

Risk Assessment:

Risk to humans posed by the dingo population on Fraser Island.

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Executive Summary

The management of dingoes on Fraser Island has been a significant issue for the Queensland Parks and Wildlife Service for over 10 years. In addition to the management of the wild dingo as a unique component of the natural resources of Fraser Island, the management of the dingo has been primarily focused on reducing its interactions with humans. This is in direct response to the threat posed by the dingo to human safety.

A range of management strategies have been identified and implemented including public education programs, signage and brochures, fines for feeding dingoes and the removal by shooting of problem animals. The relocation of animals from Fraser Island to the mainland has never been used as a management option. In response to the increasing need to pro-actively manage the dingo on the Island a draft Fraser Island Dingo Management Strategy was developed and is awaiting final approval. This strategy and the management and research programs identified are still relevant and implementation is necessary for the successful long-term management of dingoes on Fraser Island.

However, the tragic death of a 9 year old boy on 30 April 2001 has redefined the risk that dingoes pose to humans. Consequently, the aim of this risk assessment is to assign a level of risk to the current situation on Fraser Island and to highlight management strategies that can address this risk. The management of this risk is considered in the context of existing management strategies, proposed actions documented in draft plans and new ideas. The risk assessment provides direction for the immediate management of dingoes on Fraser Island and should be considered as complementary to the draft Fraser Island Dingo Management Strategy.

Since 30 April 2001 a total of 31 dingoes have been destroyed to reduce the immediate risk to people from habituated dingoes. Of these, 28 animals were culled in the period to 5 May 2001 in a limited program to remove animals that were habituated to humans and frequenting areas heavily used by people. This cull was a once only operation that achieved its predetermined aim and has been concluded. Based on a population estimate of between 100 and 200 dingoes on the Island the impact of the initial cull is unlikely to have any adverse impacts on the long-term survival of the population.

As an ongoing policy, dingoes identified as being a high risk to humans will continue to be humanely destroyed. Dingoes which moved into the areas from which dingoes were culled should now be prevented from developing the same behaviours as the previous animals. The need for further culling will be determined by the results of a range of research programs. A range of non-lethal control programs will be used in the meantime.

The risk assessment and the attached management recommendations are fundamentally different to previous management programs in that they are predominantly site-specific. This approach gives immediate management options for reducing the risk in the identified high risk areas of the Island. The risk identification also prioritises the action needed at the 68 major sites or visitor nodes on the Island. This does not preclude simultaneous implementation of Island-wide strategies as identified in the draft Fraser Island Dingo Management Plan. However, it does direct an immediate response to a few areas where the risk has been determined as extreme or high. These areas are Waddy Point campground, Kingfisher Bay Resort and Village, Lake McKenzie campground,

Eurong Township, Indian Head campground and headland, Middle Rocks car park, Waddy Point day-use area and Waddy Point beach-front camp ground. A further 10 sites have been identified as being of moderate risk and should also be the focus of intensive management programs.

Kingfisher Bay Resort and Village came in at an extreme rating, but this may be attributable to its high level of incident reporting, in keeping with its established eco-tourism standards. Further auditing work needs to be done on this location, as well as other resorts and townships to more precisely define their risk rating.

Within the identified extreme, high and moderate risk sites a range of management strategies are proposed. These strategies include previously unused options including:

- fencing of some campgrounds and recreational areas;
- active deterrence of animals in the vicinity of popular visitor areas;
- restriction on taking of food to certain locations; and
- time restrictions for visitors at some sites.

Campground closures and changes to picnic facilities are similar to changes recommended in the camping strategy for Fraser Island. Camping area restrictions over and above those considered in the camping strategy are considered for some sites. Interim measures already being implemented such as campground hosts are recommended to continue at some sites on a seasonal basis. The site-specific strategies listed in this risk assessment are additional to the need for Island-wide initiatives identified in the draft Fraser Island Dingo Management Strategy.

The risk on other areas of the Island not specifically addressed in this risk assessment should be monitored. At present this risk is considered lower than at the identified sites and manageable by routine programs.

Management options should be a combination of Island-wide approaches to:

- limiting visitor numbers;
- enhanced education and awareness;
- enforcement; and
- monitoring

within the context of a site-specific risk management approach.

Site-specific strategies have been determined according to the risk posed by dingoes at each site and the practicalities of implementation. Site-specific strategies for all sites on the Island as outlined in Attachment 12 should be implemented immediately. In addition to the above-mentioned site-specific management approach the following recommendations are also made.

- Fines and penalties for the feeding of dingoes should be significantly increased. It is recommended to increase on-the-spot fines for feeding dingoes from either \$50 or \$75 (depending on the legislation) to \$225. Maximum penalties for feeding offences by way of complaint and summons through court action are recommended to be doubled from \$1500 to \$3000. In addition to the increase in prescribed penalties it is recommended that commercial operators caught directly feeding dingoes will have their commercial tour operators permit cancelled. It is also recommended that individuals caught deliberately feeding dingoes will be directed to immediately

leave the recreational area. Legislative changes to clarify the definitions of 'feeding' are needed.

- The draft Fraser Island Dingo Management Strategy needs to be adjusted to reflect the now-confirmed risk posed to humans by dingoes. The strategy should incorporate new management options identified in this Risk Assessment as appropriate for ongoing management. The strategy should then proceed to approval and full implementation.
- Limits on the number of visitors to Fraser Island should be considered prior to 31 December 2001. Any such limits, and mechanisms to achieve these, should be considered in consultation with the Island's residents, tour operators, the Fraser Island Community Advisory Committee, native title claimants and the Island's World Heritage Area Management Committee. Possible strategies to achieve such reductions could include:
 - establishing a system of daily limits on the number of visitors on the Island;
 - setting limits on visitor numbers at specific locations;
 - limiting camping to constructed camping areas;
 - reviewing the planning controls applying to the freehold/township areas to manage potential for higher density development; and
 - limiting vehicle access permits.
- Implementation of the dingo management measures identified in this Report. This requires the appointment of a Senior Conservation Officer at Maryborough and the appointment of 4 rangers (004-005) on Fraser Island, principally focused on dingo management (1 based at each of the 4 QPWS bases on the Island, Waddy Point, Dundubara, Eurong and Central Station). Rangers should report to the Ranger-in-Charge at each base and have dingo management activities coordinated by a Senior Conservation Officer at Maryborough.
- The current public education and awareness programs should be maintained and enhanced with the comprehensive approach including:
 - continuing to send pre-visit information to each party obtaining a vehicle service permit and/or camping permit. This information provides warnings about the threats posed by dingoes and recommendations for appropriate behaviour around dingoes;
 - reviewing and where appropriate upgrading signs on the Island giving warnings and advice including staying close to children and not feeding wildlife;
 - providing detailed training and information for staff of backpacker hostels, 4WD hire companies and the Island's accommodation businesses regarding pre-visit briefings and provision of dingo related advice;
 - continuing to conduct 'Dingo-Smart' activities such as camping competitions on the Island during holiday periods;
 - continuing to provide the leaflet "Dingoes have become Threatening" which specifically targets commercial operator clients; and
 - continuing to provide displays in all backpacker hostels in Hervey Bay, Maryborough, Rainbow Beach about Fraser Island including displays about dingoes.
- Research on the population dynamics of the dingoes, including their natural food sources, on Fraser Island is important to the long-term success of dingo conservation

on the Island. Short term and long term research programs as highlighted in this assessment should commence as soon as possible. Immediate programs to standardise and record all adverse dingo/human interactions on the Island should be implemented.

- Limited time and jurisdictional constraints have negated the ability to conduct comprehensive risk assessments within townships and other private landholdings on Fraser Island. Given the ready supply of food and numbers of people exposed there is a real risk from dingoes at these sites. Incident data confirms this threat. It is suggested that additional risk assessments be conducted for these areas to enable dingo management measures to encompass the full range of land tenures on Fraser Island.
- For the effective enforcement of dingo management measures across all areas of Fraser Island, including the townships and freehold lands, appropriate powers need to be established. An important first step therefore is to initiate discussions with the relevant local governments to establish a cooperative arrangement.
- A monitoring and review schedule is required to achieve the following:
 - reporting on implementation of management strategies quarterly for the first year and 6 monthly thereafter; and
 - quarterly re-assessment of sites classified as extreme, high and moderate risk and consequent adjustment to risk management measures on a site by site basis.

Introduction

The risk posed to humans by dingoes on Fraser Island was first identified in the mid-1980's. As tourism flourished on Fraser Island human interaction with dingoes has increased. Over the last 10 years there have been numerous incidents where dingoes nipped, bit or exhibited aggression towards humans. Risk management programs including public education, signage and removal of problem dingoes have been undertaken by the Queensland Parks and Wildlife Service (QPWS) for 10 years. Despite these programs, it was identified in a State Government commissioned report by Dr Corbett in 1998 that a greater effort was needed. Consequently, the draft Fraser Island Dingo Management Strategy was developed in 1999. Those actions that directly effect risks to humans have been progressively put in place pending approval of the overall strategy.

The tragic death of a 9 year old boy on 30 April 2001 redefined the risk posed by dingoes to humans on Fraser Island. This was the first recorded death in Australia by dingoes of a human over 1 year of age. This death has prompted this re-evaluation of the risk posed to humans by dingoes and a re-assessment of the management strategies outlined in the draft Fraser Island Dingo Management Strategy (March 2001). This re-assessment also considers a range of alternative management strategies proposed by other parties.

This risk assessment is based on information contained in Dr Corbett's report (1998), the draft Fraser Island Dingo Management Strategy, QPWS records of incidents of dingo aggression and QPWS records and knowledge of dingo behaviour and sightings on the island. The risk assessment is also based on the fact that since the death on 30 April 2001, 31 dingoes frequenting camping grounds, township and public places have been destroyed. Finally, this assessment is made within the context that the long perceived risk posed to humans by dingoes is confirmed. This significantly alters the approach to dingo management and the urgency of implementing a comprehensive management program. The risk assessment and management implications are also considered with regard to the fact that the dingo population on Fraser Island is of significant conservation value. This population is widely regarded as one of the most genetically pure in Australia.

The aim of this risk assessment is to assign a level of risk to the current situation on Fraser Island and to highlight management strategies that can address this risk. The management of this risk is considered in the context of existing management strategies, proposed actions documented in draft plans and new ideas. Some previously discarded management options were also reconsidered.

This risk assessment extends the dingo management program for Fraser Island. It provides targeted management strategies to immediately address the identified high risks on the Island. It does not replace the draft Fraser Island Dingo Management Strategy which in concert with this document, provides the long-term plan for dingo management across the Island.

Context - Terms of Reference

This risk assessment is set within the context of the wider goals, objectives and strategies of the Queensland Parks and Wildlife Service in relation to protected area and

wildlife management. Emphasis is given to the need to conserve the unique environment of Fraser Island, coupled with the recognised use of this area by the public. Failure to achieve the objectives of the organisation in relation to the management of a World Heritage Area is one of the risks that must be managed. Consequently the elimination of the dingo from Fraser Island, is not considered an option for management and never has been.

However, for this risk assessment the management focus is balanced with the recognition that public safety is the critical consideration. In this regard there is now certainty that the worst outcome is death. Therefore, within this context, criteria are developed to determine the level of risk, whether this risk is acceptable in terms of danger to humans and the control options for management.

In developing this assessment particular relevance is placed on the management strategies already under development for Fraser Island including the draft Camping Management Strategy and the draft Dingo Management Strategy.

Within this organisational and environmental context the following Terms of Reference for this Risk Assessment are:

1. Identify which classes of animals are likely to present risks to humans.
2. Develop the principles and practices of a culling program that includes specific prescriptions in relation to particular locations where human/dingo interactions have become commonplace.
3. Engage leading Australian experts on dingo management to advise on future management directions.
4. Develop immediate options for management procedures including instructions for management of the field situation.
5. Develop a long-term risk assessment program.
6. Review current fines and penalties for the feeding of dingoes.

Methodology

The methodology for this risk assessment is based on the principles outlined in AS/NZS 4360:1999 Risk Management. This document was prepared as a joint standard by a Standards Australia/Standards New Zealand Committee on Risk Management as a revision of AS/NZS 4360:1995 Risk Management. It provides a generic framework for establishing the context, identification, analysis, evaluation, treatment, monitoring and communication of risk.

The standard is generic and independent of any specific industry or economic sector. The design and implementation of the risk management system is influenced by the varying needs of an organisation, its particular objectives, its products and services, and the processes and specific practices employed.

Risk management is an interactive process consisting of well-defined steps which, taken in sequence, support better decision-making by contributing a greater insight into risks and their impacts. The risk management process can be applied to any situation where an undesirable or unexpected outcome could be significant or where opportunities are identified. Decision-makers need to know about possible outcomes and take steps to control their impact.

Attachment 1 is a flow chart that describes the steps for the risk analysis as per AS4360:1999. Attachment 2 lists the risk definitions, risk classifications and the risk matrix used to assess the identified risks. Attachment 3 is a flow chart that describes the process used to evaluate the risk controls. Attachment 4 is the hierarchy of controls as per the Workplace Health & Safety Risk Management Advisory Standard 2000.

This risk process has been used as the foundation for the identification, assessment and development of risk controls and strategies for the management of the dingo/human interaction on Fraser Island.

Communication and Consultation

This risk assessment was conducted by EPA/QPWS risk management and wildlife management officers in conjunction with QPWS rangers and staff from Fraser Island. Data was provided from QPWS records and compiled by staff at Fraser Island and Maryborough. In accord with Term of Reference 3, 3 leading dingo experts, Dr Laurie Corbett (EWL Sciences, Northern Territory), Peter Fleming (NSW Agriculture) and Lee Allan (Department of Natural Resources and Mines, Queensland) were consulted for advice on future management options. In conjunction with the discussions with leading dingo experts, the Wildlife Preservation Society of Qld, Fraser Island Defenders Organisation and the RSPCA were consulted in relation to their position with regard to a range of future management alternatives.

Much of the information on which this report is based, was contained in two previously prepared documents. The first of these was Dr Laurie Corbett's 1998 report entitled "Management of Dingoes on Fraser Island". The second was the "Draft Fraser Island Dingo Management Strategy" prepared in March 2001. Extensive community consultation was conducted in the preparation of the draft.

Since 30 April 2001 there has been a range of submissions to QPWS (both verbally and in writing) on suggested management strategies. All suggestions have been considered.

Comprehensive stakeholder consultation relating specifically to the risk assessment was not undertaken due to time limitations in the preparation of this report. However, for the purposes of this risk assessment, information was available from the above-mentioned sources. Nevertheless it is recognised that there are registered native title claimants and a range of relevant interest groups that should be further consulted. This consultation should occur as part of action to implement the recommendations of this report.

Risk Identification

Much of the identification of the existence of risks associated with the interaction of humans and dingoes on Fraser Island has been established and recorded in the draft Fraser Island Dingo Management Strategy – March 2001.

The fact that Fraser Island dingoes can at times affect the ‘outdoor’ experience sought by the visiting public and more importantly, affect their safety, has been recognised for more than 10 years. The first well-reported attack on a child occurred on Fraser Island in 1988. Dingo warning signs installed at Central Station and Lake McKenzie indicate that the animals were a significant management issue by 1989. Even 60 years before this, a report in a Maryborough newspaper mentioned a problem with dingoes on Fraser Island. One anecdotal report from an ex-forestry worker indicated that dingoes were taking food from forestry camps in the early 1960s.

The issue of problem dingoes has been exacerbated by the increase in the number of visitors to Fraser Island. In addition there has been a steady year-round increase in the number of campers using the Island who provide, via direct and indirect feeding, a reliable and constant source of food for the dingo population.

While there is no definitive data on the total number of people visiting Fraser Island, QPWS has indicative figures from work conducted in recent years and from a well established local appreciation of use types, levels and trends.

The figure published in the Environmental Protection Agency’s 1999-20 Annual Report for the number of *camper nights* for Fraser Island for 1999-2000 is 321,768. This figure reflects 100,582 people recorded on 23,576 permits to camp for various lengths of stay. There were 176,868 fee paying passengers carried by the Island’s commercial operators.

An indicative estimate of annual *visitor days* for Fraser Island for 1999-2000 is 750,000. This estimate is based on the average number of camper nights per stay of 3.2 to which is added 1 day per stay to get the total stay length in days. This figure of 4.2 is then multiplied by the published number of visitors with vehicle permits of 135,667. To this is added the 176,868 visitors on commercial tours. There is an underlying assumption that the length of stay for visitors in private accommodation is the same as that for campers. This figure does not include residents or business visitors or QPWS staff. This would add an estimated further 50,000-100,000 person days.

In terms of *peak visitor numbers*, there are 1379 camp sites identified in the camping management plan. If at peak times such as Easter use averages 5 persons per campsite this would give a total of 6,900 campers. Added to this is a figure of approximately 1,500 persons in commercial resorts and short term holiday hire units and houses. An additional estimate of 2,000 persons could be on commercial tours on a particularly busy day. This gives an estimated maximum number of visitors at peak times of 10,400. A further non-visitor figure of 800 people could be present on the Island at such times, comprising about 300 trades persons, QPWS staff and resort staff and perhaps 500 people in private residences (travelling in exempt vehicles and hence not picked up by vehicle permit figures).

Increased food availability associated with increased visitor numbers has resulted in a corresponding rise in interaction between dingoes and visitors. The Summer and Easter peaks in visitor numbers coincide with the dingo breeding season when incidents of

aggression directed at people are most likely to occur. As a consequence of many generations of dingoes having regular continuing contact with people, the animals have changed their natural habits, losing their fear and wariness and relying to varying degrees on people for food. At one extreme, a few animals obtain a significant portion of their diet from handouts provided by Island residents at resorts or townships, often sleeping under houses of the residents. At the other extreme are those truly wild animals which are seen only rarely and which obtain food at remote beach campsites only inadvertently when patrolling their territories. Intermediate to these extremes are a number of dingo packs which have high visitor–use areas such as camping and/or picnic grounds in their territories.

Site-specific risk analysis

While the draft Fraser Island Dingo Management Strategy identified the Island-wide issues it is now considered necessary to develop additional site specific management strategies. To adequately identify the appropriate controls it was necessary to analyse site specific factors that contribute to the likelihood of human/dingo interaction.

Measurable factors that have been identified as influencing the likelihood of human/dingo interaction are:

- visitor numbers;
- dingo frequency and duration of exposure to people;
- availability of food; and
- incident data.

Other factors that need to be considered are:

- anecdotal evidence from rangers of dingo harassment;
- environmental factors such as availability of natural food; and
- breeding and whelping seasons.

Visitor numbers

Visitor numbers to the Island have increased dramatically over the last 15 years. The higher the numbers of visitors to the site the higher the risk. Attachment 5 lists the peak numbers of visitors per day and the subsequent risk factor rating for each site. High visitor numbers is a contributing factor to the likelihood of negative dingo/human interactions.

Dingo frequency and exposure

The number of dingoes at a site including the frequency of visits and how long they are there, gives us total hourly dingo exposure data per site. Attachment 6 lists the total dingo exposure and risk factor rating for each location. High dingo exposure is a contributing factor to the likelihood of a negative dingo/human interaction. This data was obtained from rangers who have substantial personal knowledge of dingo numbers and frequency of visits for each site. While the data are considered reasonably accurate, improved recording in this area is recommended to better assess changes in the future in response to implemented management programs.

Availability of food

It is reasonable to assume that the main reason dingoes interact with humans is to obtain food. Thus high food availability at a site will result in an increased risk of negative dingo/human interactions. Attachment 7 lists the site use and activities that lead to varying degrees of food availability for each site. A risk factor rating based on food availability has been listed for each location. This data was obtained from rangers who have substantial personal knowledge of the sites and the availability (quantity and accessibility) of food at each site.

Incident data

Attachment 8 contains a summary of incidents from 1996 to April 2001. These incidents have been analysed for number and severity of incidents for each location. While the incident data collected during this period is not complete and that in most locations incidents are grossly under reported, there are sufficient data to make valuable assessments of the risks. The data provides a good measure of high and low risk sites in relation to number and severity of incidents. Attachment 9 lists the sites and gives a risk ranking associated with numbers of incidents.

Caution needs to be taken where sites have small numbers of incidents that were relatively serious in consequence. Risk levels calculated in these situations will be less reliable.

Anecdotal evidence from rangers of dingo harassment

Attachment 9 lists the risk factor of a site based on anecdotal reports of harassment from rangers who have a substantial personal understanding of the different sites and the levels of incidents at each site. Given the shortfalls in incident data the assessments provided by the rangers is a critical factor in establishing the likelihood of incidents occurring in each location.

Environmental factors such as availability of natural food

While it is true (based on studies elsewhere) that the availability of natural food due to environmental conditions is a factor in dingoes trying to obtain food from people and campsites, there is not sufficient scientific data to effectively account for this aspect in the risk analysis. On Fraser Island, there is evidence that dingoes are frequenting campsites due to pressure from the environment as well as their dependence on human food and thus habituation to humans. There is considerable discussion relating to this aspect in the draft Dingo Management Strategy and recommendation for further scientific study that will provide a more accurate understanding of this issue.

Breeding and mating seasons

The draft Dingo Management Strategy suggested that the dingo breeding season was associated with increased levels of dingo aggression towards humans. Further study is required to validate this potential indicator of high risk interactions. If confirmed additional precautions are recommended during these times. For example, increased publicity, awareness and ranger patrols.

Risk Assessment and Evaluation

The causal factors relating to the likelihood of interaction between dingoes and humans have been cross-referenced against average consequences. This allows each site to be given a risk rating.

Attachment 10 lists the 68 major locations or visitor nodes on the Island and provides the overall risk level for each location based on the above-mentioned risk factors. This ranking which identifies the locations posing the greatest risk of negative dingo/human interactions is summarised in Attachment 11. It provides a priority order for risk control measures.

Classification of risk rating - Site description and management outcome

The risk rating for each site was calculated using the above-mentioned criteria as in Attachment 10. The critical criteria were:

- visitor numbers;
- dingo frequency and exposure;
- availability of food;
- incident data; and
- consequences of human/dingo interactions.

These criteria should also be considered in terms of the availability of natural food resources. Once a risk rating is determined for each site the risks must be assessed in terms of a management outcome. The following is a description of the 4 risk categories, the acceptability of that risk in terms of danger posed to humans and the associated management outcomes:

1. **Extreme Risk Sites**

For a site to be classified as **extreme risk** it must have a combination of high visitor numbers, high human exposure to dingoes, high levels of food availability or consumption by dingoes, high incident numbers and a high level of incident consequences.

Outcome

Risk not acceptable. Immediate management action is required to reduce risk as per the recommended site strategies (see Attachment 12). Daily monitoring of the site and regular review of the risk is required.

2. **High Risk Sites**

A site can be classified as **high risk** based on a combination of the above-mentioned criteria. A high risk site would generally exhibit high levels of visitor numbers, high level of exposure to dingoes by humans, a high availability of food and a high incident level. However, even without this combination a site reporting a high level of severe attacks from dingoes may still be classified as high risk.

Outcome

Risk not acceptable. Immediate management action is required to reduce risk as per the recommended site strategies. Daily monitoring of the site and regular review of risk is required.

3. Moderate Risk Sites

A site can be classified as **moderate risk** based on a combination of the above-mentioned criteria. A moderate risk site would generally exhibit high visitor numbers and a high level of exposure to dingoes by humans. This may include a high level of food availability.

Outcome

Risk not acceptable. Management action is required to reduce risk as per recommended site strategies. Monitoring of the site 3 times per week and regular review of risk is required.

4. Low Risk Sites

A site can be classified as **low risk** based on a combination of the above-mentioned criteria. A low risk site would generally exhibit lower levels of interactions between humans and dingoes. No high levels of any criteria would be expected except for high visitor numbers in some areas.

Outcome

Risk acceptable. Dingoes are not considered to pose an unacceptable threat to humans. Manage these sites by routine procedures.

Risk Controls

In addition to the highlighted strategies and management actions in the draft Fraser Island Dingo Management Strategy a range of different ideas for management have been forthcoming since the fatal incident. Many of these issues have been considered in this risk assessment and are included as options for management at specific sites.

A major constraint on the potential for increased dingo interactions with people into the future would be to limit the number of visitors to the Island. Several options exist including:

- establishing a system of daily limits on the number of visitors on the Island;
- setting limits on visitor numbers at specific locations;
- limiting camping to constructed camping areas;
- reviewing the planning controls applying to the freehold/township areas to manage potential for higher density development; and
- limiting vehicle access permits.

Limits on the number of visitors to Fraser Island should be considered prior to 31 December 2001. Any such limits, and mechanisms to achieve these, should be considered in consultation with the Island's residents, tour operators, the Fraser Island Community Advisory Committee, native title claimants and the Island's World Heritage Area Management Committee.

In prescribing risk management measures, where the risk can be effectively eliminated other measures are generally not necessary. However, effectiveness varies from site to site and hence the measures required need to be customised to the characteristics of the particular site and its use.

For the effective enforcement of dingo management measures across all areas of Fraser Island, including the townships and freehold lands, appropriate powers need to be

established. An important first step therefore is to initiate discussions with the relevant local governments to establish a cooperative arrangement.

Site-Specific Controls

In addition to the information discussed above, site-specific management measures have been developed by rangers from Fraser Island since 30 April 2001 (see Attachment 12). This information, including a combination of previously recommended strategies and new options, is considered in terms of how it may address the risk posed to humans by dingoes. These management measures were based on the Workplace Health and Safety Model for hierarchy of controls (see Attachment 4).

The following site specific control measures have been identified and assessed through the risk treatment process. These control options will be used occasionally in isolation or more appropriately in combination and targeted to the risks associated with individual sites. The broader strategies listed in the draft Dingo Management Strategy are amplified by the site specific strategies.

- **Humane destruction of dingo if hazing fails** - to be utilised in high risk areas where any interaction between dingoes and people is considered unacceptable and where other control measures are not practical or have failed.
- **Enhanced enforcement and public contact program** - this strategy is currently employed throughout the Island but it is recognised that an enhanced program is required. It is recommended at all sites and at a level over and above that currently possible within existing resources. This ranger interface with the public enables both enforcement and the interpretation of relevant rules, guidelines and recommended behaviour. Proactive and intensive measures trialed to date have indicated that this approach can be successful in reducing risk to acceptable levels at otherwise high risk sites. It is obviously a labour intensive measure and should be regarded as 'topping-up' other management controls rather than being the solution in itself. A minimum of 4 new positions (one at each base) is required.
- **Hazing** - this involves harassing dingoes by way of irritation. The purpose of the harassment is twofold; (i) to scare dingoes away from visitor and residential nodes thereby avoiding habituation, and (ii) to reinstate in the dingoes a fundamental fear of humans. Effective hazing requires a wide range of differing methods and techniques. Dingoes quickly become accustomed to a single stimulus and either ignore or avoid it whilst returning to the point of risk whenever the stimulus is not present. Techniques being considered include 'ratshot' via .22 calibre rifle, various crowd control projectiles fired from 12 gauge shotguns, paintball/skirmish guns, slingshots with various projectiles, *Shu-roo* type electric sonar devices and stock whips. There are a range of other methods also being assessed and considered. It is also recognised that the deployment of these techniques requires differing methods. For example, it has been noted that individual dingoes become wary of rangers in uniform but will readily approach other people.
- **Barrier Fencing** - '*Elimination*' is the first consideration in identifying hazard control measures. Whilst fencing of the entire Island is neither desirable nor practicable, it will be effective at some locations by eliminating the risk ie. separating people from dingoes. Very few additional measures are required in such instances. Appropriate fence design, gates and construction materials will be

determined and field tested. Fencing is identified as an option at a range of locations including campgrounds, picnic areas, township areas and QPWS bases. If effective fencing cannot be practically implemented in certain locations, alternative risk management measures will be applied.

- **Campground permanent closures** - recommendations are in accordance with the draft CMP but with the additional justification of reducing visitor risk in line with desirable dingo management measures.
- **Remove picnic facilities** - to achieve the prohibition of food and subsequent elimination of the stimulus for dingo interactions with people, it may be necessary to remove established picnic facilities at some sites. Picnic facilities (tables, BBQs) are not required at sites where the main attraction is another purpose and a continual flow of people is desirable ie. high turnover, short duration visits.
- **New campground construction** - this is proposed in accordance with the draft Fraser Island Camping Management Plan (draft CMP). These measures offset closure of other campgrounds and enables the rationalisation of beach camping in accordance with prescriptions in the draft CMP. Some locations have already received funding, at least in part (eg. new Central Station Campground).
- **New day-use picnic facilities** - considered necessary to meet an acceptable level of infrastructure to support use of the protected area. This may need to be implemented in conjunction with closure or relocation of camping at some sites. Additional dingo control measures will be required at these locations.
- **Construct new toilet facilities** - replacement toilet facilities are required at some locations whereas at others (such as Indian Head) no facilities exist. Aside from both health and amenity considerations, the total lack or inadequacy of these facilities increases the risk of a negative dingo interactions.
- **Upgrade toilet facilities, including lighting** - some toilets are unable to cope with existing use levels, resulting in overflow of septic tanks and trenches. It has also been noted that visitors will use adjacent bush in preference to unlit toilets at night. These improvements will reduce the quantity of exposed human waste, which is known to attract dingoes.
- **Wash-up facility construction** - the leaving out of dirty dishes and other cooking appliances are a known to attract dingoes particularly around campsites at night. Many campers do not carry necessary wash-up gear. Even well intentioned campers using isolated campground taps for washing inevitably wash food scraps onto the ground. Wash-up facilities have been trialed at some locations and have proved to assist management of this problem. The construction of additional facilities is recommended at a number of sites.
- **BBQ covers/lids** - this measure is suggested where fences are not constructed around BBQ picnic sites. Fencing is an absolute control but not considered essential at sites where other (lower key) strategies will reduce risk to acceptable levels. BBQ lids or covers are used to minimise food available for dingoes.
- **Food storage locker construction** - this is suggested for backpacker and hiker campgrounds where visitors often do not possess the equipment required to lock food

away from dingoes and other animals. This would only be required where fencing is not considered necessary or practicable.

- **Rubbish bin lighting** - this will assist in waste management at high-use campgrounds where inappropriate disposal of waste has been known to occur at night because people either cannot locate the bins or are concerned about using the bins in unlit areas. This measure would aid visitor compliance with respect to leaving food available for dingoes.
- **Camping area restrictions** - these restrictions will assist the elimination of food from areas known to attract dingoes. Most barge landings fall within this category as do water points where dingoes are known to frequent. These restrictions are over and above those detailed in the draft CMP. This is not a major strategy and given it is recommended for only a few locations, the impact upon existing use will be minimal.
- **Prohibit food** - this is a direct way of eliminating the stimulus for interaction between dingoes and people at some locations. People should not be permitted to eat or have food on display at locations as indicated, although food could be locked away in a vehicle. Locations selected for this strategy are generally day-use area where the act of eating is not integral to use of the site. Food should be prohibited from all high-use lakeside beaches. Opportunistic dingo observations would be expected to occur at these locations, but such interactions would not result from, or be a product of, habituation. As a general approach, food should be required to be stored inside a vehicle or in a dingo proof storage container.
- **Time restrictions** - the duration of exposure to dingoes is a significant component of this risk assessment. Time restrictions at some sites eliminates risk at least for a given time period each day. The locations and time periods recommended will not substantially impact upon legitimate use of an area. Where applied to a barge landing, these restrictions address the inevitable desire for people to consume food and subsequently attract dingoes. Further consideration is required with respect to the impact of these restrictions upon fishers at these sites. Any activity which has the potential to attract dingoes to barge landing areas is undesirable.
- **Fish cleaning restrictions and/or facility provision** - the *ad hoc* fish cleaning and the discarding of carcasses provides dingoes with both an 'unnatural' food supply (*unnatural* being the quantity that is available) and a reason to venture in and around campsites and visitor nodes in search of the same. Restrictions are recommended at a number of high-use visitor nodes where the presence of food available for dingoes is undesirable and management by other means does not sufficiently reduce risk. At some locations the provision of appropriately designed fish cleaning facilities will achieve the desired aim.
- **Campground host** - is suggested as an effective means of directly addressing the Department's duty of care. Enables real time response to dingo issues. Is also seen as an effective method of ensuring compliance with relevant laws and best practice guidelines. If implemented correctly, it can be a positive initiative from a camper's perspective. Most locations warrant only seasonal placements in line with peak visitation periods although some high-use sites, such as Central Station and Indian Head, would benefit from permanent placements. Assistance from native title claimants should be investigated.

- **Information booth construction and staffing** - this measure is recommended for Inskip Peninsula. It provides an outlet for the issue of permits, compliance monitoring and the conveyance of the all important dingo safety information to intending visitors to Fraser Island. The booth would require staffing from 0630 hours - 1700 hours daily. A booth already exists at River Heads which is the other major entry point to the Island. Contractual arrangements should also be established to enable a similar service to be provided to the Moon Point barge by the private permit issue centre at Urangan in Hervey Bay. The development of a major visitor information centre is in the process of approval to be located at the Noosa River crossing at Tewantin.
- **Audit and recommendations** - limited time and jurisdictional constraints have negated the ability to conduct comprehensive risk assessments within townships and other private landholdings on Fraser Island. Given the ready supply of food and numbers of people exposed there is a real risk from dingoes at these sites. Incident data confirms this threat. It is suggested that additional risk assessments be conducted for these areas including recommended legislative change to enable dingo management measures to encompass the full range of land tenures on Fraser Island. The proposed establishment of a single government agency responsible for the management of Fraser Island, would significantly facilitate a more comprehensive approach.

The addition of site specific controls will provide immediate and effective risk reductions based on actual risks associated with each site. Some sites will require immediate actions while others will be managed effectively with current strategies. Selection of the appropriate control methods is based on the characteristics at each site and the ability to reduce the risk as identified in the likelihood analysis. Also included for further consideration are a number of research options.

Rejected control options

A range of other options were raised, however they have been rejected at this point. The major options raised and the reasons for rejection are as follows:

Food dumps or dingo feeding stations: *The aim of this strategy is to provide food to dingoes in remote areas, thereby stopping dingoes searching for food in areas where visitors are common. There is also a belief by some that the dingoes are starving and it is cruel to let them die.*

This strategy is not supported for the following reasons:

- as a component of Fraser Island's natural biodiversity dingoes should be allowed to regulate their own numbers in response to available natural food on the Island (if this results in lower numbers then that is the sustainable limit);
- feeding stations would artificially increase numbers on the Island and thereby increase the chance of interactions with humans;
- some dingoes will become accustomed to 'easily available food' and their behaviour will adjust accordingly; and
- areas where food is dropped will become high risk areas for visitors.

Dingo pup training: *The aim of this strategy is to humanise pups at an early age by taking them away from their parents and teaching them to interact positively with humans before returning them to the wild.*

This strategy is not supported for the following reasons:

- the ‘taming’ of wild animals is not compatible with the values of a National Park or a World Heritage Area where wild animals are a feature of the natural resource;
- there would be no guarantee or certainty that once ‘tamed’ the dingoes would not attack humans, particularly after being returned to a semi-wild state;
- there would be a need to train the pups of ‘trained/tame’ dingoes with every litter
- finding all dingo pups is not practical, therefore this would not remove the risk to humans; and
- this would be a very resource intensive and hence costly management procedure.

A dingo zoo or sanctuary on the Island: *The aim of this strategy is to provide a facility on the Island where people and dingoes could mix in a safe environment. People could be educated about the wild dingoes and it is believed that this would reduce the compulsion of visitors to try and get close to the wild animals.*

This strategy is not supported for the following reasons:

- a positive zoo experience may encourage some people, especially children, to try to replicate their zoo experience with a wild animal;
- a zoo may attract other wild dingoes to come close due to people and the presence of other dingoes;
- a zoo may give the wrong message that these animals are best tamed for display, rather than appreciating them as wild animals;
- a zoo may encourage consideration of the option that there is no need for animals to remain in the wild, which may result in further calls for all animals not in zoos to be removed. This would be contrary to the protection of the important role of the dingoes in ecosystems and the role of protected areas in general;
- a mixed message would be given to the public that dingoes are good in some areas and bad in others. This is not a message easily understood by many people, particularly children;
- Fraser Island as a World Heritage Area is recognised as a place where dingoes and other animals in the natural environment can be free-ranging to maintain natural behaviours (such as breeding, hunting etc) that will enable the species to evolve naturally;
- a zoo is contradictory to the current dingo management strategy where education is focussed on changing visitor perceptions/expectations of dingoes in the Island. Current education programs are focussed on a quality natural experience; and
- there are opportunities elsewhere on the mainland for people to see dingoes close up (various zoos and wildlife parks) or touch dingoes and be photographed with them (eg. dingo farms in NSW and Victoria).

Island wide fencing: *The aim of this strategy is to fence off large parts of the Island to reduce interactions between people and dingoes.*

This strategy is rejected for the following reasons:

- it is impractical to build and maintain large fenced areas on an area the size of Fraser Island with a principally sand substrate;

- large restricted areas are not in keeping with the principle of providing access to the island for recreational purposes; and
- fencing of large areas does not address the primary concerns with dingoes which inhabit areas near where visitation is high.

Removal of camping from the island: *The aim of this strategy is to ban camping on the Island as a means of reducing interactions between humans and dingoes.*

This strategy is rejected for the following reasons:

- there is a well established public expectation that people visiting Fraser Island for recreational purposes will be able to camp; and
- the management of dingoes can be acceptably addressed through a range of less severe measures.

Relocation of dingoes or dingo pups from the Island: *The aim of this strategy is to reduce the population of dingoes on Fraser Island by trapping and removing selected dingoes or pups. These animals could be placed in a range of wildlife parks or dingo farms. (Elements of this strategy have been included in the draft Fraser Island Dingo Management Strategy)*

This strategy is not supported at present for the following reasons:

- the relocation of dingoes to wildlife parks has not been successful in the past in that relocated adults have not adjusted well to captivity; and
- zoos have the option to source captive bred dingoes from other zoos with breeding populations.

Summary of Recommended Management Actions for Extreme, High and Moderate Risk Sites

In terms of the implementation of site specific strategies as outlined in Attachment 12, the following is a descriptive summary of recommended management actions for extreme, high and moderate risk sites.

Extreme risk sites

Waddy Point Campground/Picnic Area. The following strategies are proposed;

- fencing
- hazing
- campground host (temporary)
- enhanced enforcement/public contact

A dingo barrier fence is to be erected so as to prevent dingoes from entering the campground. Gates will be required at the vehicle entry point and beach walking track egress point. Fence and gate designs are yet to be determined. Fence design and alignment will minimise visual intrusion. The adjoining picnic area is also to be fenced to a standard that restricts dingo access. The intent is that people in this area will not have dingoes within the 'compound'. Dingoes will learn that food is not available within this area. Barrier fencing is not considered warranted and, given the small area, would significantly detract from amenity at this location. Hazing will be a proactive strategy toward any dingoes in the campground precinct, including picnic area, roadways, residences and beachfront campground.

A temporary campground host is recommended until fencing is completed. This will enable the campground to be kept open whilst ensuring the Department meets its duty of care toward visitors. The campground host will undertake proactive education measures and real-time enforcement and dingo response actions. It is also recommended that an ongoing placement occur at peak periods throughout the year.

An enhanced enforcement/public contact strategy will be ongoing and in addition to that currently undertaken with existing resources. This strategy will assist with visitor management outside of the fenced areas. Visitors will gain a better understanding of what attracts dingoes to people and how they should behave in the event of an encounter. The need to accompany children at all times outside the fenced areas will also be a strong message.

Kingfisher Bay Resort and Village. The following strategy is proposed;

- audit and recommendations.

A detailed risk assessment and analysis of required management strategies has not been undertaken for this location. Given the history of dingo incidents and numbers of people exposed it is recommended that a separate audit be conducted. The resort and accommodation areas are within freehold lands however, the beach, walking tracks and commercial tours accessed from this site are within the protected area estate. Additional resources and cost sharing arrangements (for both the audit and ongoing management) need to be identified and agreed upon in consultation with Kingfisher Bay Resort and Village (KBRV) management.

High risk sites

Lake McKenzie precinct including campground, tour operator area, carpark and beach.

The following strategies are proposed;

- campground closure
- new day-use picnic facilities
- new toilets
- wash-up facility construction
- relocation of Hiker's Camp
- fencing
- site closure between 4:00pm and 8:00am
- enhanced enforcement/public contact
- hazing
- prohibit food

This relatively small campground caters for 16 individual campsites and provides a ready and ongoing supply of food for dingoes. The isolated location of this site in relation to QPWS bases restricts the ability to undertake proactive education strategies and renders enforcement action as a reactive response only. Given the extremely high use of this precinct the draft Camping Management Plan recognises the best use of this site to be for day-use only visitation. This risk assessment endorses this approach as a dingo management measure. Dingo barrier fencing will eliminate the risk from dingoes within the compound given a source of food remains available. Relocation of the Hiker's Camp is in accordance with the draft Camping Management Plan. Additional measures will need to be employed with respect to hikers and will need to address food storage, rubbish disposal, cooking methods and equipment. Experience to date

indicates that *bona fide* hikers tend to 'do the right thing', be more receptive to management messages and, in turn, less likely to experience a negative dingo interaction.

Barrier fencing is to include carparks and day-use picnic facilities but will leave the beach and Hikers Camp outside of the fenced area. Food is to be prohibited from the beach but allowed within the fenced areas. Hazing is only proposed for dingoes adjacent to the fenced areas, particularly the gates. It is suggested that dingoes be permitted to roam the food-free beach, however this situation will require monitoring as it is possible for negative human/dingo interactions still to occur for territorial reasons. Hazing would be the appropriate response if such situations started to develop with humane destruction if these measures fail.

It is proposed that the entire precinct be closed at night, except for use by hikers. This is quite easily achieved within the existing road network and will not unduly effect legitimate use. This will substantially reduce the risk from dingoes and negate potential enforcement complications due to unauthorised camping. Ongoing enforcement and public contact is essential and will require additional ranger resources.

Eurong Township. As per Kingfisher Bay Resort and Village. Strategies are complicated by differing tenures and numerous individual landholdings. QPWS has limited jurisdiction within the township. Legislative changes in consultation with the relevant local government may be required to effectively manage the risk from dingoes at this location.

Indian Head Campground. The following strategies are proposed;

- new campground construction
- new toilets
- washup facility construction
- fencing
- hazing
- campground host
- enhanced enforcement/public contact

Camping at Indian Head occurs in a location that for all intents and purposes, is a campground but with no provision of facilities. Several thousand people camp at this location during peak periods. It is not possible to manage the current high risk posed by dingoes without formalising camping and providing basic facilities. Ultimately, it is recommended that a formalised campground be fenced. As an interim measure a campground host is suggested. A minimum of 100 people camp at the location each night therefore to satisfy our duty of care it may be necessary to have a permanent campground host until the completion of alternative strategies. It is not considered desirable to have any interaction between people and dingoes in the area as there remains a great deal of visitor activity outside of the 'campground'. Hazing will be directed at any dingoes in the precinct with a view to educating the dingoes to stay away from the area. Ongoing education and enforcement remains a key strategy at this high-use site.

Indian Head (headland). The following strategies are proposed;

- hazing
- fish cleaning restrictions and/or facility construction
- enhanced enforcement/public contact

A high-use site with visitors undertaking fishing and walks up the headland for sightseeing purposes. The availability of fish carcasses for dingoes is of concern, being a reason for dingoes to come into close contact with people at this location. Restrictions on cleaning and carcass disposal are required, as is a facility to adequately cater for these activities. The precise restrictions and design of cleaning facilities are yet to be determined. Education towards use of any facilities and enforcement of restrictions will require additional ranger resources. Hazing of dingoes will also be an important strategy.

Middle Rocks carpark. The following strategies are proposed;

- prohibit food
- enhanced enforcement/public contact

Dingoes at Middle Rocks (Champagne Pools) carpark are currently not a problem. However, there are concerns that dingoes displaced from Indian Head will target this site if food remains available. It is a high-use site with concentrated activity in the carpark - some people eat lunch in this carpark. The prohibition of food will negate any potential for this area to become attractive to dingoes. It is not considered necessary to prohibit food from the Champagne Pools themselves and visitors can continue to carry food down to this location if so desired. There will also remain an opportunity for the consumption of food on the beach at the southern end of Middle Rocks. Enhanced enforcement and education via additional ranger resources is essential for the success of this strategy.

Waddy Point Day-Use area. As per the Waddy Point Campground with a differing fence design as previously discussed. In addition, it is proposed that the facilities be closed from 4:00pm - 8:00am daily. These time restrictions will assist the management of unauthorised camping whilst eliminating concerns with dingoes at night and negating the requirement for a full dingo barrier fence.

Waddy Point beachfront campground. The following strategies are proposed;

- wash-up facility construction
- limited fencing
- hazing
- fish cleaning restrictions
- enhanced enforcement/public contact

The draft Camping Management Plan raises concerns with respect to the density and style of camping at this location given numerous semi-permanent camps are established in closed proximity to each other. A toilet has since been constructed. Food availability for dingoes remains a concern. It is not possible to fence the entirety of this location. A fence is recommended at the rear of the eastern end of the camping area as it is known that dingoes conduct raids from this swamp into adjacent campsites. A fence will eliminate this risk. Modifications to the toilet site can cater for both wash-up and fish cleaning requirements. A fence surrounding the toilet and cleaning precinct will separate dingoes from this food source. Public education and enforcement is essential as the effectiveness of hazing will be somewhat conditional restricting access to human foods, particularly in years of limited natural food availability. The remaining semi-permanent fishing camps should be removed.

Moderate risk sites

Dilli Village. The following strategy is recommended;

- fencing

Fencing is relatively easy to erect at Dilli Village and it is recommended the entire precinct be fenced, with the exception of the old workshed and generator area. It is considered that the risk from dingoes will effectively be managed by this one strategy at this location.

Happy Valley Township. As per Eurong and Kingfisher Bay Resort and village. No detailed assessment or recommendations have been undertaken to date.

Gary's Anchorage. The following strategy is proposed;

- new toilets

Although this site keys out as medium risk in reality the risk from dingoes is significantly lower. Maximum visitation figures have been used for all sites and is generally an appropriate methodology given the majority of sites receive maximum visitation several times per year. However, at Gary's Anchorage usage is very low (with the exception of the Bay to Bay Yacht Race on one night per year) and subsequently food availability and the numbers of people exposed to dingoes is minimal. A toilet has been proposed for many years and remains a rational approach to enhanced visitor management at the site. No further additional measures are considered necessary at this point.

Ungowa Campground. The following strategies are proposed;

- new toilets (currently under construction)
- wash-up facility construction
- hazing

As per Gary's Anchorage above, it is considered that the use of maximum visitation figures may have elevated the risk from dingoes at this location above that which occurs at the site. Dingo management of this site is linked to that of the Ungowa QPWS base (same dingoes involved) and it is considered that a proactive hazing program is required. Given relatively low usage levels, hazing combined with broader island-wide dingo management measures (see draft Dingo Management Strategy - March 2001) will effectively manage risk at this location.

Central Station proper. The following strategies are proposed;

- campground closure (group camping area excepted)
- wash-up facility construction
- BBQ covers/lids
- hazing
- picnic area closures between 4:00pm and 8:00am daily
- campground host
- enhanced enforcement/public contact

Central Station presents a management challenge given the high intensity use and multitude of activities undertaken. The draft CMP recommends closure to general camping (with the continued provision of group camping) and this is supported as a dingo management measure. The location and design of future group camping area(s) requires reassessment in consideration of the risk posed by dingoes and necessary

control measures. It is appropriate that these issues be considered in conjunction with the site planning process. A 'campground host' is proposed for peak-use periods primarily for the purposes of liaising with day visitors. At these peak periods it remains impossible for staff to undertake the required public contact duties whilst continuing to provide services throughout the remainder of the management unit. Additional facilities or design modifications are recommended to restrict food availability to dingoes. Nighttime closure of the picnic area will assist no-camping enforcement measures and eliminate the risk from dingoes over this period. Hazing will be utilised to reduce the likelihood of a visitor encountering a dingo at this location.

Orchid Beach Fishers Reserve. This is an overflow campground used only during the annual fishing expo. Under the draft CMP a major campground is proposed for construction adjacent to this site. Construction of this new campground is strongly recommended as it will provide alternatives to existing beach camping and can be designed to minimise risks from dingoes. Discussion of specific dingo controls measures is premature and should be considered in the site planning and design phases of the new campground.

Orchid Beach township. As per the other Fraser Island townships. The risk posed by dingoes in this township is real and significant. A separate audit process is strongly recommended.

Low Risk Sites

In determining priorities for site specific management we need to remain cognisant that some low risk sites have received this classification due to significant efforts by staff at these locations for many years. While they currently are considered a low priority for remedial action these sites need to be identified and management measures directed at these areas as needed.

Proposed Legislative and Operational Changes in Relation to Fines and Enforcement Procedures

The following recommendations on proposed legislative and operational changes are in response to a call to review fines and penalties associated with the feeding of dingoes as outlined in Terms of Reference 6.

Feeding dingoes is recognised as a major contributor to habituation and therefore interactions with humans. In accordance with the revised management action proposed for dingoes on Fraser Island, it is proposed to significantly increase enforcement effort and the prescribed penalties which may be applied to persons feeding wildlife in contravention of the *Nature Conservation Regulation 1994* and *Recreation Area Management By-Laws 1991*. A summary of recommendations regarding fines is shown in Table 1.

Incorporated in these amendments will be the necessity to clarify the definitions of 'dangerous animal'. Furthermore the definition of 'feed' should be redefined to incorporate failing to secure food as an offence, including the provision of material from fish cleaning.

The *Recreation Area Management By-Law 1991* expressly permits the feeding of ‘dogs’ at the Inskip Point Recreation Area. In order to obtain consistency between statutory instruments, offences under this section should be revised.

Details of proposed amendments can be found in Attachment 13.

Table 1. Prescribed Penalties and Amendments

Statutory Instrument	Section	Land Status	Penalties			
			Current		Proposed	
			Infringement	Maximum	Infringement	Maximum
Nature Conservation Regulation 1994. State Penalties Enforcement Regulation 2000.	87 Schedule 2	Protected	1 Penalty Unit (\$75)	20 Penalty Units (\$1500)	3 Penalty Units (\$225)	40 Penalty Units (\$3000)
Nature Conservation Regulation 1994. State Penalties Enforcement Regulation 2000.	237 Schedule 2	Non-protected	1 Penalty Unit (\$75)	20 Penalty Units (\$1500)	3 Penalty Units (\$225)	40 Penalty Units (\$3000)
Nature Conservation Regulation 1994. State Penalties Enforcement Regulation 2000.	81(1) Schedule 2	Protected	Not Applicable	120 Penalty Units (\$9000)	3 Penalty Units (\$225)	120 Penalty Units (\$9000)
Recreation Area Management By-Law 1991.	15(1) & 22(2)(c)	Recreation Area	\$50	20 Penalty Units (\$1500)	\$225	40 Penalty Units (\$3000)
Recreation Area Management By-Law 1991.	10(3)(b) & 22(2)(c)	Recreation Area	\$50	20 Penalty Units	\$225	40 Penalty Units (\$3000)

These changes recommend an increase in the on-the-spot fines for feeding dingoes from either \$50 or \$75 (depending on the legislation) to \$225. Maximum penalties for feeding offences by way of complaint and summons through court action are recommended to be doubled from \$1500 to \$3000.

The following legislative changes are also recommended. In addition to the increase in prescribed penalties it is recommended that commercial operators caught directly feeding dingoes will have their commercial tour operators permit cancelled. It is also recommended that individuals caught deliberately feeding dingoes will be directed to immediately leave the recreational area.

Summary of Outcomes for Terms of Reference

1. *Identify which classes of animals are likely to present risks to humans.*

The animals that present the greatest risk to humans are those animals frequenting sites classified as high risk (see Attachment 11). Treatment of these risks should be through the strategies identified as suitable for each site (see Attachment 12).

2. *Develop the principles and practices of a culling program that includes specific prescriptions in relation to particular locations where human/dingo interactions have become commonplace.*

Culling is a legitimate component of the long-term dingo strategy for Fraser Island. As an ongoing policy, dingoes identified as being a high risk to humans will be humanely destroyed. Based on research, a further culling program may be developed. The cull of

individual dingoes that are habituated and frequent heavily used areas by humans has concluded.

3. *Engage leading Australian experts on dingo management to advise on future management directions.*

Three leading dingo experts from Australia have provided advice on a range of subjects covered in this risk assessment. These experts (Laurie Corbett, Peter Fleming and Lee Allan) have also provided advice on future research needs and this information is being used to develop a comprehensive research program for the Island. All three experts will continue to assist in the development of dingo management programs. Dr Corbett is being contracted for five years as an independent adviser on dingo matters on the Island.

4. *Develop immediate options for management procedures including instructions for management of the field situation.*

Following the death on the 30 April 2001, an intensive management program commenced on the Island. Twenty eight (28) dingoes were removed from areas where people were considered most at risk to attacks by habituated dingoes. All dingoes exhibiting aggression towards humans have also been immediately destroyed (a further 3 animals). Management options for all independent sites have been developed as described in this assessment and are being implemented. Limiting the number of visitors is proposed.

5. *Develop a long-term risk assessment program.*

The need for a long-term risk assessment program is recognised and the methodology for this program is as outlined in this report. Recommendations included in this report form the basis for this continuing program.

6. *Review current fines and penalties for the feeding of dingoes.*

Actions to address this Term of Reference are in progress with the proposed legislative and operational initiatives set out in this report and detailed in Attachment 13.

Enhanced Education

Balancing the dingo's conservation value and community support with the need to minimise the risk to humans has been the primary objective of the QPWS in dealing with the dingoes on Fraser Island. A primary strategy has been the implementation of a range of public education and awareness initiative. These include:

- sending pre-visit information to each party obtaining a vehicle service permit and/or camping permit. This information provides warnings about the threats posed by dingoes and recommendations for appropriate behaviour around dingoes;
- providing signs on the Island giving warnings and advice including staying close to children and not feeding wildlife;
- providing detailed training and information for backpacker hostels and 4WD hire companies staff regarding pre-visit briefings and inclusion of dingo related advice. Specific information has been provided to some tour operators especially Kingfisher Bay Resort and Village regarding appropriate guest behaviour and interaction with dingoes.

- arranging Dingo-Smart camping competitions for most Fraser Island bases each holiday period for the last 2 years in order to reinforce the messages.
- providing a leaflet "Dingoes have become Threatening" which specifically targets commercial operator clients; and
- providing displays in all backpacker hostels in Hervey Bay, Maryborough, Rainbow Beach about Fraser Island including displays on dingoes.

These initiatives have provided a comprehensive approach. However, they should be built upon, especially with the tourism industry, to enhance the effective delivery of the necessary level of education and awareness to all visitors to Fraser Island.

Research Needs

Research needs as outlined in the draft Fraser Island Dingo Management Strategy remain relevant and should be implemented as soon as practicable. However, it is critical that there is work conducted in the short term (ie. within 6 months) to assess dingo density and distribution across the island. This information is recognised as critical in terms of developing island-wide strategies and confirming the impact of localised management programs.

Proposals have been received from Peter Fleming and Lee Allen outlining trap and release and sandplot monitoring programs that have been conducted successfully elsewhere in Australia. In the absence of an immediate commencement of a long-term research program one or both of these studies should be undertaken. This work should commence immediately.

Monitoring and Review

The risk analysis has identified estimated risk ratings per location and given a priority order for action on a site by site basis. The process has also identified the main causal factors contributing to the likelihood of negative dingo/human interaction.

Due to the potential for one or more of the risk factors changing it is necessary to continually monitor these factors and review the impact such changes have on the risk ratings of each area on the Island. For example if dingo aversion methods succeed in preventing dingoes from visiting a particular area this will change the dingo visitation risk factor which in turn will reduce the overall risk level for that site. Similarly if the erection of a fence precludes dingo human interaction in a particular location the risk rating for that location will be significantly reduced or eliminated.

This process of monitoring and review is also valuable to assess if the introduction of control measures has actually reduced the risk of that particular location. Consequences can only be reduced by reducing the number or severity of attacks by dingoes on humans. This can only be achieved by intervention by third parties or by successful education of visitors on how to react when dingoes display harassing or aggressive behaviour.

The consequence may be reduced by ensuring that children are accompanied by adults, the intervention by a camp ground host or the appropriate response by the person. These factors can and should all be monitored. The change in behaviour and knowledge of

visitors can be monitored and reviewed by surveys of visitors. This will also act as a measure of the success of publicity and promotional campaigns implemented under the dingo management strategy.

Camp ground hosts have been suggested for some locations. Measurement of incident numbers and consequence data will be one indicator of the success of this control measure. There is a need to develop clear indicators of success for all control measures.

It must also be recognised that at many sites there will be more than one control measure implemented and that monitoring programs must where possible measure the success of individual controls and combinations of controls.

The monitoring and review program should achieve the following:

Implementation of the risk management controls

Reporting on implementation of management strategies quarterly for first year and 6 monthly thereafter. These reviews should be conducted as part of the normal management processes. The aim of the monitoring and review program is to ensure that there is a reduction in risks as a result of the implemented programs. To aid this process targets need to be set to reduce the risk to low across the Island. Once risks are low monitoring should be conducted regularly even though the risk rating may not be expected to change. These assessments should take account of seasonal changes to visitation and dingo behaviour.

A major review should be conducted within six months of the release of the Dingo Management Strategy including the risk analysis documentation. This review should be conducted by management and include an independent auditor.

Risk factors

Continuous monitoring should include changes such as a significant increase in visitor numbers or changes in human food availability of a site. These changes should then be factored into the risk level for that site.

A quarterly review of the risk levels of all sites should be conducted for the first year and then 6 monthly.

The factors to be monitored are;

Visitor numbers and age composition (eg. adult/children)
Visitor behaviour towards dingoes (eg. neutral/incitory)
Dingo numbers, frequency and exposure
Food availability (quantity, form and accessibility)
Incidents

Incidents

The current incident reporting system is being reviewed. This is vital for the long term assessment of the risk associated with negative dingo/human interaction.

Visitor awareness

A system should be implemented to monitor visitor awareness of the dangers of dingoes and the precautions that should be taken in a situation of confrontation with a dingo or dingoes. In addition non-compliance level should be monitored and recorded.

Summary of Major Recommendations

- Fines and penalties for the feeding of dingoes should be significantly increased. It is recommended to increase on-the-spot fines for feeding dingoes from either \$50 or \$75 (depending on the legislation) to \$225. Maximum penalties for feeding offences by way of complaint and summons through court action are recommended to be doubled from \$1500 to \$3000. In addition to the increase in prescribed penalties it is recommended that commercial operators caught directly feeding dingoes will have their commercial tour operators permit cancelled. It is also recommended that individuals caught deliberately feeding dingoes will be directed to immediately leave the recreational area. Legislative changes to clarify the definitions of 'feeding' are needed.
- The draft Fraser Island Dingo Management Strategy needs to be adjusted to reflect the now-confirmed risk posed to humans by dingoes. The strategy should incorporate new management options identified in this Risk Assessment as appropriate for ongoing management. The strategy should then proceed to approval and full implementation.
- Limits on the number of visitors to Fraser Island should be considered prior to 31 December 2001. Any such limits, and mechanisms to achieve these, should be considered in consultation with the Island's residents, tour operators, the Fraser Island Community Advisory Committee, native title claimants and the Island's World Heritage Area Management Committee. Possible strategies to achieve such reductions could include:
 - establishing a system of daily limits on the number of visitors on the Island;
 - setting limits on visitor numbers at specific locations;
 - limiting camping to constructed camping areas;
 - reviewing the planning controls applying to the freehold/township areas to manage potential for higher density development; and
 - limiting vehicle access permits.
- Implement dingo management measures identified in this Report. This requires the appointment of a Senior Conservation Officer at Maryborough and the appointment of 4 rangers (004-005) on Fraser Island, principally focused on dingo management (1 based at each of the 4 QPWS bases on the Island, Waddy Point, Dundubara, Eurong and Central Station). Rangers should report to the Ranger-in-Charge at each base and have dingo management activities coordinated by a Senior Conservation Officer at Maryborough.
- The current public education and awareness programs should be maintained and enhanced with the comprehensive approach including:
 - continuing to send pre-visit information to each party obtaining a vehicle service permit and/or camping permit. This information provides warnings

- about the threats posed by dingoes and recommendations for appropriate behaviour around dingoes;
 - reviewing and where appropriate upgrading signs on the Island giving warnings and advice including staying close to children and not feeding wildlife;
 - providing detailed training and information for staff of backpacker hostels, 4WD hire companies and the Island's accommodation businesses regarding pre-visit briefings and provision of dingo related advice;
 - continue to conduct 'Dingo-Smart' activities such as camping competitions on the Island during holiday periods;
 - continue to provide the leaflet "Dingoes have become Threatening" which specifically targets commercial operator clients; and
 - continue to provide displays in all backpacker hostels in Hervey Bay, Maryborough, Rainbow Beach about Fraser Island including displays about dingoes.
- Research on the population dynamics of the dingoes, including their natural food sources, on Fraser Island is important to the long-term success of dingo conservation on the Island. Short term and long term research programs as highlighted in this assessment should commence as soon as possible. Immediate programs to standardise and record all adverse dingo/human interactions on the Island should be implemented.
- Limited time and jurisdictional constraints have negated the ability to conduct comprehensive risk assessments within townships and other private landholdings on Fraser Island. Given the ready supply of food and numbers of people exposed there is a real risk from dingoes at these sites. Incident data confirms this threat. It is suggested that additional risk assessments be conducted for these areas to enable dingo management measures to encompass the full range of land tenures on Fraser Island.
- For the effective enforcement of dingo management measures across all areas of Fraser Island, including the townships and freehold lands, appropriate powers need to be established. An important first step therefore is to initiate discussions with the relevant local governments to establish a cooperative arrangement.
- A monitoring and review schedule is required to achieve the following:
 - reporting on implementation of management strategies quarterly for the first year and 6 monthly thereafter; and
 - quarterly re-assessment of sites classified as extreme, high and moderate risk and consequent adjustment to risk management measures on a site by site basis.

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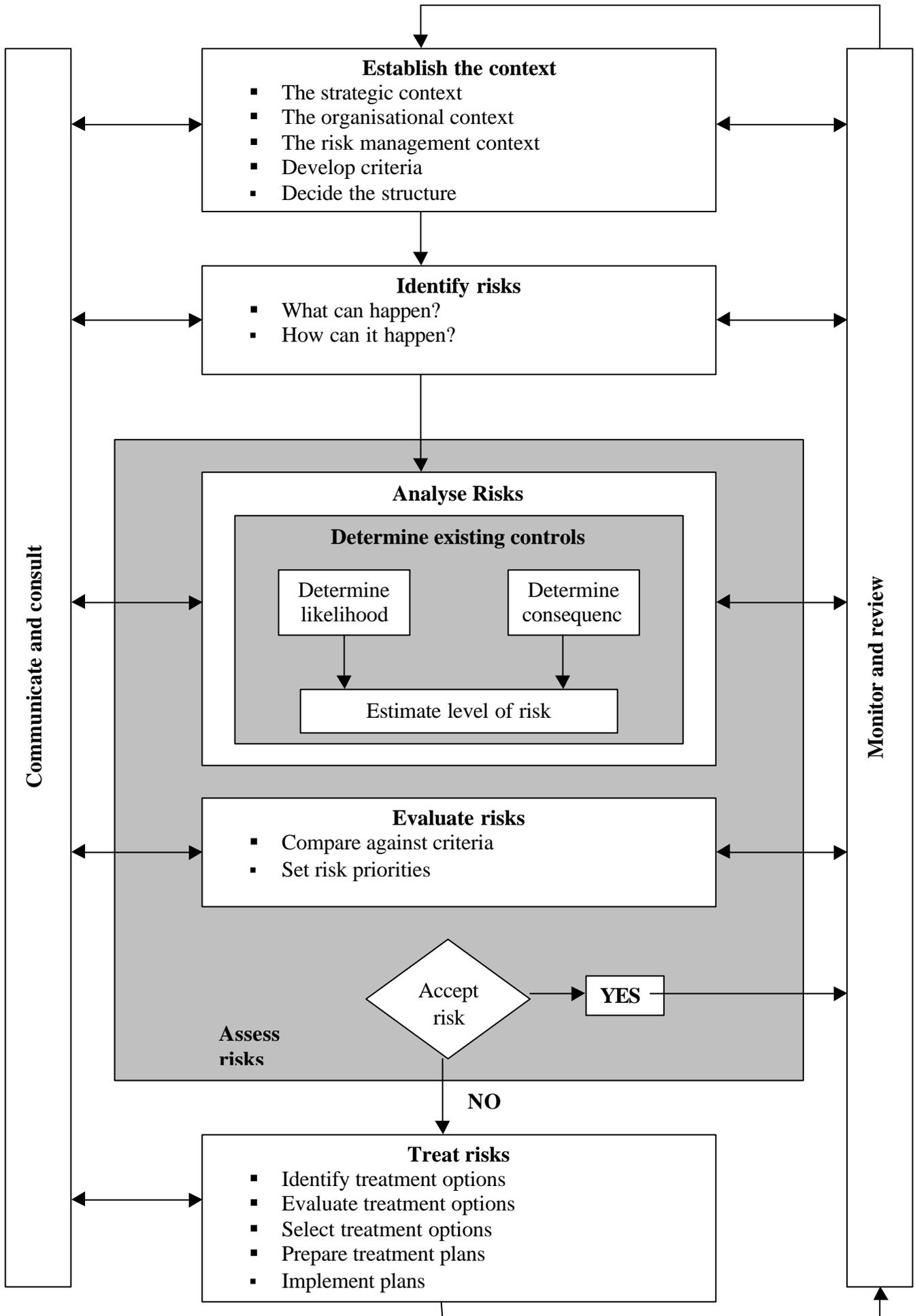
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Risk assessment methodology



Qualitative measure of **consequence** or impact

Level	Descriptor	Description
1	Insignificant	No injuries, Property damage, Insignificant harassment by Dingo/s
2	Minor	First aid treatment, Minor harassment by Dingo/s
3	Moderate	Medical treatment required, Moderate harassment by dingo/s
4	Major	Extensive injuries, moderate or major harassment by Dingo of child. Major harassment of adult by Dingo
5	Catastrophic	Death

Qualitative measure of **likelihood**

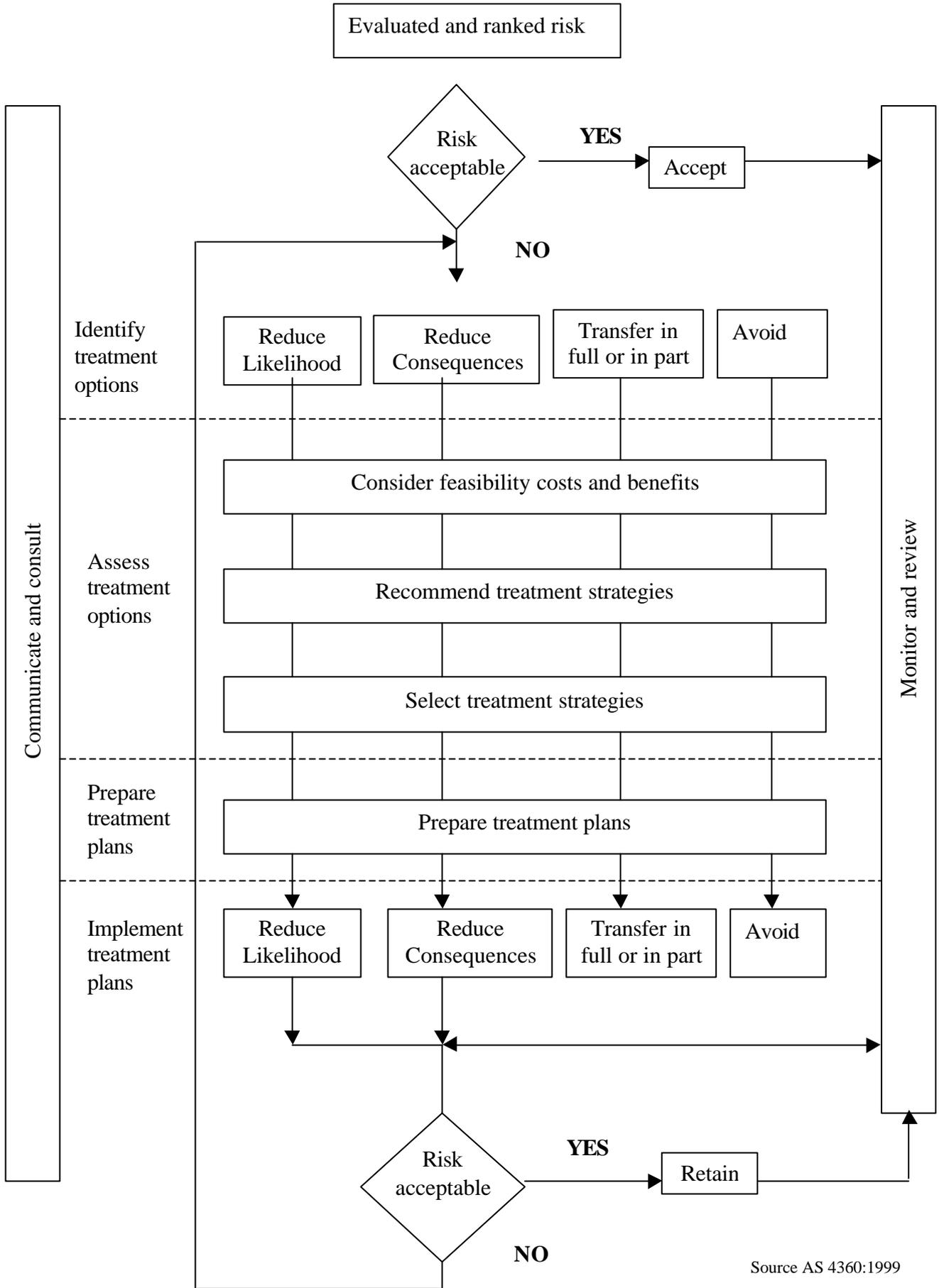
Level	Descriptor	Description
A	Almost certain	Is expected to occur in most circumstances
B	Likely	Will probably occur I most circumstances
C	Possible	Commonly Occurs
D	Unlikely	Not likely to occur
E	Rare	Only occurs only in exceptional circumstances

Qualitative risk analysis matrix – Level of risk

Likelihood	Consequences				
	Harassment				
	Insignificant (Property damage) 1	Minor (Nip) 2	Moderate (bite) 3	Major (bite) 4	Catastrophic (death) 5
A (almost certain)	H	H	E	E	E
B (likely)	M	H	H	E	E
C (moderate)	L	M	H	E	E
D (unlikely)	L	L	M	H	E
E (rare)	L	L	M	H	H

E = Extreme H = High M = Moderate L = Low

Risk treatment process



Hierarchy of controls as per the Workplace Health & Safety Risk Management Advisory Standard 2000

1	Elimination	Firstly try to eliminate the hazard. This may mean discontinuing dangerous work practices or removing dangerous substances or equipment.
2	Substitution	Substituting a less hazardous material or equipment.
3	Redesign	Redesigning the workplace equipment or work processes so work can be done differently
4	Isolation	Isolating the hazard from the person, or the person from the hazard
5	Administrative controls	Introduce administrative controls, which involve using procedures or instructions eg. education and training
6	Personal Protective Equipment	Use Personal Protective Equipment (PPE) as the final barrier between people and the hazard.

Attachment 5

Visitor numbers risk factor ratings

Location	Maximum Visitor Numbers/Day	Risk Factor Ratings
EURONG MANAGEMENT UNIT		
Hook Point barge landing	5000	A (almost certain)
Dilli Village	100	D (unlikely)
Lake Boomanjin campground and day-use area	240	C (moderate)
Eurong township	1000	A (almost certain)
Eurong beachfront (No camp area)	200	C (moderate)
Eurong QPWS base	20	E (rare)
Zone 1 beach camping area	240	C (moderate)
Zone 2 beach camping area	240	C (moderate)
Zone 3 beach camping area	2500	A (almost certain)
Lake Wabby beach carpark	400	C (moderate)
Lake Wabby inland carpark and lookout	200	C (moderate)
Stonetool Sandblow Lookout	100	D (unlikely)
The Oaks private residence	20	E (rare)
Poyungan Rocks private residences	15	E (rare)
Rainbow Gorge car park	100	D (unlikely)
Yidney rocks private residences	40	E (rare)
Happy Valley township	250	C (moderate)
Eli Creek and boardwalk	800	B (likely)
Lake Garawongerra day-use area and beach	150	D (unlikely)
EURONG RESORT	unknown	unknown
CENTRAL MANAGEMENT UNIT		
Gary's Anchorage	90	E (rare)
Ungowa campground	60	E (rare)
Ungowa QPWS base	10	E (rare)
Wanggoolba creek barge landing	1000	A (almost certain)
Lake Birrabeen tourist operator area 1	15	E (rare)
Lake Birrabeen upper car park, toilets and day use area	300	C (moderate)
Lake Birrabeen beach	500	B (likely)
Lake Birrabeen lower tourist operator bus park area	200	C (moderate)
Central Station proper	1000	A (almost certain)
Central Station QPWS duplex residence	4	E (rare)
Central Station new campground	300	C (moderate)
Lake Benaroon hikers camp	20	E (rare)
McKenzies Jetty	50	E (rare)
Lake McKenzie public car park	600	B (likely)
Lake McKenzie campground	100	D (unlikely)
Lake McKenzie tourist operator bus park and BBQ site	300	C (moderate)
Lake McKenzie main beach	1000	A (almost certain)
Lake McKenzie hikers camp	30	E (rare)
Pile Valley car park	100	D (unlikely)
Kingfisher Bay Resort and Village	500	B (likely)

Location	Maximum Visitor Numbers/Day	Risk Factor Ratings
DUNDUBARA MANAGEMENT UNIT		
The Maheno shipwreck	500	B (likely)
The Pinnacles	200	C (moderate)
Zone 4 beach camping area	1500	A (almost certain)
Cathedral Beach Resort	200	C (moderate)
Dundubara camp ground	600	B (likely)
Dundubara QPWS residences	6	E (rare)
Indian Head campground	600	B (likely)
Indian Head (headland)	500	B (likely)
Knifblade Sandblow carpark and lookout	100	D (unlikely)
Lake Allom day use area	100	D (unlikely)
Moon Point barge landing	200	C (moderate)
Puthoo QPWS camp	6	E (rare)
Zone 7 beach camping area	400	C (moderate)
Coomboo Lake QPWS camp	6	E (rare)
Lake Bowarrady hikers camp	4	E (rare)
WADDY POINT MANAGEMENT UNIT		
Middle Rocks car park	500	B (likely)
Waddy Point campground	360	C (moderate)
Waddy Point day-use area	50	E (rare)
Waddy Point QPWS residences	10	E (rare)
Waddy Point beachfront campground	270	C (moderate)
Waddy Lodge	30	E (rare)
Orchid Beach township	500 (?)	B (likely)
Orchid Beach Fishers Reserve campground	300	C (moderate)
Wathumba Creek campground	240	C (moderate)
Zone 5 beach camping area	660	B (likely)
Ocean Lake day-use area	200	C (moderate)
Zone 6 beach camping area	180	D (unlikely)
Sandy Cape Fisherman's Camp	10	E (rare)
Waddy point (headland)	200	C (moderate)
SANDY CAPE QPWS RESIDENCE		
		E (rare)

Location	Dingo Numbers Prior to cull	Dingoes culled	Dingo numbers after cull	Frequency of dingo exposure	Duration of dingo exposure in minutes	Total dingo exposure minutes	Risk factor rating
CENTRAL MANAGEMENT UNIT							
Gary's Anchorage	2	0	2	3 x Weekly or .43 Daily	30	26	E (Rare)
Ungowa camp ground	4	0	4	4 x Daily	60	960	B (Likely)
Ungowa QPWS base	4	0	4	3 x Daily	60	720	B (Likely)
Wanggoolba creek barge landing	3	2	1	3 x Daily	60	180	C (Moderate)
Lake Birrabeen southern tourist operator area	4	0	4	Weekly	passing by		E (Rare)
Lake Birrabeen upper car park, toilets and day use area	4	0	4	1 x Daily	30	120	C (Moderate)
Lake Birrabeen beach	4	0	4	1 x Daily	180	720	B (Likely)
Lake Birrabeen lower tourist operator bus park area	4	0	4	1 x Daily	180	720	B (Likely)
Central Station proper	4	3	1	1 x Weekly or .14 Daily	5	.70	E (Rare)
Central Station QPWS duplex residence	4	0	4	1 x Weekly or .14 Daily	5	2.8	E (Rare)
Central Station new camp ground	unknown	0	unknown	1 x Weekly or .14 Daily	2	unknown	unknown
Lake Benaroon hikers camp	unknown	0	unknown	1 x Weekly or .14 Daily	2	unknown	unknown
McKenzies Jetty	3	0	3	2 x Daily	30	180	C (Moderate)
Lake McKenzie public car park	4	0	4	1 x Daily	60	240	C (Moderate)
Lake McKenzie camp ground	4	0	4	1 x Daily	60	240	C (Moderate)
Lake McKenzie tourist operator bus park and BBQ site	4	1	3	1 x Daily	60	180	C (Moderate)

Location	Dingo Numbers Prior to cull	Dingoes culled	Dingo numbers after cull	Frequency of dingo exposure	Duration of dingo exposure in minutes	Total dingo exposure minutes	Risk factor rating
WADDY POINT MANAGEMENT UNIT							
Middle Rocks car park	7	0	7	1 x Daily	120	840	B (Likely)
Waddy point camp ground	7	4	3	1 x Daily	480	1440	A(Almost certain)
Waddy Point day use area	7	0	7	1 x Daily	480	3360	A(Almost certain)
Waddy point QPWS residences	7	0	7	1 x Daily	5	35	E (Rare)
Waddy Point beach front camp ground	7	0	7	1 x Daily	480	3360	A(Almost certain)
Waddy lodge				Daily			
Orchid Beach township	9	0	9	1 x Daily	480	4320	A(Almost certain)
Orchid Beach fishers reserve camp ground	9	0	9	1 x Daily	120	1080	A(Almost certain)
Wathumba Creek camp ground	4	0	4	Yearly	60	.72	E (Rare)
Zone 5 beach camping (including Orchid Beach Nth)	5	0	5	1 x Daily	60	300	C (Moderate)
Ocean Lake day use area	5	2	3	1 x Daily	60	180	C (Moderate)
Zone 6 beach camping area	2	0	2	1 x Daily	60	120	C (Moderate)
Sandy Cape Fisherman's Camp	2	0	2	1 x Daily	60	120	C (Moderate)
Sandy Cape QPWS residences	2	0	2	1 x Daily	120	240	C (Moderate)
Waddy point (Headlands)				Weekly	5		

Attachment 7

Availability of food risk factor rating

Location	Site Use	Risk factor ratings
EURONG MANAGEMENT UNIT		
Hook Point barge landing	waiting for vehicles	E (rare)
Dilli Village	camping	A (almost certain)
Lake Boomanjin campground and day-use area	camping /BBQ picnic	A (almost certain)
Eurong township	all uses	Estimated C (Moderate)
Eurong beachfront (No camp area)	fishing, swimming, general recreation	E (Rare)
Eurong QPWS base	Residences	E (rare)
Zone 1 beach camping area	camping, fishing	A (almost certain)
Zone 2 beach camping area	camping, fishing	A (almost certain)
Zone 3 beach camping area	camping, fishing	A (almost certain)
Lake Wabby beach carpark	car park and walk track	E (rare)
Lake Wabby inland carpark and lookout	car park, lookout and walk track	E (rare)
Stonetool Sandblow Lookout	picnic and lookout	C (moderate)
The Oaks private residence	residences	E (rare)
Poyungan Rocks private residences	residences	E (rare)
Rainbow Gorge car park	walk track	E (rare)
Yidney Rocks private residences	residence	E (rare)
Happy Valley township	township	E (rare)
Eli Creek and boardwalk	swimming, sunbaking	E (rare)
Lake Garawongerra day-use area and beach	BBQ picnic area	A (almost certain)
CENTRAL MANAGEMENT UNIT		
Gary's Anchorage	camping, BBQ area	A (almost certain)
Ungowa campground	Camping and fishing	A (almost certain)
Ungowa QPWS base	residences	E (rare)
Wangoolba creek barge landing	waiting in and around vehicles	E (rare)
Lake Birrabeen tourist operator area 1	picnic	C (moderate)
Lake Birrabeen upper car park, toilets and day use area	picnic, car park & toilets	B (likely)
Lake Birrabeen beach	swimming, picnic	D (unlikely)
Lake Birrabeen lower tourist operator bus park area	bus park (some eating)	D (unlikely)
Central Station proper	camping, BBQ , picnic, sightseeing.	B (likely)
Central Station QPWS duplex residence	residence	E (rare)
Central Station new campground	camping	A (almost certain)
Lake Benaroon hikers camp	camping	A (almost certain)
McKenzies Jetty	sightseeing	E (rare)
Lake McKenzie public car park	car park, picnic	D (unlikely)
Lake McKenzie campground	camping	A (almost certain)
Lake McKenzie tourist operator bus park and BBQ site	BBQ picnic	C (moderate)

Lake McKenzie main beach	swimming, picnic, sightseeing	E (Rare)
Lake McKenzie hiker's camp	camping	A (almost certain)
Pile Valley car park	sightseeing	E (rare)
Kingfisher Bay Resort and Village	Eating and misc	A (almost certain)
DUNDUBARA MANAGEMENT UNIT		
The Maheno shipwreck	sightseeing, fishing occasionally	E (Rare)
The Pinnacles	sightseeing	E (rare)
Zone 4 beach camping area	camping, fishing	A (almost certain)
Cathedral Beach Resort	supervised camping	C (moderate)
Dundubara campground	camping, fishing	A (almost certain)
Dundubara QPWS residences	residence	E (rare)
Indian Head campground	camping, fishing	A (almost certain)
Indian Head (headland)	fishing, sightseeing	E (rare)
Knifeblade Sandblow carpark and lookout	sightseeing	E (rare)
Lake Allom day-use area	sightseeing, BBQ picnic, camping	B (likely)
Moon Point barge landing	waiting in vehicles, some camping, fishing	E (rare)
Puthoo QPWS camp	part-time residence	E (rare)
Zone 7 beach camping area	camping, fishing	A (almost certain)
Coombloo Lake QPWS camp	part-time residence	E (Rare)
Lake Bowarrady Hikers camp	camping	A (almost certain)
WADDY POINT MANAGEMENT UNIT		
Middle Rocks car park	car park, walk track	D (unlikely)
Waddy Point campground	camping	A (almost certain)
Waddy Point day-use area	BBQ picnic	A (almost certain)
Waddy Point QPWS residences	residence	E (rare)
Waddy Point beach front campground	camping, fishing	A almost certain)
Waddy Lodge	private accommodation	E (rare)
Orchid Beach township	township	Estimated C (Moderate)
Orchid Beach Fishers Reserve campground	camping (to be constructed)	A (almost certain)
Wathumba Creek campground	camping, fishing	A (almost certain)
Zone 5 Beach camping area	camping, fishing	A (almost certain)
Ocean Lake day-use area	sightseeing, BBQ picnic	E (rare)
Zone 6 beach camping area	camping, fishing	A (almost certain)
Sandy Cape QPWS residences	residence	E (rare)
Waddy Point (headland)	fishing	D (unlikely)
Sandy Cape fisherman's camp	fishing, camping	C (Moderate)

Attachment 8

Summary of dingo/human incidents 1996 to 2001

Consequences

Year	Total	Insignificant	Minor	Moderate	Major	Catastrophic
1996	46	14	13	10	9	
1997	113	40	29	35	9	
1998	81	11	17	34	19	
1999	24	9	6	9		
2000	9		1	7	1	
2001	6		4		1	1
Totals	279	74	70	95	39	1

1996 Incident Data

Consequences

Locations	Totals	Insignificant	Minor	Moderate	Major	Catastrophic
Unknown	2	1			1	
Kingfisher Bay Resort	4		2	1	1	
Lake McKenzie	6	1		3	2	
Gary's Anchorage	3	1			2	
Central station	12	4	3	4	1	
Woralie track	1	1				
Dundubara	3	1	2			
Indian Head campground	2		1	1		
Lake Birrabeen	3		3			
Eurong township	3			1	2	
Cornwall's Road	1	1				
Maheno wreck	1	1				
Waddy Point	1		1			
Happy Valley	2	2				
Pinnacles	1		1			
Eli creek	1	1				
Totals	46	14	13	10	9	0

1997 Incident Data

Consequences

Locations	Totals	Insignificant	Minor	Moderate	Major	Catastrophic
Unknown	9	4	1	1	3	
Dilli Village	2	1	1			
Lake McKenzie	47	11	14	19	3	
Indian Head	8	2	4	2		
Eli Creek	1			1		
Eurong	4		2	1	1	
Eurong resort	4		2	2		
Eurong Village	1		1			
Middle Rock	1			1		
The Oaks	1	1				
Central Station	12	9	2	1		
Dundubara	13	12	1			
Champagne Pools	1		1			
Kingfisher Bay Resort	7			5	2	
Waddy Point	2			2		
Totals	113	40	29	35	9	0

1998 Incident Data**Consequences**

Locations	Totals	Insignificant	Minor	Moderate	Major	Catastrophic
Unknown	12			5	7	
Lake McKenzie	25	2	14	8	1	
Indian Head	10			4	6	
Kingfisher Bay Resort	14		1	11	2	
Waddy Point	8	2	1	3	2	
Eurong	1			1		
Dundubara	8	5		2	1	
Dilli Village	1		1			
Central Station	1	1				
Mahino Wreck	1	1				
Totals	81	11	17	34	19	0

1999 Incident Data**Consequences**

Locations	Totals	Insignificant	Minor	Moderate	Major	Catastrophic
Waddy Point	16	9	5	2		
Orchid Beach	8		1	7		
Totals	24	9	6	9	0	0

2000 Incident Data**Consequences**

Locations	Totals	Insignificant	Minor	Moderate	Major	Catastrophic
Waddy Point	4			4		
Orchid Beach	2			2		
Ungowa	2		1	1		
Happy valley	1				1	
Totals	9		1	7	1	

2001 Incident Data**Consequences**

Locations	Totals	Insignificant	Minor	Moderate	Major	Catastrophic
Waddy Point	4		2		1	1
Indian Head	2		2			
Totals	6		4		1	1

Attachment 9. Incident numbers and anecdotal risk factor ratings

Location	Incident Numbers	Risk factor ratings based on actual incidents	Risk factors based on anecdotal reports of harassment
EURONG MANAGEMENT UNIT			
Hook Point barge landing			occasional
Dilli Village	1	E (rare)	occasional
Lake Boomanjin campground and day-use area			occasional
Eurong township	1	E (rare)	frequent
Eurong beachfront (No camp area)	7	D (unlikely)	frequent
Eurong QPWS base			never
Zone 1 beach camping area			never
Zone 2 beach camping area			occasional
Zone 3 beach camping area	1	E (rare)	occasional
Lake Wabby beach carpark			occasional
Lake Wabby inland carpark and lookout			never
Stonetool Sandblow Lookout			never
The Oaks private residence	1	E (rare)	unknown
Poyungan Rocks private residences			unknown
Rainbow Gorge car park			never
Yidney Rocks private residences			occasional
Happy Valley township	3	E (rare)	frequent
Eli Creek and boardwalk	2	E (rare)	occasional
Lake Garawongerra day-use area and beach			never
Eurong Resort	5	E (rare)	unknown
CENTRAL MANAGEMENT UNIT			
Gary's Anchorage	3	E (rare)	never
Ungowa campground	2	E (rare)	never
Ungowa QPWS base			never
Wanggoolba Creek barge landing			occasional
Lake Birrabeen tourist operator area 1			never
Lake Birrabeen upper car park, toilets and day-use area			never
Lake Birrabeen beach	3	E (rare)	never
Lake Birrabeen lower tourist operator bus park area			never
Central Station proper	24	B (moderate)	occasional
Central Station QPWS duplex residence			never
Central Station campground	1	E (rare)	unknown
Lake Benaroon hikers camp			never
McKenzies Jetty			never
Lake McKenzie public car park			frequent
Lake McKenzie campground	78	A (Almost certain)	frequent
Lake McKenzie tourist operator bus park and BBQ site			frequent
Lake McKenzie main beach			frequent
Lake McKenzie hikers camp			occasional
Pile Valley car park			never
Kingfisher Bay Resort and Village	25	C (Moderate)	frequent

DUNDUBARA MANAGEMENT UNIT			
The Maheno shipwreck			never
The Pinnacles	1	E (rare)	never
Zone 4 beach camping area	26	C (moderate)	frequent
Cathedral Beach Resort			occasional
Dundubara campground			occasional
Dundubara QPWS residences			never
Indian Head campground	23	C (moderate)	frequent
Indian Head (headland)			frequent
Knifeblade Sandblow carpark and lookout			never
Lake Allom day-use area			never
Moon Point barge landing			occasional
Puthoo QPWS camp			never
Zone 7 beach camping area			never
Coomboo Lake QPWS camp			never
Lake Bowarrady hikers camp			never
WADDY POINT MANAGEMENT UNIT			
Middle Rocks car park	2	E (Rare)	never
Waddy Point campground			frequent
Waddy Point day-use area	35	B (likely)	frequent
Waddy Point QPWS residences			never
Waddy Point beach front campground			frequent
Waddy Lodge			unknown
Orchid Beach township	10	C (Moderate)	frequent
Orchid Beach Fishers Reserve campground			never
Wathumba Creek campground			never
Zone 5 beach camping area			occasional
Ocean Lake day-use area			occasional
Zone 6 beach camping area			never
Sandy Cape fisherman's camp			unknown
Sandy Cape QPWS residences			never
Waddy Point (headland)			frequent

Attachment 10

Overall site-specific risk levels (Qualitative measure of likelihood against consequence)

Location	Visitor frequency factor	Dingo frequency and exposure factor	Site activity and use factor	Incident factor	Anecdotal harassment factor	Total likelihood score	Likelihood rating	Average Consequence	Final Risk Level for location
EURONG MANAGEMENT UNIT									
Hook Point barge landing	5	1	1	0	2	9	D	Insignificant	L
Dilli Village	2	3	5	1	2	13	C	Minor	M
Lake Boomanjin camp ground and day-use area	3	5	5	0	2	15	C	Insignificant	L
Eurong township	5	3	3	1	4	16	B	Minor	H
Eurong beachfront (No camp area)	3	3	1	2	4	13	C	Minor	M
Eurong QPWS base	1	1	1	0	0	3	E	Insignificant	L
Zone 1 beach camping area	3	1	5	0	0	9	D	Insignificant	L
Zone 2 beach camping area	3	1	5	0	2	11	C	Insignificant	L
Zone 3 beach camping area	5	3	5	1	2	16	B	Insignificant	M
Lake Wabby beach carpark	3	3	1	0	2	9	D	Insignificant	L
Lake Wabby inland carpark and lookout	3	1	1	0	0	5	E	Insignificant	L
Stonetool Sandblow Lookout	2	1	3	0	0	6	D	Insignificant	L
The Oaks private residence	1	3	1	1	unknown	6+	D+	Insignificant	L
Poyungan Rocks private residences	1	1	1	0	unknown	3+	E+	Insignificant	L
Rainbow Gorge car park	2	1	1	0	0	4	E	Insignificant	L

Location	Visitor frequency factor	Dingo frequency and exposure factor	Site activity and use factor	Incident factor	Anecdotal harassment factor	Total likelihood score	Likelihood rating	Average Consequence	Final Risk Level for location
EURONG MANAGEMENT UNIT (Cont)									
Yidney rocks private residences	1	3	1	0	2	7	D	Insignificant	L
Happy Valley township	3	4	1	1	4	13	C	Minor	M
Eli Creek and boardwalk	4	1	1	1	2	9	D	Minor	L
Lake Garawongerra day-use area and beach	2	1	5	0	0	8	D	Insignificant	L
Eurong Resort	unknown	unknown	unknown	1	unknown	unknown	unknown	unknown	unknown
CENTRAL MANAGEMENT UNIT									
Gary's Anchorage	1	1	5	1	0	8	D	Moderate	M
Ungowa campground	1	4	5	1	0	11	C	Minor	M
Ungowa QPWS base	1	4	1	0	0	6	D	Insignificant	M
Wanggoolba Creek barge landing	5	3	1	0	2	11	C	Insignificant	L
Lake Birrabeen southern tourist operator area	1	1	3	0	0	5	E	Insignificant	L
Lake Birrabeen upper car park, toilets and day-use area	3	3	4	0	0	10	D	Insignificant	L
Lake Birrabeen beach	4	4	2	1	0	11	C	Minor	M
Lake Birrabeen lower tourist operator bus park area	3	4	2	0	0	9	D	Insignificant	L

Location	Visitor frequency factor	Dingo frequency and exposure factor	Site activity and use factor	Incident factor	Anecdotal harassment factor	Total likelihood score	Likelihood rating	Average Consequence	Final Risk Level for location
Central Station proper	5	1	4	4	2	16	B	Insignificant	M
Central Station QPWS duplex residence	1	1	1	0	0	3	E	Insignificant	L
Central Station new camp ground	3	unknown	5	1	?	9+	D+	Insignificant	L
Lake Benaroon hikers camp	1	unknown	5	0	0	6+	D+	Insignificant	L
McKenzies Jetty	1	3	1	0	0	5	E	Insignificant	L
Lake McKenzie public car park	4	3	2	0	4	13	C	Minor	M
Lake McKenzie campground	2	3	5	5	4	19	B	Minor	H
Lake McKenzie tourist operator bus park and BBQ site	3	3	3	0	4	13	C	Minor	M
Lake McKenzie hikers camp	1	3	5	0	2	11	C	Minor	M
Lake McKenzie main beach	5	3	1	0	4	13	C	Minor	M
Pile Valley car park	2	1	1	0	0	4	E	Insignificant	L
Kingfisher Bay Resort and Village	4	5	5	3	4	21	A	Moderate	E
DUNDUBARA MANAGEMENT UNIT									
The Maheno shipwreck	4	3	1	0	0	8	D	Insignificant	L
The Pinnacles	3	3	1	1	0	8	D	Minor	L

Location	Visitor frequency factor	Dingo frequency and exposure factor	Site activity and use factor	Incident factor	Anecdotal harassment factor	Total likelihood score	Likelihood rating	Average Consequence	Final Risk Level for location
DUNDUBARA MANAGEMENT UNIT (Cont)									
Zone 4 beach camping area	5	3	5	3	4	20	B	Insignificant	M
Cathedral Beach Resort	3	4	3	0	2	12	C	Insignificant	L
Dundubara campground	4	3	5	0	2	14	C	Insignificant	L
Dundubara QPWS residences	1	3	1	0	0	5	E	Insignificant	L
Indian Head (headland)	4	5	1	3	4	17	B	Moderate	H
Indian Head campground	4	3	5	3	4	19	B	Moderate	H
Knifeblade Sandblow carpark and lookout	2	1	1	0	0	4	E	Insignificant	L
Lake Allom day-use area	2	3	4	0	0	9	D	Insignificant	L
Moon Point barge landing	3	1	1	0	2	7	D	Insignificant	L
Puthoo QPWS camp	1	1	1	0	0	3	E	Insignificant	L
Zone 7 beach camping area	3	2	5	0	0	10	D	Insignificant	L
Coomboo Lake QPWS camp	1	1	1	0	0	3	E		L
Lake Bowarrady hikers camp	1	1	5	0	0	7	D	Insignificant	L

Location	Visitor frequency factor	Dingo frequency and exposure factor	Site activity and use factor	Incident factor	Anecdotal harassment factor	Total likelihood score	Likelihood rating	Average Consequence	Final Risk Level for location
WADDY POINT MANAGEMENT UNIT									
Middle Rocks car park	4	4	2	1	0	11	C	Moderate	H
Waddy Point campground	3	5	5	4	4	21	A	Moderate	E
Waddy Point day use area	1	5	5	4	4	19	B	Moderate	H
Waddy Point QPWS residences	1	1	1	0	0	3	E	Insignificant	L
Waddy Point beach front campground	3	5	5	0	4	17	B	Moderate	M
Waddy Lodge	1	unknown	1	0	unknown	2+	E+	Insignificant	L
Orchid Beach township	4	5	3	3	4	19	B	Insignificant	L
Orchid Beach Fishers Reserve camp ground	3	5	5	0	0	13	C	Insignificant	L
Wathumba Creek camp ground	3	1	5	0	0	9	D	Insignificant	L
Zone 5 beach camping area	4	3	5	0	2	14	C	Insignificant	L
Ocean Lake day-use area	3	3	1	0	2	9	D	Insignificant	L
Zone 6 beach camping area	2	3	5	0	0	10	D	Insignificant	L
Sandy Cape fisherman's camp	1	3	3	0	unknown	7+	D+	Insignificant	L+
Sandy Cape QPWS residence	1	3	1	0	0	5	E	Insignificant	L
Waddy Point (headland)	3	unknown	2	0	4	9+	D+	Insignificant	L+

0-5 = E

6-10 = D

11-15 = C

16-20 = B

20+ = A

Attachment 11

Sites of greatest risk

Extreme Risk

Waddy Point campground
Kingfisher Bay Resort and Village

High Risk

Lake McKenzie campground
Eurong township
Indian Head campground
Indian Head (headland)
Middle Rocks car park
Waddy Point day-use area

Medium Risk

Waddy Point beachfront camp ground
Dilli Village (low incidents)
Happy Valley township (low incidents)
Gary's anchorage (low incidents)
Central Station proper
Lake McKenzie tourist operator bus park and BBQ site
Lake McKenzie main beach
Lake McKenzie hikers camp
Orchid Beach township
Eurong beach front (no camp area)
Zone 3 beach camping area (low incidents)
Zone 4 beach camping area (low incidents)

Low Risk

All other sites

Attachment 13 Proposed Legislative and Operational Changes in Relation to Fines and Enforcement Procedures

The following recommendation on proposed legislative and operational changes are in response to a call to review fines and penalties associated with the feeding of dingoes.

Legislative Changes

1. (a) That immediate action be commenced to amend the *Recreation Areas Management By-law 1991* to separate and strengthen offences contained in section 15. The revised section may appear as follows:

Animals

15.(1) A person must not—

- (a) take a live animal into a recreation area; or
- (b) have a live animal under the person’s control in a recreation area.

Maximum penalty—20 penalty units

(2) A person in a recreation area must not feed, offer food to, or fail to secure food to prevent access by an animal if a notice erected by the board prohibits the feeding of the animal.

Maximum penalty—40 penalty units

(3) Subsection 1 does not apply—

- (a) to an animal brought into the area with the written approval of the board; or
- (b) to a guide dog or a guide dog trainee under the *Guide Dogs Act 1972*;
or
- (c) in the Inskip Peninsula Recreation Area – to a dog taken into the recreation area or under a person’s control in the recreation area in accord with the provisions of a notice erected by the board; or
- (d) to an invertebrate animal lawfully taken in the recreation area or adjacent to the recreation area for use as bait for fishing; or
- (e) to a live fish, sandcrab or mudcrab lawfully taken in the recreation area or adjacent to the recreation area.

(4) A person in a recreation area must not feed, offer food to, fail to secure food to prevent access by, lure, attract, approach or pursue an animal that is dangerous, venomous or capable of injuring a person.

Maximum penalty—40 penalty units.

(5) Subsection 4 does not apply in the Inskip Peninsula Recreation Area to a dog taken into the recreation area or under a person’s control in the recreation area in accordance with the provisions of a notice erected by the board.’

- (b) That section 22 of the *Recreation Areas Management By-law 1991* be amended to reflect that a prescribed infringement notice penalty for a breach

of section 15.(2) be \$225. (The infringement penalty for a breach of 15.(1) would remain at \$50.)

(c) That section 22(2) of the *Recreation Areas Management By-law 1991* be amended to increase the infringement notice penalty associated with section 10(3)(b), which deals with a requirement to bury any offal, carcass or skeleton, of that By-law to \$225.

(2) (a) That immediate action be commenced to separate parts (a) and (b) of section 87 of the *Nature Conservation Regulation 1994* and provide for a maximum penalty of 40 penalty units (\$3,000) an offence relating to the feeding of native animals. The revised section 87 may appear as follows:

‘Feeding native animals

87. (1) A person in a protected area must not feed, offer food to, or fail to secure food to prevent access by, a native animal that is dangerous, venomous or capable of injuring a person.

Maximum penalty- 40 penalty units

(2) A person in a protected area must not feed, offer food to, or fail to secure food to prevent access by a native animal if a regulatory notice prohibits feeding of the animal.

Maximum penalty- 40 penalty units’

(b) That the complimentary areas of the *State Penalties Enforcement Regulation 2000* schedule 2 be amended to reflect an infringement notice penalty for a breach of the revised section 87 (1) be 3 penalty units, ie (\$225) and the penalty associated with the revised section 87 (2) be increased to 3 penalty units ie (\$225).

(3) (a) That immediate action be commenced to amend Schedule 2 of the *State Penalties Enforcement Regulation 2000* introduce a prescribed infringement notice penalty of 3 penalty units (ie. \$225) for contravention of section 81(1) of the *Nature Conservation Act 1992* which relates to failing to bury or leave a noxious, offensive or harmful substance, offal or a carcass or skeleton.

(4) (a) That immediate action be commenced to have section 237 (**Feeding native animals in the wild**) of the *Nature Conservation Regulation 1994* amended to increase the maximum penalty associated with feeding a native animal that is dangerous, venomous or capable of injuring a person to a maximum of 40 penalty (\$3,000) units.

(b) That the complimentary areas of the *State Penalties Enforcement Regulation 2000* schedule 2 be amended to reflect an infringement notice penalty for a breach of the amended section 237 be 3 penalty units, ie (\$225).

Operational recommendations in terms of fines and enforcement procedures

1. That, pending amendments to the *Recreation Areas Management By-laws 1991* and the *State Penalties Enforcement Regulation 2000*, as outlined in recommendation 1, field staff located on Fraser Island investigating offences of feeding of native animals on or off the protected area on Fraser Island area utilise the infringement notices provided for *Nature Conservation Regulation 1994* by the *State Penalties Enforcement Act 1999*. Presently an infringement notice fine of \$75-00 for both section 87 and 237 .
2. That the Senior Investigations Officer (Southern Region) develop a compliance strategy for the Great Sandy Area which would include addressing the operational matters relating to compliance issues, including the feeding of dingo on Fraser Island.
3. That any incidents involving the feeding of dingo by overseas visitors, be addressed by way of issuing infringement notices to the alleged offenders, with the overseas addresses being taken and verified from documents such as passports. Further, in the event of the notice not being paid, prosecution action be commenced under the *Justices Act 1886* and the associated Court documents be mailed to the address supplied in order that the alleged breach can be carried through to the prosecution stage.
4. That any incidents involving the large-scale or commercial feeding of native animals on Fraser Island by either residents, commercial operators or others involved in the management of Fraser Island be dealt by prosecution. Repeat offenders should also be prosecuted. Other minor offences by transient visitors or occupants should be dealt with by way of infringement notices.
5. That immediate training on the enforcement of legislation relating to the investigation of offences relating to the feeding of dingoes and the issue of infringement notices be made available to Fraser Island field staff. It is envisaged that this training would take 4-6 hours.
6. That consideration be given to seeking the cancellation or suspension of permits issued any commercial operators who are repeat offenders.
7. That, depending on the seriousness and the individual circumstances of a particular incident, the provisions of section 62 of the NCA may be utilised in the event of an offender who, whilst on a protected area, ‘lures’ a dingo. (see definition of “take” as it refers to an animal which is inclusive of the definition of a natural resource.) On a protected area, the dingo is part of the natural resource of that protected area which includes wildlife. (see definition in sec 7 NCA “protected area”, see also definition of “wildlife” which includes “animal”, see also definition of “animal”)

Background

The bulk of present legislation available to conservation officers under the NCA and/or authorised officers under the RAM Act needs to be revised to reflect the need for change that recent unequalled events has identified. It appears the present legislative regime was unprepared for such developments. Any change in legislation needs to be cognisant of the degree that the unlawful feeding of native animals that are dangerous, venomous or capable of injuring a person, has contributed to the change, modification and/or intensification of the basic instincts the animals concerned.

Nature conservation legislation applies varied penalty units to a wide range of offences. Some of these offences are:

- offences relating to fires (eg fail to extinguish fire, light fire when prohibited) 165 penalty units \$12,375 Infringement Notice Penalty \$375
- conduct commercial activity without authority 165 penalty units \$12,375 Infringement Notice Penalty \$375
- bringing plants into protected area without approval 50 penalty units \$3,750 Infringement Notice Penalty \$150

Marine park legislation carries infringement notice penalties for amounts such as:

- discharging a firearm in a marine park \$750;
- discharging human waste in a protection zone \$450;
- deposit waste in a marine park \$450; and
- abandon a vessel on a marine park \$525.

As can be seen the proposed levels of fines proposed are not inconsistent with the seriousness of the offences listed and the fine levels proposed are not incompatible.

HIERARCHY OF RISK MANAGEMENT CONTROL METHODS						
	ELIMINATION				REDESIGN	
	Humane destruction of dingo if hazing fails	Campground closure	Remove picnic facilities	New campground construction	New day-use picnic facilities	New toilet(s)
EURONG MANAGEMENT UNIT						
Hook Point barge landing	X					
Dilli Village						
Lake Boomanjin campground		convert existing to day-use only		X		
Eurong township						
Eurong beachfront (No camp area)	X					
Eurong QPWS base						
Zone 1 beach camping area						
Zone 2 beach camping area						
Zone 3 beach camping area				X		X
Lake Wabby beach carpark						X
Lake Wabby inland carpark and lookout						X
Stonetool Sandblow picnic area and lookout					X	X
The Oaks private residences						
Poyungan Rocks private residences						
Rainbow Gorge car park			X			
Yidney Rocks private residences						
Happy Valley township						
Eli Creek and boardwalk						
Lake Garawongerra day-use area and beach						
CENTRAL MANAGEMENT UNIT						
Gary's Anchorage						X
Ungowa campground						X
Ungowa QPWS base						
Wanggoolba Creek barge landing	X					
Lake Birrabeen southern tourist operator area						
Lake Birrabeen upper carpark, toilets and day-use area						
Lake Birrabeen beach						
Lake Birrabeen lower tourist operator buspark area						
Central Station proper		X				
Central Station QPWS duplex residence						
Central Station new campground				X		
Lake Benaroon Hikers Camp						
McKenzies Jetty						
Lake McKenzie public carpark						
Lake McKenzie campground		convert existing to day-use			X	X
Lake McKenzie tourist operator buspark and BBQ site						
Lake McKenzie main beach						
Lake McKenzie Hikers camp						
Pile Valley carpark						
Kingfisher Bay Resort and Village						
DUNDUBARA MANAGEMENT UNIT						
Maheno Shipwreck						
The Pinnacles						
Zone 4 beach camping area						X
Cathedral Beach Resort						
Dundubara Campground				backpacker camp		X
Dundubara QPWS residences						
Indian Head campground				X		X
Indian Head (headland)						
Knifeblade Sandblow carpark and lookout						
Lake Allom day-use area		X		X	X	X
Moon Point barge landing	X	within 1km				
Puthoo QPWS camp						
Zone 7 beach camping area						
Coomboo Lake QPWS camp						
Lake Bowarrady Hikers camp						
WADDY POINT MANAGEMENT UNIT						
Middle Rocks carpark						
Waddy Point Campground						
Waddy Point day-use area						
Waddy Point QPWS residences						
Waddy Point beachfront campground						
Waddy Lodge						
Orchid Beach township						
Orchid Beach Fishers Reserve campground						
Wathumba Creek Campground						
Zone 5 beach camping (including Orchid Beach North)						
Ocean Lake day-use area					X	
Zone 6 beach camping area						
Sandy Cape QPWS residences						
Waddy Point (Headland)						

SEPARATION							
	Upgrade toilets	Washup facility	BBQs covers	Food storage	Rubbish bin	Fencing	Camping area
	including lighting	construction		locker construction	lighting		restrictions
EURONG MANAGEMENT UNIT							
Hook Point barge landing							no camping within 1 km
Dilli Village						X	
Lake Boomanjin campground	X	X	in day-use area			Campground only	
Eurong township							
Eurong beachfront (No camp area)							
Eurong QPWS base						X	
Zone 1 beach camping area							
Zone 2 beach camping area							
Zone 3 beach camping area		X					
Lake Wabby beach carpark							
Lake Wabby inland carpark and lookout							
Stonetool Sandblow picnic area and lookout						monitor	
The Oaks private residences							
Poyungan Rocks private residences							
Rainbow Gorge car park							
Yidney Rocks private residences							
Happy Valley township							
Eli Creek and boardwalk							X
Lake Garawongerra day-use area and beach						day-use area only	
CENTRAL MANAGEMENT UNIT							
Gary's Anchorage							
Ungowa campground		X					
Ungowa QPWS base						X	
Wangoolba Creek barge landing							
Lake Birrabeen southern tourist operator area							
Lake Birrabeen upper carpark, toilets and day-use area							
Lake Birrabeen beach							
Lake Birrabeen lower tourist operator buspark area							
Central Station proper		X	X			X	
Central Station QPWS duplex residence						X	
Central Station new campground						X	
Lake Benaroon Hikers Camp				X			
McKenzies Jetty							X
Lake McKenzie public carpark	X					X	
Lake McKenzie campground		X				X	
Lake McKenzie tourist operator buspark and BBQ site						X	
Lake McKenzie main beach							
Lake McKenzie Hikers camp				X			
Pile Valley carpark							
Kingfisher Bay Resort and Village							
DUNDUBARA MANAGEMENT UNIT							
Maheno Shipwreck							400m closure
The Pinnacles							
Zone 4 beach camping area							around dingo watering holes
Cathedral Beach Resort							
Dundubara Campground	X	X	X		X	X	
Dundubara QPWS residences							
Indian Head campground		X				X	
Indian Head (headland)							
Knifblade Sandblow carpark and lookout							
Lake Allom day-use area		X	X				
Moon Point barge landing							
Puthoo QPWS camp							
Zone 7 beach camping area							
Coomboo Lake QPWS camp							
Lake Bowarrady Hikers camp				X			
WADDY POINT MANAGEMENT UNIT							
Middle Rocks carpark							
Waddy Point Campground						X	
Waddy Point day-use area						X	
Waddy Point QPWS residences						X	
Waddy Point beachfront campground		X				limited	
Waddy Lodge							
Orchid Beach township							
Orchid Beach Fishers Reserve campground							
Wathumba Creek Campground				X			
Zone 5 beach camping (including Orchid Beach North)							
Ocean Lake day-use area			X				X
Zone 6 beach camping area							
Sandy Cape QPWS residences							
Waddy Point (Headland)							

ADMINISTRATION								
	Hazing	Prohibit food	Time restrictions	Fish cleaning restrictions and/or facilities	Campground host	Information booth construction and staffing	Enhanced enforcement/public contact	Audit and recommendations
EURONG MANAGEMENT UNIT								
Hook Point barge landing	X	within 1km	max. 30min wait			On mainland side		
Dilli Village								
Lake Boomanjin campground	X	on lakeshore			3pm - 9am			
Eurong township								
Eurong beachfront (No camp area)	X			X				
Eurong QPWS base								
Zone 1 beach camping area							X	
Zone 2 beach camping area							X	
Zone 3 beach camping area	X						X	
Lake Wabby beach carpark				X				
Lake Wabby inland carpark and lookout		X					X	
Stonetool Sandblow picnic area and lookout								
The Oaks private residences								X
Poyungan Rocks private residences								X
Rainbow Gorge car park		X		X				
Yidney Rocks private residences								X
Happy Valley township								X
Eli Creek and boardwalk	X							
Lake Garawongerra day-use area and beach	X	outside day-use area	4pm - 8am				X	
CENTRAL MANAGEMENT UNIT								
Gary's Anchorage								
Ungowa campground	X							
Ungowa QPWS base								
Wanggoomba Creek barge landing	X							
Lake Birrabeen southern tourist operator area								
Lake Birrabeen upper carpark, toilets and day-use area	X							
Lake Birrabeen beach	X	X						
Lake Birrabeen lower tourist operator buspark area	X	X						
Central Station proper	X		4pm-8am		X		X	
Central Station QPWS duplex residence								
Central Station new campground								
Lake Benaroon Hikers Camp								
McKenzies Jetty								
Lake McKenzie public carpark	X		4pm-8am				X	
Lake McKenzie campground			4pm-8am				X	
Lake McKenzie tourist operator buspark and BBQ site			4pm-8am				X	
Lake McKenzie main beach	X	X					X	
Lake McKenzie Hikers camp	X						X	
Pile Valley carpark		X					X	
Kingfisher Bay Resort and Village								X
DUNDUBARA MANAGEMENT UNIT								
Maheno Shipwreck		X		X				
The Pinnacles		X						
Zone 4 beach camping area	monitor						X	
Cathedral Beach Resort								X
Dundubara Campground	X				X		X	
Dundubara QPWS residences								
Indian Head campground	X				X		X	
Indian Head (headland)	X			X			X	
Knifeblade Sandblow carpark and lookout		X						
Lake Allom day-use area		from lakeshore only						
Moon Point barge landing	X	within 1 km					X	
Puthoo QPWS camp								
Zone 7 beach camping area							X	
Coomboo Lake QPWS camp								
Lake Bowarrady Hikers camp	X						X	
WADDY POINT MANAGEMENT UNIT								
Middle Rocks carpark		X					X	
Waddy Point Campground	X				temp		X	
Waddy Point day-use area	X		4pm-8am				X	
Waddy Point QPWS residences	X							
Waddy Point beachfront campground	X			X			X	
Waddy Lodge	X							X
Orchid Beach township								X
Orchid Beach Fishers Reserve campground	X						X	
Wathumba Creek Campground							X	
Zone 5 beach camping (including Orchid Beach North)							X	
Ocean Lake day-use area	X						X	
Zone 6 beach camping area							X	
Sandy Cape QPWS residences	X							
Waddy Point (Headland)	X			?			X	