EXISTING RESEARCH

Prior to the commencement of this research, existing research was provided by NPWS and reviewed by the Woolcott Research Project Team. Woolcott Research also sourced existing research from the internet and referred to relevant studies conducted on behalf of EPA. This review ensured that the project did not unnecessarily duplicate areas already covered by previous research and that future interpretation of findings would take previous findings into account.

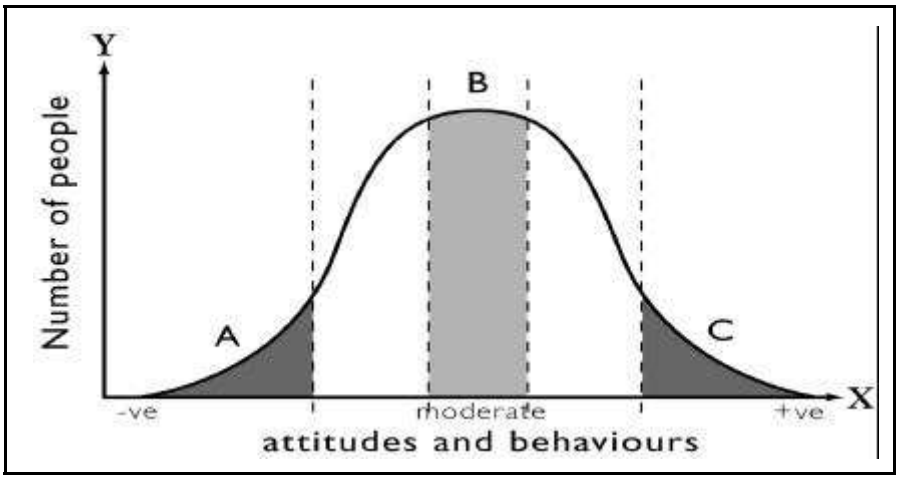
## 2. WORKSHOP/STAKEHOLDER CONSULTATIONS

Following this review process, a half day workshop was conducted with NSW National Parks and Wildlife Service. During this session the objectives of the research were confirmed. A proposed discussion guide was also presented by Woolcott and developed further according to client requirements. Finally, and most importantly, the respondent segments and, specific definitions of each, were discussed and agreed upon. NPWS referred to wider consultations to reflect the perspective of other stakeholders.

## 3. QUALITATIVE COMPONENT

This component involved a series of 20 individual in-depth interviews and 10 mini focus group discussions. To ensure a wide range of attitudes was discovered, in-depth interviews and mini focus groups were recruited according to the following matrix of attitudinal segments. The recruitment question is given in Appendix A—Qualitative component.

Postulated distribution of attitudes and behaviours towards the urban conservation.




This study involved a broad cross section of the community, and within the community various psychographic segments can be identified, where people within a segment express similar opinions. Segments in this study were based upon the type of area that people live in, such as country versus city, or high density versus low density areas, as well as their general attitude towards the natural environment . Segments were not mixed as respondents tend to feel unable, and thus are less likely, to express personal opinions, which may conflict with respondents from other segments that are different to their own.

*We therefore conducted mini group discussions for several reasons:*

- *They provide a more intimate environment than a regular group discussion.*
- *For application of projective techniques.*
- *To enable us to cover each of the individual psychographic segments, within the budget.*
- *To be able to observe the impact of peer group influence within the segments on people's attitudes and reported behaviour.*

We hypothesised that understandings of urban wildlife would vary depending upon the density of residential setting. *We therefore structured the research sample to explore a range of residential densities, in both the Qualitative and Quantitative research.*

There is also a tendency for people's viewpoints to be affected by the viewpoints of others, who seem to be more knowledgeable and/or more confident than themselves. Therefore we conducted a series of individual in-depth interviews to eliminate the element of peer pressure.

The resultant recruitment specifications were as follows:

| | SEGMENTS | | | | | | |
|---|---|---|---|---|---|---|---|
| **Attitudes to Fauna and Native Plants Preservation** | **High Density City** | **Medium Density City** | **¼ acre City** | **City fringe** | **Large town** | **Medium town** | **Small town** |
| Committed | - | - | 1 group and 2 depths | | 1 group and 2 depths | - | |
| Moderate/indifferent | - | 1 group and 2 depths | 1 group and 2 depths | 1 group and 2 depths | 1 group and 2 depths | 1 group and 2 depths | |
| Anti | 1 group and 2 depths | | 1 group and 2 depths | - | - | - | - |

A larger proportion of research effort was dedicated to the Moderate/Indifferent group, about whom stakeholders felt least was known.

The recruitment question used to ascertain attitudinal segment is given in Appendix A in stakeholder workshops. Definitions of each area type were agreed upon. The following segment specifications for area types were utilised:

**High Density – City:** Apartment buildings in city areas.

**Medium Density – City:** Small dwellings such as semi-detached houses, some townhouses and terraces with courtyards or small gardens in city areas.

| | |
|---|---|
| **¼ Acre Suburban– City:** | ¼ Acre blocks of land in city areas. |
| **Acreage City Fringe:** | Acre blocks of land on the outskirts of city areas, e.g. Dural |
| **Large Towns/Rural City:** | Population of more than 25,000 |
| **Medium Towns:** | Population of approximately 10,000- 25,000 |
| **Small Towns:** | Population of approximately 1,000 – 10,000 |

High and Medium Density City groups were conducted at the Woolcott Research group rooms, located in the Sydney CBD. Moderate/Indifferent, Quarter Acre City and City Fringe mini focus groups and interviews were conducted in the city, whilst a Moderate/Indifferent and the Committed mini focus group and interviews were held at group rooms located in Parramatta. Country mini focus groups and in-depth interviews were conducted in Mudgee for the Small/Medium town research and Dubbo for the large town representation.

Groups and in-depths were mixed with regards to gender and, a broad mix of socio-economic backgrounds were covered. In terms of age, the qualitative component was based on two broad age groups - 25 - 39 year olds and 40 - 60 year olds. With regard to incorporating different cultural backgrounds, N=5 in-depth interviews were conducted amongst Non English Speaking Background respondents.

A number of specific techniques, tailored to fit in with the subject of the research were used to delve below the surface in our investigation of needs, motivations, attitudes and behaviour. These included Triadic Sorting and card sorting.

**Triadic Sorting** invited respondents to comment on three contrasting garden styles and the type of person who would choose each.

**Card Sorting** used a variety of images of various plants and animals, both native and introduced, to stimulate discussion about preferences and experiences with plants and animals in urban areas.

Both the discussion guide used for this component as well as the stimulus material is appended to the document.

### Interim Presentation of the Qualitative Findings

A verbal presentation was given of the findings from the qualitative component. The qualitative findings, became the basis for discussions to refine the questionnaire for the quantitative component. A final version of the questionnaire was approved by NSW NPWS to ensure inclusion of all requirements, prior to commencement of the Quantitative phase.

### Quantitative Component

Before conducting this phase, a series of pilot interviews were carried out to finalise the questionnaire to ensure questions were effective and that the overall length was appropriate. It was decided that, due to the length of the questionnaire, there would be two versions. The core questions to be asked were included on both questionnaire versions whilst the following questions were included on the one version only:

| Questionnaire A | Questionnaire B |
|---|---|
| Q3. Importance of aspects making somewhere a nice place to live. | Q5. Adjectives describing Australian Native gardens. |
| Q4. Preferred flowers and plants for the garden. | Q6. Adjectives describing gardens with roses, azaleas, camelias. |
| Q5. Appeal of different animals. | Q8. Meaning of term “environment” |
| Q12. Organisations/places go to for Information on conversation. | Q9. Perceptions of greatest problems facing our environment |
| Q13a. Conversation responsibility ranking of different groups. | Q10. Level of impact caused by various environmental issues. |
| Q13b. Extinct/endangered animals. | Q11. Level of concern of each issue. |

In effect the core questions were asked of the full sample whilst the questions included on only version A or B were asked of around half the total sample or around 500 people.

Incorporated into the questionnaires was a proprietary technique called CARE (Customer Attitude Response Evaluation) an effective way of identifying which of those elements are most important in contributing to people's perceptions on conservation. (See Appendix B: Q7. Questionnaire A, Q4. Questionnaire B). This approach incorporates both a qualitative and quantitative research design where the qualitative is used to establish the elements that make up perceptions and quantitative to measure relative importance of these. This method of analysis CARE, which utilises scalar conjoint analysis is the best method to ensure a real ranking of importance. This method forces respondents to work through alternative choice sets rather than just applying rankings or ratings in a traditional way, which often does not differentiate clearly enough. That is, many things may emerge as important in an absolute sense and it is not until people have to choose between one aspect and another that a real hierarchy emerges.

A series of N=1,006 telephone interviews were conducted amongst respondents across NSW. These interviews were conducted randomly, in order to achieve a sample that was representative of the population, particularly with regards to age, gender and regional locality. Areas covered in this component of the research adhered to the Urban definition provided in the brief, of population clusters greater than 1,000 people comprising more than 250 dwellings.

| | |
|---|---|
| **SYDNEY** | |
| High / Medium Density | 102 |
| Suburban Block | 250 |
| Fringe | 104 |
| SUB TOTAL | 456 |
| **NEWCASTLE/WOLLONGONG** | |
| Suburban Block | 150 |
| Fringe | 100 |
| SUB TOTAL | 250 |
| **COUNTRY** | |
| Large/Medium | 150 |
| Small | 150 |
| SUB TOTAL | 300 |
| **TOTAL** | **1,006** |

There were a number of reasons for coverage of the above segments for the quantitative phase of the study as follows:

1. The responsibility of the NSW National Parks and Wildlife Services is to all of New South Wales and therefore once the organisation has developed relevant initiatives, these will need to be implemented, statewide.
2. Attitudes toward urban renewal may differ quite significantly depending on the area in which the respondent lives.
3. The type of urban wildlife would vary between city and country areas, which would further impact on knowledge of and behaviour toward the wildlife.
4. The greater Sydney area is quite different from regional centres such as Newcastle and Wollongong, in terms of size and urban opportunities for renewal. In that sense we sampled greater Sydney area separately to these regional centres.
5. We postulated that there exists a number of psychographic segments within the community in terms of their attitude to urban wildlife renewal.

The ability to recognise heterogeneity in the community allows stakeholders to select strategies and messages that work powerfully and effectively within a segment and diminish reliance upon one-size-fits-all strategies.

In that sense, it was important to have the capacity to analyse the attitudes and beliefs on a segment by segment basis. For example, we hypothesised that people in high density dwellings within the city would have a very different set of attitudes and beliefs toward nature than those dwelling in more suburban areas.

We included coverage of the following various segments in the quantitative component.

- High density, city,
- Medium density, city
- ¼ acre suburban, city,
- Acreage city fringe,
- Large towns,
- Medium towns, and
- Small towns.

The area segments covered in this component were the same as those represented in the qualitative phase however some segments were merged because of expected similarities of attitudes as well as budgetary constraints. Those segments that were merged included:

**High – Medium Density City:** Apartments and small dwellings such as semi-detached houses, some townhouses and terraces races with courtyards or small gardens in city areas.

**Large –Medium Towns:** Population of approximately 10,000 plus e.g. Camden, Goulbourn, Wagga, Tamworth

Quotas were applied to the sample to ensure coverage of each of the area segments. At analysis stage, the results were post weighted to reflect the true distribution of each segment within the population.

Telephone interviews were conducted using CATI (Computer Assisted Telephone Interviewing), the benefits of which include generation of phone numbers on a random basis, control over sample quotas to ensure the sample achieved best resembles pre-set definition and minimisation of interviewer error.

The following document presents the findings of this research in the form of detailed write up accompanied by charts. Also appended to the back is a copy of the questionnaires utilised for the quantitative component as well as relevant material from the qualitative component of the research.

# 2. UNDERLYING NEEDS OPERATING IN THE AREA OF WILDLIFE RENEWAL

Understanding human needs is crucial to developing strategies to change the behaviour of the community in favour of contributing to urban wildlife renewal. The most important of needs to arise tended to concentrate around the need for independence and freedom and safety and security. Considering other need states, those on acreages were more likely to rate the need for nurturing, self actualisation, and recognition and status as "extremely important" than their counterparts in apartments, town houses and houses.

All human behaviour tends to be driven by the desire on the part of people, to satisfy underlying needs states. In assessing how to impact the communities' attitudes and behaviour, the research firstly attempted to uncover all the underlying needs operating within the area of urban wildlife renewal that could potentially act as either barriers or motivators. This was achieved through the use of several projective techniques and detailed questioning methods. For example, within the qualitative groups and in-depth interviews, we used a form of thematic apperception testing that required respondents to look at various photos of garden types and then project as to why a person chose that type of garden, what type of person he or she was and so on.

The following tables describe all the needs states revealed in the research that could impact on community behaviour in relation to urban wildlife renewal. The third column contains a selection of verbalisations heard in the focus groups and depth interviews when a need was expressed. The second column illustrates the need state more precisely by describing the behavioural implications associated with that need state. The first column gives a descriptive label to the need states that were revealed in the research. Whilst most of the verbalisations are actual quotes from the group discussions, some have been re-worded to make the sentiment being expressed clearer.

| NEEDS | BEHAVIOURAL IMPLICATION | VERBALISATION OF THE NEED |
|---|---|---|
| • Need for security | • Avoiding threats from nasty animals, falling trees and other people. | • *"I want a home that is safe from the threat of snakes and spiders."*<br>• *"I try and make certain that there is no chance of falling trees around my home."*<br>• *"I try to avoid local parks that encourage drug users and unsavoury people".* |
| | • Marking out your own territory | • *"I like to create my own sense of space around me that is typical of my taste."* |
| • Need for status and recognition | • To be recognised by others for personal achievements | • *"I would like a garden that will be admired by others".*<br>• *"I would like to have an expensive garden designed by a top landscaper".*<br>• *"I would like to be recognised as a person who knows a lot about, and cares for the environment"*<br>• *"I want a garden with birds that are really admired by visitors".* |
| • Need for control, structure and order | • A desire for neat and tidy surrounds | • *"I want a garden that is neat and tidy, with trimmed hedges and manicured lawns."*<br>• *"Gum trees can be extremely messy".*<br>• *" Australian native gardens tend to look messy".* |

| NEEDS | BEHAVIOURAL IMPLICATION | VERBALISATION OF THE NEED |
|---|---|---|
| • Need for belonging/acceptance | • The recognition of interpersonal relationships as important.<br>• Being accepted as part of the community. | • *"It is important for me to have a garden whose appearance is in keeping with my neighbours".*<br>• *"I would feel good about joining a community group to help wildlife regeneration in my local neighbourhood".*<br>• *"I like to play my part in making sure our community is a nice place to live",*<br>• *"I like to believe that the way I feel about major issues such as the environment is in line with the views of most of my friends and neighbours".* |
| • Need for mastery and competence | • A desire to be confident and knowledgeable with relation to plants and animals | • *"I love spending time in the garden and watching things grow well ."*<br>• *"I like to think I have a green thumb".* |
| • Need for nurturing/to be a good parent | • An innate desire to care for my family<br>• A derived tendency to also care for and nurture people and animals less well off than myself | • *"I think it is important for kids to be able to get outdoors and run around".*<br>• *"It is best for native animals to stay out of urban areas where they can get hurt".*<br>• *"If I see a bird or animal that has been hurt I try to look after it"* |

| NEEDS | BEHAVIOURAL IMPLICATION | VERBALISATION OF THE NEED |
|---|---|---|
| • Need for social interaction | • Desire for companionship | • *"I would like a backyard that is good for entertaining ."*<br>• *"My pets are good company for me"* |
| • Need for esteem of others | • Being seen to be a good citizen | • *"I believe an Australian native landscape is right for Australia".* |
| • Need for self-actualisation | • Being at one with nature | • *"I would enjoy living out of town on my own in a natural bushland setting"*<br>• *"I like to try and continually improve my knowledge of plants and animals".* |
| | • Striving to make a contribution | • *"The ideal person would have great knowledge of environmental matters and would really contribute to making the world a better place"* |

In order to determine the relative strength of need states operating in the area of urban wildlife renewal, respondents were asked to firstly indicate from a scale from “extremely important” to “not important at all” their feelings toward a number of statements that were chosen to reflect various needs states. Following the use of this rating scale, study participants were then presented the statements in pairs and asked to say which of the two statements was more important.

This technique of “trading off” one attribute against another is a proprietary scalar conjoint technique which forces respondents to choose from pairs of statements which is the more important to them personally. The pairs of statements are generated by computer in a way that means that each respondent does not have to be exposed to all combinations of pairs. Once respondents have traded off the statements a ranking is obtained which shows the order of importance of the need states.

The chart below shows the results of asking respondents to indicate how important (% who said “extremely” or “very important”) each statement is to them personally along with the ranking obtained through the scalar conjoint technique.

The three highest ranked need states to emerge were, “being in an outdoor environment where you feel relaxed, peaceful, and totally stress free” (with 39% of respondents rating it “extremely important” and 42% “very important”), “a garden that makes you feel that you are at one with nature” (19% of respondents rating it “extremely important” and 34% “very important”), and “a garden with native birds and animals which you could feed” (16% of respondents rating it “extremely important” and 24% “very important”).

Other need states which were rated as “extremely or very important” to respondents included:

- “a home that is safe from the threat of snakes and spiders”,
- “a home where there is not chance of falling trees”,
- “a backyard that is good for entertaining people”, and
- “a local park that has big lawn areas where you can play outdoors”.

| | Extremely Important % | Very Important % | Ranking |
|---|---|---|---|
| Being in an outdoor environment where you feel relaxed, peaceful, and totally stress free | 39 | 42 | 1 |
| A garden that makes you feel that you are at one with nature | 19 | 34 | 2 |
| A garden with native birds and animals which you could feed | 16 | 24 | 3 |
| A home that is safe from the threat of snakes and spiders | 25 | 29 | 4 |
| A garden that expresses my own individuality | 15 | 26 | 5 |
| A home where there is no chance of falling trees | 21 | 31 | 6 |
| A local park that has big lawn areas where you can play outdoor games | 18 | 39 | 7 |
| A backyard that is good for entertaining people | 19 | 34 | 8 |
| A native garden that people will think is right for Australia | 16 | 28 | 9 |
| A garden that is neat and tidy | 15 | 36 | 10 |
| Being someone who is recognised as knowing a lot about, and caring for the environment | 14 | 27 | 11 |
| A garden with birds that are really admired by visitors | 13 | 24 | 12 |
| A garden that will be admired by other people | 8 | 14 | 13 |
| A garden whose appearance is in keeping with my neighbours | 6 | 12 | 14 |
| An expensive garden designed by a top landscaper | 2 | 4 | 15 |

All respondents – QA6/B3

There were some interesting differences to emerge in the results when comparing answers by type of dwelling the respondent lived in. Being in a home that "is safe from the threat of snakes and spiders" was more important to those in apartment and townhouses than those living on acreages.

**Importance of Need States Within the Local Environment**
- Extremely Important -

| | Total % | DWELLING TYPE: Apartment/ Townhouse % | House % | Acreage % |
|---|---|---|---|---|
| **Need for Independence and Freedom** | | | | |
| Being in an outdoor environment where you feel relaxed, peaceful and totally stress free | 39 | 32 | 39 | 47 |
| A garden that expresses my own individuality | 15 | 15 | 15 | 19 |
| **Need for Security** | | | | |
| A home that is safe from the threat of snakes and spiders | 25 | 27 | 25 | 20 |
| A home where there is no chance of falling trees | 21 | 16 | 22 | 22 |
| **Need for Self Actualisation** | | | | |
| A garden that makes you feel you are at one with nature | 19 | 20 | 18 | 29 |
| **Need for Social Interaction** | | | | |
| A backyard that is good for entertaining people | 19 | 14 | 21 | 18 |
| **Need for Nuturing/Good Parent** | | | | |
| A local park that has big lawn areas where you can play outdoor games | 18 | 15 | 18 | 18 |
| A garden with native birds and animals which you could feed | 16 | 10 | 16 | 26 |
| **Need for Control, Structure and Order** | | | | |
| A garden that is neat and tidy | 15 | 14 | 15 | 13 |

All respondents – QA6/B3

| | Total % | DWELLING TYPE | | |
|---|---|---|---|---|
| | | Apartment/ Townhouse % | House % | Acreage % |
| **Need for Esteem of Others** | | | | |
| A native garden that people will think is right for Australia | 16 | 13 | 16 | 23 |
| **Need for Status and Recognition** | | | | |
| Being someone who is recognised as knowing a lot about, and caring for the environment | 14 | 14 | 14 | 17 |
| A garden with birds that are really admired by visitors | 13 | 8 | 13 | 23 |
| A garden that will be admired by others | 8 | 6 | 9 | 6 |
| **Need for Acceptance and Belonging** | | | | |
| A garden that is in keeping with my neighbours | 6 | 7 | 6 | 6 |

All respondents – QA6/B3

Respondents living on acreages on the other hand, were much more likely than their house and apartment dwelling counterparts to see the following as "extremely important":

- "being in an outdoor environment where you feel relaxed, peaceful and totally stress free, (47% "extremely important" versus 39% for the total),
- having "a garden that makes you feel at one with nature", (29% "extremely important" versus 18% for the total),
- having "a garden with birds that are really admired by visitors" (23% "extremely important" versus 13% for the total), and
- having a "garden that people think is right for Australia" (23% "extremely important" versus 16% for the total), and
- having " a garden with native birds and animals which you could feed" (26% "extremely important" versus 16% for the total).

All human behaviour tends to be driven by the desire to satisfy underlying need states. Participation is expected to be greatest when a program is felt to satisfy needs and does not prevent other underlying needs being met.

The findings suggest that to engage people in positive behaviours in their backyards a program should identify the pay-off for taking action in terms that meet people's needs. Eg. A backyard with native birds and butterflies may be felt to meet the need for independence and freedom. Taking such action is helping and protecting native plants and animals, a sense that can be felt to meet the need to nurture. Knowing that it is right for Australia aligns with the need for self actualisation. On the other side of the equation, unless the program can build confidence and capacity to deal with wildlife behaviour the need for safety and security may block participation.

# 3. THE URBAN RESIDENT'S CONCEPT OF A NICE PLACE TO LIVE

## 3.1 CURRENT HOME ENVIRONMENT

The majority of people in urban NSW live in a free standing house in Sydney in a free standing home on a suburban block. Respondents living in free standing houses in fact represented 74% of the total number of survey participants, apartment dwellers, 10% semi-detached homes or townhouse residents, 8% and acreage dwellers 8%.

| | Total % |
|---|---|
| **Location** | |
| Sydney | 71 |
| Wollongong | 4 |
| Newcastle | 9 |
| Large/Medium Town | 8 |
| Small Town | 8 |
| **Type of Home** | |
| A free standing house on a suburban block | 74 |
| An apartment building | 10 |
| A semi-detached house, townhouse or terrace | 8 |
| A house on a block that is ½ an acre or more | 8 |

All respondents – QB2 (weighted)

## 3.2 ASPECTS PERCEIVED TO CONTRIBUTE TO MAKING A "NICE PLACE TO LIVE"

As evident from the chart below, the majority of the sample resided on suburban blocks. 18% of respondents lived in high or medium density housing, the remainder of participants lived on the "fringe" or in country towns.

| | Total % |
|---|---|
| **Home Location Type** | |
| **Sydney** | |
| High / medium density | 18 |
| Suburban block | 51 |
| Fringe | 2 |
| **Newcastle/Wollongong** | |
| Suburban block | 12 |
| Fringe | 1 |
| **Country** | |
| Large/medium | 11 |
| Small town | 5 |

All respondents – QB2

Whilst people appeared to be aware of native plants in their garden the selection of the type of trees and shrubs tended to be based on their suitability and attractiveness, rather than whether they were Australian natives or "right" for the environment.

The qualitative phase indicated that people did not necessarily recognise or place importance on the ecological values of bushland, native plants and native animals in urban areas. However, within the quantitative survey we were able to determine the importance that is given to these elements, namely the contribution they make to having a "nice place to live".

Panellists often claimed to be able to recognise native plants (not using their botanical name) in their own garden, however in most cases their general knowledge of natives per se was limited.

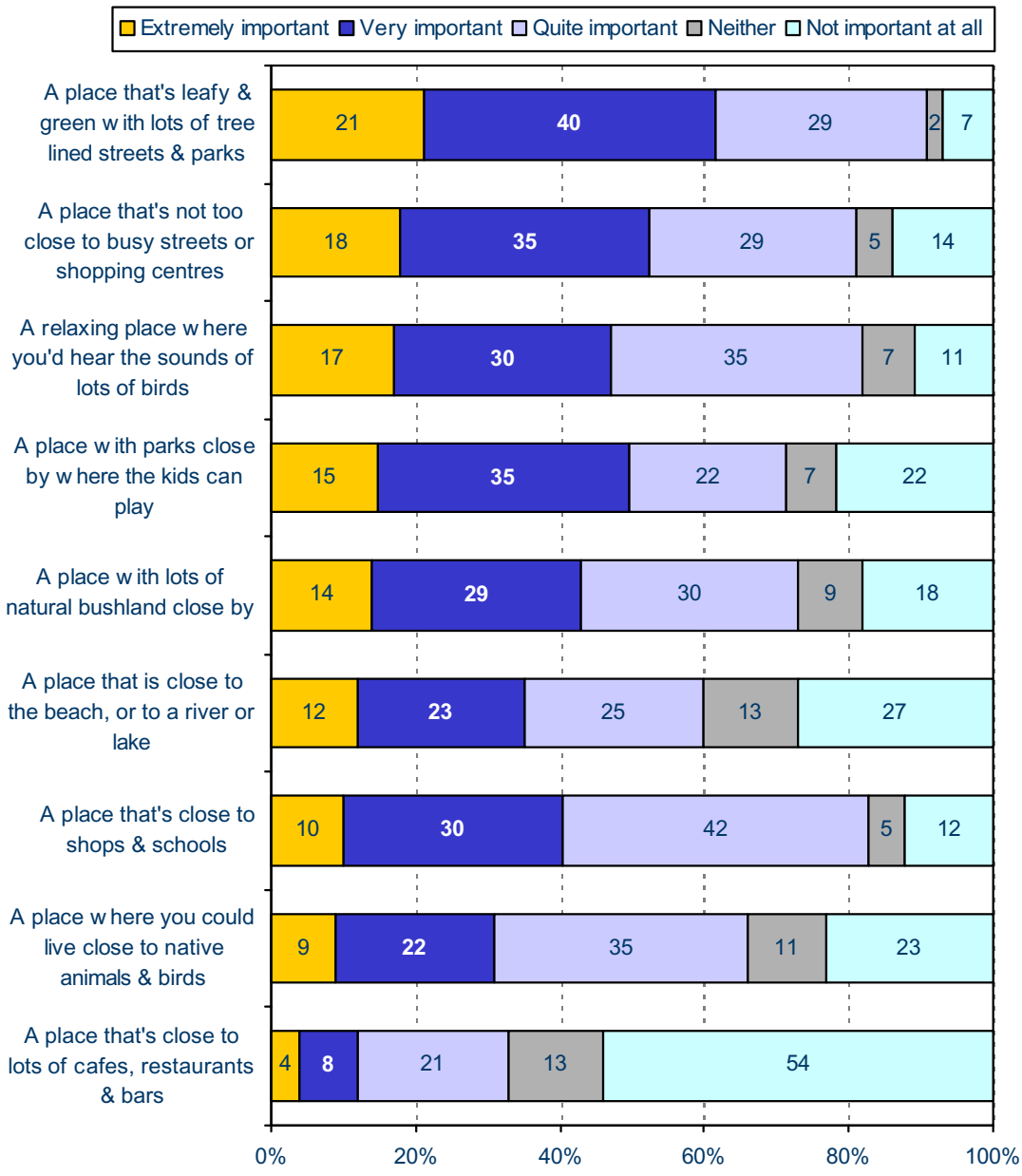
Peoples preferences for garden which contain garden beds, mown lawns and neat edges were examined using the triadic sorting technique. There was a strong preference for gardens which contained garden beds, mown lawns and neat edges. These gardens were favoured because they were seen as neat, attractive colourful, and contributed more to the overall appeal of the property. There was a sense that this traditional style of garden was actually more in keeping with the urban architecture.

Some perceive that the look of a "bush garden" especially one incorporating native grasses was the product of a household who did not care about the way their garden looked. These findings can be understood with reference to the needs that people are responding to.

Respondents were asked how important a number of aspects were in contributing to making somewhere a "nice to live". From the list read to respondents the three most important aspects to emerge as contributing to making somewhere a "nice place to live" were, "a place that's leafy and green with lots of tree lined streets and parks" (rated "extremely important" by 21% of the sample, "very important" by 40% and "quite important" by 29%), "a place that's not too close to busy streets or shopping centres" (18% "extremely important", 35% "very important" and 29% "quite important") and "a relaxing place where you'd hear the sounds of lots of birds" (17% "extremely important, 30% "very important" and 35% "quite important").

Aspects which, by their description, implied proximity of the natural environment, such as "a place where you could live close to lots of native animals and birds" tended to have reduced importance despite having the potential to contribute in the same way as "a relaxing place where you'd hear the sounds of lots of birds". An aspect that was given greater importance.

**Aspects Perceived to Contribute to Making a "Nice Place to Live"**




Base: All respondents-QA3

The aspects thought to be least important were "a place that's close to lots of cafes, restaurants and bars" (4% "extremely important" and 8% "very important") and "a place where you could live close to native animals and birds" (9% "extremely important" and 22% "very important").

When looking at those who rated the various aspects as "extremely important" in regards to making somewhere a "nice place to live", there were a number of quite interesting differences in responses by location and dwelling type.

Respondents who lived in country areas were more likely to see aspects such as "a place with lots of natural bushland close by" (23% compared to total of 14%) and "a place where you could live close to native animals and birds" (19% compared to 9% for total) as "extremely important" when thinking about a "nice place to live". A higher proportion of those in regional areas also viewed "a place where you could live close to native animals and birds" as "extremely important" (16% compared to 9% of total).

Similarly, those that lived on "acreages" tended to be more likely to perceive the following as "extremely important" in contributing to a nice place to live than their counterparts in apartments/townhouses and houses:

- "a place that's not too close to busy streets or shopping centres" (28% compared to 18% for the total),
- "a relaxing place where you'd hear the sounds of lots of birds" (35% compared to 17% for total),
- "a place with lots of natural bushland close by" (35% compared to 14% for total), and
- "a place where you could live close to native animals and birds" (20% compared to 9% of the total).

**Aspects Considered "Important" to Contributing to Making a "Nice Place to Live"**
- Extremely Important -

| | Total | Location | | | Dwelling Type | | |
|---|---|---|---|---|---|---|---|
| | Extremely Important % | Sydney % | Regional %l | Country % | Apartment/ Townhouse % | House % | Acreage % |
| **Key Statements:** | | | | | | | |
| A place that's leafy & green with lots of tree lined streets & parks | 21 | 21 | 18 | 22 | 23 | 20 | 20 |
| A place that's not too close to busy streets or shopping centers | 18 | 17 | 20 | 21 | 12 | 18 | 28 |
| A relaxing place where you'd hear the sounds of lots of birds | 17 | 16 | 14 | 25 | 16 | 16 | 35 |
| A place with parks close by where the kids can play | 15 | 14 | 17 | 20 | 9 | 16 | 18 |
| A place with lots of natural bushland close by | 14 | 11 | 18 | 23 | 9 | 13 | 35 |
| A place that is close to the beach, or to a river or lake | 12 | 11 | 13 | 15 | 16 | 11 | 14 |
| A place that's close to shops and schools | 10 | 11 | 10 | 8 | 5 | 12 | 5 |
| A place where you could live close to native animals and birds | 9 | 6 | 16 | 19 | 7 | 9 | 20 |
| A place that's close to lots of cafes, restaurants and bars | 4 | 5 | - | - | 5 | 4 | 1 |

All respondents – QA3

"A place with parks close by where the kids can play" received a lower "extremely important" rating in terms of contributing to making somewhere a "nicer place to live" amongst those who lived in an apartment or townhouse (9% compared to 15% for the total).

These findings should guide the choices of concepts, images and phrases that are used to promote a program and build relevance to the target audience.

## 3.3 Descriptions of Various Garden Types

On balance a garden with manicured lawns, or paved areas, and garden beds were preferred over a "bush garden".

Respondents in the survey were asked to select from a list of adjectives those that best described a "garden with a mown lawn area combined with garden beds containing plants like roses, azaleas, and camellias" and then again for a "garden with garden beds containing mainly Australian native plants".

There were a number of differences between the adjectives chosen to describe the two types of garden. The Australian native garden was more often described as "right for Australia" (88% compared to 49% traditional), "natural" (87% compared to 37%), and relaxing (86% compared to 79%). The differences in favour of the traditional garden included "colourful" (95% compared to 77% for native), "admired by passers by" (91% compared to 76% for native), "neat and tidy" (88% compared to 65% for native), "fashionable" (60% compared to 44% for native), "adds value to the property" (87% compared to 38% for native) and "soft" (65% compared to 37% for native).

The findings indicate the natural advantages of native plants that can be emphasised when promoting their use amongst gardeners.

Equally the findings indicate commonly perceived disadvantages some of which may be addressed in education.

The findings suggest native plants should be presented as valuable alternatives rather than direct substitutes.

**Adjectives Selected to Describe Garden Types**

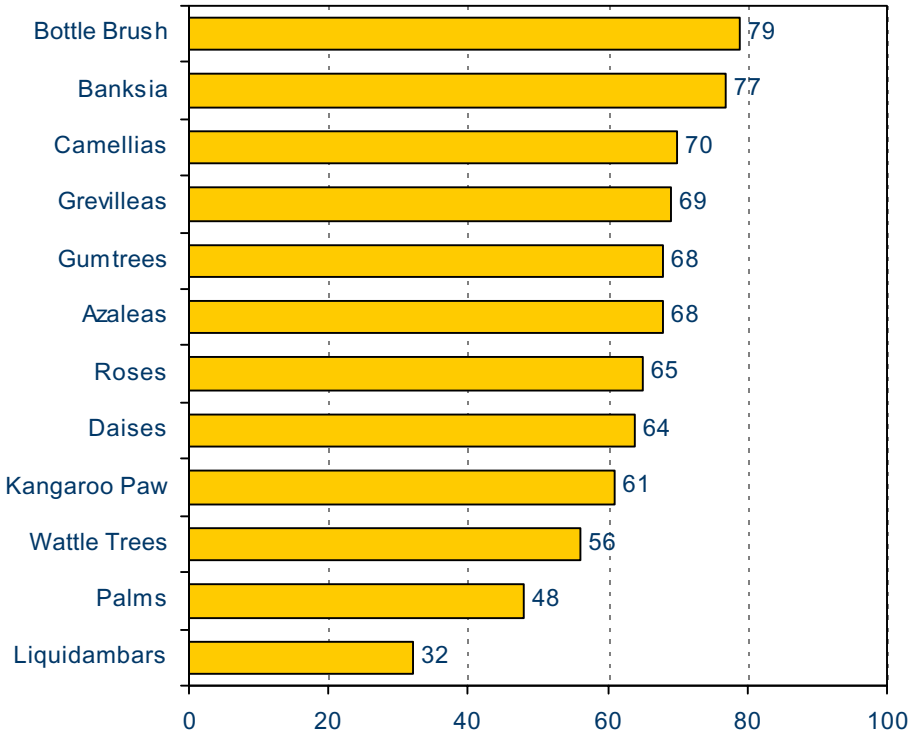
| | Australian Native Garden % | Traditional Garden % |
|---|---|---|
| Right for Australia | 88 | 49 |
| Natural | 87 | 37 |
| Relaxing | 86 | 79 |
| Attractive | 83 | 88 |
| Colourful | 77 | 95 |
| Admired by passers by | 76 | 91 |
| Neat and tidy | 65 | 88 |
| In keeping with neighbourhood | 55 | 54 |
| Fashionable | 44 | 60 |
| Place for snakes and spiders | 44 | 25 |
| Adds value to property | 38 | 87 |
| Soft | 37 | 65 |
| Thick | 30 | 21 |
| Messy | 15 | 8 |
| Dull | 12 | 12 |

All respondents – QB5/6

## 3.4 FLOWERS AND PLANTS THAT PEOPLE WANTED IN THEIR GARDENS

Many native plant enjoy popularity in gardens equal to common ornamental non-natives. The Bottle Brush and Banksia were the most desired native plants, whilst Camellias, Azaleas and roses held the most appeal out of the non-natives.

**Flowers and Plants That Appeal**




Base: All respondents-QA4

# 4. URBAN PEOPLE AND "THE OUTDOORS"

## 4.1 THE COMMUNITY'S CONNECTION TO NATURE

Study participants expressed a liking for outdoors activities as they were perceived to be healthy, relaxing, and something different to their usual environment. As such, sitting in the backyard, sport, picnics, fishing, and walking were very popular. In terms of a fantasy outdoor setting, the most commonly described settings related to secluded beaches, rainforest, and riverbanks.

When discussing what we do with our free time, study participants often referred to outdoor activities, in fact, the majority expressed a preference for getting outdoors and into a natural environment which will mean different things to different people. However, most also felt they did not get outdoors or into a natural environment as often as they would like.

Essentially, the attraction of the "outdoors" was due to people's perception that it is:

- Relaxing and stress reducing as study participants felt they could mentally leave behind work, problems, concerns, etc;
- More active than being indoors;
- Healthy because it usually involved activity and/or relaxation; and
- Different to one's usual environment.

Given the wide ranging attraction of the "outdoors", it was not surprising that there was a broad variety of activities which study participants claimed to enjoy. The most commonly mentioned "outdoor" activities included:

- Sitting in the backyard and reading;
- Organised and unorganised sports;

- Picnics in mown suburban parks, which included activities such as throwing frisbees and letting the kids run around;
- Fishing;
- Going to the beach;
- Walking
  - urban walking such as the Bondi to Bronte walk,
  - bush/urban walking such as The Spit to Manly walk,
  - bush walking such as The Scenic Railway to the Giant Stairway; and
- Serious, overnight bush walking.

Study participants were also encouraged to go beyond their regular experiences and talk about their fantasy outdoor locations, which typically included settings such as secluded beaches, rainforests, or riverbanks.

According to study participants the main attractions of a secluded beach were the natural vegetation meeting the sand and that there would not be a lot of people around.

When discussing a rainforest as a fantasy location, people often envisaged a small waterfall trickling into a pool of water, a stream, and tall trees and ferns.

In terms of a riverbank, the most common settings were that of a grassy bank with a few trees, and a medium sized stream.

## 4.2 PREFERRED OUTDOOR ACTIVITIES

The most popular and regular activities undertaken were those most easily accessed, such as walking along beaches or river fronts and going to picnics.

The most popular outdoor activities, in terms of those that respondents claimed to "enjoy" doing, were walking along beaches or river fronts (88%), going to picnics (81%), and bushwalks through national parks (78%). Respondent were also quite likely to do these regularly or four or more times per year. Seven in ten suggested they walk along the beach and six in ten go on picnics regularly.

Around half the sample also claimed to "enjoy" fishing (48%), whilst 38% suggested they enjoyed long bushwalks where you camp out overnight and 35% said they enjoyed canoeing. Only 2% of the sample suggested they did not enjoy doing any of these activities.

Although less likely, bushwalks through national parks (49%) and fishing (31%) were also activities regularly performed by respondents.

Less accessible activities such as long bushwalks where you camp out overnight (13%) and canoeing (10%) were much less likely to be regular, whilst 11% did not participate in any of the above activities regularly.

These findings are higher than other recreational studies as these questions were not designed to accurately find out recreational behaviour, it does suggest that people do have a strong desire to participate.

These questions were not set out to accurately measure recreational behaviour rather to give the relative popularity of a range of outdoor pursuits. Notably, activities that involve greater immersion in the natural environment or specific physical ability are less popular.

**Outdoor Activities Enjoyed**

| | Total Enjoy Doing % | Total Regular Basis % |
|---|---|---|
| Walking along beaches or riverfronts | 88 | 69 |
| Going to picnics | 81 | 60 |
| Bushwalks through national parks | 78 | 49 |
| Fishing | 48 | 31 |
| Long bushwalks where you camp out overnight | 38 | 13 |
| Canoeing | 35 | 10 |
| None | 2 | 11 |

All respondents – Q17/18

# 5. THE RELATIONSHIP BETWEEN NATURE AND URBAN AREAS

## 5.1 AGREEMENT WITH ATTITUDE STATEMENTS REGARDING THE LOCAL ENVIRONMENT

The degree to which people were attitudinally positive to conserving wildlife and felt that they were in a position to contribute tended to relate to dwelling type and location. Those in apartments were seemingly not against wildlife, although they perceived there was little they could do to help encourage wildlife into urban areas. Those living on larger blocks, normally at the fringe of urban areas, showed an increased likelihood to adopt positive behaviours.

Twenty two statements regarding issues which involved the local environment were read out to respondents, and a level of agreement measured for each one from a five point scale of "strongly agree" to "strongly disagree".

Respondents most "strongly agreed" that "cats are a real threat to our native animals in cities and towns", as indicated by 69% of the sample. Other statements which received a high level of "agreement" from respondents included, "you can really feel at one with nature in an Australian bush garden" (54% "strongly agreed"), "I'd love to think that my backyard was suitable for lots of native Australian wildlife" (52% "strongly agree") and " I would love to be able to feed native birds and animals in my own yard" (50% "strongly agree").

Respondents were less likely to agree that "I believe that half of the parks in my neighbourhood should be returned to bushland to provide a home for native animals" (17% strongly agreed), "it's important to spray your garden at least once a year to get rid of the bugs" (17% "strongly agree"), "a totally native bush garden would look out of place in my neighbourhood" (11% "strongly agree"), "Australian native gardens often look unkempt and messy" (11% "strongly agree") and "Australian native gardens are not really fashionable these days" (8% "strongly agree").

The major differences between segments in terms of agreement with the statements, were found when comparing dwelling types. Those who lived on "acreages" tended to differ from those who live in an apartment, townhouse or house.

**Agreement With Attitude Statements Regarding Local Environment**
– Agree Strongly/Agree Slightly -

| | Agree Strongly % | Agree Slightly % |
|---|---|---|
| Cats are a real threat to our native animals in cities and towns | 69 | 15 |
| Where they pose a threat to native animals foxes should be gotten rid of | 58 | 23 |
| You can really feel at one with nature in an Australian bush garden | 54 | 33 |
| I would love to be able to feed native birds and animals in my own yard | 50 | 25 |
| I'd love to think that my backyard was suitable for lots of native Australian wildlife | 52 | 25 |
| I would really object if the council stopped mowing the grass in my local park and let it go back to natural bush | 43 | 13 |
| Its unfair to encourage native animals into the built up areas where they could be hurt | 46 | 24 |
| Australian native gardens require little maintenance or watering | 41 | 30 |
| I would like to play my part in helping to bring native plants and animals back into my neighbourhood | 41 | 33 |
| The best parks are those with wide expanses of green grass with plenty of picnicing and playing outdoor games | 35 | 29 |
| You can tell a lot about a person by the way their garden looks | 39 | 27 |
| There are plenty of natural areas for native animals outside our cities and towns | 31 | 27 |
| Possums are a real nuisance because they can get in your roof | 28 | 25 |
| Gum trees are dangerous in suburban backyards, they can fall over and cause damage | 28 | 27 |
| Dogs are a threat to our native animals in cities and towns | 26 | 27 |

All respondents – QA8/B7

*Agreement With Attitude Statements Regarding Local Environment …continued*

| | Agree Strongly % | Agree Slightly % |
|---|---|---|
| A local park with lots of grass dense bush can be unsafe for children | 24 | 33 |
| I am all for Australian plants and animals but where I live, there is little I can really do to help | 23 | 18 |
| I think formal European gardens look out of place in Australia | 19 | 21 |
| I believe that half of the parks in my neighbourhood should be returned to bushland to provide a home for native animals | 17 | 19 |
| Its important to spray your garden at least once a year to get rid of the bugs | 17 | 16 |
| A totally native bush garden would look out of place in my neighbourhood | 11 | 12 |
| Australian native gardens often look unkept and messy | 11 | 30 |
| Australian native garden are not really fashionable these days | 8 | 14 |

All respondents – QA8/B7

Those living on acreages are more likely to agree than those in apartments or those in houses with the following: "you can really feel at one with nature in an Australian bush garden" (72% strongly agreed compared to 54% for the total sample), "I would love to be able to feed native birds and animals in my own yard" (69% strongly agreed compared to 50% for the total sample), "I'd love to think that my backyard was suitable for lots of native Australian wildlife" (71% strongly agreed compared to 52% for the total sample), "I would like to play my part in helping to bring native plants and animals back into my neighbourhood" (60% strongly agreed compared to 41% for the total sample) .

The only statement that respondents on "acreages" had a noticeably lower level of agreement on was for "I am all for Australian plants and animals but where I

live there is little I can really do to help", with 6% "agreeing strongly" compared to 34% for apartment or townhouse dwellers.

**Agreement With Attitude Statements Regarding Local Environment**
– Agree Strongly -

| | Total % | DWELLING TYPE | | |
|---|---|---|---|---|
| | | Apartment/ Townhouse % | House % | Acreage % |
| Cats are a real threat to our native animals in cities and towns | 69 | 60 | 70 | 76 |
| Where they pose a threat to native animals, foxes should be gotten rid of | 58 | 52 | 58 | 74 |
| You can really feel at one with nature in an Australian bush garden | 54 | 45 | 55 | 72 |
| I would love to be able to feed native birds and animals in my own yard | 50 | 49 | 48 | 69 |
| I'd love to think that my backyard was suitable for lots of native Australian wildlife | 52 | 45 | 51 | 71 |
| I would really object if the council stopped mowing the grass in my local park and let it go back to natural bush | 43 | 43 | 44 | 38 |
| Its unfair to encourage native animals into the built up areas where they could be hurt | 46 | 35 | 47 | 56 |
| Australian native gardens require little maintenance or watering | 41 | 38 | 41 | 49 |
| I would like to play my part in helping to bring native plants and animals back into my neighbourhood | 41 | 33 | 41 | 60 |
| The best parks are those with wide expanses of green grass with plenty of picnicing and playing outdoor games | 35 | 36 | 35 | 38 |
| You can tell a lot about a person by the way their garden looks | 39 | 33 | 41 | 40 |
| There are plenty of natural areas for native animals outside our cities and towns | 31 | 27 | 31 | 33 |
| Possums area real nuisance because they can get in your roof | 28 | 24 | 29 | 26 |
| Gum trees are dangerous in suburban backyards, they can fall over and cause damage | 28 | 18 | 29 | 41 |
| Dogs are a threat to our native animals in cities and towns | 26 | 23 | 26 | 34 |

*Agreement With Attitude Statements Regarding Local Environment …continued*

| | Total % | DWELLING TYPE | | |
|---|---|---|---|---|
| | | Apartment/ Townhouse % | House % | Acreage % |
| A local park with lots of grass dense bush can be unsafe for children | 24 | 22 | 24 | 27 |
| I am all for Australian plants and animals but where I live, there is little I can really do to help | 23 | 34 | 22 | 6 |
| I think formal European gardens look out of place in Australia | 19 | 17 | 19 | 25 |
| I believe that half of the parks in my neighbourhood should be returned to bushland to provide a home for native animals | 17 | 15 | 17 | 20 |
| Its important to spray your garden at least once a year to get rid of the bugs | 17 | 22 | 17 | 11 |
| A totally native bush garden would look out of place in my neighbourhood | 11 | 11 | 11 | 7 |
| Australian native gardens often look unkept and messy | 11 | 12 | 11 | 12 |
| Australian native garden are not really fashionable these days | 8 | 14 | 7 | 9 |

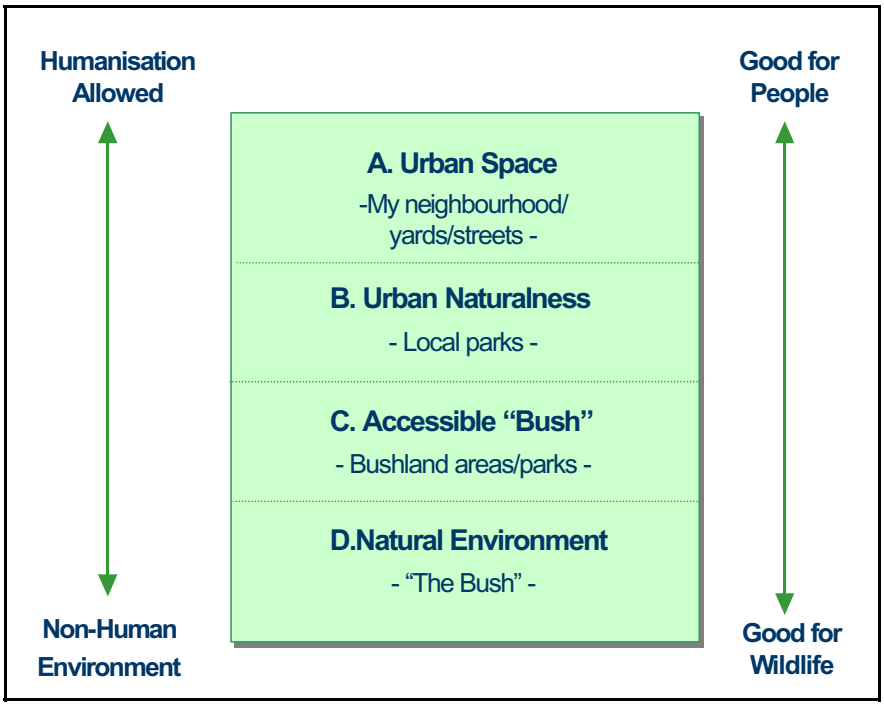
All respondents – QA8/B7

Those working to involve the community in urban wildlife conservation should note the results for relevant attitude statements in the segment representing their target audience.

## 5.2 EXTENT TO WHICH WILDLIFE SHOULD BE ENCOURAGED INTO SPECIFIC AREAS

Within this study it emerged that people currently have a partitioned concept of the world comprising areas along a continuum. Areas considered "right for humans" and areas that are "right for animals" exist at the extremities of the continuum.

When participants thought about the natural environment there appeared to be a perceptual scale, which defined where they saw wildlife as being appropriate. There were four dimensions on this continuum. The scope of these dimensions covered extremes of the spectrum in which humanisation was allowed (i.e. good for people) to the non-human environment (i.e. good for wildlife).




### A) URBAN SPACE

This dimension consisted of participants' neighbourhood, yard and streets. It was seen as the part of the world or landscape that was constructed for human habitation. Respondents where positive to the idea of encouraging wildlife of certain types into urban areas, for example 52% agreed strongly that they would "love to think their backyard suitable for wildlife", and 41% agreed strongly that they would like to play a part in bringing back wildlife to the neighbourhood. Many participants in the focus groups believed that in this type of space, which is

designed to suit people, native animals appeared to be out of place to the extent that it was seen to be dangerous for the animals to roam free. In essence the feeling regarding urban conversation was that if it were to be pursued it needed to be done in a fashion that did not result in more harm than good for wildlife.

### B) URBAN NATURALNESS

This portion of the landscape was described as consisting of maintained local parks. These were developed leisure spaces with mown grass and planted trees. Again, these areas were thought to be there for the enjoyment of people and therefore had to be safe for people. Providing a home for native animals is a secondary function.

43% of respondents agreed strongly that they "would really object if the council stopped mowing the grass in my local park and let it go back to natural bush".

### C) ACCESSIBLE "BUSH"

"Accessible bush", which was described as managed native parkland areas which contained tracks and trails was an area where it was felt to be both appropriate for native wildlife to roam and for humans to enjoy.

### D) NATURAL ENVIRONMENT

This was described as being the natural bush, which was not managed or controlled. It was thought to be unspoilt and original and certainly a place which was home to our native plants and animals.

The tendency of participants to partition the world into four different types of spaces appeared to underpin a number of other attitudes and behaviours. Many participants seemed to express that humans had created urban spaces, and urban naturalness, for themselves to live in. As a result the underlying principles for these urban spaces appear to be primarily influenced by considerations of what is "right" and "best" for human inhabitants.

Finding a distinction between areas that are "right for humans" and areas that are "right for animals" reduces the sense that there are conservation issues within

urban spaces.

The other important outcome of the partitioning scale was that the natural environment was somehow distanced from urban communities. The natural environment was viewed as a place to visit rather than live in. There appeared to be no difference in this view amongst those from large cities and smaller towns. It seemed that country areas were more concerned about creating an urban environment for themselves, than a more natural one.

The partitioning concept was investigated in a quantitative sense asking respondents to indicate the extent to which it was thought that wildlife should be encouraged into each of the four sub divisions. Within suburban backyards, 14% of respondents believed wildlife should "definitely be encouraged", a further 50% felt that they should be "encouraged to some extent". 36% of the sample believed that wildlife should "not be encouraged at all" into suburban backyards.

There was a slightly higher level of support to encourage wildlife in local parks, with 23% of respondents suggesting that it should be "definitely encouraged", and 52% of the sample indicating that it should be "encouraged to some extent". 25% of survey participants believed that wildlife should "not be encouraged at all" into local parks.

There was a greater acceptance for the encouragement of wildlife in local bushland and unspoilt bushland. 65% believed that wildlife should be "definitely encouraged" in local bushland and 87% felt the same way for unspoilt bushland. A very small proportion of the sample believed that wildlife should "not be encouraged at all" into these two areas (7% for local bushland and 1% for unspoilt bushland).

Approximately half of the sample strongly agreed that:

- "I would love to be able to feed native birds and animals in my own yard" (50%),

- "I'd love to think that my backyard was suitable for lots of native Australian wildlife" (52%), and

- "I would love to play my part in helping to bring native animals and plants back into my neighbourhood" (41%).

**Extent to Which Wildlife Should be Encouraged Into Specific Areas**

| | Total Encouraged % | Definitely Encouraged % | Encouraged to Some Extent % | Not encouraged at all % |
|---|---|---|---|---|
| A. Suburban backyards | 64 | 14 | 50 | 36 |
| B. Local parks | 75 | 23 | 52 | 25 |
| C. Local bushland | 93 | 65 | 28 | 7 |
| D. Unspoilt bushland | 99 | 87 | 12 | 1 |

All respondents – QA10

When presenting program concepts to a target audience it is important not to deny a partitioned concept of the world. In acknowledgment of this, programs should not be able to be perceived to naturalise urban areas at the expense of amenity for people.

## 5.3 LIVING IN HARMONY WITH URBAN WILDLIFE

In a qualitative sense participants tended to group native fauna into three categories, primarily based on the issue of their perceived ability to "happily co-exist" with people. This provided some insight into what maybe currently considered as acceptable to "encourage" into suburban backyards (64%) and neighbourhood parks (75%).

The first group consisted of animals that were described as "cute", "harmless" and "attractive" and were generally thought of as desirable and appropriate for an urban space. This group included:

- Small and/or attractive birds,
- Ladybirds,
- Blue tongue lizards,
- Kookaburras,
- Frogs,
- Butterflies, and
- Worms.

The second group was made up of "attractive" fauna that was thought to be desirable but inappropriate for an urban environment principally because they might come to harm. Animals in this group included:

- Koalas,
- Wombats,
- Echidna,

- Platypus,
- Tortoise, and
- Kangaroos (city participants only).

The final group was composed of fauna that was considered to be “destructive”, “annoying” or “threatening”, and was generally thought to be undesirable. Such animals included:

- Spiders,
- Snakes,
- Cockroaches,
- Caterpillars,
- Possums,
- Bats,
- Wasps, bees,
- Flies, mosquitoes, moths
- Magpies,
- Cockatoos, and
- Kangaroos (in country areas).

**Animals "Liked to Have" in Backyard**

| | A lot % | A little % | Not like it at all % |
|---|---|---|---|
| Small birds (like finches) | 80 | 97 | 3 |
| Butterflies | 77 | 95 | 5 |
| Lorikeets | 69 | 91 | 9 |
| Earth worms | 66 | 87 | 13 |
| Kookaburras | 66 | 92 | 8 |
| Koalas | 55 | 83 | 17 |
| Blue Tongue Lizards | 50 | 79 | 21 |
| Frogs | 43 | 75 | 25 |
| Cockatoos | 41 | 78 | 22 |
| Magpies | 31 | 61 | 39 |
| Possums | 26 | 61 | 39 |
| Caterpillars | 22 | 61 | 39 |
| Bats | 16 | 38 | 62 |
| Moths | 11 | 39 | 61 |
| Spiders | 10 | 41 | 59 |
| Snakes | 5 | 21 | 79 |

All respondents – QA5

In the quantitative phase, when respondents were read a list of animals and asked to what extent they would like each one in their own backyard, small birds and butterflies were the most popular, with 80% and 77% of the sample respectively claiming they would like these animals in their backyard "a lot". Other animals that were "liked" included lorikeets (69% "liked a lot"), earth worms (66% "liked a lot"), and kookaburras (66% "liked a lot").

The least popular animals were spiders (59% "not like it at all"), bats (62% "not like it at all"), moths (61% "not like it at all"), and snakes (79% "not like it at all").

When categorising these animals, in terms of desirability, a range of factors were taken into account. In some cases characteristics attributed to various animals was not done as a result of personal experience, but were mainly associated with general perceptions.

Desirable attributes that were mentioned by participants included:

- Cute appearance (koala, lorikeet),
- Good “image” or “reputation” (kookaburras, blue tongue),
- Recognised positive contribution to the urbanised environment (worms, frogs), and
- Status value.

The undesirable attributes consisted of:

- Potential to cause harm to humans (snakes, spiders, wasps),
- Noisy (cockatoos, possums),
- Smelly (bats),
- Potential to cause damage to home or gardens (cockatoos, caterpillars, possums),
- Dirty, unhealthy (cockroaches, bats), and
- Annoying (possums, flies, mosquitoes).

The range of evaluative attributes was generally based on a principle of “what’s good for me” and how it would affect an individual’s current lifestyle. There appeared to be very little evidence of concern for broader environmental issues when the type of wildlife seen as being desirable for an urban space was being determined. There was very little reference to any contribution that urban wildlife renewal would make in the broader environmental health context.

There was also a clear lack of understanding of the relationships and interdependencies of individual elements within the ecosystem. Examples of this lack of understanding was illustrated by people’s view that:

- Butterflies were desirable, but caterpillars were destructive,
- Frogs were popular, but small insects (on which frogs can feed) are annoying,
- Bees were known to be essential, but people were afraid of being stung, and
- Small birds were seen as attractive, but their habitat of dense native undergrowth was considered to be messy.

The inevitable outcome of the limited knowledge concerning various environmental interactions was that the general perception of wildlife in the urban space is made up of “bit and pieces” . Possibly left over from the environment prior to urbanisation, and not the visible part of a functioning modified ecosystem.

On balance participants saw their immediate urban space as being separated from the “natural” environment. There were a number of general sentiments and justifications given to support this view, some of which included:

- Urban areas are only a small fraction of Australia, it’s the vast non-urban space that really matters to the environment,
- Urban areas have to be the way they are so that people can live in them, humans and wildlife have different needs,
- I accept that living in a big city (Sydney respondents) is probably not as healthy, but it’s my choice,
- Words like “biodiversity”, “ecosystem” and “wildlife” have nothing to do with urban areas, they refer to forests, bush and countryside,
- There are heaps of native wildlife in the “bush”, we don’t need it in urban areas as well, and
- Planting a tree in my backyard makes no real difference for the environment.

As the urban space was conceived of as being quite "separate" from the "natural" environment, a harmonious relationship between the two was rarely considered. As most people were relatively comfortable in their urban space, there was a hope that they would not have any unwanted wildlife encounters in and around their local neighbourhood. Confidence, in regards to dealing with wildlife, varied enormously and was mainly dependent on the following factors:

- General area of residence and proximity to the "bush",
- Frequency of previous wildlife encounters,
- Underlying attitudes towards wildlife and the environment, and
- The level of knowledge regarding wildlife and the environment.

Amongst those who lived in an urban space there was a common feeling that "avoidance behaviour" was the best approach to dealing with wildlife encounters. The extreme of this attitude was to totally avoid any areas in which such an unwanted wildlife encounter may be possible. For others, this "avoidance behaviour" simply meant trying not to encounter any wildlife, and if a meeting did occur to get out of the way as quickly as possible.

# 6. THREATS TO WILDLIFE IN THE URBAN SITUATION

## 6.1 MINIMISING THREATS TO URBAN WILDLIFE

In general people were well aware of threats to wildlife in areas.

The major threat to wildlife was urbanisation itself, and as such there was little that people felt could be done to minimise the threat, other than relocating wildlife "out of harms way". There was however, agreement that there could be greater controls on domestic pets such as cats and dogs.

In terms of the issue of urban wildlife, there was recognition amongst study participants that native plants and animals do exist within urban areas. However, this wildlife tended to be seen as "remnants" or "bits and pieces", rather than the visible expression of a modified native ecosystem. That is, the notion of any urban ecology in which plants and wildlife could exist is uncommon. And for some, the existing urban wildlife was almost seen as infringing on urban life.

When discussing the major threats to urban wildlife the most top of mind issue was that of urbanisation, or the urban situation, itself. However, when encouraged to discuss the threat of the urban situation further, group participants could identify many aspects which pose a threat to Australian native fauna, and to a lesser extent Australian native flora. Commonly mentioned urban related threats included:

- **Urban lifestyles** – today's population was thought to have an increasing preference for insect free outdoor living, which included a large usage of garden insecticides and a low tolerance of insects as they were seen as "intruders".

- **Urban pollution** – from car exhausts, factories, rubbish, etc.

- **Physical threats** – from people themselves, cats, dogs, and motor vehicles.

- **Lack of a suitable habitat** – that is, a shortage of the right food, trees and other vegetation, and living areas.

- **Introduced or dominant species** – such as Foxes, Cane Toads, Indian Minors, and Magpies.

Given that the perceived major threats to wildlife related to the current level of urbanisation (rather than increasing urbanisation) it was not surprising that, on balance, most people could not see much chance of the urban space becoming any less hostile to native wildlife in the future.

In fact, because urbanisation itself was deemed to be the threat, there was very little feeling amongst study participants that there was any point in modifying their own behaviour to minimise the threats, as it was likely to have no real effect. However, there was agreement that it was "proper" to look after distressed wildlife that was encountered in one's local neighbourhood. Rather than lacking compassion towards wildlife, it seems that there was a sense of loss of control, or hopelessness, in terms of an individual's ability to positively impact on the situation.

Overall there was a general tendency for study participants to believe that in order to minimise the threat to wildlife it would be necessary to relocate it out of urban settings and ultimately, "out of harms way".

As mentioned above, one of the perceived major threats, whilst being a consequence of urbanisation, was also one that study participants believed they could actually control – cats and dogs. In fact, cats and, to a lesser extent, dogs were one of the "human elements" which some felt should be controlled, with cats in particular being recognised as a threat to birds and small animals. 69% agreed strongly that cats are a real threat while only 26% believed dogs were.

Interestingly, some people felt that urban spaces were appropriate places for domestic pets, and as such they tended to rationalise any possible threat to wildlife as "bad luck". However, most did display some level of concern over the prospect of cats harming wildlife, which seemed to be driven by a nurturing concern for desirable animals or birds.

As part of this discussion of domestic pets, a number of scenarios relating to pet

in which domestic cats and dogs would not be allowed within known habitat areas. There was very strong rejection of this scenario by most people, primarily as it was seen as a threat to their civil liberties. A common reaction to this scenario was that pets belong with people in urban areas and native wildlife belongs in "the bush". There was however, some acceptance of this proposition amongst non-pet owners.

The second scenario put to study participants was that of tight restrictions applying to dogs and cats in known habitat areas. Somewhat unsurprisingly this scenario was far more acceptable as most felt that these kinds of restrictions were more reasonable, although non-pet owners found it more acceptable than pet owners. In another sense, this proposition was seen as just an extension of some of the rules already in place.

## 6.2 AWARENESS OF ENDANGERED OR EXTINCT AUSTRALIAN ANIMALS

A variety of native animals were perceived to be extinct or endangered, with the Tasmanian Tiger and Koala being mentioned most often.

In the qualitative, when discussing threatened species the words "extinct" and "extinction" were readily used, having a somewhat general meaning. Knowledge tended to be anecdotal rather than accurate and specific, reflected in statements like: "I've heard that frogs are becoming more extinct" For this reason the word "extinct" was used in the quantitative survey.

**Australian Animals Endangered or Extinct**

| | Total % |
|---|---|
| Tasmanian Tiger | 40 |
| Koala | 25 |
| Bilby | 15 |
| Tasmanian Devil | 14 |
| Frogs (NET) | 14 |
| Birds (NET) | 10 |
| Platypus | 9 |
| Wallaby (NET) | 9 |
| Wombats (NET) | 8 |
| Kangaroo (NET) | 5 |
| Possum (NET) | 4 |
| Fish (NET) | 3 |
| *Other* | *19* |

All respondents – QA13b

When asked to name any Australian native animals that are extinct or endangered, 40% of study participants named the Tasmanian Tiger, and 25% named the Koala. The next most commonly mentioned endangered or extinct Australian animals were that of the Bilby (15%), the Tasmanian Devil (14%), frogs (14%), and birds (10%).

Just under one in ten study participants suggested the Platypus (9%), Wallabies (9%), and wombats (8%) were endangered or extinct. Kangaroos, possums and fish were also mentioned but by 5% or less of the total sample.

Knowledge of threatened species was not strictly accurate and without the prompting provided by the word “extinct” the concept lacked clarity in peoples’ minds.

While many conservation programs have been developed around threatened species issues the concept may not have penetrated deeply in all target audiences.

Programs should include concepts other than threatened species to broaden their appeal.

# 7. URBAN COMMUNITY UNDERSTANDING OF CONSERVATION CONCEPTS

## 7.1 PERCEIVED MEANING OF THE TERM "ENVIRONMENT"

Study participants were asked to describe what the term "environment" meant to them personally, and the most popular meanings they offered related to nature/ natural surroundings (45% Net), native animals/plants (36% Net), being free from pollution (32% Net), and looking after the environment/for the future (21% Net).

Other popular meanings attributed to the term "environment" related to:

- living in harmony (7% Net),
- a nice place (5% Net),
- urban development (5% Net),
- the world (4% Net),
- recycling (3% Net),
- ecosystem (2% Net), and
- 'other' things such as soil, efficient use of resources, etc (15% Net 'other').

In terms of the overall category of natural surroundings, study participants actually referred to "the surroundings in which we live" (33%), "natural/unspoilt land" (6%), and nature/natural surrounds (7%), whilst the comments under the heading of native animals/plants were "native animals/wildlife/to look after the animals" (22%), and "native plants/trees/bushland" (31%).

More specifically, the most common responses under the overall heading of being free from pollution included "the air/clean air" (12%), "not to pollute the environment" (11%), "a clean place/not to have any rubbish around" (10%); and "water/clean water" (8%).

For some respondents the term involves some engagement from people. The most common response in this category was “to look after the environment/care for the world around you” (18%).

**Perceived Meaning of The Term “Environment”**

| | Total % |
|---|---|
| **Net Nature/Natural surrounds** | **45** |
| The surroundings in which you live | 33 |
| Natural/unspoilt land | 6 |
| Nature/natural surrounds | 7 |
| **Net Native Animals/Plants** | **36** |
| Native animals/wildlife/to look after the animals | 22 |
| Native plants/tree’s/bushland | 31 |
| **Net Free from Pollution** | **32** |
| The air/clean air | 12 |
| Not to pollute the environment | 11 |
| A clean place/not to have any rubbish around | 10 |
| Water/clean water | 8 |
| Rivers/keep rivers clean | 2 |
| Keep Australia clean/natural | 1 |
| **Net Look After the Environment/for the Future** | **21** |
| To look after the environment/care for the world around you | 18 |
| It must be maintained for future generations | 4 |
| Beaches/looking after our beaches | 0 |

| *Perceived Meaning of The Term "Environment" …continued* | **Total %** |
|---|---|
| **Net Living in Harmony** | **7** |
| People and society | 2 |
| The combination of natural and manmade | 2 |
| Humans and nature living together in harmony | 3 |
| **Net a Nice Place** | **5** |
| **Net Urban Development** | **5** |
| Responsible urban development-not onto green areas | 2 |
| Houses/buildings suburbs | 3 |
| **Net the World** | **4** |
| The world in which we live | 2 |
| The outdoor environment/the natural world around me | 2 |
| Open spaces/large areas | 1 |
| **Net Recycling** | **3** |
| **Net Ecosystem** | **2** |
| **Net Weather** | **0** |

*Perceived Meaning of The Term "Environment" …continued*

| | Total % |
|---|---|
| **Net Other** | **15** |
| Soil | 3 |
| Using resources efficiently | 2 |
| Keeping cats/dogs inside | 0 |
| It is very important | 0 |
| *Other* | *10* |
| *Don't know* | *3* |

All respondents – QB8

## 7.2 Access To Information Relating to Native Flora & Fauna

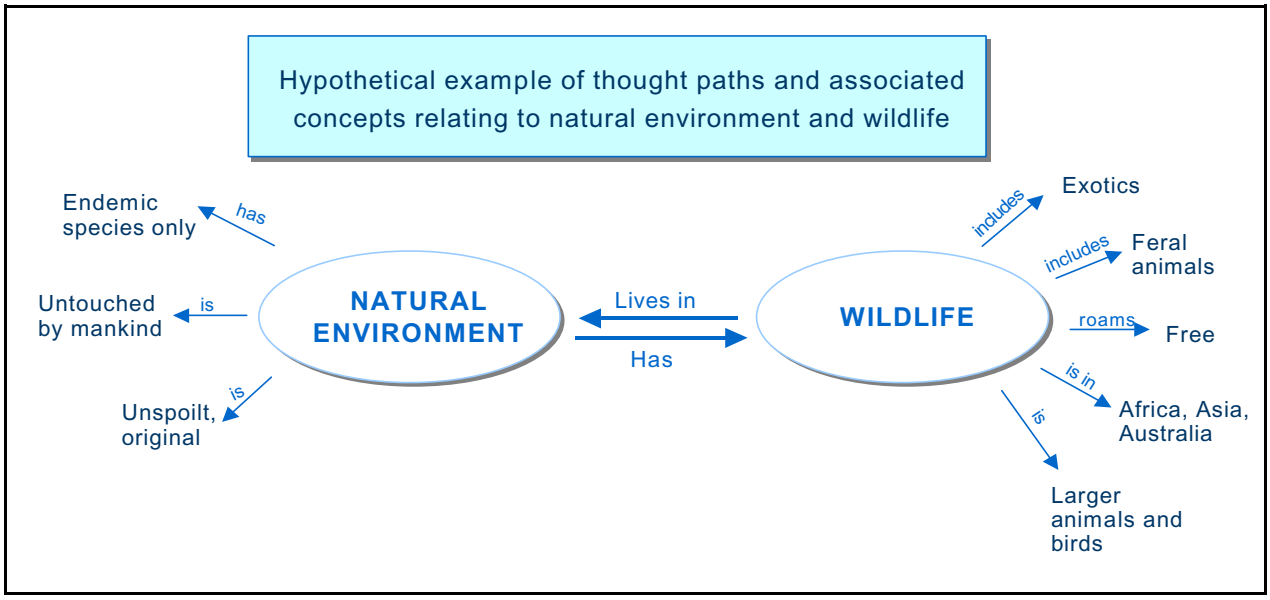
The specifics of urban wildlife conservation lacked personal relevance for many participants in the groups and in-depth interviews. Concepts such as biodiversity, natural ecosystems, wildlife, and the natural environment were distant issues that most placed under some global category thought to only be of relevance to environmental "experts".

As these terms tended to be "dismissed" in people's minds as information relevant to "experts", most had given little thought to their real meaning. Consequently they were quite poorly defined within panellists' minds and not well understood.

The meanings assigned to terms discussed in the qualitative research were as follows:

- **Wildlife** – this term was thought to refer to animals rather than plants, and in fact, to larger animals and birds rather than insects. In some sense, the term wildlife was seen to be just as pertinent and as strongly associated to places other than Australia (eg: African wildlife), however, it did have clear connotations of animals roaming free in their natural environment.

- **Natural Environment** – was seen to be all about untouched, unspoilt areas of the world where plants and animals live together without humans affecting them or their habitat. In fact, the natural environment and the term "wildlife" had strong associations with each other in the minds of people. A possible cognitive model of how these two concepts are linked in people's brains, is shown below.




- **Biodiversity** – was a term for which most struggled to provide a definition or description. Some 'positive' panellists did however describe it as a rich array of different plant and animal life, which could enable a complex ecosystem to be fully sustainable.

- **Ecosystem** – was thought to be an environment consisting of a range of plants and animals.

- **Native** – meant Australian or not introduced.

In an overall sense, with the exception of “natural”, “natural environment”, and “native”, the above terms were rarely used by panellists during discussions. Further, speciality language such as “biodiversity” and “ecosystem” were seen to be primarily the domain of “boffins” and “scientists”.

Part of this investigation of panellists’ knowledge of common concepts and terms within the environmental field also involved an investigation of their knowledge of native flora and fauna. When discussing the overall look and feel of our “native flora” most panellists used descriptors such as “scrubby” and “bushy looking”, although they did admit they had little if any detailed knowledge of actual species.

The most well known “native flora” included:

- Gum trees,

- Wattle, and

- Bottle Brush.

Introduced and exotic species were more readily recognised, such as:

- Roses,

- Camellias, and

- Azaleas.

Whilst knowledge and awareness of native flora was relatively low, there was much greater knowledge and recognition of native fauna, with many “iconic” animals being the most widely recognised. There was also a good awareness of foxes and rabbits as being introduced or non-native species. When discussing

native fauna commonly mentioned animals included the:

- Kangaroo,
- Koala,
- Wombat,
- Echidna,
- Kookaburra,
- Magpie,
- Cockatoo/Galah,
- Parrot/Lorikeet,
- Snake and Lizard,
- Fly, mosquito, ant,
- Cicada, and
- Dingo.

## 7.3 HABITAT RECONSTRUCTION & REINTRODUCTION OF LOCAL NATIVE ANIMALS AND PLANTS TO URBAN AREAS

When discussing the concept of wildlife and the extent to which it exists or should exist within the urban environment it became clear that panellists did not really have a concept in their minds of such a thing as an 'Urban Native Ecosystem' or urban ecology.

There was little or no knowledge of the existence of particular native trees or particular native animals that were only able to survive in their local area, so in that regard there was no sense that perhaps the survival of these plants or animals may depend on our ability to live with them or to maintain their habitat in urban areas. Any native flora or fauna living in urban areas was seen as being a remnant of the original natural environment and rather than belonging there, they were seen as being sometimes out of place in urban areas. This view is consistent with the partitioned concept of the world discussed in Chapter 5.

Wildlife was perceived as belonging to its natural environment and in fact, it was felt that animals are not safe in built up areas. Most had therefore concluded that animals are happier and better able to survive in their own natural environment away from urban areas.

The term “urban” on the other hand conjured images of people and buildings, noise and vehicles and as such the urban environment was not seen to be a place for wildlife. There was not thought to be sufficient space, food, or protection for wildlife to exist in urban areas. The conclusion in this case was therefore that urban areas have been specifically designed for the safety and comfort of humans, not animals.

The findings indicate the limited meaning that specialist language has for many target audiences. Indeed some of the terms and concepts that are common in discourse about urban conservation may be poorly understood, or even worse, off-putting or alienating to many target audiences.

It may be appropriate to seek to motivate people to conservation behaviours, without necessarily requiring full understanding of conservation concepts.

# 8. URBAN CONSERVATION WITHIN THE BROADER RANGE OF ENVIRONMENTAL CONCERNS

## 8.1 OVERALL CONCERN FOR THE ENVIRONMENT

When asked about their overall level of concern for environmental issues, 94% of respondents claimed to be 'concerned about the environment'. More specifically, 20% claimed to be 'extremely concerned', 33% claimed to be 'very concerned', and 41% claimed to be 'quite concerned'.

**Overall Level of Concern for Environmental Issue**

| | Total % |
|---|---|
| I am extremely concerned about the environment | 20 |
| I am very concerned about the environment | 33 |
| I am quite concerned about the environment | 41 |
| I am neither concerned nor unconcerned about the environment | 4 |
| I am quite unconcerned about the environment | 1 |
| I am very unconcerned about the environment | 1 |
| I am extremely unconcerned about the environment | 0 |

All respondents – Q14

Just over one in twenty claimed they were not concerned about environmental issues – 4% were 'neither concerned nor unconcerned', 1% were 'quite unconcerned' and 1% were 'very unconcerned'.

Whilst there was a high level of claimed concern about the environment, very few (13%) had actually acted on this concern by becoming actively involved in environmental programs such as joining a wildlife, horticultural, or conservation group. In that sense, the populations' concern for the environment is not necessarily easily converted into action taken on a collective basis.

**Incidence of Belonging to any Wildlife, Horticultural or Conservation Group**

| | Total % |
|---|---|
| Yes | 13 |
| No | 87 |

All respondents – Q15a

When individuals consider putting concern into action they identified better waste management, composting and better energy efficiency/reduced energy consumption as behaviours that individuals could adopt in order to have some positive impact on our natural environment. The behaviours and actions that study participants felt they could do to make some difference to our natural environment, such as:

- Recycling waste;
- Not putting oil down the sink;
- Composting
- Using their cars less; and
- Being more energy efficient.

Unprompted, participants in the qualitative phase seemed to struggle to think of local action they could take that specifically addressed wildlife conservation. As respondents tended to partition the natural environment from the urban space they feel there is not a great deal they can do personally to have a positive impact on wildlife conservation.

Qualitatively we found that when discussing things that have the most negative impact on the environment and those of greatest concern, study participants tended to be relating to environmental issues on a global scale rather than a local scale. Issues seen to be having the largest impact on the natural environment

included:

- Greenhouse gases;
- Global warming;
- The destruction of native habitats;
- The growing number of endangered species (although interestingly, this was seen to be a greater problem in countries other than our own);
- The degradation of waterways and land quality; and
- Pollution.

Consequently study participants felt that specific actions in their local area or space (eg: paving the backyard) could have little genuine impact on the natural environment.

## 8.2 PERCEIVED GREATEST PROBLEM FACING THE ENVIRONMENT

In the quantitative study, when asked what they believed to be the greatest problems facing our natural environment today, respondents indicated problems such as urbanisation, over population and domestic animals which relate to loss of habitat within urban areas. However this, loss of habitat was not referred to directly.

The most commonly perceived problems related to pollution (44% net), urbanisation (33% net), overpopulation (28% net), forest degradation/land clearing (27% net) and domestic animals (18% net).

Other issues such as lack of education, cars, chemicals, greed/war, salinity, and poor farming/mining/fishing practices, were less likely to be perceived as the greatest problem facing the environment today, although they were mentioned by 5-14% of the sample.

Whilst the majority of the issues above were relatively straightforward and self explanatory, the issue of pollution was a little wider in scope in that it covered "pollution" in general (25%), "water pollution/pollution of the waterways" (15%) and "rubbish/littering" (13%).

| Perceived Greatest Problem Facing The Environment | Total % |
|---|---|
| **Net Pollution** | **44** |
| Pollution | 25 |
| Water pollution/pollution of waterways | 15 |
| Rubbish/littering | 13 |
| **Net Urbanisation** | **33** |
| Over development/urbanisation | 31 |
| Factories | 3 |
| **Net Overpopulation** | **28** |
| **Net Forest Degradation/Land Clearing** | **27** |
| Deforestation/destroying trees | 15 |
| Land clearing leading to loss of habitat | 12 |
| Erosion | 2 |
| **Net Domestic Animals** | **18** |
| Domestic animals turning feral/hunting | 12 |
| Introduced species | 7 |

| *Perceived Greatest Problem Facing The Environment …continued* | **Total %** |
|---|---|
| **Net Lack of Education** | **14** |
| Ignorance/lack of education | 14 |
| **Net Cars** | **13** |
| Over/inefficient use of cars/too many cars | 13 |
| **Net Chemicals** | **9** |
| Chemicals/fertilisers/sprays | 9 |
| **Net Greed/War** | **9** |
| Greed | 4 |
| The threat of nuclear war | 3 |
| Shortsighted/greedy politicians | 3 |
| **Net Salinity** | **5** |
| **Net Poor Farming/Mining/Fishing** | **5** |
| Poor farming practices | 3 |
| Commercial fishing/over fishing | 1 |
| Mining | 1 |
| Irrigation | 1 |
| Mining | 0 |

*Perceived Greatest Problem Facing The Environment …continued*

| | Total % |
|---|---|
| **The ozone layer/the hole in the ozone layer** | **5** |
| **Global warming/greenhouse effect** | **5** |
| **Net Other** | **10** |
| Bushfires | 3 |
| Greenies/do gooders | 1 |
| Drought | 1 |
| *Other* | *6* |
| *Don't Know* | *3* |

All respondents – QB9

## 8.3 PERCEIVED IMPACT OF FACTORS ON THE ENVIRONMENT

Whilst destruction of native habitats was perceived to be having 'an extreme impact' on our environment by a large proportion of the sample, loss of native plants and animals from the urban environment was much less likely to be perceived as having 'an extreme impact'.

Respondents were read a list of issues that have the potential to impact on our environment and were asked to indicate the extent to which those issues were having an impact on the environment, using a 4 point scale ranging from 'an extreme impact' through to 'no impact at all'.

Based on the proportion who applied a rating of 'an extreme impact', the issues perceived to be having the greatest impact were those of water/land degradation (77%), pollution (75%), land clearing (70%), and destruction of native habitats (67%).

Just over four in ten respondents felt that loss of native plants and animals from the Urban environment was having 'an extreme impact'.

**Perceived Impact Of Factors on The Environment**
-Extreme Impact -

| | Extreme % | Some % | A little % | None % |
|---|---|---|---|---|
| Degradation of water/land | 77 | 18 | 3 | 1 |
| Pollution | 75 | 21 | 3 | - |
| Land clearing | 70 | 24 | 5 | 1 |
| Destruction of native habitats | 67 | 27 | 5 | 2 |
| Greenhouse gasses | 59 | 33 | 7 | 1 |
| Global warming | 55 | 29 | 13 | 4 |
| Endangered species | 53 | 34 | 10 | 3 |
| Loss of native plants and animals from Urban environment | 43 | 39 | 14 | 4 |

All respondents – QB10

People residing on acreage generally tended to perceive different factors having high impact on the environment when compared to those living in apartment or townhouses. In particular the biggest differences with regard to the concern felt by each of these groups related to "destruction of nature habitats" (76% - acreage vs 58% apartment dwellers), "endangered species" (58% vs 47%) and "loss of native plants and animals" (49% v 36%).

*Perceived Impact Of Factors on The Environment …continued*

| | EXTREME | DWELLING TYPE | | |
|---|---|---|---|---|
| | Total % | Apartment/ Townhouse % | House % | Acreage % |
| Degradation of water/land | 77 | 78 | 77 | 82 |
| Pollution | 75 | 73 | 75 | 76 |
| Land clearing | 70 | 67 | 70 | 70 |
| Destruction of native habitats | 67 | 58 | 67 | 76 |
| Greenhouse gasses | 59 | 56 | 59 | 60 |
| Global warming | 55 | 47 | 58 | 45 |
| Endangered species | 53 | 47 | 54 | 58 |
| Loss of native plants and animals from Urban environment | 43 | 36 | 44 | 49 |

All respondents – QB10

## 8.4 ENVIRONMENTAL ISSUES OF GREATEST CONCERN

The above issues were again read to respondents and they were asked to choose the one of greatest concern, the next greatest concern, and the least concern to them personally. This technique forced participants to choose the factors that they believe are of greatest concern to the environment.

Pollution and degradation of water/land were of greatest concern to respondents, whilst loss of native plants and animals from the Urban environment was of least concern.

The two issues of greatest concern were those of pollution (92% 'greatest/next greatest' concern) and degradation of water/land (67% 'greatest/next greatest' concern).

**Factors of Greatest Concern to the Environment**

| | Greatest Concern % | Next Greatest Concern % | Least Concern % |
|---|---|---|---|
| Pollution | 33 | 26 | 4 |
| Degradation of water/land | 22 | 22 | 9 |
| Global warming | 14 | 12 | 19 |
| Land clearing | 13 | 9 | 12 |
| Greenhouse gasses | 6 | 9 | 13 |
| Destruction of native habitats | 5 | 8 | 7 |
| Loss of native plants and animals from Urban environment | 4 | 7 | 30 |
| Endangered species | 3 | 6 | 5 |

All respondents – QB11

The next most commonly perceived greatest concerns were that of global warming and land clearing although they were of concern to far smaller proportion of the sample (41% and 35% 'greatest/next greatest' concern respectively).

Loss of native plants and animals form the urban environment, global warming, greenhouse gases, were most likely to be perceived as being of 'least concern' to respondents.

| | Least Concern |
|---|---|
| Loss of native plants and animals from the urban environment | 30% |
| Global warming | 19% |
| Greenhouse gases | 13% |
| Land clearing | 12% |

## 8.5 IMPORTANCE OF FACTORS IN HELPING THE ENVIRONMENT

When a list of behaviours that have potential to help the environment was read out to respondents, those believed to be of most importance personally were not putting oil down the sink (68% extremely important), recycling waste (61% extremely important), and keeping cats locked in at night (58% extremely important).

The next most important behaviours according to respondents were that of using less garden chemicals (46% extremely important), being more energy efficient (45% extremely important), composting waste (39% extremely important), supporting the establishment of more protected areas for native plants and animals (39% extremely important), and helping look after native animals in your local area (37% extremely important).

**Importance of Factors in Helping the Environment**

| | Extremely Important % | Very Important % |
|---|---|---|
| Do not put oil down the sink | 68 | 24 |
| Recycle waste | 61 | 31 |
| Keep cats locked in at night | 58 | 25 |
| Use less garden chemicals | 46 | 32 |
| Be more energy efficient | 45 | 38 |
| Help look after native animals in your local area | 37 | 32 |
| Compost their waste | 39 | 33 |
| Support the establishment of more protected areas for native plants and animals | 39 | 35 |
| Plant more native plants in their local neighbourhood | 31 | 34 |
| Use their car less | 25 | 30 |
| Get involved in community projects to help conserve native plants and animals in your local area | 22 | 31 |

All respondents – QA9/B12

Of less importance were behaviours such as planting more native plants in your local neighbourhood, using the car less, and getting involved in community projects to help conserve native plants and animals in your local area.

The behaviours relating to Urban renewal were seen to be 'extremely/very important' by more than half the sample, with keeping cats locked in at night (83% extremely/very important) and supporting the establishment of more protected areas for native plants and animals (74% extremely/very important) being the most important Urban renewal related behaviours.

# 9. TAKING ACTION

## 9.1 LIKELIHOOD TO CONTRIBUTE TO HELPING THE ENVIRONMENT

A high percentage of respondents (78%) claimed to be "very likely" to contribute to helping the environment through the recycling of waste, however currently only one third of the sample indicate a strong likelihood to get involved by helping with such initiatives as conserving native plants and animals.

When read out a list of conservation measures that could be taken, the majority of the sample (96%) claimed they would be either "very likely" (78%) or "quite likely" (18%) to recycle waste. One third of the sample stated they would be "very likely" to "support council to regenerate some parks back to natural bush" (33%) and "seek out information to better understand how to live with native birds and animals" (32%). 30% of respondents were "very likely" to "help look after native animals", whilst 21% had similar feelings towards getting "involved in conservation of native plants and animals".

**Likelihood to Contribute to Helping the Environment**

| | Very Likely % | Quite Likely % | Unlikely % |
|---|---|---|---|
| Recycle waste | 78 | 18 | 3 |
| Plant more native trees/shrubs | 33 | 38 | 27 |
| Get involved in conservation of native plants and animals | 21 | 36 | 41 |
| Seek out information to better understand how to live with native birds and animals | 32 | 39 | 28 |
| Help look after native animals | 30 | 38 | 29 |
| Support council to regenerate some parks back to natural bush | 33 | 33 | 31 |

All respondents – QA11/B14

Behaviours that were most likely to be adopted were those that were simple to incorporate in daily life, well supported with infrastructure, such as recycling waste or felt to align with peoples needs, such as plant more native trees/shrubs. The least likely to be adopted may have appeared specialised or demanding.

The major differences in likelihood to contribute to helping the environment were found amongst those who lived on acreages. Those within the acreage segment more often claimed to be "very likely" to "plant more native trees or shrubs" (55% compared to 33% for total sample), "seek out information to better understand how to live with native birds and animals" (47%, compared to 32% total), "help look after native animals" (47% compared to 30% total), and "get involved in conservation of native plants and animals" (37% compared to 21% total).

*Likelihood to Contribute to Helping the Environment …continued*

- Very Likely -

| | Total | DWELLING TYPE | | |
|---|---|---|---|---|
| | | Apartment/ Townhouse | House | Acreage |
| | % | % | % | % |
| Recycle waste | 78 | 77 | 79 | 76 |
| Plant more native trees/shrubs | 33 | 27 | 32 | 55 |
| Support council to regenerate some parks back to natural bush | 33 | 33 | 32 | 33 |
| Seek out information to better understand how to live with native birds and animals | 32 | 30 | 31 | 47 |
| Help look after native animals | 30 | 28 | 29 | 47 |
| Get involved in conservation of native plants and animals | 21 | 21 | 19 | 37 |

All respondents – QA11/B14

In the qualitative phase it appeared that people's willingness to contribute to urban wildlife conservation was conditional and depended on their attitudes and the strength of their individual needs. Example of this conditional participation included comments along the lines of:

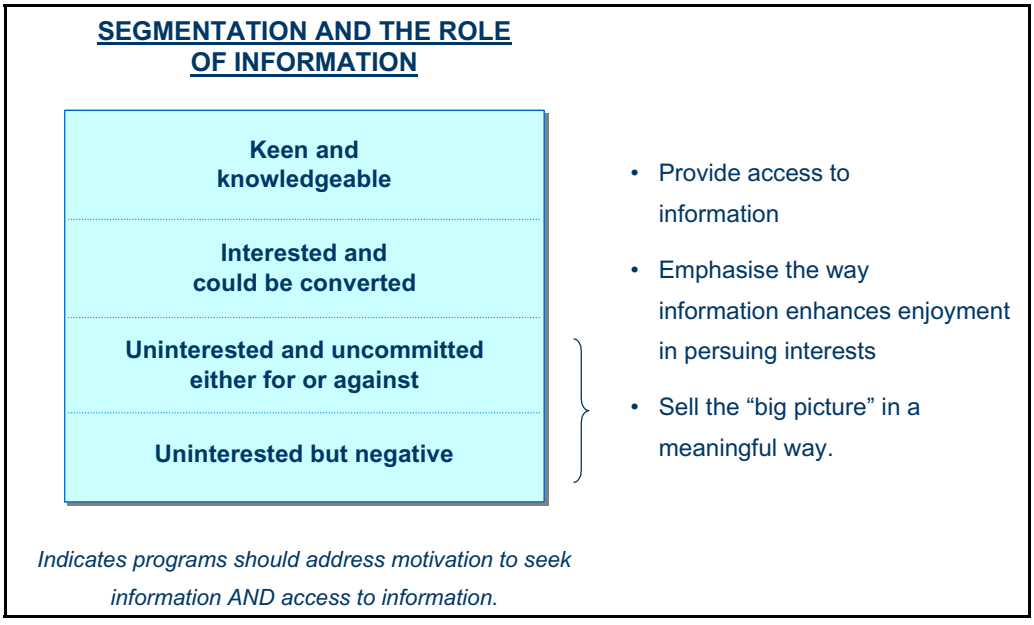
- "as long as no danger is brought to wildlife in urban areas",

- "as long as it doesn't threaten the safety of my family",
- "as long as someone gives me the plants for free",
- "as long as it doesn't potentially cause damage to my home",
- "as long as it fits in with the style of my garden", and
- "as long as the insects don't eat my plants".

## 9.2 Access to Information for Planning and Action

It became clear within the qualitative phase of the study that it was not as simple as just having environment and wildlife information on hand to make people want to become involved, but rather it was more a matter of providing motivators that would encourage participants to actively seek the information.

Four segments were identified requiring different motivational prompts to encourage the seeking of information and ultimate personal contribution to wildlife renewal. It seemed that those who were "keen and knowledgeable" on wildlife and environment issues would need the least encouragement. Making the information easily accessible to them would possibly be enough to make them seek and read



the information and then do their part to contribute to urban renewal.

The "interested and could be converted" segment on the other hand, would require a little more prompting to get them to seek out information, emphasising the role information plays in enhancing their enjoyment in pursuing their interest. Information is important to formulate ideas as to how they could make a personal contribution at a local level.

The two least involved segments would need to be actively marketed to for them to want to personally contribute. The "uninterested and uncommitted either" for or against" and the "uninterested but negative" segments, would need to discover the big picture in a meaningful way. The most powerful motivation would be to stress the importance of urban wildlife in terms of how it can or will directly affect them at a personal level.

On the whole, group members tended to feel that information on issues such as wildlife and the environment were topics learnt about at school at a young age or through documentaries.

Many did not really think about these issues routinely and therefore were put on the spot to identify where they would go to obtain information about wildlife, the natural environment and other related topics.

## 9.3 Organisations Who Should be Taking an Active Role in Conserving our Plants and Animals

### *Native Plants*

The local council was top of mind when respondents thought about where to obtain information on native plants, being mentioned by 43% of the sample. A nursery was close behind at 38%, followed by the library (25%) and then the internet (22%). The National Parks and Wildlife was mentioned by 20% of the sample in regards to obtaining information on native plants, placing it in fifth position in terms of top of mind awareness.

### *Wildlife Conservation*

Different organisations were mentioned for wildlife conservation. 29% of the sample mentioned The National Parks and Wildlife. WIRES was mentioned by 19% of the sample as an information source for wildlife conservation, whilst 16% cited the local council, 14% the internet and 12% the library.

### *Native Animals*

Information on native animals was most often associated with The National Parks and Wildlife, with one quarter of the sample mentioning the organisation (25%). Approximately one in five respondents (19%) would go to the library to obtain native animal information, followed by 18% who would contact WIRES, 17% Taronga Zoo or a zoo, 15% the internet and 12% the local council.

These findings indicate the sources that the public expect to find information. They may guide the selection of partners to communicate with the public on specific issues.

**Organisations or Places to Go to Find Information On …**

| | Native Plants % | Wildlife Conservation % | Native Animals % |
|---|---|---|---|
| The local council | 43 | 16 | 12 |
| A nursery | 38 | 1 | 0 |
| The library | 25 | 12 | 19 |
| The internet | 22 | 14 | 15 |
| The National Parks and Wildlife | 20 | 29 | 25 |
| Books/magazines/newspapers | 11 | 4 | 4 |
| The Forestry Department | 5 | 1 | 1 |
| Botanical gardens | 5 | 0 | 0 |
| Gardeners/landscapers | 4 | 0 | - |

All respondents – QA12a

*Organisations or Places to Go to Find Information On …continued*

| | Native Plants % | Wildlife Conservation % | Native Animals % |
|---|---|---|---|
| Landcare | 2 | 1 | - |
| The television | 2 | 1 | 1 |
| Local bushcare/environment groups | 2 | 1 | 1 |
| University | 2 | 1 | 1 |
| The phone book | 2 | 3 | 2 |
| Greening Australia | 2 | - | 0 |
| The Department of Agriculture | 1 | 0 | 0 |
| TAFE | 1 | 1 | 0 |
| Taronga Zoo/A zoo | 1 | 8 | 17 |
| Talking to friends/family/neighbours | 1 | 2 | 2 |
| WIRES | 1 | 19 | 18 |
| CSIRO | 1 | 1 | 0 |
| Greenpeace | 1 | 1 | 1 |
| The National Trust | 1 | - | - |
| A museum | 1 | 0 | 1 |
| The Conservation Society | 0 | 1 | 1 |
| Information centre | 0 | 1 | 0 |
| RSPCA | - | 8 | 5 |
| Animal/Wildlife Welfare Associations | - | 6 | 3 |
| Vet | - | 5 | 5 |

All respondents – QA12a

Local councils and wildlife conservation groups appear to be the most widely nominated groups whom respondents perceived as needing to be taking an active role in conserving native plants and animals.

When respondents were read a list of organisations and asked to rank them according to which ones they believed should be most responsible for conserving

native plants and animals. Local councils received the highest ranking with a mean of 2.3, followed by Wildlife Conservation Groups (2.6) and Government Departments (3.0). The lowest rankings were given to Community Groups (3.5) and "Individuals like yourself" (3.7).

*Organisations or Places to Go to Find Information On …continued*

| | Native Plants % | Wildlife Conservation % | Native Animals % |
|---|---|---|---|
| WWF | - | 3 | 2 |
| Local National Parks | - | 2 | 5 |
| Animal Welfare Centres | - | 2 | 1 |
| Government Departments | - | 1 | 2 |
| Park Rangers | - | 1 | 1 |
| Community Centre | - | 0 | - |
| Other | 9 | 5 | 4 |
| None | 3 | 1 | 2 |
| Don't know | 5 | 15 | 15 |

All respondents – QA12a

**Organisations Who Should be Taking An Active Role in Conserving Our Plants and Animals**

| | Mean Ranking |
|---|---|
| Local Councils | 2.3 |
| Wildlife Conservation Groups | 2.6 |
| Government Departments | 3.0 |
| Community groups | 3.5 |
| Individuals like yourself | 3.7 |

*NB. Closer the score to 1, the higher the ranking*

All respondents – QA13

## 9.4 SPECIFIC REACTIONS TO URBAN WILDLIFE INITIATIVES

Participants were presented with a number of scenarios, which related to proposed urban wildlife initiatives and asked for their thoughts on each. (A full description of the scenarios are appended to the back of the document).

***Scenario 1:*** ***Gum trees in backyards and in street tree plantings.***

The concept of planting gums to eventually provide a continuous canopy of trees for koalas, sugar gliders and possums was generally seen as worthwhile. Participants, however, were reluctant to plant gum trees around their house to contribute to this initiative. The main reasons for this reluctance were based on:

- a perception that gum tress are unsafe, messy and too large for the home,

- not wanting to encourage possums in their roof, and
- a fear that koalas would get run over, or attacked by cats in an urban environment.

***Scenario 2:*** ***Dense shrubs and patches of tussocky native grass in backyards, on median strips and in local parks.***

This initiative was not appealing. Shrubs and native grasses were thought to be very unattractive, messy and out of place in an urban garden. It was also thought that an introduction of such an initiative would provide a haven for dangerous snakes and spiders. Overall this concept was not in keeping with the idea of a neat, attractive backyard.

***Scenario 3:*** ***Replacement landscaping in local park.***

The main concern regarding this initiative was that it would be unsafe. The introduction of replacement landscaping would not only create a haven for snakes and spiders, but it was also thought that it would attract "unsavoury" and dangerous characters to local parks. With this in mind it was generally thought that the local park would no longer be a safe place for children.

Another concern with this initiative was that the local parks would look unkempt, untidy and overgrown, which would make them and the neighbourhood look less attractive. This initiative was also felt to contradict the current image that exists for a local park, which is that they are a place to go to relax, play or picnic.

In regards to participation in urban renewal, it appeared that participants showed more preparedness to become involved or take action at a community level, rather than at an individual one. The rationale behind the preference to participate in community urban renewal was a feeling that:

- it's coordinated,
- people can more obviously see the result of the project,
- more of a difference can be made working on a larger scale,

- it would require less time,
- there would be no cost involved,
- it's social and educational,
- it's a family activity, and
- it would generate a sense of community involvement and achievement.

***Scenario 4:*** ***Award Schemes and plaques for participation***

The proposition of award schemes, which would include plaques for homes, did not appear to be a strong motivation for participation in urban renewal. Whilst recognition was important to people, the prospect of simply having a plaque on the wall in isolation was not felt to be a strong enough motivator.

## 9.5 PARTICIPATION IN ENVIRONMENTAL ACTIVITIES

Within the quantitative study, a number of activities regarding looking after native animals and plants were read to respondents and they were asked to nominate those they had participated in over the past two years. Two thirds (67%) of the sample claim to have "planted a native plant" in their garden and 59% of the sample claimed to have "stopped using insecticides" over the past two years. A further 15% of respondents had been "involved in an organised community tree planting day".

In regards to activities involving fauna, 58% professed to have "provided natural food sources for native birds and animals", followed by 20% who had "put up a nest box in their yard for birds, or possums" and 18% who claimed to have "placed a bell on their cat's collar to warn the birds".

Only a small proportion (12%) of the sample claimed to have not taken part in any of the activities in the past two years.

| Activities Taken Part in, in the Past Two Years | Total % |
|---|---|
| Planting a native plant in your garden | 67 |
| Stopped using insecticides in your garden | 59 |
| Providing natural food sources for native birds and animals | 58 |
| Putting up a nest box in your yard for birds, or possums | 20 |
| Placing a bell on your cat's collar to warn the birds | 18 |
| Being involved in an orgainsed community tree planting day | 15 |
| *Other* | *8* |
| *None* | *12* |

All respondents – Q16

## 9.6 PROFILE OF PEOPLE LIKELY TO ADOPT "APPROPRIATE" URBAN WILDLIFE CONSERVATION BEHAVIOUR

Respondents were asked to indicate what their likelihood would be of adopting various types of conservation behaviour. Each respondent was given an overall score based on all of their responses where a "very likely" response was attributed a score of 5, "quite likely" a score of 4, "neither/nor" a 3, "quite unlikely" - a 2 and "very unlikely" a 1. Therefore the highest achievable score based on 6 statements is 30. Respondents with an overall score of between 25-30 were segmented as having a "high likelihood" to adopt behaviour and those scoring 0-10 a "low likelihood".

During analysis, those who had displayed a high likelihood to adopt appropriate urban wildlife conservation behaviour were compared with those who indicated that they would be unlikely to take up initiatives.

Those with low likelihood to adopt conservation behaviour tended to:

- live in Sydney,
- have a lawn and garden,
- be either “quite concerned” or “not concerned” about the environment, and
- male.

High likelihood to adopt conservation behaviour was more common amongst respondents who:

- had a native garden,
- were “extremely concerned” about the environment,
- were over 35 years of age, and
- had a household income of either $20K-$29K or $100K plus.

**Profile of Those Likely to Adopt Appropriate Urban Wildlife Conservation Behaviour**

| | Total | Low Likelihood to Adopt Behaviour | High Likelihood to Adopt Behaviour |
|---|---|---|---|
| | % | % | % |
| **Location:** | | | |
| Sydney | 71 | 76 | 66 |
| Newcastle/Wollongong | 13 | 11 | 14 |
| Country | 16 | 14 | 21 |
| **Dwelling Type:** | | | |
| Apartment | 10 | 12 | 7 |
| Townhouse/Semi | 8 | 6 | 8 |
| House | 74 | 76 | 73 |
| Acreage | 8 | 5 | 12 |

*Profile of Those Likely to Adopt Appropriate Urban Wildlife Conservation Behaviour …continued*

| | Total % | Low Likelihood to Adopt Behaviour % | High Likelihood to Adopt Behaviour % |
|---|---|---|---|
| **Garden Type:** | | | |
| Lawn and gardens | 58 | 64 | 46 |
| Native garden | 13 | 6 | 28 |
| Courtyard | 8 | 10 | 4 |
| Balcony | 8 | 9 | 7 |
| Bushland setting | 7 | 5 | 9 |
| **Environmental Concern:** | | | |
| Extremely concerned | 20 | 5 | 49 |
| Very concerned | 33 | 18 | 39 |
| Quite/not concerned | 47 | 77 | 11 |
| **Gender:** | | | |
| Male | 52 | 60 | 51 |
| Female | 48 | 40 | 49 |
| **Age:** | | | |
| 18-34 years | 34 | 37 | 27 |
| 35-54 years | 41 | 37 | 46 |
| 55 years plus | 23 | 26 | 28 |
| **Education:** | | | |
| Primary/school certificate | 27 | 32 | 30 |
| HSC | 20 | 20 | 17 |
| Trade qualification | 23 | 19 | 20 |
| University degree | 30 | 28 | 32 |
| **Highest Household Salary:** | | | |
| Under $20K | 12 | 12 | 8 |
| $20K - $29K | 11 | 7 | 17 |
| $30K-$49K | 26 | 28 | 27 |
| $50K-$99K | 29 | 30 | 18 |
| $100 K plus | 9 | 8 | 13 |

# APPENDIX A:

# QUALITATIVE COMPONENT

## QUALITATIVE RESEARCH

This study is the first of its kind to investigate understanding of wildlife and conversation among the urban communities of NSW and as such, the methodologies must be able to explore “the lie of the land”. Focus groups and depth interviews are important tools to systematically gather information of a qualitative nature.

These qualitative methodologies can reveal as wide a range as possible of understanding in the target populations. In qualitative studies the researcher can probe to discover the reasons behind the opinions or attitudes that people express, and gain an impression of the strength of feeling around issues. Qualitative research does not attempt to establish the frequency of particular attitudes in a population. However findings will help to accurately understand and interpret the results when a quantitative survey is subsequently undertaken.

In focus groups and depth interviews researchers can observe and record the language, terminology and concepts that people tend to use when discussing issues. Such insights have distinct value to develop effective communication with target populations.

Importantly, information about language and concepts can be used to guide the formulation of survey questions so they are better understood and, therefore, more accurately answered by respondents.

## NPWS RECRUITING DEFINITIONS

## FOR QUALITATIVE COMPONENT

**Recruitment Question:**

Q. Some people have suggested that it is important for us to encourage a lot more native plants and animals in our towns and cities that is, in public parks and in people's backyards.

Just thinking about it personally, are you ….

| | | **Attitudes to Fauna & Native Plants Preservation** |
|---|---|---|
| Strongly in favour of this | - | COMMITTED |
| Slightly in favour of this | - | MODERATES |
| Undecided | - | MODERATES |
| Slightly against this | - | MODERATES |
| STRONGLY AGAINST THIS | - | ANTI |

## NPWS DISCUSSION OUTLINE FOR QUALITATIVE COMPONENT

Q. Thinking about your own “backyard”, the parks around your home and the “outdoors” generally:

a. What do you like/ enjoy?
b. What are the good and bad aspects?
c. What would be your ideal for each of those situations?

Q. Do you enjoy getting out in a natural surrounding?

a. How often do you do this?
b. What usually prompts your outdoor activities? (school sports, family gatherings etc)
c. What sort of outdoor activities do you enjoy?
d. What type of natural setting is your ideal?
e. If you had the time, what outdoor activities would you do? (e.g. bushwalk, 4WD, walking etc)
f. What would be your fantasy location if you could choose anywhere in the world?

Q. Looking at a range of photos of native flora and fauna (using the card sort technique):

a. Which ones do you like?
b. Which don’t you like?
c. Do you know the names of any of these? Are they natives?
d. Have you ever encountered any problems with any of these?
e. What do you have/want in your garden?
f. What do you want in parks and reserves near your home?

Q. Landscape preferences: (using three examples of suburban homes and three examples of different types of parks we can attempt to understand needs via triadic sorting)

a. how does one (home) differ from the other two?
b. Why would a person choose this type of landscape for their home?
c. What does it say about the person? etc.

Q. Is it important to have an Australian landscape as an Australian?

Q. Alignment with generalized conservation principles:

a. How important do they believe preservation/renewal of the natural ecosystem is?
b. Why?
c. Why not?
d. Is it only relevant to non-urban areas or can it apply to urban environment as well?

Q. Current behaviour toward Wildlife Renewal:

a. What do you currently do to help preserve wildlife?
b. Do you belong to any association?
c. What could you do to help?
d. Where would you start, who would you see?, Where would you get advice?

Q. Should/ could people in the cities and towns do anything about wildlife renewal?

a. What could they do?
b. What should they do?
c. What could you personally do?

Q. Agreement with Wildlife Renewal:

a. Do you agree with the concept of urban wildlife renewal?
b. Are you likely to do anything to help?
c. What types of things would you be willing to consider doing?
d. How far would you go in terms of urban wildlife renewal?

Q. Prompts to action for participation in wildlife renewal:

a. What would prompt you to do something?
b. Where would you find out what to do?
c. What organisations are you aware of that may be involved in wildlife renewal?
d. What are the barriers to participation?

Q. Reactions to a number of different propositions to prompt changes in behaviour.

a. Gum Trees in Backyards and In Street Tree Plantings
b. Pet Control
c. Dense Shrubs, and Patches of Tussocky Native Grass in Backyards, on Median Strips and in Local Parks
d. Replacement Landscaping in a Local Park
e. Getting Information about how to be a Wildlife Friendly Household
f. Recognition for Wildlife Friendly/Conservation Committed Households

Q. Appropriateness of Following Names for a Program that is going to Support the Improvement of Wildlife and Nature in Urban Areas.

a. Wildlife in the Suburbs
b. Gardens for Wildlife
c. Urban Wildlife Renewal
d. Land for Wildlife
e. Wildscaping
f. Native Animals and Plants
g. Nature Street
h. Australian
i. Bush in the Burbs
j. Bush in Backyards
k. City Sanctuaries
l. Homes for Habitat
m. Wilderness

Q. Understanding of Relevant Terminology.

a) What is your understanding of the terms:

- Flora,
- Fauna,
- Wildlife,
- Bushland,
- Feral,
- Native Animal,
- Ecosystem,
- Biodiversity, and
- Invertebrates.

## MATERIAL PRESENTED FOR QUALITATIVE COMPONENT

*- Propositions to Prompt Changes in Behaviour -*

### Gum Trees in Backyards and in Street Tree Plantings

An environmental plan is being implemented for your local area. As part of the plan a corridor of gum trees (the same as would have originally been there before settlement) will be planted in a broad band of land across the district.

In 10-20 years a continuous canopy of trees will connect parks in your area.

The trees will also be planted in the street where they will not conflict with power lines. In some cases existing trees will be replaced.

Your local council will provide you with young trees and you are invited to plant these in your backyard and care for them.

It is expected that within 10 years the trees will have developed enough to encourage possums living in your backyard. After 20 years the trees could be home to other animals that could be reintroduced to the parks in your area if the habitat becomes suitable, including koalas or sugar gliders.

- Why might people oppose such a project?
- What would it take to make people do their bit?
- Incentives, penalties, infrastructure support?
- Does the idea of saving koalas help motivate you?

## Pet Control

Dogs and cats are known to be a major threat to wildlife living in or near urban areas. In Coffs Harbour and Port Stephens dog attack is the most common cause of death for koalas. To return wildlife to your suburb, pets and feral animals must be prevented from hunting native animals.

If your houses are in a known habitat area, you and your neighbours would be unable to keep dogs and cats as pets due to a new wildlife protection zoning applied to urban areas. This restriction would be phased in and must be in place within 10 years.

OR

Tight restrictions would be applied. Dogs must be on a leash at all times in public areas and cats must be kept within your property boundaries and inside at night. Animals would be impounded and heavy fines would be applied to pet owners not complying with the regulations.

- Should people be controlling their pets to improve the chances of wildlife?
- Would they do it?
- What would make them cooperate most?
- Incentives, penalties. Infrastructure support.
- Would you support a pet free zoning imposed in your area?
- Is it reasonable to restrict pets and their owners in the following way?

**Dense shrubs, and patches of tussocky native grass in backyards, on median strips and in local parks.**

While large showy flowers and fruits attract some birds to our gardens, some beautiful “bush birds” have become rare in our suburban backyards. These “bush birds” feed on a myriad of small insects in native shrubs or eat seeds from native grass. To survive in your garden these “bush birds” also require the protection (from predators and large territorial birds) of dense native shrubbery.

As part of a district wide campaign to increase the numbers of these birds gardeners would be asked to replace some lawn areas with tussock native grasses which are straw coloured for much of the year.

Gardeners would also be asked to replace some of their garden plants with dense native shrubbery. The increase in insects would be accompanied by an increase in other creepy-crawlies such as spiders (mostly harmless).

- Would you change your garden to help the campaign?
- What would cause you to join?
- Incentives, penalties, infrastructure support.

## Replacement landscaping in a local park

In the cases where there is a park adjacent to your property which has normally been mown for years, the Council would plan to stop mowing in the reserve except for the children's play areas and around park furniture.

Native trees, shrubs and especially grasses would regrow from seeds stored in the soil. With some replanting the park would become a mini wilderness of dense understorey and home to native animals (including insects, spiders, snakes and lizards).

Undoubtedly some "weeds" would emerge and need to be carefully removed. For the first 5-10 years the council would need to increase spending in the park, but after a while the money saved (by not mowing) would more than cover the cost of keeping the park as a home for native plants and animals.

- What do you think about the changes in the park?
- What do you think about Council spending more money to do this?
- Would you get involved to help or protest against this move?
- Do you have any concerns about children playing in such a park?

## Getting information about how to be a wildlife friendly household

A NEW GARDENING FOR WILDLIFE WEBSITE to be developed. By submitting the name of your suburb and selecting the wildlife you would like to attract to your garden the site will return you a list of trees shrubs and grasses you should plant and show photos of those plants.

The site would also offer other tips for making your garden a good home for wildlife.

At the end of your inquiry you can print a shopping list and the web site will suggest which local nurseries can supply you the plants.

A PUBLIC INFORMATION LINE TO ANSWER WILDLIFE QUERIES The state government to fund a free call number staffed by experts who can answer the Public's questions and concerns about wildlife. This service could refer you to other specialist services such as WIRES, etc.

- Are you interested in the site making your garden wildlife friendly and would you visit the website to help plan your garden.

## Recognition for Wildlife friendly/Conservation committed households

- Would you appreciate community recognition for your efforts? How would you like to recognised?
- An award scheme.
- A plaque at the front of your house.
- A sign in your street.
- Any other way to recognise people. Would such recognition be important to you?
- Would you like to network of people interested in renewing wildlife so that you can receive a tips and advice perhaps via a newsletter.
- Would you like to gain access to training?

# APPENDIX B:

# QUANTITATIVE COMPONENT

WOOLCOTT RESEARCH JULY 2001

Ref: grp1/2001/NPSW/npws2.que-A **NPWS URBAN STUDY- A** **Job No: 5234-F**

Good …I'm … from Woolcott Research a market research company and I would appreciate it if you would have some time to help us with our study today.

**RECORD TOWN / SUBURB: _____POST CODE: _____**

| | | | | |
|---|---|---|---|---|
| Q1i | **RECORD CITY:** | Sydney | 1 | **CHECK QUOTAS** |
| | | Wollongong | 2 | |
| | | Newcastle | 3 | |
| | **RECORD COUNTRY:** | Large / Medium town | 1 | |
| | | Small town | 2 | |

Q1ii First of all, which of the following best describe the home you live in?

| | |
|---|---|
| An apartment building | 1 |
| A semi detached house, townhouse or terrace | 2 |
| A free standing house on a regular sized suburban block | 3 |
| A house on a block that is ½ an acre or more | 4 |

**Q1iii RECORD AREA TYPE:**

**SYDNEY**

| | | | | |
|---|---|---|---|---|
| **IF Q1 CODE 1 OR 2** | → | High/Medium Density | 1 | **CHECK QUOTAS** |
| **IF Q1 CODE 3** | → | ¼ acre suburban block | 2 | |
| **IF Q1 CODE 4** | → | City acreage/ fringe | 3 | |

**Q1iii RECORD AREA TYPE:**

**WOLLONGONG / NEWCASTLE**

| | | | | |
|---|---|---|---|---|
| **IF Q1 CODE 3** | → | ¼ acre suburban block | 1 | **CHECK QUOTAS** |
| **IF Q1 CODE 4** | → | City acreage/ fringe | 2 | |

**IF ½ ACRE BLOCK OR MORE (Q1 CODE 4) ASK:**

Q1iv Would you describe yourself as a primary producer?

| | | |
|---|---|---|
| Yes | 1 | **TERMINATE** |
| No | 2 | **CONTINUE** |

Q1v How many acres do you have? _____ acres

Q2 And which of these statements best describes the outdoor areas around your home? **READ OUT**

| | |
|---|---|
| I have only a balcony | 1 |
| I have basically a courtyard style of garden | 2 |
| I have a combination of lawn and gardens | 3 |
| I have a garden of mostly native plants | 4 |
| I have mostly a bushland setting | 5 |
| Other *(please specify):*_____ | 6 |

Q3 I am now going to read out a number of aspects and, I would like you to tell me how important each one is to you in making somewhere a nice place to live. Taking the first aspect, ..**(INSERT)**…How important would you say this is to you personally? Would you say it was extremely, very or, quite important, neither important or unimportant or not important at all? **READ OUT.**

| | Extremely Important | Very Important | Quite Important | Neither Important nor Unimportant | Not important at all |
|---|---|---|---|---|---|
| A place that is close to the beach, or to a river or lake | 1 | 2 | 3 | 4 | 5 |
| A place with parks close by where the kids can play | 1 | 2 | 3 | 4 | 5 |
| A place that's not too close to busy streets or shopping centres | 1 | 2 | 3 | 4 | 5 |
| A place with lots of natural bushland close by | 1 | 2 | 3 | 4 | 5 |
| A place that's close to shops and schools | 1 | 2 | 3 | 4 | 5 |
| A place where you could live close to native animals and birds | 1 | 2 | 3 | 4 | 5 |
| A place that's close to lots of cafes, restaurants and bars | 1 | 2 | 3 | 4 | 5 |
| A relaxing place where you'd hear the sounds of lots of birds | 1 | 2 | 3 | 4 | 5 |
| A place that's leafy & green with lots of tree lined streets and parks | 1 | 2 | 3 | 4 | 5 |

Q4 As I read out these different types of flowers and plants and I would like you to tell me which ones you would like to have in your garden. **READ OUT**

| | Yes | No | Never heard of it |
|---|---|---|---|
| Azaleas | 1 | 2 | 3 |
| Camellias | 1 | 2 | 3 |
| Palms | 1 | 2 | 3 |
| Roses | 1 | 2 | 3 |
| Wattle trees | 1 | 2 | 3 |
| Grevilleas | 1 | 2 | 3 |
| Kangaroo Paw | 1 | 2 | 3 |
| Liquidambars | 1 | 2 | 3 |
| Gumtrees | 1 | 2 | 3 |
| Banksia | 1 | 2 | 3 |
| Bottle Brush | 1 | 2 | 3 |
| Daisies | 1 | 2 | 3 |

Q5 As I read out a list of animals, I would like you to tell me how much you would like to have that type of animal living in your backyard or around your home. Even though you may think that it is unlikely or impossible for that animal to live around your home I would still like you to comment as if it would be possible. Taking the first one…..**INSERT**…, How much would you like to have that type of animal in your backyard? Would you like it a lot, a little or would you not like it at all? **READ OUT.**

| | Like it a lot | A little | Not like it at all |
|---|---|---|---|
| Snakes | 1 | 2 | 3 |
| Possums | 1 | 2 | 3 |
| Butterflies | 1 | 2 | 3 |
| Spiders | 1 | 2 | 3 |
| Lorikeets | 1 | 2 | 3 |
| Bats | 1 | 2 | 3 |
| Koalas | 1 | 2 | 3 |
| Small birds like wrens and finches | 1 | 2 | 3 |
| Caterpillars | 1 | 2 | 3 |
| Blue tongue lizards | 1 | 2 | 3 |
| Magpies | 1 | 2 | 3 |
| Moths | 1 | 2 | 3 |
| Kookaburras | 1 | 2 | 3 |
| Cockatoos | 1 | 2 | 3 |
| Frogs | 1 | 2 | 3 |
| Earth worms | 1 | 2 | 3 |

Q6 I am going to read out a number of statements and as I read each one I'd like you to tell me how important this issue is to you personally despite whether or not you have a garden… Lets take the first statement, how important is it to you personally to have a……..would you say that is important or unimportant to you.

**IF IMPORTANT:** Would that be extremely important, very important or quite important?

**IF UNIMPORTANT:** Would that be quite unimportant, very unimportant or extremely unimportant?

| | Extremely important | Very important | Quite important | Neither important nor unimportant | Quite unimportant | Very unimportant | Extremely unimportant |
|---|---|---|---|---|---|---|---|
| A home that is safe from the threat of snakes and spiders | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A garden with birds that are really admired by visitors | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A garden whose appearance is in keeping with my neighbours | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A garden that makes you feel that you are at one with nature | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Being someone who is recognised as knowing a lot about, and caring for the environment | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A home where there is no chance of falling trees | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A local park that has big lawn areas where you can play outdoor games | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| An expensive garden designed by a top landscaper | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A garden with native birds and animals which you could feed | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | Extremely important | Very important | Quite important | Neither important nor unimportant | Quite unimportant | Very unimportant | Extremely unimportant |
|---|---|---|---|---|---|---|---|
| Being in an outdoor environment where you feel relaxed, peaceful, and totally stress free | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A native garden that people will think is right for Australia | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A backyard that is good for entertaining people | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A garden that expresses my own individuality | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A garden that will be admired by other people | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A garden that is neat and tidy | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Q7 I would now like to read out these same statements in pairs and I would like you to tell me which aspect would be more important to you personally despite whether or not you have a garden.

For example, which is more important to you …**(INSERT)** or …? And is that much more important, slightly more important or are they equally important as each other to you.

| | **Much more important** | **Slightly more important** | **Same/ equally important** | **Slightly more important** | **Much more important** | |
|---|---|---|---|---|---|---|
| A home that is safe from the threat of snakes and spiders | ☐ | ☐ | ☐ | ☐ | ☐ | A home where there is no chance of falling trees |
| A native garden that people will think is right for Australia | ☐ | ☐ | ☐ | ☐ | ☐ | A garden that is neat and tidy |
| A garden that will be admired by other people | ☐ | ☐ | ☐ | ☐ | ☐ | An expensive garden designed by a top landscaper |
| A garden whose appearance is in keeping with my neighbours | ☐ | ☐ | ☐ | ☐ | ☐ | A backyard that is good for entertaining people |
| A local park that has big lawn areas where you can play outdoor games | ☐ | ☐ | ☐ | ☐ | ☐ | Being in an outdoor environment where you feel relaxed, peaceful and totally stress free |
| A garden with native birds and animals which you could feed | ☐ | ☐ | ☐ | ☐ | ☐ | A garden that expresses my own individuality |
| A garden that makes you feel that you are at one with nature | ☐ | ☐ | ☐ | ☐ | ☐ | A garden with birds that is really admired by visitors |
| Being someone who is recognised as knowing a lot about and caring for the environment | ☐ | ☐ | ☐ | ☐ | ☐ | A backyard that is good for entertaining people |

Q8 I am now going to read out a number of statements people have made regarding plants and animals and this time I would like you to tell me to what extent you agree or disagree with each one. Taking the first statement**……(INSERT)…….** Would you say that you agree or disagree with that statement? **IF AGREE:** Do you agree strongly or slightly. **IF DISAGREE:** Would you say that you disagree slightly or strongly?

| | Strongly Agree | Slightly Agree | Neither Agree or Disagree | Slightly Dis-agree | Strongly Disagree |
|---|---|---|---|---|---|
| A totally native bush garden would look out of place in my neighbourhood | 1 | 2 | 3 | 4 | 5 |
| Australian Native Gardens often look unkept and messy | 1 | 2 | 3 | 4 | 5 |
| I would love to be able to feed native birds and animals in my own yard | 1 | 2 | 3 | 4 | 5 |
| Gum trees are dangerous in suburban backyards, they can fall over and cause damage | 1 | 2 | 3 | 4 | 5 |
| The best parks are those with wide ex-panses of green grass with plenty of room for picnicking and playing outdoor games | 1 | 2 | 3 | 4 | 5 |
| A local park with lots of grass and dense bush can be unsafe for children | 1 | 2 | 3 | 4 | 5 |
| Its important to spray your garden at least once a year to get rid of the bugs | 1 | 2 | 3 | 4 | 5 |
| I am all for Australian plants and ani-mals but where I live, there is little I can really do to help | 1 | 2 | 3 | 4 | 5 |
| You can really feel at one with nature in an Australian bush garden | 1 | 2 | 3 | 4 | 5 |
| I would really object if the council stopped mowing the grass in my local park and let it go back to natural bush | 1 | 2 | 3 | 4 | 5 |
| Possums are a real nuisance because they can get in your roof | 1 | 2 | 3 | 4 | 5 |
| I think formal European gardens look out of place in Australia | 1 | 2 | 3 | 4 | 5 |

| | Strongly Agree | Slightly Agree | Neither Agree or Disagree | Slightly Disagree | Strongly Disagree |
|---|---|---|---|---|---|
| I'd love to think that my backyard was suitable for lots of native Australian wildlife | 1 | 2 | 3 | 4 | 5 |
| Its unfair to encourage native animals into the built up areas where they could be hurt | 1 | 2 | 3 | 4 | 5 |
| Dogs are a threat to our native animals in cities and towns | 1 | 2 | 3 | 4 | 5 |
| I believe that half of the parks in my neighbourhood should be returned to | 1 | 2 | 3 | 4 | 5 |
| I would like to play my part in helping to bring native plants and animals back into my neighbourhood | 1 | 2 | 3 | 4 | 5 |
| Australian native gardens are not really fashionable these days | 1 | 2 | 3 | 4 | 5 |
| You can tell a lot about a person by the way their garden looks | 1 | 2 | 3 | 4 | 5 |
| There are plenty of natural areas for native animals outside our cities and towns | 1 | 2 | 3 | 4 | 5 |
| Cats are a real threat to our native animals in cities and towns | 1 | 2 | 3 | 4 | 5 |
| Australian native gardens require little maintenance or watering | 1 | 2 | 3 | 4 | 5 |
| Where they pose a threat to native animals, foxes should be gotten rid of | 1 | 2 | 3 | 4 | 5 |

Q9 I am now going to mention a number of things people have identified that they can do to help the environment, how important do you personally feel it is that people …INSERT … Do you think it is extremely important, very important, quite important, or not important at all.?

| | Extremely important | Very important | Quite important | Not important at all |
|---|---|---|---|---|
| Plant more native plants in their local neighbourhood | 1 | 2 | 3 | 4 |
| Recycle waste | 1 | 2 | 3 | 4 |
| Keep cats locked in at night | 1 | 2 | 3 | 4 |
| Use less garden chemicals | 1 | 2 | 3 | 4 |
| Use their car less | 1 | 2 | 3 | 4 |
| Do not put oil down the sink | 1 | 2 | 3 | 4 |
| Help look after native animals in your local area | 1 | 2 | 3 | 4 |
| Compost their waste | 1 | 2 | 3 | 4 |
| Support the establishment of more protected areas for native plants and animals | 1 | 2 | 3 | 4 |
| Get involved in community projects to help conserve native plants and animals in your local area | 1 | 2 | 3 | 4 |
| Be more energy efficient | 1 | 2 | 3 | 4 |

Q10 Now, I'd like you to tell me to what extent you personally believe that the community should try to encourage native animals to live in different types of environment or areas.
Taking ….(INSERT), do you think native animals should be definitely encouraged, encouraged to some extent or not encouraged at all to live here.

| | Definitely encouraged | Encouraged to some extent | Not encouraged at all |
|---|---|---|---|
| Suburban backyards | 1 | 2 | 3 |
| Local parks with mown grassy areas | 1 | 2 | 3 |
| Local largely untouched parks/bushland in suburban areas | 1 | 2 | 3 |
| Unspoilt bushland | 1 | 2 | 3 |

Q11 There are many things people can do to help conserve our native plants and animals. How likely would you be to … **INSERT** … Would you be very likely, quite likely, undecided, quite unlikely, very unlikely? **READ OUT**.

| | Very likely | Quite likely | Undecided | Quite unlikely | Very unlikely |
|---|---|---|---|---|---|
| Plant more native trees and shrubs in your local neighbourhood | 1 | 2 | 3 | 4 | 5 |
| Get involved in a community project to help conserve native plants and animals in your local area | 1 | 2 | 3 | 4 | 5 |
| Seek out information that would help you to better understand how to live side by side with native birds and animals | 1 | 2 | 3 | 4 | 5 |
| Help look after native animals in your local area | 1 | 2 | 3 | 4 | 5 |
| Recycle waste | 1 | 2 | 3 | 4 | 5 |
| Support your local council to regenerate some of the parks in your area back to natural bush | 1 | 2 | 3 | 4 | 5 |

Q12 What organisations or places would you go to find out more information on …**(INSERT)**… **PROBE FULLY** Can you think of any other places you'd go to find out information?

Native Plants _____

Wildlife Conservation _____

Native animals _____

Q13a There are several organisations or groups that people feel should be taking an active part in conserving our native plants and animals in cities and towns. I will read out some of these organisations and I would like you to rank them in order according to who should take most responsibility for conserving native plants and animals. Who should take most responsibility … **READ OUT LIST**, who should be the next most responsible? **READ OUR REMAINING FOUR COMPANIES** and who should be the next most responsible, and so no for each of the five groups?

| | Ranked 1 | Ranked 2 | Ranked 3 | Ranked 4 | Ranked 5 |
|---|---|---|---|---|---|
| Government Departments | 1 | 1 | 1 | 1 | 1 |
| Local councils | 2 | 2 | 2 | 2 | 2 |
| Individuals like yourself | 3 | 3 | 3 | 3 | 3 |
| Wildlife and conservation groups | 4 | 4 | 4 | 4 | 4 |
| Community groups | 5 | 5 | 5 | 5 | 5 |

Q13b Can you name any Australian Native Animals that are extinct or endangered?

_____

_____

_____

## CLASSIFICATION

Q14 Generally speaking how would you describe your overall level of concern for environmental issues. **READ OUT.**

| | |
|---|---|
| I am extremely concerned about the environment | 1 |
| I am very concerned about the environment | 2 |
| I am quite concerned about the environment | 3 |
| I am neither concerned nor unconcerned about the environment | 4 |
| I am quite unconcerned about the environment | 5 |
| I am very unconcerned about the environment | 6 |
| I am extremely unconcerned about the environment | 7 |

Q15a Do you currently belong to any wildlife, horticultural or conservation group?

Yes 1 **ASK Q15b** No 2 **GO TO Q16**

**IF YES,**

Q15b Which one/s?_____

_____

Q16 During the past two years, which of the following activities have you taken part in to help look after native plants and animals in your local area. **READ OUT. MORE THAN ONE ANSWER ALLOWED**

| | |
|---|---|
| Planting a native plant in your garden | 1 |
| Being involved in an organised community tree planting day | 2 |
| Placing a bell on your cat's collar to warn the birds | 3 |
| Providing natural food sources for native birds and animals | 4 |
| Putting up a nest box in your yard for birds, or possums | 5 |
| Stopped using insecticides in your garden | 6 |
| Other: (please specify):_____ | 7 |

Q17 Thinking about all the different types of outdoor activities, which of the following do you enjoy doing? **READ OUT**

Q18 And which would you say you actively participate in on a regular basis, by that I mean four or more times a year? **READ OUT**

| | Q17 | Q18 |
|---|---|---|
| Bushwalks through national parks | 1 | 1 |
| Walking along beaches or riverfronts | 2 | 2 |
| Long bushwalks where you camp out overnight | 3 | 3 |
| Fishing | 4 | 4 |
| Canoeing | 5 | 5 |
| Going on picnics | 6 | 6 |

Q19 Do you have any household pets? **IF YES:** What type of pet do you own?

| | |
|---|---|
| Dog | 1 |
| Cat | 2 |
| Bird | 3 |
| Fish | 4 |
| Rabbit | 5 |
| Guinea Pigs | 6 |
| Other: Please specify:_____ | 7 |

Q20 **RECORD GENDER:** MALE 1 FEMALE 2

Q21 Which of the following age groups do you fall into? **READ OUT**

| | | | |
|---|---|---|---|
| 18-24 years of age | 1 | 55-64 years of age | 5 |
| 25-34 years of age | 2 | 65 years of age and over | 6 |
| 35-44 years of age | 3 | Refused (Do not read out) | 7 |
| 45-54 years of age | 4 | | |

Q22 Do you have any children living at home under the age of 15 years?

Yes 1 No 2

Q23 Which of these categories describes you? **READ OUT. ONE ANSWER ONLY.**

| | | |
|---|---|---|
| Working full time | 1 | |
| Working part time | 2 | |
| A student | 3 | |
| Unemployed | 4 | |
| Engaged in home duties | 5 | |
| Retired | 6 | |
| Other | 7 | |
| Refused | 8 | **GO TO Q25** |

Q24 **IF WORKING (CODES 1 OR 2 AT Q25):** What is your occupation? **RECORD BELOW. IF NOT WORKING (CODE 3 –7 AT Q25):** Have you ever worked? **IF YES:** What was your most recent occupation? Industry:_____ Position:_____

Q25 What s the highest level of education that you obtained?

| | |
|---|---|
| Competed primary school | 1 |
| Intermediate/school certificate | 2 |
| Leaving/higher school certificate | 3 |
| Trade course/diploma | 4 |
| University degree | 5 |
| Post Graduate | 6 |

Q26 What is the income of the highest income earner in your household before tax? **READ OUT**

| | | | |
|---|---|---|---|
| Under $10,000 | 1 | $50,000 - $59,999 | 6 |
| $10,000-$19,999 | 2 | $60,000 - $69,999 | 7 |
| $20,000-$29,999 | 3 | $70,000-$79,999 | 8 |
| $30,000-$39,999 | 4 | $80,000-$100,000 | 9 |
| $40,000-$49,999 | 5 | $100,000+ | 10 |

Q27 What is your country of birth?_____

Q28 What is the main language spoken in your home other than English?_____

WOOLCOTT RESEARCH JULY 2001

Ref: grp1/2001/NPSW/npws2.que-B **NPWS URBAN STUDY– B** **Job No: 5234-F**

Good …I'm … from Woolcott Research a market research company and I would appreciate it if you would have some time to help us with our study today.

**RECORD TOWN / SUBURB:** _____**POST CODE:** _____

| | | | | |
|---|---|---|---|---|
| Q1i | **RECORD CITY:** | Sydney | 1 | **CHECK QUOTAS** |
| | | Wollongong | 2 | |
| | | Newcastle | 3 | |
| | **RECORD COUNTRY:** | Large / Medium town | 1 | |
| | | Small town | 2 | |

Q1ii First of all, which of the following best describe the home you live in?

| | |
|---|---|
| An apartment building | 1 |
| A semi detached house, townhouse or terrace | 2 |
| A free standing house on a regular sized suburban block | 3 |
| A house on a block that is ½ an acre or more | 4 |

**Q1iii RECORD AREA TYPE:**

**SYDNEY**

| | | | | |
|---|---|---|---|---|
| **IF Q1 CODE 1 OR 2** | → | High/Medium Density | 1 | **CHECK QUOTAS** |
| **IF Q1 CODE 3** | → | ¼ acre suburban block | 2 | |
| **IF Q1 CODE 4** | → | City acreage/ fringe | 3 | |

**Q1iii RECORD AREA TYPE:**

**WOLLONGONG / NEWCASTLE**

| | | | | |
|---|---|---|---|---|
| **IF Q1 CODE 3** | → | ¼ acre suburban block | 1 | **CHECK QUOTAS** |
| **IF Q1 CODE 4** | → | City acreage/ fringe | 2 | |

**IF ½ ACRE BLOCK OR MORE (Q1 CODE 4) ASK:**

Q1iv Would you describe yourself as a primary producer?

| | | |
|---|---|---|
| Yes | 1 | **TERMINATE** |
| No | 2 | **CONTINUE** |

Q1v How many acres do you have? _____ acres

Q2 And which of these statements best describes the outdoor areas around your home? **READ OUT**

| | |
|---|---|
| I have only a balcony | 1 |
| I have basically a courtyard style of garden | 2 |
| I have a combination of lawn and gardens | 3 |
| I have a garden of mostly native plants | 4 |
| I have mostly a bushland setting | 5 |
| Other *(please specify):*_____ | 6 |

Q3 I am going to read out a number of statements and as I read each one I'd like you to tell me how important this issue is to you personally despite whether or not you have a garden… Lets take the first statement, how important is it to you personally to have a……..would you say that is important or unimportant to you.

**IF IMPORTANT:** Would that be extremely important, very important or quite important?

**IF UNIMPORTANT:** Would that be quite unimportant, very unimportant or extremely unimportant?

| | Extremely important | Very important | Quite important | Neither important nor unimportant | Quite unimportant | Very unimportant | Extremely unimportant |
|---|---|---|---|---|---|---|---|
| A home that is safe from the threat of snakes and spiders | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A garden with birds that are really admired by visitors | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A garden whose appearance is in keeping with my neighbours | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A garden that makes you feel that you are at one with nature | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Being someone who is recognised as knowing a lot about, and caring for the environment | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | Extremely important | Very important | Quite important | Neither important nor unimportant | Quite unimportant | Very unimportant | Extremely unimportant |
|---|---|---|---|---|---|---|---|
| A home where there is no chance of falling trees | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A local park that has big lawn areas where you can play outdoor games | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| An expensive garden designed by a top landscaper | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A garden with native birds and animals which you could feed | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Being in an outdoor environment where you feel relaxed, peaceful, and totally stress free | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A native garden that people will think is right for Australia | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A backyard that is good for entertaining people | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A garden that expresses my own individuality | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A garden that will be admired by other people | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A garden that is neat and tidy | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Q4 I would now like to read out these same statements in pairs and I would like you to tell me which aspect would be more important to you personally despite whether or not you have a garden.

For example, which is more important to you …**(INSERT)** or …? And is that much more important, slightly more important or are they equally important as each other to you.

| | **Much more important** | **Slightly more important** | **Same/ equally important** | **Slightly more important** | **Much more important** | |
|---|---|---|---|---|---|---|
| A home that is safe from the threat of snakes and spiders | ☐ | ☐ | ☐ | ☐ | ☐ | A home where there is no chance of falling trees |
| A native garden that people will think is right for Australia | ☐ | ☐ | ☐ | ☐ | ☐ | A garden that is neat and tidy |
| A garden that will be admired by other people | ☐ | ☐ | ☐ | ☐ | ☐ | An expensive garden designed by a top landscaper |
| A garden whose appearance is in keeping with my neighbours | ☐ | ☐ | ☐ | ☐ | ☐ | A backyard that is good for entertaining people |
| A local park that has big lawn areas where you can play outdoor games | ☐ | ☐ | ☐ | ☐ | ☐ | Being in an outdoor environment where you feel relaxed, peaceful and totally stress free |
| A garden with native birds and animals which you could feed | ☐ | ☐ | ☐ | ☐ | ☐ | A garden that expresses my own individuality |
| A garden that makes you feel that you are at one with nature | ☐ | ☐ | ☐ | ☐ | ☐ | A garden with birds that is really admired by visitors |
| Being someone who is recognised as knowing a lot about and caring for the environment | ☐ | ☐ | ☐ | ☐ | ☐ | A backyard that is good for entertaining people |

Q5 Now, thinking specifically about gardens around people's homes, which of the following words or phrases would you use to describe a garden with mown lawn areas with garden beds containing mainly Australian native plants. You may choose as many or as few as you like.

Q6 And which words would you use to describe a garden with a mown lawn area combined with garden beds containing plants like Roses, Azaleas and Camellias?

| | Q5 | Q6 |
|---|---|---|
| Attractive | 1 | 1 |
| Dull | 2 | 2 |
| Messy | 3 | 3 |
| Soft | 4 | 4 |
| Colourful | 5 | 5 |
| Fashionable | 6 | 6 |
| In keeping with my neighbourhood | 7 | 7 |
| Right for Australia | 8 | 8 |
| Natural | 9 | 9 |
| Thick | 10 | 10 |
| Neat and tidy | 11 | 11 |
| A place for snakes and spiders | 12 | 12 |
| Relaxing | 13 | 13 |
| A garden that would be admired by people passing by | 14 | 14 |
| Adds to the value of the property | 15 | 15 |

Q7 I am now going to read out a number of statements people have made regarding plants and animals and this time I would like you to tell me to what extent you agree or disagree with each one. Taking the first statement**……(INSERT)…….** Would you say that you agree or disagree with that statement? **IF AGREE:** Do you agree strongly or slightly. **IF DISAGREE:** Would you say that you disagree slightly or strongly?

| | Strongly Agree | Slightly Agree | Neither Agree or Disagree | Slightly Dis-agree | Strongly Disagree |
|---|---|---|---|---|---|
| A totally native bush garden would look out of place in my neighbourhood | 1 | 2 | 3 | 4 | 5 |
| Australian Native Gardens often look unkept and messy | 1 | 2 | 3 | 4 | 5 |
| I would love to be able to feed native birds and animals in my own yard | 1 | 2 | 3 | 4 | 5 |
| Gum trees are dangerous in suburban backyards, they can fall over and cause damage | 1 | 2 | 3 | 4 | 5 |
| The best parks are those with wide expanses of green grass with plenty of room for picnicking and playing outdoor games | 1 | 2 | 3 | 4 | 5 |
| A local park with lots of grass and dense bush can be unsafe for children | 1 | 2 | 3 | 4 | 5 |
| Its important to spray your garden at least once a year to get rid of the bugs | 1 | 2 | 3 | 4 | 5 |
| I am all for Australian plants and animals but where I live, there is little I can really do to help | 1 | 2 | 3 | 4 | 5 |
| You can really feel at one with nature in an Australian bush garden | 1 | 2 | 3 | 4 | 5 |
| I would really object if the council stopped mowing the grass in my local park and let it go back to natural bush | 1 | 2 | 3 | 4 | 5 |

| | Strongly Agree | Slightly Agree | Neither Agree or Disagree | Slightly Disagree | Strongly Disagree |
|---|---|---|---|---|---|
| Possums are a real nuisance because they can get in your roof | 1 | 2 | 3 | 4 | 5 |
| I think formal European gardens look out of place in Australia | 1 | 2 | 3 | 4 | 5 |
| I'd love to think that my backyard was suitable for lots of native Australian wildlife | 1 | 2 | 3 | 4 | 5 |
| Its unfair to encourage native animals into the built up areas where they could be hurt | 1 | 2 | 3 | 4 | 5 |
| Dogs are a threat to our native animals in cities and towns | 1 | 2 | 3 | 4 | 5 |
| I believe that half of the parks in my neighbourhood should be returned to bushland to provide a home for native animals | 1 | 2 | 3 | 4 | 5 |
| I would like to play my part in helping to bring native plants and animals back into my neighbourhood | 1 | 2 | 3 | 4 | 5 |
| Australian native gardens are not really fashionable these days | 1 | 2 | 3 | 4 | 5 |
| You can tell a lot about a person by the way their garden looks | 1 | 2 | 3 | 4 | 5 |
| There are plenty of natural areas for native animals outside our cities and towns | 1 | 2 | 3 | 4 | 5 |
| Cats are a real threat to our native animals in cities and towns | 1 | 2 | 3 | 4 | 5 |
| Australian native gardens require little maintenance or watering | 1 | 2 | 3 | 4 | 5 |
| Where they pose a threat to native animals, foxes should be gotten rid of | 1 | 2 | 3 | 4 | 5 |

Q8 What does the term “environment” mean to you personally? **PROBE FULLY**

_____

Q9 What do you believe are the greatest problems facing our natural environment today? **PROBE FULLY**

_____

_____

_____

Q10 I will read out some issues that people have identified as having an impact on our environment and as I read out each one, I’d like you to tell me how much of an impact you personally think it is having on our environment. Taking the first issue (INSERT)…would you say that it is having an extreme impact, some impact, only a little impact or no impact at all? What about the next issue …?

| | **An extreme impact** | **Some impact** | **Only a little impact** | **No impact at all** |
|---|---|---|---|---|
| Pollution | 1 | 2 | 3 | 4 |
| Increasing number of endangered species | 1 | 2 | 3 | 4 |
| Global warming | 1 | 2 | 3 | 4 |
| Degradation of waterways and land quality | 1 | 2 | 3 | 4 |
| Greenhouse gas emissions | 1 | 2 | 3 | 4 |
| Loss of native plants and animals from our cities and towns | 1 | 2 | 3 | 4 |
| Destruction of native habitats | 1 | 2 | 3 | 4 |
| Land clearing | 1 | 2 | 3 | 4 |

Q11 I am now going to read out these same issues and I would like you to tell me which one is of greatest concern to you personally, which is the next biggest issue of concern to you and which is the least issue of concern. **READ OUT**.

| | An extreme impact | Some impact | Only a little impact | No impact at all |
|---|---|---|---|---|
| Pollution | 1 | 2 | 3 | 4 |
| Increasing number of endangered species | 1 | 2 | 3 | 4 |
| Global warming | 1 | 2 | 3 | 4 |
| Degradation of waterways and land quality | 1 | 2 | 3 | 4 |
| Greenhouse gas emissions | 1 | 2 | 3 | 4 |
| Loss of native plants and animals from our cities and towns | 1 | 2 | 3 | 4 |
| Destruction of native habitats | 1 | 2 | 3 | 4 |
| Land clearing | 1 | 2 | 3 | 4 |

Q12 I am now going to mention a number of things people have identified that they can do to help the environment, how important do you personally feel it is that people …INSERT … Do you think it is extremely important, very important, quite important, or not important at all.?

| | Extremely important | Very important | Quite important | Not important at all |
|---|---|---|---|---|
| Plant more native plants in their local neighbourhood | 1 | 2 | 3 | 4 |
| Recycle waste | 1 | 2 | 3 | 4 |
| Keep cats locked in at night | 1 | 2 | 3 | 4 |
| Use less garden chemicals | 1 | 2 | 3 | 4 |
| Use their car less | 1 | 2 | 3 | 4 |
| Do not put oil down the sink | 1 | 2 | 3 | 4 |
| Help look after native animals in your local area | 1 | 2 | 3 | 4 |

| | Extremely important | Very important | Quite important | Not important at all |
|---|---|---|---|---|
| Compost their waste | 1 | 2 | 3 | 4 |
| Support the establishment of more protected areas for native plants and animals | 1 | 2 | 3 | 4 |
| Get involved in community projects to help conserve native plants and animals in your local area | 1 | 2 | 3 | 4 |
| Be more energy efficient | 1 | 2 | 3 | 4 |

Q13 Now, I'd like you to tell me to what extent you personally believe that the community should try to encourage native animals to live in different types of environment or area. Taking … (INSERT), do you think native animals should be definitely encouraged,

| | Definitely encouraged | Encouraged to some extent | Not encouraged at all |
|---|---|---|---|
| Suburban backyards | 1 | 2 | 3 |
| Local parks with mown grassy areas | 1 | 2 | 3 |
| Local largely untouched parks/bushland in suburban areas | 1 | 2 | 3 |
| Unspoilt bushland | 1 | 2 | 3 |

encouraged to some extent or not encouraged at all to live here.

Q14 There are many things people can do to help conserve our native plants and animals. How likely would you be to … **INSERT** … Would you be very likely, quite likely, undecided, quite unlikely, very unlikely? **READ OUT**.

| | Very likely | Quite likely | Undecided | Quite unlikely | Very unlikely |
|---|---|---|---|---|---|
| Plant more native trees and shrubs in your local neighbourhood | 1 | 2 | 3 | 4 | 5 |
| Get involved in a community project to help conserve native plants and animals in your local area | 1 | 2 | 3 | 4 | 5 |
| Seek out information that would help you to better understand how to live side by side with native birds and animals | 1 | 2 | 3 | 4 | 5 |
| Help look after native animals in your local area | 1 | 2 | 3 | 4 | 5 |
| Recycle waste | 1 | 2 | 3 | 4 | 5 |
| Support your local council to regenerate some of the parks in your area back to natural bush | 1 | 2 | 3 | 4 | 5 |

## CLASSIFICATION

Q15 Generally speaking how would you describe your overall level of concern for environmental issues. **READ OUT.**

| | |
|---|---|
| I am extremely concerned about the environment | 1 |
| I am very concerned about the environment | 2 |
| I am quite concerned about the environment | 3 |
| I am neither concerned nor unconcerned about the environment | 4 |
| I am quite unconcerned about the environment | 5 |
| I am very unconcerned about the environment | 6 |
| I am extremely unconcerned about the environment | 7 |

Q16a Do you currently belong to any wildlife, horticultural or conservation group?

Yes 1 **ASK Q16b** No 2 **GO TO Q17**

**IF YES,**

Q16b Which one/s?_____

_____

Q17 During the past two years, which of the following activities have you taken part in to help look after native plants and animals in your local area. **READ OUT. MORE THAN ONE ANSWER ALLOWED**

| | |
|---|---|
| Planting a native plant in your garden | 1 |
| Being involved in an organised community tree planting day | 2 |
| Placing a bell on your cat's collar to warn the birds | 3 |
| Providing natural food sources for native birds and animals | 4 |
| Putting up a nest box in your yard for birds, or possums | 5 |
| Stopped using insecticides in your garden | 6 |
| Other: (please specify):_____ | 7 |

Q18 Thinking about all the different types of outdoor activities, which of the following do you enjoy doing? **READ OUT**

Q19 And which would you say you actively participate in on a regular basis, by that I mean four or more times a year? **READ OUT**

| | Q18 | Q19 |
|---|---|---|
| Bushwalks through national parks | 1 | 1 |
| Walking along beaches or riverfronts | 2 | 2 |
| Long bushwalks where you camp out overnight | 3 | 3 |
| Fishing | 4 | 4 |
| Canoeing | 5 | 5 |
| Going on picnics | 6 | 6 |

Q20 Do you have any household pets? **IF YES:** What type of pet do you own?

| | |
|---|---|
| Dog | 1 |
| Cat | 2 |
| Bird | 3 |
| Fish | 4 |
| Rabbit | 5 |
| Guinea Pigs | 6 |
| Other: Please specify:_____ | 7 |

Q21 **RECORD GENDER:** MALE 1 FEMALE 2

Q22 Which of the following age groups do you fall into? **READ OUT**

| | | | |
|---|---|---|---|
| 18-24 years of age | 1 | 55-64 years of age | 5 |
| 25-34 years of age | 2 | 65 years of age and over | 6 |
| 35-44 years of age | 3 | Refused (Do not read out) | 7 |
| 45-54 years of age | 4 | | |

Q23 Do you have any children living at home under the age of 15 years?

Yes 1 No 2

Q24 Which of these categories describes you? **READ OUT. ONE ANSWER ONLY.**

| | | |
|---|---|---|
| Working full time | 1 | |
| Working part time | 2 | |
| A student | 3 | |
| Unemployed | 4 | |
| Engaged in home duties | 5 | |
| Retired | 6 | |
| Other | 7 | |
| Refused | 8 | **GO TO Q26** |

Q25 **IF WORKING (CODES 1 OR 2 AT Q25):** What is your occupation? **RECORD BELOW. IF NOT WORKING (CODE 3 –7 AT Q25):** Have you ever worked? **IF YES:** What was your most recent occupation? Industry:_____ Position:_____

Q26 What s the highest level of education that you obtained?

| | |
|---|---|
| Competed primary school | 1 |
| Intermediate/school certificate | 2 |
| Leaving/higher school certificate | 3 |
| Trade course/diploma | 4 |
| University degree | 5 |
| Post Graduate | 6 |

Q27 What is the income of the highest income earner in your household before tax?

**READ OUT**

| | | | |
|---|---|---|---|
| Under $10,000 | 1 | $50,000 - $59,999 | 6 |
| $10,000-$19,999 | 2 | $60,000 - $69,999 | 7 |
| $20,000-$29,999 | 3 | $70,000-$79,999 | 8 |
| $30,000-$39,999 | 4 | $80,000-$100,000 | 9 |
| $40,000-$49,999 | 5 | $100,000+ | 10 |