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DARWIN CITY COUNCIL

ENVIRONMENT & INFRASTRUCTURE COMMITTEE

MEMBERS: Member R K Elix (Chairman); The Right Worshipful, The Lord Mayor, Mr G R Sawyer, Member J L Sangster; Member F P Marrone; Member H D Sjoberg.

OFFICERS: Chief Executive Officer, Mr B Dowd; General Manager Infrastructure, Mr L Cercarelli; Manager Climate Change & Environment, Mrs P Robinson; Manager Infrastructure Projects, Mr D Lelekis; Manager Infrastructure Maintenance, Mr K Smith; Assistant Committee Administrator, Miss K Heath.

Enquiries and/or Apologies: Katrina Heath
E-mail: k.heath@darwin.nt.gov.au - PH: 89300 685
OR Phone Committee Room 1, for Late Apologies - PH: 89300 519

Committee's Responsibilities

* Car Parking	* Public Facilities
* Council Buildings	* Roads
* Drainage	* Street Lighting
* Environmental Management	* Traffic Management
* Parks and Reserves	* Urban Enhancement
* Plant Management	* Waste Management

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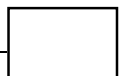


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E&IC4\3

Environment & Infrastructure Committee Meeting - Monday, 20 04, 2009

1 MEETING DECLARED OPEN

2 APOLOGIES AND LEAVE OF ABSENCE

2.1 Apologies

2.2 Leave of Absence Granted

3 DECLARATION OF INTEREST OF ELECTED MEMBERS

4 CONFIDENTIAL ITEMS

Nil

3

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5 WITHDRAWAL OF ITEMS FOR DISCUSSION**COMMITTEE'S DECISION**

THAT the Committee resolve under delegated authority that all Information Items and Officers Reports to the Environment & Infrastructure Committee Meeting held on Monday, 20 April, 2009, be received and all recommendations contained therein be adopted by general consent with the exception of Item Number

DECISION NO.20\() (20/04/09)

6 CONFIRMATION OF MINUTES PERTAINING TO THE PREVIOUS ENVIRONMENT & INFRASTRUCTURE COMMITTEE MEETING**COMMITTEE'S DECISION**

THAT the Committee resolve that the minutes of the previous Environment & Infrastructure Committee Meeting held on Monday, 23 March, 2009, tabled by the Chairman, be received and confirmed as a true and correct record of the proceedings of that meeting.

DECISION NO.20\() (20/04/09)

7 BUSINESS ARISING FROM THE MINUTES PERTAINING TO THE PREVIOUS ENVIRONMENT & INFRASTRUCTURE MEETING**8 INFORMATION ITEMS**

Nil



ENCL: YES

DARWIN CITY COUNCIL

DATE: 22/01/2009

REPORT

TO:	ENVIRONMENT & INFRASTRUCTURE COMMITTEE/OPENA	APPROVED:	NH
FROM:	GENERAL MANAGER INFRASTRUCTURE	APPROVED:	KS
REPORT NO:	09TS0011KS:nh	APPROVED:	LC
COMMON NO:	1465309		
SUBJECT:	50TH ANNIVERSARY REUNION 2 CONTROL AND REPORTING UNIT (RAAF)		

ITEM NO: 9.1

SYNOPSIS:

A 50th Anniversary Reunion is being planned to celebrate the establishment of 2 Control and Reporting Unit (2 CARU), RAAF at Lee Point in 1959. **(Attachment A)**

As part of the festivities the reunion committee would like to lay a commemorative plaque and conduct a ceremony on the Esplanade as a remembrance to all those personnel who served in the unit.

The reunion committee is seeking a grant through the Department of Veterans Affairs "Saluting Their Service" program to provide for the plaque and subsequent arrangements for its dedication. The approval of Darwin City Council is required before the grant application can be processed.

This report recommends granting permission for the installation of the plaque and associated ceremony subject to standard Council conditions and requirements.

GENERAL:

The 2 CARU Reunion Committee is seeking Council's approval to erect a small plaque of a similar style and size that already exist at Bi-Centennial Park to recognise the 2 CARU and those who served. They are also seeking approval to perform a ceremony conducted by the RAAF Chaplain with some estimated 300 invited ex-members in attendance, on Sunday, 20 September 2009. **(Attachment B)**

The RSL have provided their support to the committee. **(Attachment C)**

There are spaces available on the concrete plinth for plaques to be installed at the rear of the Cenotaph. This plaque will installed next in line to the existing. **(Attachment D)**

If approved the committee will be responsible for the provision of all requirements for the installation and ceremony such as shade, seats, toilets and other standard Council conditions and requirements for such activities.

It is recommended that this plaque installation and associated ceremony be approved as it is in keeping with Council's recognition of its military history and those who have served.

FINANCIAL IMPLICATIONS:

Nil

STRATEGIC PLAN IMPLICATIONS:

The issues addressed in this Report are in accordance with the following Goals/Strategies of the Darwin City Council 2008 – 2012 as outlined in the 'Evolving Darwin Strategic Directions: Towards 2020 and Beyond':-

Goal

6 Promote Brand Darwin

Outcome

6.2 Promote our Darwin City

Key Strategies

6.2.1 Promote Darwin's history, particularly its WWII experiences

LEGAL IMPLICATIONS:

Nil.

ENVIRONMENTAL IMPLICATIONS:

Nil.

PUBLIC RELATIONS IMPLICATIONS:

Nil.

COMMUNITY SAFETY IMPLICATIONS:

Nil.

DELEGATION:

Nil.

PAGE: 3
REPORT NUMBER: 09TS0011KS:nh
SUBJECT: 50TH ANNIVERSARY REUNION 2 CONTROL AND REPORTING UNIT (RAAF)

CONSULTATION:

Gail Snell	2 Control And Reporting Unit (RAAF) Reunion Committee
Peter Mansell	President RSL Darwin
Sam Kolpondinos	Team Leader Customer Services

PROPOSED PUBLIC CONSULTATION PROCESS:

Nil.

APPROPRIATE SIGNAGE

Nil

RECOMMENDATIONS:

THAT it be a recommendation to Council:-

- A. THAT Report Number 09TS0011KS:nh entitled, 50th Anniversary 2 Control And Reporting Unit (RAAF) be received and noted.
- B. THAT Council grant permission for the installation of a plaque on the Memorial Plinth and associated ceremony within Bi-Centennial Park to commemorate 50th Anniversary of the formation of 2 Control And Reporting Unit (RAAF) and those that served, on 20 September 2009, subject to standard Council conditions and requirements.

KERRY SMITH
MANAGER INFRASTRUCTURE
MAINTENANCE

LUCCIO CERCARELLI
GENERAL MANAGER
INFRASTRUCTURE

Any queries on this report may be directed to Nicole Harper on 08 8930 0655.

ENCL: YES

DARWIN CITY COUNCIL

DATE: 07/04/2009

REPORT

TO: ENVIRONMENT & INFRASTRUCTURE
COMMITTEE/OPENA

APPROVED: PL

FROM: GENERAL MANAGER INFRASTRUCTURE

APPROVED: PR

REPORT NO: 09TS0056 PL:cb

APPROVED: LC

COMMON NO: 465791

SUBJECT: DRAFT DARWIN HARBOUR REGIONAL MANAGEMENT STRATEGIC
FRAMEWORK 2009 – 2013

ITEM NO: 9.2

SYNOPSIS:

The Darwin Harbour Advisory Committee (DHAC) has prepared a Draft Darwin Harbour Regional Management Strategic Framework for 2009 – 2013 (**Attachment A**). DHAC is seeking community feedback on the documents until 15 May 2009. This report summarises the major principles and goals which underpin the Strategic Framework for Darwin Harbour and recommends Council support them.

GENERAL:

The Darwin Harbour Strategic Framework supersedes the 2003 Darwin Harbour Regional Plan of Management. It presents a policy framework and guidelines for the management of environmental, social, cultural and economic values and uses of the Darwin Harbour Region.

The Darwin Harbour catchment extends from Charles Point in the west to Gunn Point in the east, and south to Darwin River Dam.

The Framework is a detailed document to manage catchment land use but provides a strategic and integrated overview to inform and guide the community, business, industry and all levels of Government in decision making regarding their use of the region.

The Strategic Framework is based on eight founding principles which are: ecological sustainability; climate change; community and stakeholder engagement; transparency in decision-making; integration; flexibility; equity; and adaptive management.

Five goals have been identified and each is supported by a series of guidelines.

The goals are:

1. To maintain a healthy environment.
2. To support recreational use and enjoyment of the environment.
3. To ensure that development is implemented in an ecologically sustainable manner.
4. To protect cultural values and heritage.
5. To foster community awareness, industry partnerships and stewardship of the Darwin Harbour Region.

The Framework contains a list of guidelines which relate to each goal. When taking actions to comply with the guidelines proponents are advised to consider the approaches, tools and planning embodied with ecosystem-based management.

The guidelines cover such matters as water quality, stormwater collection, ecosystem function and biodiversity, development in coastal zones, climate change, planning, environmental impact, residential, commercial and industrial development.

There is currently legislation, policy and a number of plans, strategies and frameworks prepared and implemented by Government that complement the Darwin Harbour Regional Management Strategic Framework 2009 – 2013.

All Northern Territory legislation applies to the region as well as Darwin City Council's Environmental Management Plan and the Environmental Atlas.

In partnership the Darwin Harbour Advisory Committee and the Northern Territory Government will undertake reporting against the Strategic Framework.

FINANCIAL IMPLICATIONS:

Nil.

STRATEGIC PLAN IMPLICATIONS:

The issues addressed in this report are in accordance with the following goals/strategies of the Darwin City Council 2008 – 2012 as outlined in the 'Evolving Darwin Strategic Directions: Towards 2020 and Beyond':-

Goal

- 1 Achieve Effective Partnerships and Engage in Collaborative Relationships

Outcome

- 1.1 Improve relations with all levels of Government

Key Strategies

- 1.1.4 Play a strategic role in the planning and developmental processes that impact Darwin

Key Strategies

- 1.1.5 Influence Government and developers to develop sustainable projects which reflect Darwin's lifestyle

Goal

- 4 Create and Maintain an Environmentally Sustainable City

Outcome

- 4.4 Enhance, preserve and protect the Darwin environment

Key Strategies

- 4.4.1 Preserve the Darwin Harbour

Key Strategies

- 4.4.2 Enhance water quality, ecological systems and biodiversity in Darwin

LEGAL IMPLICATIONS:

This issue is not considered confidential.

ENVIRONMENTAL IMPLICATIONS:

The Framework is not a detailed document for management of the catchment but one of various trials available which should be considered. It provides a strategic and integrated overview to ensure the regions values and the function of its ecosystems are maintained.

PUBLIC RELATIONS IMPLICATIONS:

Not assessed.

COMMUNITY SAFETY IMPLICATIONS:

Not assessed.

DELEGATION:

Nil.

CONSULTATION:

Nil.

PROPOSED PUBLIC CONSULTATION PROCESS:

Not applicable.

APPROPRIATE SIGNAGE

Nil.

RECOMMENDATIONS:

THAT it be a recommendation to Council:-

- A. THAT Report Number 09TS0056 entitled, Draft Darwin Harbour Regional Management Strategic Framework 2009 – 2013, be received and noted.
- B. THAT Council write to the Darwin Harbour Advisory Committee to express support for the founding principles, goals and guidelines that underpin the Draft Darwin Harbour Regional Management, Strategic Framework 2009 – 2013.

PAM ROBINSON
MANAGER CLIMATE CHANGE &
ENVIRONMENT

LUCCIO CERCARELLI
GENERAL MANAGER INFRASTRUCTURE

Any queries on this report may be directed to Peter Lindwall on 8930 0528 or Pam Robinson on 8930 0530.

ENCL: YES

DARWIN CITY COUNCIL

DATE:15/04/2009

REPORT

TO: ENVIRONMENT & INFRASTRUCTURE COMMITTEE/OPEN A **APPROVED:** PC

FROM: GENERAL MANAGER INFRASTRUCTURE **APPROVED:** LC

REPORT NO: 09TS0059 PC:cpd

COMMON NO: 1480282

SUBJECT: RAPHAEL ROAD, WINNELLIE – PARKING

ITEM NO: 9.3

SYNOPSIS:

At the meeting held on 25 November 2008 Council resolved:

Raphael Road and Swan Crescent Winnellie - Carparking

Common No. 1480282

THAT the matter of illegal parking in the middle of Raphael Road and Swan Crescent, Winnellie and options to address the issue, be the subject of a report to be presented to a future Environment & Infrastructure Committee Meeting.

DECISION NO.20\1057 (25/11/08) Carried

This report recommends a concept parking treatment for the area for the purpose of future budget consideration and public consultation.

GENERAL:

Raphael Road is an industrial road in Winnellie servicing allotments zoned for General and Light Industry use in accordance with the Northern Territory Planning Scheme. The road is approximately 20m wide kerb to kerb with a central linemarked median approximately 7.7m wide. Electrical Towers and overhead power lines also run centrally down its length.

Whilst some on-street kerb side parking is available, employees and customers of businesses in Raphael Road have also used the central painted median as an unofficial parking area. This practise has now reduced after motorists were advised that parking on a painted island/median was illegal and as a result of enforcement by Council.

Ideally the provision of parking for business should be provided on the premises, the Northern Territory Planning Scheme provides for carparking requirements for various

uses however, it also allows for variation to parking requirements under certain conditions.

In addition vehicles are able to park legally parallel to the kerbside along Raphael Road subject to normal road rules.

As a result of the enforcement of illegal parking a request from a representative of the Saint Johns Ambulance, Australia (NT) to provide some additional “legal” parking has been received, and subsequently a study into the feasibility of parking in the centre of Raphael Road was undertaken.

Issues considered in this study were the turning movements required of Single Unit Trucks and Semi-Trailers when accessing properties, these movements of these vehicles were used due to the zoning and potential use of the land. The ability of Power Water Corporation’s service vehicles to maintain the existing Electrical Towers and infrastructure was also an important consideration raised.

With consideration of the above requirements two concept layouts for parking in the centre of Raphael Road are presented in **Attachment A** and **Attachment B**.

Attachment A shows a car parking layout catering for 35 vehicles and is designed on the turning requirements for a Single Unit Truck. **Attachment B** indicates a parking layout of 15 bays designed for Semi Trailer turning movements.

The layout presented in **Attachment A** is preferred as it provides more spaces. However, should the need to accommodate Semi Trailers arise this can simply be achieved by modifying linemarking.

Parking in the median is not considered an ideal solution.

It will be recommended that the concept shown in **Attachment A** be endorsed for installation subject to public consultation and future funding.

FINANCIAL IMPLICATIONS:

Option 1 – **Attachment A** Cost to Council for modifying the existing central median to accommodate 35 parking bays is in the order of \$20,000.

Option 2 – **Attachment B** Cost to Council for modifying the existing central median to accommodate 15 parking bays is in the order of \$26,000.

There is no funding for this project within the 2008/2009 budget it will be recommended that it be referred to the 2009/2010 budget for consideration.

STRATEGIC PLAN IMPLICATIONS:

The issues addressed in this Report are in accordance with the following Goals/Strategies of the Darwin City Council 2008 – 2012 as outlined in the 'Evolving Darwin Strategic Directions: Towards 2020 and Beyond':-

Goal

- 1 Achieve Effective Partnerships and Engage in Collaborative Relationships

Outcome

- 1.2 Effectively engage with community

Key Strategies

- 1.2.2 Develop ways in which Council can enhance relationships and work collaboratively with Community Groups

Goal

- 3 Assist Individuals and the Community Stay Connected with the Darwin Region

Outcome

- 3.2 Enhance transport systems

Key Strategies

- 3.2.4 Provide parking facilities and management systems which meet the needs of the community

LEGAL IMPLICATIONS:

This issue is not considered confidential.

ENVIRONMENTAL IMPLICATIONS:

Nil

PUBLIC RELATIONS IMPLICATIONS:

Consultation with relevant stakeholders is required prior to implementation.

COMMUNITY SAFETY IMPLICATIONS:

Nil

DELEGATION:

Nil

CONSULTATION:

To date consultation with the following stakeholders has occurred:

General Manager Infrastructure
Power Water Corporation
Representative of Saint Johns Australia (NT)

PROPOSED PUBLIC CONSULTATION PROCESS:

Consultation with adjoining property owners/occupiers is required prior to implementation to allow the opportunity for comment and will occur if the project is funded in a future budget.

APPROPRIATE SIGNAGE

Nil

RECOMMENDATIONS:

THAT it be a recommendation to Council:-

- A. THAT Report Number 09TS0059 PC:cpd entitled Raphael Road, Winnellie – Parking be received and noted.
- B. THAT Council endorses the provision of parking in the centre of Raphael Road, Winnellie in accordance with the concept shown in **Attachment A** of Report Number 09TS0059 PC:cpd.
- C. THAT the amount of \$20,000 be referred to the 2009/2010 budget for the installation of centre median parking within Raphael Road, Winnellie.

PETER COPLEY
DESIGN TEAM LEADER

LUCCIO CERCARELLI
GENERAL MANAGER INFRASTRUCTURE

Any queries on this report may be directed to Peter Copley on 89300589.

ENCL: YES

DARWIN CITY COUNCIL

DATE: 06/04/2009

REPORT

TO:	ENVIRONMENT & INFRASTRUCTURE COMMITTEE/OPEN A	APPROVED:	BS
FROM:	GENERAL MANAGER INFRASTRUCTURE	APPROVED:	PL
REPORT NO:	09TS0049 BS:cb	APPROVED:	LC
COMMON NO:	1462346		
SUBJECT:	SHORT TERM FREE CAR PARKING IN THE CENTRAL BUSINESS DISTRICT		

ITEM NO: 9.4

SYNOPSIS:

Council requested that staff investigate the Short Term Free Car Parking in the Central Business District:

Short Term Free Car Parking in the Central Business District

THAT a report on short term free car parking in the Central Business District, be presented for Council's consideration.

DECISION NO. 20\0802 (30/09/08) Carried

This report recommends that a re-distribution of the short term free car parking in the Central Business District from areas where they are no longer required to areas where a new need for 15 minute car parking spaces has been identified.

GENERAL:

A review of on-street parking in the CBD indicates that there are currently 4 x 5 minute free short term car parking bays adjacent to the Darwin Entertainment Centre (DEC), and there are 120 x 15 minute free short term carparking bays. No change is proposed to the 4 x 5 minute car spaces outside DEC.

Generally short term bays are provided where a need exists for quick and easy access to a service or facility. These include but are not limited to services such as banks. ATMs, hotels and post offices. The review identified a number of business changes within the CBD resulting in the need to relocate 15 minute parking bays to locations where a new need for short term parking spaces has been identified.

Key Strategies

3.2.2 Continue to manage and maintain the municipal road network and infrastructure to a standard that meets the needs of the community

Key Strategies

3.2.4 Provide parking facilities and management systems which meet the needs of the community

LEGAL IMPLICATIONS:

This issue is not considered confidential.

ENVIRONMENTAL IMPLICATIONS:

Not assessed.

PUBLIC RELATIONS IMPLICATIONS:

There may be public relation implications with the removal of existing free car parking bays from businesses in the immediate areas.

COMMUNITY SAFETY IMPLICATIONS:

Not assessed.

DELEGATION:

Nil.

CONSULTATION:

General Manager Infrastructure
Strategic Town Planner
Design Team Leader
Regulatory Manager
Car park Coordinator - Westlane

PROPOSED PUBLIC CONSULTATION PROCESS:

A press release on proposed changes to car parking in the CBD. An Advertisement in the NT News. Letters to relevant organisations such as the Chamber of Commerce and the Property Council.

APPROPRIATE SIGNAGE

Regulation signage in accordance with Australian Road Rules and Standards.

RECOMMENDATIONS:

That it be a recommendation to Council:-

- A. THAT Report Number 09TS0049 BS:cb entitled Short Term Free Car Parking in the Central Business District, be received and noted.
- B. THAT the following short term free 15 minute car parking bays be removed and replace within long term bays of equivalent time periods and zone charges to those bays adjacent:
- Mitchell Street – four (4) bays adjacent to Lot 1763 (old National Australia Bank);
 - Smith Street – seven (7) bays in adjacent to Lot 413 (old Commonwealth Bank) and;
 - Searcy Street – six (6) bays in adjacent to Lot 1519 (new Commonwealth Bank);
- C. THAT the following short term free 15 minute car parking bays be installed:
- Peel Street – five (5) bays adjacent to the Australian Central Credit Union Lot 2187 and six (6) bays adjacent to the National Australia Bank Lot 7586 and;
 - Mitchell Street – six (6) bays adjacent to Crocosaurus Cove, Lot 5661.

PETER LINDWALL
STRATEGIC TOWN PLANNER

LUCCIO CERCARELLI
GENERAL MANAGER INFRASTRUCTURE

Any queries on this report may be directed to Brian Sellers on 89300683.

ENCL: YES

DARWIN CITY COUNCIL

DATE: 23/03/09

REPORT

TO: ENVIRONMENT & INFRASTRUCTURE
COMMITTEE/OPEN

APPROVED: KS

FROM: GENERAL MANAGER INFRASTRUCTURE

APPROVED: LC

REPORT NO: 09TS0046 KS:nh

COMMON NO: 201133

SUBJECT: AGILE WALLABY CENSUS - EAST POINT RESERVE

ITEM NO: 9.5

SYNOPSIS:

Surveys to estimate the size of the Agile Wallaby (*Macropus agilis*) at East Point reserve have been collected since 1989. Part of this process has been to engage a consultant to provide the population estimate and to make recommendations on strategies that might be employed to increase the health and size of the mob. Outsidesign undertook a scheduled agile wallaby count at East Point Reserve in March 2009 (**Attachment A**).

GENERAL:

The Outsidesign Report, March 2009 estimates the population of the Agile Wallaby at East Point at 171, which is the same figure as the previous count in September 2008. The target population is identified as 250 – 300 animals.

The report considers a number of possible causes and management options including carry capacity small population, prediction and disease.

The report concludes the following:

“Based on the discussion above, it is likely that the carrying capacity combined with the small population is limiting growth in the population. As recommended in previous reports, the current strategy of providing troughs for watering points and sprinklers for green grass in the dry season should probably be expanded in 2009 dry season as this strategy combines lowest risk and cost.”¹

¹Population estimate of the Agile wallaby (*Macropus agilis*) at East Point Reserve, Darwin: March 2009 report by Tony Grithits Outsidesign.

Council has based on previous reports provided watering troughs and increased irrigation in the "wallaby paddock". Fertilising applications have not been applied in accordance with a long term program and this matter is being addressed.

It is recommended that no further expansion of the area occur in the 2009 dry season, Council's focus be on continuing and improving on the existing watering troughs, irrigation and fertilisation program. This will allow Council more time to adequately assess the success or otherwise of this program and the implementation of an adequate fertilisation program not previously in place.

Furthermore, Council officers will consult with the Northern Territory Government Department of Parks and Wildlife on sustainable strategies and recommendations that they may have regarding increasing the wallaby population.

FINANCIAL IMPLICATIONS:

Increasing the fertiliser program - \$800.00 per annum

To be undertaken within existing programs.

STRATEGIC PLAN IMPLICATIONS:

The issues addressed in this Report are in accordance with the following Goals/Strategies of the Darwin City Council 2008 – 2012 as outlined in the 'Evolving Darwin Strategic Directions: Towards 2020 and Beyond':-

Goal

4 Create and Maintain an Environmentally Sustainable City

Outcome

4.4 Enhance, preserve and protect the Darwin environment

Key Strategies

4.4.2 Enhance water quality, ecological systems and biodiversity in Darwin

LEGAL IMPLICATIONS:

NIL

ENVIRONMENTAL IMPLICATIONS:

NIL

PUBLIC RELATIONS IMPLICATIONS:

NIL

COMMUNITY SAFETY IMPLICATIONS:

NIL

DELEGATION:

NIL

CONSULTATION:

Outsidesign Consulting
Parks and Reserves Urban Bushland Team

PROPOSED PUBLIC CONSULTATION PROCESS:

NIL

APPROPRIATE SIGNAGE

Nil

RECOMMENDATIONS:

THAT it be a recommendation to Council:-

- A. THAT Report Number 09TS0046 KS:nh entitled Agile Wallaby Census – East Point Reserve, be received and noted.
- B. THAT the East Point Agile Wallaby Population Program not be expanded in the 2009 dry season and that Council continue with the existing program consisting of water troughs, irrigated grass and fertilisation.

KERRY SMITH
MANAGER INFRASTRUCTURE
MAINTENANCE

LUCCIO CECARELLI
GENERAL MANAGER
INFRASTRUCTURE

Any queries on this report may be directed to Kerry Smith on 08 8930 0655.

Agile wallaby population survey March 2009

**Population estimate of the Agile wallaby
(*Macropus agilis*) at East Point Reserve,
Darwin: March 2009**



Report by
Tony Griffiths
Outsidesign
PO Box 318
Nightcliff NT 0814

Griffiths, A.D. (2009). Population estimate of the agile wallaby (*Macropus agilis*) at East Point Reserve, Darwin: March 2009. Outsidesign, Darwin, NT.

Report commissioned by Darwin City Council, NT.

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Introduction

Regular surveys to estimate the size of agile wallaby *Macropus agilis* population at East Point Reserve have been collected since 1989. The agile wallaby population has declined to less than 200 animals in recent years compared to over 2000 in 1990 (Griffiths *et al.* 2005). Darwin City Council has implemented a management strategy designed to ensure the population remains viable by managing threats that pose risk to the population, including: predator control, traffic and habitat management. Therefore, this report aims to:

1. Estimate the size of the population of agile wallabies at East Point Reserve at the end of the 2009 wet season (March).
2. Recommend any relevant management actions to increase the size of the population.

Study Area and Methods

Study area

The survey was conducted at East Point Reserve in the Northern Territory, Australia. This is a public reserve situated on a peninsula 5 km from Darwin's central business district. Vegetation in the Reserve consists of monsoon rainforest (30 ha), replanted and regenerating woodland and forest (40 ha), and grassed areas (40 ha).

Survey methods

Fieldwork took place on Sunday 8th March 2009 between 7.00 and 8.30 am. The weather conditions were fine and sunny. Transects were traversed on foot by a two people. Transects were walked at a slow pace (approximately 750 m hr⁻¹), were unbounded and the centre line was maintained by walking along a compass bearing from the start-point. All individual agile wallabies seen or heard were recorded. Data were collected ungrouped so that each individual was recorded as a separate observation. Animals were recorded at the initial point of detection by measuring the perpendicular distance (m) from the transect centre line. Care was taken to record all animals on the centre line to ensure a detection probability equal to

one. The length of each transect was measured from the known start and finish points using a Garmin® GPS. The length of transects varied due to differences in size and shape of the Reserve.

Data Analysis

Probabilities of detection and density were calculated from distance data using line-transect methodology and the computer program DISTANCE Version 5 (Laake *et al.* 1993). Akaike's Information Criterion (AIC) was used to compare four line transect distribution models (Uniform, Half Normal, Negative Exponential and Hermite). The most parsimonious model had the smallest AIC score and was used to make inferences from the data.

Results

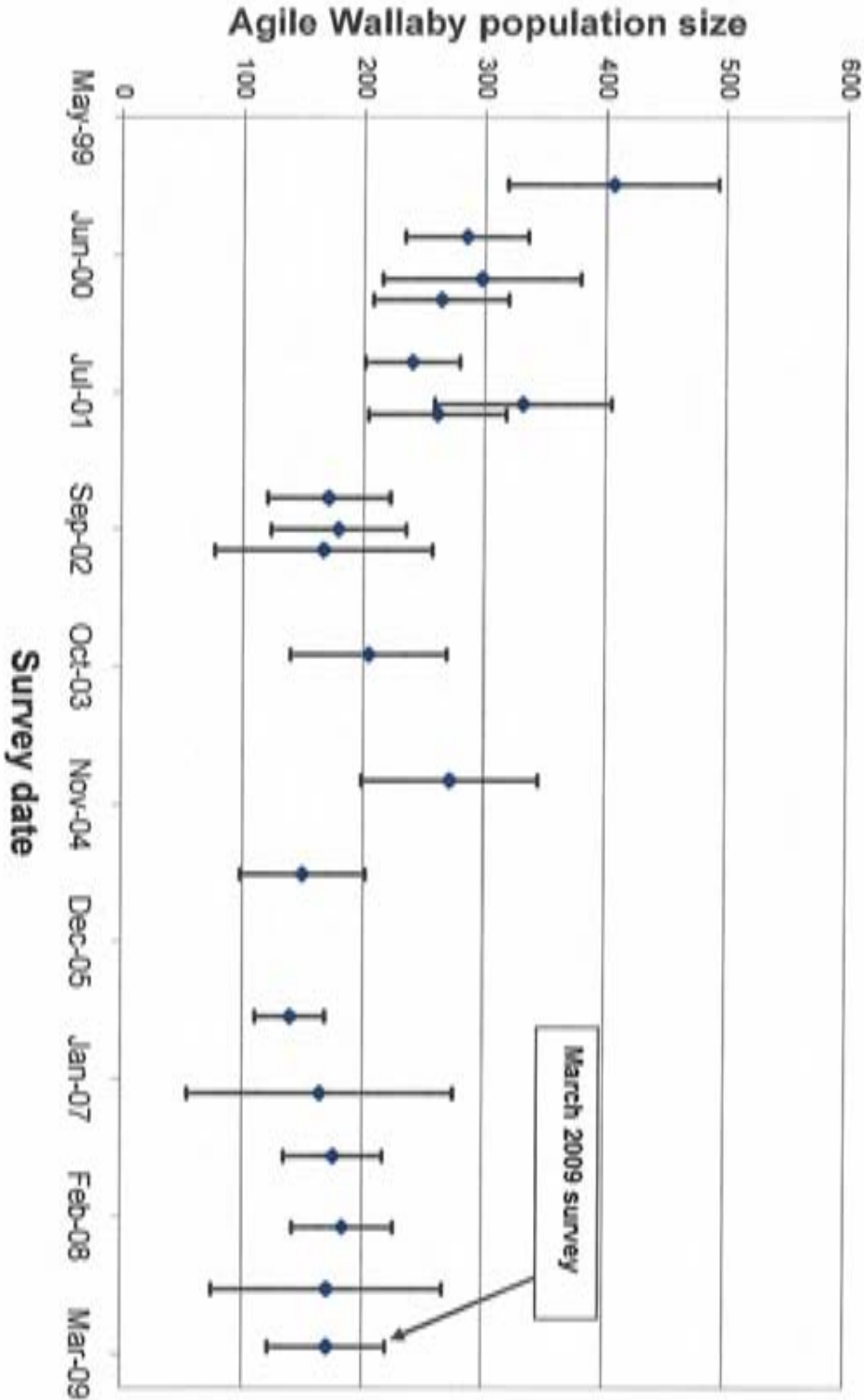
Observations and survey effort

Twenty one individual agile wallabies from 6 transects (total length = 2.01 km) were observed during the survey. The majority of observations were made in the 'wallaby paddock', in the open areas between the re-vegetated forests (i.e. areas that used to be fairways when East Point was a golf course). A number of juvenile animals were observed. No dogs were observed during the survey.

Population estimate calculated from distance sampling

Based on the March 2009 survey, the density of agile wallabies at East Point Reserve was estimated to be $2.41 \text{ ha}^{-1} \pm 0.71$. Based on a total survey area of 70 ha, the size of the agile wallaby population at East Point Reserve is estimated to be 171 ± 49 (95% Confidence Intervals = 91 – 320). The estimate is identical to the September 2008 estimate ($n = 171$ wallabies), although the measure of uncertainty (95% Confidence Interval) was much smaller in the current survey due to a more even distribution of animals in across the survey area (i.e. we recorded animals from all transects). The March 2009 estimate can be compared with all other population estimates since 1999 (Figure 1). It is clear that the population has stabilised at below 200 animals.

Figure 1. Estimates of the size of the agile wallaby population at East Point Reserve, Darwin. All estimates are based on line transect sampling between 1999 and March 2009.



Discussion

Based on the 2009 wet season survey, the population size of agile wallabies at East Point Reserve is estimated to be 171 animals. The population has stayed at this level since approximately 2007, which indicates that recent management actions aimed at increasing the population have not been successful. A target population of approximately 250-300 animals at East Point Reserve is viewed as optimal to minimize the long-term risk and improve the likelihood of visitors viewing animals. There are a number of possible causes why the population hasn't grown over this period. The following discussion attempts to consider a range of possible causes and possible management actions to increase the population:

Carry capacity – Carrying capacity is defined as the supportable population of an organism, given the food, habitat, water and other necessities available within an environment. It is quite likely that the current agile wallaby population has reached its carrying capacity and recent attempts to manipulate the environment (e.g. sprinklers during the dry season) to increase the carrying capacity have not been effective. Managing the habitat is the most cost-effective, flexible and low risk option for managing the population. Therefore, an increase the amount of dry season irrigation of grass and the number of watering points may be required.

Small population – The agile wallaby population at East Point can increase at a rate of approximately 11% of the population in any one-year based on each adult female in the population producing between 3 and 4 young during her lifetime (average age is 5 years). This is a maximum value for the population and will only occur under ideal conditions. When the population is large and condition ideal this translates into rapid population growth. However, when the population is small, the reproductive potential of the population is low. A potential solution to this is to supplement the population by adding individual from other areas (e.g. orphaned or wild animals). This a high-cost and high risk option due to the costs of veterinary assessments required to assess each animal prior to translocation to minimize the risk of introducing disease into the population.

Predation – In the past, predation of agile wallabies by domestic dogs and dingoes was a major threat to the population, with approximately 250 deaths in 1995. Currently, however, the level of predation is negligible. The precinct team leader that oversees the East Point section has not reported a death to Council in the last 12 months. Whether or not members of the public have taken injured wallabies to the RSPCA/wildlife rescue that have died later from their injuries is not clear but unlikely to be a common occurrence. Therefore, predation is unlikely to be responsible for limiting the growth of the population.

Disease - Agile wallabies are susceptible to a range of diseases, including sarcoptic mange and *Trypanosoma evansi* (Surra disease). There has been no evidence to suggest animals in the East Point population suffer from disease. Therefore, disease is unlikely to be responsible for limiting the growth of the population.

Conclusion

Based on the discussion above, it is likely that the carrying capacity combined with the small population is limiting growth in the population. As recommended in previous reports, the current strategy of providing troughs for watering points and sprinklers for green grass in the dry season should probably be expanded in 2009 dry season as this strategy combines lowest risk and cost.

References

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- Griffiths, A. D., Dingle, J., and Bradshaw, C. J. A. (2005). 'A Management Program for the Agile Wallaby (*Macropus agilis*), East Point Reserve, Darwin.' (Key Centre for Tropical Wildlife Management, Charles Darwin University, Darwin.)
- Laake, J. L., Buckland, S. T., Anderson, D. R., and Burnham, K. P. (1993). 'DISTANCE User's Guide V2.0' (Colorado Cooperative Fish and Wildlife Research Unit, Colorado State University: Fort Collins, CO.)

ENCL: YES

DARWIN CITY COUNCIL

DATE: 14/04/2009

REPORT

TO: ENVIRONMENT & INFRASTRUCTURE
COMMITTEE/OPENA

APPROVED: NK

FROM: GENERAL MANAGER INFRASTRUCTURE

APPROVED: KS

REPORT NO: 09TS0060NK

APPROVED: LC

COMMON NO: 251433

SUBJECT: PARKS USER SATISFACTION SURVEY AUGUST 2008 TO MARCH 2009

ITEM NO: 9.6

SYNOPSIS:

A survey of park users to benchmark satisfaction levels against other Council's is undertaken twice yearly in major parks.

This report relates for the period of August 2008 to March 2009.

GENERAL:

Park User Satisfaction Benchmark Surveys were introduced as a management tool in December 1999. The format for the questionnaire and correlation of results is undertaken by Integrated Open Space Services, a consultant based in Queensland.

The information generated from the survey has been utilised by authorities to:

- Monitor specific maintenance regimes.
- Monitor seasonal variations in the levels of user satisfaction.
- Determine appropriate maintenance specifications that align with customer requirements and expectations.
- Provide quantifiable justification for resource allocation for current levels of facility and maintenance provision and lobbying of further resources.

Other participating Council's in tropical regions include:

- Gladstone Regional Council
- Mackay City Council
- Townsville City Council
- Whitsunday Shire Council

While the general focus of the survey is to obtain park users' perceived standard of maintenance, the following data is also obtained from the survey participant:

- Regularity of park visitation
- Mode of transportation to the park
- Distance travelled to reach the park
- Length of visit
- Reasons for visiting
- Features and/or facilities of park that survey participant likes
- Survey participants requirements/desires regarding provision of facilities and services within the park
- Perception of safety within the park
- General Comments
- Primary activity at time of interview

The Benchmark Park User Satisfaction Survey Program for Tropical Australia Region, Regional Parks, Round 13 August 2008 – March 2009 results are attached to this report. **(Attachment A)**

FINANCIAL IMPLICATIONS:

Nil

STRATEGIC PLAN IMPLICATIONS:

The issues addressed in this Report are in accordance with the following Goals/Strategies of the Darwin City Council 2008 – 2012 as outlined in the 'Evolving Darwin Strategic Directions: Towards 2020 and Beyond':-

Goal

2 Enhance Darwin's Active, Positive and Flexible Lifestyle

Outcome

2.1 Improve urban enhancement around Darwin

Key Strategies

2.1.1 Manage and maintain the municipal landscaping and infrastructure to a standard that meets community needs

Goal

7 Demonstrate Effective, Open and Responsible Governance

Outcome

7.1 Effective governance

Key Strategies

7.1.1 Continuously review service delivery to meet the communities needs and expectations

LEGAL IMPLICATIONS:

Nil

ENVIRONMENTAL IMPLICATIONS:

Nil

PUBLIC RELATIONS IMPLICATIONS:

Nil

COMMUNITY SAFETY IMPLICATIONS:

Nil

DELEGATION:

Nil

CONSULTATION:

Intergrated Open Space Services
Darwin Community

PROPOSED PUBLIC CONSULTATION PROCESS:

The public consultation process was undertaken onsite between Council staff and the community. This enabled the Council to measure the community's views with regards to the standards expected by the public in relation to our parks.

APPROPRIATE SIGNAGE

Nil

PAGE: 4
REPORT NUMBER: 09TS0060NK
SUBJECT: PARKS USER SATISFACTION SURVEY AUGUST 2008 TO MARCH 2009

RECOMMENDATIONS:

THAT it be a recommendation to Council:-

THAT Report Number 09TS0060NK entitled Parks User Satisfaction Survey August 2008 To March 2009, be received and noted.

**KERRY SMITH
MANAGER INFRASTRUCTURE
MAINTENANCE**

**LUCCIO CERCARELLI
GENERAL MANAGER
INFRASTRUCTURE**

Any queries on this report may be directed to Kerry Smith on 0889300655

Benchmark Park User Satisfaction Survey Program

Tropical Australia Region
Regional Parks

Round 13
August 2008 – March 2009

Darwin City Council

Participating Government Authorities within Region:

Darwin City Council (NT)
Gladstone Regional Council (QLD)
Mackay City Council (QLD)
Townsville City Council (QLD)
Whitsunday Regional Council (QLD)



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Summary of Key Findings

Field and Park Survey Data

60 park user intercept surveys were conducted in 5 parks within the Darwin City Council area during April – October 2008.

Survey Participants Frequency of Visitation to the Park

56% of the survey participants within the Darwin City Council area were regular visitors to the park that they were interviewed in. 37% of participants visited the park more than once a week (with 16% visiting daily and 11% a few days a week). 14% visited weekly, 8% fortnightly, and 4% monthly. 9% visited every few months, 6% twice yearly, and 4% less than once per year. 20% of participants were visiting the park for the first time.

Survey Participants Length of Stay in the Park

35% of survey participants within the Darwin City Council area visited the park for one to two hours, 29% for half to one hour, 15% for two to four hours, and 18% for less than half an hour. 4% visited for more than four hours. 5% of survey participants did not specify for how long they visited the park.

Survey Participants Reasons for Visiting the Park

A number of survey participants gave two or more reasons for visiting the park on the day they were interviewed. 20% of survey participants interviewed in the Darwin City Council area were visiting to enjoy view / landscape, 20% to relax, 19% to enjoy birds, 15% to enjoy outdoors, 15% to walk, 14% to enjoy the natural environment, 11% to enjoy the weather, 10% to cycle, 10% to have a picnic / BBQ, and 9% to fish.

Survey Participants and Group Size

65% of survey participants within the Darwin City Council area were visiting the park by themselves, 34% with another person, and 24% in a group of three to five people. 5% were visiting the park in a group of six to ten people. 1% of survey participants did not specify their group size.

Survey Participants and Group Profile

Of the people visiting the park with one or more other people, 64% of pairs/groups consisted of all adults, and 24% of pairs/groups were adults and children. 4% of pairs/groups were adults and teenagers, and 2% of pairs/groups were all teenagers. 4% of survey participants did not specify their group profile.

Survey Participants Initial Knowledge of Park

Survey participants within the Darwin City Council area came to find know of the park location due to local knowledge (41% of participants), going past (29%), word of mouth (24%), map (5%), and media (1%).

Survey Participants Mode of Transport to the Park

40% of survey participants within the Darwin City Council area walked to the park, 30% travelled as a private vehicle, and 18% cycled. 3% travelled via land public transport, and 1% via water public transport.

Average Distance Travelled to the Park by Survey Participants

The average distance travelled to the park by survey participants (from place of residence, accommodation, work etc) within Darwin City Council area was 6.1 km.

Average Travel Time to the Park by Survey Participants

The average time taken to travel to the park by survey participants (from place of residence, accommodation, work etc) within Darwin City Council area was 15 minutes.

Survey Participants Satisfaction with Level of Maintenance in Parks within Authority and Region

The overall mean score given by survey participants for satisfaction with the level of maintenance within the Darwin City Council was 7.6. Of the Authorities participating in this round of surveys within Tropical Australia, Darwin City Council was ranked 5th out of ten.



Survey Participants Perception of Safety within the Park

100% of survey participants felt that the park was a safe place to visit during the daylight. 35% of participants felt that the park was safe at night. 24% felt that the park was not safe during the night, and 41% were unsure. Survey participants were invited to state what they thought could be done to improve safety in the park they were interviewed in. The majority of comments related to lighting (12 comments), and security (9 comments).

Place of Residence of Survey Participants

41% of survey participants lived within the Darwin City Council, 8% from other areas within the Northern Territory, 24% from interstate, and 20% from overseas. 1% of survey participants did not state their residential location.

Dwelling & Private Outdoor Space

Survey participants were asked which type of (private) outdoor space best described where they lived or were staying. 50% of participants lived / were staying in a dwelling with a private backyard, 11% with private courtyard without communal recreation facilities, and 10% with communal grounds with communal recreation facilities. 8% lived / were staying in a dwelling without communal grounds or communal recreation facilities, 8% on acreage / farmland, 4% with communal recreation facilities but no communal grounds, 1% in a private courtyard with communal recreation facilities, and 1% with communal grounds without communal recreation facilities.

Age of Survey Participants

20% of survey participants within the Darwin City Council area were aged between twenty and twenty-nine years, 25% between thirty and thirty-nine years, 14% between fifty and fifty-nine years, and 11% between forty and forty-nine years. 0% were aged between sixty and sixty-nine years, 3% between seventeen and nineteen years, 1% above seventy years, and 1% between fourteen and sixteen years.

Gender of Survey Participants

41% of survey participants within the Darwin City Council area were females, and 44% were males. 15% of genders were not specified.



1. Introduction to Program

The Benchmark Park User Satisfaction Survey Program has been developed to:

- Provide information about park users and park usage
- Measure park user's satisfaction with the level of park maintenance within a management area (eg Local Government Authority or State Government Authority)
- Provide a confidential means for comparison of results on an intra-regional and inter-regional basis
- Obtain park user's requirements for facility/service provision

Authorities have utilized the information generated from the survey to:

- Inform open space, recreational and asset strategic planning and management, and park master/management planning
- Monitor specific maintenance regimes
- Determine appropriate maintenance specialisations that align with park user requirements
- Integrate park user satisfaction with operational performance
- Develop in-house park user satisfaction performance indicators for landscape facility maintenance
- Identify and prioritize specific maintenance and facility provision issues
- Compare performance against other similar organizations through a confidential means
- Provide quantifiable justification for resource allocation for current levels of facility and maintenance provision and lobbying of further resources

1.1 Program Methodology

The Benchmark Park User Satisfaction Survey Program involves conducting a generic park user intercept survey in parks and reserves within participating Government Authorities. The survey program is conducted annually within a region, which allows for a means to track user satisfaction with maintenance regimes over time, or the implementation of new regimes. However, user interviews can be conducted twice annually to determine seasonal variations, or to obtain data and perceptions from different user groups.

1.2 Parkland Categories

The survey program involves conducting park user intercept interviews within parklands of a nominated category or mix of categories. Individual parks are chosen by each Authority which are representative of the category of parks being surveyed in that region.

The parklands are divided into categories based on level of amenity, level and type of infrastructure, usage levels, usage types and user catchment. Park user interviews within a region are conducted within a single category or a combination of categories, depending on the requirements of the local park managers within the region. The parkland categories are:

- **Iconic Parklands**
Highly developed parkland that fulfils a very significant role in recreational and tourism amenity.
- **Botanic Gardens**
Areas which set aside for the preservation of plant varieties, plant education and botanical research.
- **Passive High Profile Parklands (Passive Regional Parklands)**
Developed parklands that offer a high level of amenity (either facilities or natural attraction), have high usage levels and attract a significant proportion of users from outside the immediate area.



- **Passive Low & Medium Profile Parklands (Passive Local & District Parklands)**
Developed parklands that offer a low / medium level of amenity (either facilities or natural attraction), have low / medium usage levels and primarily attract users within the immediate area / adjoining areas.
- **Active High Profile Parklands (Active Regional Parklands)**
Developed parklands that are predominantly designated sporting areas, offer a high level of facilities (either number, quality or type), have high usage levels and attract a significant proportion of users from outside the immediate area.
- **Active Medium Profile Parklands (Active District Parklands)**
Developed parklands that are predominantly designated sporting areas, offer a medium level of facilities (either number, quality or type) and have medium usage levels.
- **Conservation Parklands**
Natural areas that are set aside for environmental conservation and recreation.

The reasoning behind the classification system is that the level of park amenity within each category can generally be compared between government authorities.

1.3 Sample Size

The base minimum sample size is 60 interviews within an Authority, which ensures a reasonable statistical reliability of results. However, most Authorities, due to their size and survey requirements require a sample size of 100 – 700 interviews in order to strengthen confidence levels and gain a greater insight associated with park usage and maintenance requirements.

1.3.1 Confidence in Using the Survey Data

Confidence levels can be used to determine the reliability of survey results in relation to the expected responses from a total population. The confidence intervals either side of an average score can be calculated when the sample size and standard deviation are known. The sample size needs to be large enough to demonstrate a satisfactory interval of confidence. For example, in a program of 60 surveys, the range of confidence levels for the various mean scores is likely to be:

- +/- 3% to 10%, at a 95% confidence level:
for Individual Authority Mean Scores on Individual Maintenance Elements
(confidence levels do not fall within this range when there is less than 20 responses for an element).
- +/- 1% to 7%, at a 95% confidence level:
for Regional Mean Scores on Individual Maintenance Elements
- +/- 2%, at a 95% confidence level:
for Individual Authority Overall Mean Score & Regional Overall Mean Score.

Statistically, 60 survey participants per Authority give a minimal measure of confidence in the results. However, utilizing a larger sample size per Authority understandably strengthens confidence levels.

Regardless of sample size, as the surveys are conducted on a regular basis, the logging of trend data is achievable which further strengthens the validity of the sample size.

1.4 Range of Park Users

While park users are chosen at random, an attempt is made to interview users undertaking a range of activities within the category of parkland. However, although the activities of participants generally reflect usage patterns in the parks, it is sometimes more difficult to intercept park users involved in active



pursuits such as playing sport, cycling or jogging. Data on park usage should therefore be reviewed in conjunction with park usage observation studies.

1.5 Timing of Interviews

Interviews are conducted during the range of park usage times (from dawn to dusk; weekdays and weekends), with the majority of interviews conducted during peak usage times to reflect actual park usage.

1.6 Collection of Data

In collecting data, the following important objectives are pursued:

- Ensuring maximum park user participant rates in the survey (ie minimising the possibility of refusal to participate in the survey by park users), through the employment of a user friendly survey, survey techniques, and interviewers.
- Data accuracy and integrity, through interviewer training, field supervision and survey audits.
- Data which is reflective of actual park usage (ie times and activities).

All interviewers employed by IOSS undergo specific park user intercept interview training prior to field work and are fully supervised once in the field. On site induction is also undertaken for each Authority. All interview questionnaires are fully audited by experienced supervisors for accuracy and integrity of data.

Interviewers are chosen on the basis of personal presentation, oral communication skills, written communication skills, inter personal skills, ability to work independently, confidence, enthusiasm, personal motivation, interest in the work being undertaken, education, and comparable/relevant work experience. IOSS has recently incorporated the utilization of multi-lingual staff for areas with a high proportion of park users from non-English speaking backgrounds.

1.7 Survey Data

The survey is designed to be flexible and provide relevant and useful information to park planners and managers. Consequently, the format and content of the survey questionnaire is under constant review, with survey questions added or deleted based on feedback from park managers. The following data is obtained from survey participants regarding the park in which they are interviewed:

PARK USAGE: SURVEY PARTICIPANTS VISITATION TO THE PARK

- Frequency of park visitation.
- Length of park visit.
- Reasons for visiting the park.
- Primary activity at time of interview.
- Group size.
- Group profile.

PARK ACCESS: ACCESS TO THE PARK BY SURVEY PARTICIPANTS

- How visitors first came to know of the park.
- Mode of transport to the park.
- Distance travelled to reach the park.
- Time taken to travel to the park.

PARK MAINTENANCE AND PROVISION OF FACILITIES / SERVICES

- Satisfaction with standard of maintenance:
Participants are requested to rate their level of satisfaction, on a scale of 1 – 10 (1 being the lowest level of satisfaction and 10 the highest), with the maintenance of 24 park elements.
- Requirements/desires regarding provision of facilities and services within the park.

SURVEY PARTICIPANTS EXPERIENCE OF THE PARK

- Perception of safety within the park.



- General comments.

SURVEY PARTICIPANT'S PROFILE

- Location of residence.
- Type of dwelling and outdoor space.
- Age of survey participant.
- Gender of survey participant.

Participating Authorities also have the option to add further questions to the basic survey questionnaire for use within their jurisdiction.

1.8 Note on Report Usage

The information in the survey report is presented to support/assist park planners and managers in aligning their strategies with nature requirements. It is not recommended as a sole source for strategic decision-making, or for showcase purposes.

1.9 Participating Authorities

Over eight years, the program has involved 96 Local and State Government Authorities within the regions of South East Queensland, Sydney, Melbourne, Tasmania, Sydney, Darwin, and Central & North Queensland.. Participating Authorities in this round have been listed in Appendix 1.



2. Field and Park Survey Data

80 park user intercept surveys were conducted in 5 parks within the Darwin City Council area during April – October 2008.

Table 1. Dates of Interviews Conducted – Darwin City Council

Total number of surveys:	80	
Number of parks surveys conducted in:	5	
Date of surveys:	12.08.2008	Tuesday
	14.08.2008	Thursday
	27.08.2008	Wednesday
	08.09.2008	Saturday
	08.09.2008	Monday
	08.09.2008	Tuesday
	10.09.2008	Wednesday
	11.09.2008	Thursday
	12.09.2008	Friday
	19.09.2008	Friday
	27.09.2008	Saturday
	29.09.2008	Sunday
	10.10.2008	Friday
	08.03.2009	Friday
	07.03.2009	Saturday
	08.03.2009	Sunday

Table 2. Date, Time and Number of Interviews Conducted in Individual Parks – Darwin City Council

Park	Location	Park Category	# Surveys	Date	Time
Millennium Park	Darwin City	Regional Passive	13	12.08.08 29.09.08	1:00 am – 6:45 pm 11:15 am – 12:00 pm
Fannie Bay Foreshore	Fannie Bay	Regional Passive	17	28.08.08 08.09.08 14.09.08 27.09.08 29.09.08	8:30 am – 9:05 am 11:10 am – 1:10 pm 5:00 pm 8:00 am – 11:30 am 8:15 am – 9:55 am
Lake Alexander	Lake Point	Regional Passive	13	08.09.08 08.09.08 10.09.08 11.09.08 12.09.08	7:15 am – 10:20 am 8:00 am Not specified Not specified 11:00 am
Nightcliff Foreshore	Nightcliff	Regional Passive	16	08.09.08 10.09.08 10.10.08	9:45 am – 12:00 pm 10:20 am – Next Specimen 11:00 am – 11:30 am
Watergardens	Jingili	Regional Passive	11	06.03.09 07.03.09 08.03.09	9:00 am 10:00 am – 11:15 am 12:00 am – 1:00 pm



3. Survey Results

3.1 Park Usage – Survey Participants Visitation to the Park

3.1.1 Survey Participants Frequency of Visitation to the Park

56% of the survey participants within the Darwin City Council area were regular visitors to the park that they were interviewed in. 37% of participants visited the park more than once a week (with 19% visiting daily and 18% a few days a week), 14% visited weekly, 3% fortnightly, and 4% monthly. 9% visited every few months, 6% twice yearly, and 4% less than once per year.

25% of participants were visiting the park for the first time.

Table 3. Survey Participants Frequency of Visitation to the Park – Darwin City Council & Trop. Aust. Region

Frequency of Visitation	# Participants DCC	% Participants DCC	% Participants Trop. Aust. Region
Daily	15	19%	15%
Few Days per Week	14	18%	16%
Weekly	11	14%	11%
Fortnightly	2	3%	6%
Monthly	3	4%	8%
Every Few Months	7	9%	9%
Twice Yearly	5	6%	6%
Yearly	-	-	4%
< Once per Year	3	4%	4%
First Time	20	25%	20%



3.1.2 Survey Participants Length of Stay in the Park

35% of survey participants within the Darwin City Council area visited the park for one to two hours, 29% for half to one hour, 15% for two to four hours, and 13% for less than half an hour. 4% visited for more than four hours.

5% of survey participants did not specify for how long they visited the park.

Table 4. Survey Participants Length of Stay in the Park – Darwin City Council & Trop. Aust. Region

Length of Stay	# Participants DCC	% Participants DCC	% Participants Trop. Aust. Region
< ½ hour	10	13%	14%
½ : 1 hour	23	29%	27%
1 : 2 hours	28	35%	32%
2 : 4 hours	12	15%	17%
> 4 hours	3	4%	8%
Not Specified	4	5%	1%



3.1.3 Survey Participants Reasons for Visiting the Park

A number of survey participants gave two or more reasons for visiting the park on the day they were interviewed. 29% of survey participants interviewed in the Darwin City Council area were visiting to enjoy view / landscape, 20% to relax, 10% to enjoy park, 15% to enjoy outdoors, 15% to walk, 14% to enjoy the natural environment, 11% to enjoy the weather, 10% to cycle, 10% to have a picnic / BBQ, and 9% to fish.

Table 5. Survey Participants Reasons for Visiting the Park Darwin City Council

Reasons for Visiting	% Participants DCC
Enjoy Weather	11%
Enjoy Natural Environment	14%
Enjoy Park	10%
Enjoy Outdoors	15%
Take a Break	5%
Run Along	4%
Enjoy Peace & Quiet	6%
Read / Study in Park	1%
Fishing	9%
Swimming	3%
Sightseeing	6%
Enjoy View / Landscape	29%
Take Photos	6%
Watch Wildlife	3%
Walk	15%
Cycle	10%
Jog	1%
Ride Mountain Bike	1%
Exercise	1%
Swim	2%
Sun / Cool / Relax / Chill	3%
Rest	2%
Play / Take Sport	1%
Spend Time with Children / Family	4%
Annual Regatta / Family Function	1%
Long Exercise / Recreation	1%
Have Picnic / BBQ	10%
Have Meal / Drink	4%
Access other Locations – pass thru park	1%
Wait / Pick Up / Drop Off	1%
Park is Convenient	1%



The following table outlines survey participants responses for visiting the individual parks in the Darwin City Council.

Table 6, Survey Participants Reasons for Visiting the Park – Darwin City Council

Parks	Main Reasons x # Participants
Blenheim Park	Enjoy View/Landscape x 15 Enjoy Park x 9 Enjoy Gardens x 8 Enjoy Natural Environment x 5 Relax x 5 Enjoy Weather x 4 Sightsee x 3 Walk x 3 Enjoy Peace & Quiet x 2 Take Photos x 2 Take a Break x 1 Watch Wildlife x 1 Exercise x 1 Spend Time with Children/Family x 1 Attend Social/Family Function x 1 Have Picnic/BBQ x 1 Have Moral Boost x 1
Fannie Bay Foreshore	Relax x 5 Enjoy View/Landscape x 4 Enjoy Gardens x 4 Enjoy Natural Environment x 3 Enjoy Weather x 4 Enjoy Park x 3 Sightsee x 2 Walk x 2 Enjoy Peace & Quiet x 2 Take Photos x 2 Fish x 2 Take a Break x 1 Spend Time with Children/Family x 1 Have Picnic/BBQ x 1 Moral Boost x 1 Be Alone x 1 Sunbathe x 1 Cycle x 1 Pass through Park x 1 Windback/Hydrangea Cut x 1 Swim x 1
Lake Alexander	Relax x 3 Sightsee x 1 Enjoy Park x 2 Be Alone x 2 Enjoy View/Landscape x 1 Enjoy Natural Environment x 2 Take Photos x 1 Fish x 1 Take a Break x 1 Have Picnic/BBQ x 1 Sunbathe x 1 Cycle x 1 Watch Wildlife x 1
Nightcliff Foreshore	Cycle x 6 Fish x 4 Walk x 4 Relax x 3 Enjoy View/Landscape x 2 Boat/Sail/Kayak/Canoe x 2 Enjoy Natural Environment x 1 Have Picnic/BBQ x 1 Enjoy Gardens x 1 Enjoy Weather x 1 Time with Children/Family x 1 Have Moral Boost x 1



Parks	Maka Monema & # Participants
	Hahaione Mountain Trail x 1
	Play/Train Spur x 1
	Park to Convention x 1
	Puma/MSO x 1
	Walk x 1
Watergardens	Enjoy View/Trail and/or Park x 1
	Enjoy Children x 1
	Enjoy Park x 1
	Take a Break x 1
	Enjoy Puma & Cloud x 1
	Enjoy/Enjoy x 1
	Just x 1
	Eng 1 x 1 and/or 1 x 1



3.1.4 Survey Participants and Group Size

36% of survey participants within the Darwin City Council area were visiting the park by themselves, 34% with another person, and 24% in a group of three to five people. 5% were visiting the park in a group of six to ten people.

1% of survey participants did not specify their group size.

Table 7. Survey Participants and Group Size – Darwin City Council & Trop. Aust. Region

Group Size	# Participants DCC	% Participants DCC	% Participants Trop. Aust. Region
By Themselves	29	36%	27%
Another Person	27	34%	31%
3 – 5 People	19	24%	27%
6 – 10 People	4	5%	7%
> 10 People	-	-	7%
Not Specified	1	1%	0.2%

3.1.5 Survey Participants and Group Profile

Of the people visiting the park with one or more other people, 64% of pairs/groups consisted of all adults, and 24% of pairs/groups were adults and children.

6% of pairs/groups were adults and teenagers, and 2% of pairs/groups were all teenagers.

4% of survey participants did not specify their group profile.

Table 8. Survey Participants' Group Profile – Darwin City Council & Trop. Aust. Region

Group Profile	# Participants DCC	% Participants Visiting Park * DCC	% Participants Visiting Park * Trop. Aust. Region
All Adults	32	64%	45%
All Teenagers	1	2%	3%
Adults & Teenagers	3	6%	5%
Adults & Children	12	24%	40%
Teenagers & Children	-	-	0.3%
Adults, Teens & Children	-	-	6%
Not Specified	2	4%	1%

* Survey Participants who visited the park with one or more other people.



3.2 Access to the Park by Survey Participants

3.2.1 Survey Participants Initial Knowledge of Park

Survey participants within the Darwin City Council area came to first know of the park location due to local knowledge (41% of participants), going past (20%), word of mouth (24%), map (5%), and media (1%).

Table 8. Survey Participants' Initial Knowledge of the Park – Darwin City Council

Park	Local Knowledge	Going Past	Word of Mouth	Map	Media
Blenheim Park	6	10	2	1	1
Parade Bay Foreshore	8	4	4	1	-
Lake Alexander	4	1	5	1	-
Nightcliff Foreshore	4	5	7	-	-
Watergardens	0	-	1	1	-
Total	33	23	19	4	1



3.2.2 Survey Participants Mode of Transport to the Park

43% of survey participants within the Darwin City Council area walked to the park, 38% travelled in a private vehicle, and 16% cycled. 3% travelled via land public transport, and 1% via water public transport.

Table 10. Survey Participants Mode of Transport to the Park – Darwin City Council & Trop. Aust. Region

Mode of Transport	# Participants DCC	% Participants DCC	% Participants Trop. Aust. Region
Walk	34	43%	33%
Cycle	13	16%	5%
Private Motor Vehicle	30	38%	58%
Boat / Jet ski	-	-	1%
Private Bus	-	-	0.2%
Public Transport – Land	2	3%	2%
Public Transport – Water	1	1%	0.4%



3.2.3 Average Distance Travelled to the Park by Survey Participants

The average distance travelled to the park by survey participants (from place of residence, accommodation, work etc) within Darwin City Council area was 6.1 km.

Table 11. Average Distance Travelled to the Park by Survey Participants – Darwin City Council

Park	Average Distance Travelled (km)
Bicentennial Park	5.9
Fannie Bay Foreshore	4.8
Lake Alexander	7.5
Nightcliff Foreshore	6.1
Watergardens	7.1

Table 12. Average Distance Travelled to the Park by Survey Participants – Darwin City Council & Trop. Aust. Region

Average Distance Travelled DCC	Average Distance Travelled Trop. Aust. Region
6.1 km	13.5 km



3.2.4 Average Travel Time to the Park by Survey Participants

The average time taken to travel to the park by survey participants (from place of residence, accommodation, work etc) within Darwin City Council area was 15 minutes.

Table 13. Average Travel Time to the Park by Survey Participants – Darwin City Council

Park	Average Travel Time (minutes)
Bicentennial Park	15
Fannie Bay Foreshore	10
Lake Alexander	20
Nightcliff Foreshore	14
Watergardens	14

Table 14. Average Travel Time to the Park by Survey Participants – Darwin City Council & Trop. Aust. Region

Average Travel Time DCC	Average Travel Time Trop. Aust. Region
15 mins	17 mins



3.3 Park Maintenance and Provision of Facilities and Services

3.3.1 Survey Participants Satisfaction with Level of Maintenance in Parks within Authority and Region

The overall mean score given by survey participants for satisfaction with the level of maintenance within the Darwin City Council was 7.6. Of the Authorities participating in this round of surveys within Tropical Australia, Darwin City Council was ranked 5th out of five.

Table 15. Survey Participants Satisfaction with Level of Maintenance in Parks – Darwin City Council & Trop. Aust. Region

	City of Darwin Mean Score 2008	Trop. Aust. Region Mean Score 2006/8	Trop. Aust. Region Highest Mean Score 2006/8
Garden Beds	7.9	8.3	8.5
Grass Length	7.7	8.5	8.8
Grass Quality	7.1	8.0	8.6
Tree Health	8.0	8.6	8.8
Boardwalks, Bridges & Piers	7.9	8.8	9.1
Internal Roads & Carparks	7.9	8.1	8.7
Fences & Barriers	7.1	8.2	8.9
Signs	7.7	8.4	9.1
Pathways & Trails	8.2	8.6	8.9
Sport & Recreation Facilities	7.6	8.4	9.1
Play Equipment	7.8	8.2	9.1
P/E Undersurfacing	7.4	8.3	9.1
Shelters	7.7	8.6	9.2
Tables & Seats	6.9	8.3	9.0
BBQs	7.6	8.4	8.9
Taps & Drinking Fountains	7.1	7.9	8.3
Toilets & Change Rooms	6.0	7.1	8.3
Rubbish Bins	7.4	8.1	8.7
Ground Litter Removal	7.8	8.5	9.0
Graffiti Removal	7.7	8.7	9.1
Banks of Watercourses	7.6	8.2	8.8
Quality of Watercourses/bodies	7.9	8.1	8.9
Land Drainage	8.0	8.1	8.7
Health of Bushland Vegetation	7.7	8.3	8.7
Mean	7.6	8.3	8.7
Rank	5/5		

* Sample size was < 20 responses.

Note 1: Sample sizes below 20 respondents should be considered with caution.



3.3.2 Survey Participants Satisfaction with Level of Maintenance in Parks – Darwin City Council Trend Data

Table 16. Survey Participants Satisfaction with Level of Maintenance in Parks – Darwin City Council Trend Data

	1999	Mar-May 2000	Oct-Dec 2000	2001	Jan-Apr 2002	Nov-Dec 2002	2003	2004	2005	2006	2007	Mar-Apr 2008	Apr-Oct 2008
Garden Beds	8.3	8.0	7.8	7.2	7.7	7.1	7.0	7.8	8.0	8.7	7.8	8.5	7.9
Grass Length	7.7	7.7	7.8	7.9	8.1	7.9	7.0	8.4	7.3	8.0	7.9	8.1	7.7
Grass Quality	7.7	7.5	7.2	7.2	7.8	7.4	7.6	8.3	8.4	8.6	8.0	8.4	7.1
Tree Health	8.8	8.1	8.4	8.7	8.4	8.4	8.8	8.7	7.7	7.6	8.8	8.7	8.0
Roadwalks, Bridges & Piers	8.0	8.7	8.0	8.2	8.8	8.2	8.0	7.8	7.4	6.7	8.1	8.1	7.0
Internal Roads & Carparks	8.4	8.3	7.9	8.0	8.2	8.5	8.6	8.0	7.3	6.7	7.8	8.2	7.2
Fences / Railings	8.0	8.8	8.0	7.9	7.8	7.8	8.2	7.8	7.0	8.0	7.3	8.0	7.1
Signs	7.4	7.5	6.8	6.8	7.3	7.7	8.2	7.8	7.1	7.0	7.7	8.3	7.7
Pathways & Trails	7.8	8.0	8.0	7.8	8.2	8.4	8.2	7.8	7.6	6.7	8.0	8.4	8.2
Sport & Recreation Facilities	* 7.0	* 8.6	* 8.7	* 8.4	* 8.0	* 8.8	* 8.0	8.0	7.2	7.0	8.1	8.8	7.8
Play Equipment	7.3	* 7.7	7.1	6.8	7.0	8.1	8.4	8.3	7.5	6.3	8.0	8.1	7.3
P/E Undersurfacing	7.7	* 8.1	6.7	7.3	7.7	7.7	8.0	8.5	8.4	6.1	7.8	7.5	7.4
Shelters	7.0	8.0	8.0	6.6	7.2	7.0	6.7	8.8	8.8	6.3	7.4	7.0	7.7
Tables & Seats	7.0	7.2	7.5	6.8	7.6	6.8	6.4	7.8	8.8	6.5	7.2	7.0	6.9
BBQs	7.2	7.0	8.1	7.2	7.6	7.4	6.4	7.8	7.2	6.4	7.4	7.8	7.6
Taps & Drinking Fountains	6.7	5.8	5.8	5.4	6.4	6.7	5.8	6.9	6.2	6.1	6.8	7.8	7.1
Toilets & Change Rooms	5.0	5.2	5.5	5.0	4.7	5.5	5.8	6.5	6.2	5.4	6.5	7.2	6.0
Rubbish Bins	8.0	8.5	8.1	7.0	7.8	7.9	7.0	7.6	8.4	8.6	8.8	8.0	7.4
Ground Litter Removal	8.2	8.4	8.7	8.5	8.2	8.3	8.3	8.4	7.1	6.7	8.0	8.5	7.8
Graffiti Removal	7.0	* 7.7	* 6.3	5.3	7.9	7.7	8.0	7.0	7.2	6.4	7.1	8.2	7.7
Banks of Watercourses	7.4	* 8.2		6.9	8.2	* 7.2	8.4	8.0	7.4	6.6	7.8	8.1	7.6
Quality of Watercourses/roddles								7.8	7.5	7.0	7.0	8.5	7.8
Land Drainage	7.7	* 7.6	* 8.2	7.3	8.1	7.6	7.7	8.2	7.0	6.5	7.7	8.5	8.0
Health of Bushland Vegetation							8.4	8.1	7.0	6.7	8.1	8.8	7.7
Mean	7.8	7.8	7.7	7.4	7.6	7.7	7.7	7.8	7.1	6.8	7.8	8.2	7.8

* Sample size was < 20 respondents.

Note 1: Sample sizes below 20 respondents should be considered with caution.



3.3.3 Inter-Regional Comparison of Survey Participants Satisfaction with Level of Maintenance

Table 17. Survey Participants Satisfaction with Level of Maintenance in Parks – Inter-Regional Comparisons

	Tropical Australia Region Mean Score 2006/8	Melbourne Region Mean Score 2007/8	Sydney Region Mean Score 2008	Perth Region Mean Score 2008	South East Queensland Region Mean Score 2007/8
Garden Beds	8.3	7.3	7.5	8.5	7.7
Grass Length	8.5	7.5	7.8	8.4	7.8
Grass Quality	8.0	6.6	7.7	8.2	7.4
Tree Health	8.5	7.8	8.4	8.5	8.4
Boardwalks, Bridges & Piers	8.8	7.7	8.0	8.3	8.3
Internal Roads & Carparks	8.1	7.6	7.3	8.1	7.8
Fences / Barriers	8.2	7.2	7.4	8.0	7.9
Signs	8.4	7.9	7.4	7.8	7.8
Pathways & Trails	8.0	7.7	7.8	8.3	8.3
Sport & Recreation Facilities	6.4	7.6	7.8	8.2	8.1
Play Equipment	8.2	8.0	7.7	8.2	8.0
P/E Underpinning	8.3	7.7	7.3	8.0	7.3
Shelters	8.0	7.1	7.3	8.1	8.1
Tables & Seats	8.3	7.1	7.1	7.8	7.7
BENCHES	8.4	7.3	7.2	8.1	7.9
Taps & Drinking Fountains	7.9	6.2	6.2	7.6	7.0
Toilets & Change Rooms	7.1	6.0	6.0	7.0	6.8
Rubbish Bins	8.1	7.0	7.4	7.6	7.6
Ground Litter Removal	8.5	7.4	7.6	8.0	8.0
Graffiti Removal	8.7	7.2	7.6	7.8	8.0
Banks of Watercourses	8.2	6.8	7.3	7.6	7.8
Quality of Watercourses / bodies	8.1	6.0	6.8	6.8	7.6
Land Drainage	6.1	7.3	7.1	7.1	7.8
Health of Bushland Vegetation	8.3	7.7	8.2	8.4	8.4
Overall Mean	8.3	7.3	7.6	7.9	7.9

* Note: Due to the high proportion of Integrated Parks surveyed in Tropical Australia, no inter-regional comparisons which reflects other region's proportion of Local/Direct and Integrated Parks – cannot be obtained. The results for Tropical Australia have therefore been included for interest rather than as direct comparisons.



3.3.4 Survey Participants Requirements / Desires Regarding Provision of Facilities and Services within the Park

Survey participants were invited to comment on the types of facilities and services that they would like to see provided or improved in the park that they were interviewed in.

Table 10. Provision / Improvement of Facilities & Services in the Park – Darwin City Council

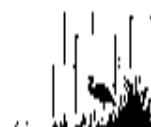
Park	Provision / Improvement
Bicentennial Park	AMENITY BLOCKS More toilets x 4 Another toilet POTABLE WATER More drinking fountains x 4 SIGNS Directional signs Signs telling you where the toilets are Signs telling you where to go and how far BINS More bins x 2 SEATS / TABLES Tables closer to the river along the fence x 2 BENCHES BENCHES CIRCULATION Walking path
Family Day Foresters	SEATS / TABLES Clearing tables for table More tables Tables need paint Tables need painting, looking neglected AMENITY BLOCKS More toilets x 2 Toilets SOFT LANDSCAPE Upgrade and enlarge the grass Grass very patchy, needs water SHADE & SHELTER More shade Shade for sitting under main playground BENCHES Sign indicating drain ahead. Fall in it a few months ago BENCHES More benches FENCES A fence all the way along the golf course FOOD & BEVERAGE OUTLETS Kiosk GENERAL MAINTENANCE Rubbish or bench should be picked up daily. SPECIAL FEATURES / ATTRACTIONS Camping area USER MANAGEMENT Better litter and management
Lake Alexander	SOFT LANDSCAPE More bird attracting trees More feature sculpture Water spray more



Park	Provision / Improvement
	BBQs More BBQs north of park along car park More BBQs AMENITY BLOCKS More tables SHADE & SHELTER More shaded tables FOOD & BEVERAGE OUTLETS Kiosk SPECIAL FEATURES / ATTRACTIONS Camping area POTABLE WATER More drinking fountains BINS Recycling bins POUNDS/POLE MANAGEMENT More sand on benches EXTREME RECREATION BMX / Skate Park
Nightcliff Foreshore	FOOD & BEVERAGE OUTLETS Cafe/pub x 2 More shops along foreshore SAFETY & SECURITY Life ring on jolly north end of pier x 2 More speed limit awareness on cycle path AMENITY BLOCKS Showers Toilet near footbridge - north of bridge Clean the toilet more regularly SEATS / TABLES More seats More tables CIRCULATION Jolly needs painting Pier to jolly requires repair BBQs Cleaner BBQs SOFT LANDSCAPE More irrigation on garden beds More garden beds SHADE & SHELTER Shelter over BBQ POTABLE WATER More water equipment/benches COMMERCIAL OPERATIONS - NON FOOD/BEVERAGE More shops along foreshore LIGHTING Lights over BBQ
Watergardens	SAFETY & SECURITY More security to get rid of drunken locals WATERBODIES / WATERWAYS Pond needs cleaning RIBS Provide 24hr public access SOFT LANDSCAPE More flowering trees SHADE & SHELTER More shade for people BINS More bins for recycling



Park	Provision / Improvement
	SIGNS Clear warning signs, street lighting (Pond pool)
	EXERCISE FACILITIES Workout stations under shade
	BIRD MANAGEMENT Attract more birds



3.4 Survey Participants Experience of the Park

3.4.1 Survey Participants Perception of Safety within the Park

100% of survey participants felt that the park was a safe place to visit during the daytime.

35% of participants felt that the park was safe at night. 24% felt that the park was not safe during the night, and 41% were unsure.

Table 19. Perception of Safety within Darwin City Council Parks

Response	Day		Night	
	# Participants	% Participants	# Participants	% Participants
Yes	80	100%	28	35%
No	-	-	19	24%
Unsure	-	-	33	41%

Survey participants were invited to state what they thought could be done to improve safety in the park they were interviewed in. The majority of comments related to lighting (12 comments), and security (9 comments).

Table 20. Responses to Improving Perception of Safety within the Park – Darwin City Council

Reasons	# Participants	Parks	#
LIGHTING	12		
Lighting		Fannie Bay Foreshore	1
		Lake Alexander	1
		Watergardens	1
More lighting		Lake Alexander	3
		Nightcliff Foreshore	1
		Watergardens	5
SECURITY	9		
More police patrols		Fannie Bay Foreshore	1
Caretaker		Lake Alexander	1
More patrols		Nightcliff Foreshore	1
CCTV		Nightcliff Foreshore	1
Security		Watergardens	2
More security		Watergardens	3
USER MANAGEMENT	3		
Stop alcohol consumption		Lake Alexander	1
Secure dogs		Lake Alexander	1
Reduce itinerants		Watergardens	1
NOTHING	1		
Nothing can be done		Watergardens	1



3.4.2 Survey Participants General Comments

Survey participants were invited to offer additional comments about the park.

Table 21. General Comments – Darwin City Council

Park	Comments
Bicentennial Park	<p>Good walking track. I'd come more often if I lived closer. It is beautiful as is the whole of your city. People we meet in the park are very friendly. It's lovely and nice and shady. It's perfect. Leave it as is, it is perfect. No its fine. Park great – suggestion that involve schools to paint mural to combat graffiti. So quiet, beautiful, green animals. Very impressed with park.</p>
Fannie Bay Foreshore	<p>There should be more parks around. Especially like this one.</p> <p>Beautiful place. First time here, just checking out the fishing. Leave it as is. Like it. Lots of birds, chirping all the time. Love cycling through it. Lovely breeze most mornings. My little sisters love coming to play. Peaceful, no-one really uses it. You can always improve service, but compared to places south, this is clean and peaceful.</p> <p>Had a coconut scare the Jesus out of me. Fell right beside me. Looked up and my luck its only the only palm with nuts on it. Pity more people don't use it. Still I only come twice a year. Maybe I would use it more if I lived closer. Pandanus would look great, if it was kept cleaned up. Always looks neglected.</p>
Lake Alexander	<p>Very nice. What a beautiful place.</p> <p>Fences don't do too much, lots of broken areas. Seen dingo in natural reserve.</p>
Nightcliff Foreshore	<p>Doing a bloody good job. Doing a great job council. Litter pickup is good. Top job. Very nice. Was just here to use boat ramp.</p> <p>Grass is a bit dead.</p>
Watergardens	<p>A nice park to visit with friends. A well looked after park. Ok as it is. Park always look beautiful. This is a lovely park and well preserved.</p> <p>Too many long grasses inhabit the area.</p>



3.5 Survey Participant Profile

3.5.1 Place of Residence of Survey Participants

41% of survey participants lived within the Darwin City Council, 37% from other councils within the Northern Territory, 24% from interstate, and 20% from overseas. 3% of survey participants did not state their residential location.

Table 22. Place of Residence of Survey Participants – Darwin City Council

Place of Residence	# Participants	% Participants	Parks
CITY OF DARWIN			
Paroo Bay	7	9%	Paroo Bay Foreshore x 4 Lake Alexander x 2 Millers Pond Park x 1
Nightcliff	6	8%	Nightcliff Foreshore x 3 Lake Alexander x 2 Paroo Bay Foreshore x 1
Larrakeyah	5	6%	Lake Alexander x 2 Paroo Bay Foreshore x 1 Millers Pond Park x 1 Nightcliff Foreshore x 1
Milneba	3	4%	Millers Pond Park x 1 Paroo Bay Foreshore x 1 Watergardens x 1
Alawa	2	3%	Millers Pond Park x 1 Watergardens x 1
Bayview	2	3%	Paroo Bay Foreshore x 1 Nightcliff Foreshore x 1
Freemantle	2	3%	Paroo Bay Foreshore x 1 Lake Alexander x 1
Jingili	1	1%	Nightcliff Foreshore
Lee Point	1	1%	Nightcliff Foreshore x 1
Millner	1	1%	Lake Alexander
Nakara	1	1%	Nightcliff Foreshore
The Narrows	1	1%	Nightcliff Foreshore
Waggon	1	1%	Nightcliff Foreshore
OTHER NORTHERN TERRITORY			
Palmerston	3	4%	Watergardens x 2 Lake Alexander x 1
Humpty Doo	2	3%	Nightcliff Foreshore x 1 Millers Pond Park x 1
Parade	1	1%	Millers Pond Park x 1
INTERSTATE			
Western Australia	5	6%	Nightcliff Foreshore x 2 Millers Pond Park x 1 Paroo Bay Foreshore x 1 Watergardens x 1
New South Wales	4	5%	Millers Pond Park x 2 Nightcliff Foreshore x 1 Lake Alexander x 1



Place of Residence	# Participants	% Participants	Parks
Queensland	3	4%	Bicentennial Park x 2 Watergardens x 1
South Australia	3	4%	Bicentennial Park x 1 Fannie Bay Foreshore x 1 Nightcliff Foreshore x 1
Victoria	3	4%	Lake Alexander x 2 Bicentennial Park x 1
Tasmania	1	1%	Bicentennial Park
OVERSEAS			
Germany	3	4%	Bicentennial Park x 2 Nightcliff Foreshore x 1
England	2	3%	Bicentennial Park x 1 Fannie Bay Foreshore x 1
France	2	3%	Bicentennial Park x 1 Fannie Bay Foreshore x 1
New Zealand	2	3%	Bicentennial Park x 2
Finland	1	1%	Bicentennial Park
Holland	1	1%	Lake Alexander
Indonesia	1	1%	Fannie Bay Foreshore
Ireland	1	1%	Fannie Bay Foreshore
Israel	1	1%	Fannie Bay Foreshore
Turkestan	1	1%	Bicentennial Park
United States of America	1	1%	Fannie Bay Foreshore

6 Not Stated

Table 23. Place of Residence – Darwin City Council & Trop. Aust. Region

Place of Residence	% Participants DCC	% Participants Trop. Aust. Region
Within Authority Area	41%	59%
Outside Authority Area	51%	40%
Not Stated	8%	1%



3.5.2 Dwelling & Private Outdoor Space

Survey participants were asked which type of (private) outdoor space best described where they lived or were staying. 56% of participants lived / were staying in a dwelling with a private backyard, 11% with private courtyard without communal recreation facilities, and 10% with communal grounds with communal recreation facilities.

9% lived / were staying in a dwelling without communal grounds or communal recreation facilities, 8% on acreage / farmland, 4% with communal recreation facilities but no communal grounds, 1% in a private courtyard with communal recreational facilities, and 1% without communal grounds or communal recreation facilities.

Table 24. Participants Dwellings & Outdoor Space – Darwin City Council & Trop. Aust. Region

Outdoor Space	# Participants DCC	% Participants DCC	% Participants Trop. Aust. Region
Acreage / Farm	6	8%	6%
Private Yard	45	56%	73%
Private Courtyard & Communal Recreational Facilities	1	1%	2%
Private Courtyard & No Communal Recreational Facilities	9	11%	4%
Communal Grounds & Communal Recreational Facilities	8	10%	4%
Communal Grounds & No Communal Recreational Facilities	3	4%	2%
Communal Recreation Facilities & No Grounds	1	1%	1%
No Grounds & No Communal Recreational Facilities	7	9%	9%
No Dwelling	-	-	0.4%



3.5.3 Age of Survey Participants

26% of survey participants within the Darwin City Council area were aged between twenty and twenty-nine years, 25% between thirty and thirty-nine years, 14% between fifty and fifty-nine years, and 11% between forty and forty-nine years.

6% were aged between sixty and sixty-nine years, 3% between seventeen and nineteen years, 1% above seventy years, and 1% between fourteen and sixteen years.

Table 25. Age of Survey Participants – Darwin City Council & Trop. Aust. Region

Age Cohort	# Participants DCC	% Participants DCC	% Participants Trop. Aust. Region
14 – 16 yrs	1	1%	2%
17 – 19 yrs	2	3%	4%
20 – 29 yrs	21	26%	24%
30 – 39 yrs	20	25%	25%
40 – 49 yrs	9	11%	17%
50 – 59 yrs	11	14%	12%
60 – 69 yrs	10	13%	10%
Above 70 yrs	5	6%	6%
Not Specified	1	1%	0.2%

3.5.4 Gender of Survey Participants

41% of survey participants within the Darwin City Council area were females, and 44% were males.

15% of genders were not specified.

Table 26. Gender of Survey Participants – Darwin City Council & Trop. Aust. Region

Gender	# Participants DCC	% Participants DCC	% Participants Trop. Aust. Region
Females	33	41%	49%
Males	35	44%	48%
Not Specified	12	15%	3%



Appendix 1: Participating Authorities in Current Round of Survey Program

SOUTH EAST QUEENSLAND REGION 2007-8		TROPICAL AUSTRALIA REGION 2006-8	
Caboolture Shire Council		Darwin City Council (NT)	
Gold Coast City Council		Calloope Shire Council (QLD)	
Hervey Bay City Council		Mackay City Council (QLD)	
Redland Shire Council		Townsville City Council (QLD)	
		Whitsunday Shire Council (QLD)	

PERTH REGION 2008	MELBOURNE REGION 2007-8	NSW REGION 2008
City of Joondalup	City of Bayside	Baulkham Hills Shire Council
Town of Mosman Park	City of Boroondara	Gosford City Council
City of Nedlands	City of Brimbank	Hornsby Shire Council
City of Swan	City of Darebin	Lismore City Council
	City of Glen Eira	Parramatta City Council
	City of Hobsons Bay	Ryde City Council
	City of Kingston	Sydney City Council
	City of Knox	Sydney Olympic Park Authority
	City of Manningham	Wyong Shire Council
	City of Monash	
	City of Moonee Valley	
	City of Moreland	
	Shire of Mornington Peninsula	
	City of Port Phillip	
	City of Stonnington	
	City of Whitehorse	
	City of Yarra	



OPEN SECTION

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GENERAL BUSINESS

10.1 Outstanding Items

