WHAT IS THE ROLE OF AN INDIVIDUAL COUNCILLOR?

Individual councillors are non-executive directors of the organisation; they are involved in policy making and strategic planning exercises, but do not engage in the day-to-day management of the organisation. The role of an individual councillor, or elected member, is to:

- represent the community;
- · act in the best interests of the community;
- facilitate communication by the council with the community;
- participate in the activities of the council;
- undertake duties and responsibilities as authorised by the council.

The Act also requires that councillors represent accurately the policies and decisions of the council in performing the functions of councillor.

In addition, councillors have collective functions as members of the council³. Councillors must not:

- direct or attempt to direct an employee of the council in relation to the discharge of the employee's duties; or
- perform any function of the mayor without the approval of the mayor.

WHAT COMMON ISSUES AFFECT THE ABILITY OF SOME COUNCILLORS TO PERFORM THEIR ROLE?

There are no pre-requisites to stand as a councillor and while elected members may be passionate about their community and well educated, they do not necessarily have the

relevant knowledge and experience required to effectively fulfil their complex role.

Newly elected members may not be familiar with the requirements of the Act, or with meeting procedures and regulations. They may not be aware of other relevant legislation or have experience in land-use planning matters. This knowledge is critical when it comes to being an effective councillor.

Councils operate in accordance with a corporate governance model whereby elected members are responsible for setting the policy framework and strategic direction and the general manager and council staff are responsible for the operational activities of the council.

This important distinction in roles and responsibilities is sometimes poorly understood leading to tension and, in some cases, dysfunction at the heart of the organisation.

A key challenge for councillors is not becoming involved in the day-to-day operation of the council by directing council employees to take action or perform particular tasks.

In line with best practice governance, there should be protocols for delineation between the elected body and the administration. In practice, communication between the council and management mainly occurs through the mayor's liaison with the general manager.

Mayors are responsible for overseeing councillors in the performance of their functions and exercise of their responsibilities. However, there is no corresponding requirement for councillors to comply with direction provided by mayors.

³ For more detail on the functions of councillors see <u>The functions and powers of the people who lead and</u> <u>serve our community</u>.

WHAT HAPPENS ELSEWHERE?

New South Wales is considering reform to include the following roles for councillors:

- to be an active and contributing member of the governing body;
- to make considered and well-informed decisions;
- to represent the collective interests of residents, ratepayers and the wider community of the local government area;
- to facilitate communication between the community and the governing body;
- to be accountable to the community for the local government's performance; and
- to uphold and represent accurately the policies and decisions of the governing body.

Further to this, New South Wales has proposed that newly elected and returning councillors (and mayors) are required to participate in induction programs following elections, as well as annual professional development plans.

As with mayors, elected members participation in induction and professional development would be reported in the annual report.

In Victoria, the Local Government Act 1989 has recently been amended to improve governance. Amendments include specifying how a councillor is to perform their role, in addition to defining what the role of councillor includes. In performing their role a councillor must:

- consider the diversity of interests and needs of the local community; and
- observe the principles of good governance and act with integrity; and
- provide civic leadership in relation to the exercise of the various functions and responsibilities of the council under this Act and other Acts; and
- participate in the responsible allocation of resources of council through the annual budget; and
- facilitate effective communication between the council and the community.

WHAT ARE THE OPPORTUNITIES FOR CHANGE?

It is important the Act supports elected members to effectively represent and serve their communities.

The role of elected members is typically considered to be part-time. However, there are community expectations and legal obligations associated with their role which affect the way elected members should conduct themselves at all times.

Options for reform include:

- Clarifying how mayors are to oversee councillors in relation to the performance of their functions and exercise of their responsibilities.
- Requiring councils to develop protocols to guide interaction between council staff and councillors.
- Building capacity and professionalism among elected members by requiring them to:
 - participate in induction programs following elections;
 - create and implement annual professional development plans; and
 - report on participation in induction and professional development in the annual report.

WHAT DO YOU THINK?

- Q8 How should mayors fulfil their role of overseeing councillors in the performance of their functions?
- Q9 What protocols should councils develop to guide interactions between council staff and councillors?
- Q 1 0 Should elected members be required to participate in induction and professional development programs and, if so, what sort of training should they do?

HOW IS THE GENERAL MANAGER APPOINTED AND MANAGED?

The Act enables councils to appoint a general manager, specifically providing that 'a council is to appoint a person as general manager of the council for a term not exceeding 5 years on terms and conditions it considers appropriate'.

The Act requires that the council is to advertise the position of general manager if there is a vacancy and monitor the general manager's performance. However, it does not prescribe principles or a detailed process for appointing or managing the performance of a general manager.

WHAT HAPPENS ELSEWHERE?

The provisions related to the appointment of general managers (or equivalent) in other jurisdictions are similar to those in Tasmania. Some jurisdictions specify advertising requirements and required qualifications as well as contract terms.

The Northern Territory's Act simply states that 'appointments to the office of CEO are to be made, as occasion requires, by the council in accordance with the relevant Ministerial guidelines'.

WHAT ARE THE OPPORTUNITIES FOR CHANGE?

It is important councils have sufficient guidance and support to effectively manage the appointment and performance of their general managers.

Options for reform include:

- Clarifying the role of the mayor in relation to the appointment and performance appraisal of general managers (given the requirement for the mayor to 'liaise with the general manager').
- Including principles for the selection, reappointment and performance appraisal processes for general managers.

WHAT DO YOU THINK?

QII What role should mayors have in relation to the appointment and performance appraisal of general managers?

Q12 Should the Act include principles for the selection, reappointment and performance appraisal of general managers?

WHAT IS THE ROLE OF THE GENERAL MANAGER?

The general manager is responsible for running the day-to-day operations of the council, based on the policy framework and strategies determined by the council.

The general manager's role is to:

- implement the policies; plans and programs of the council;
- implement the decisions of the council;
- be responsible for the day-to-day operations and affairs of the council;
- provide advice and reports to the council on the exercise and performance of its powers and functions and any other matter requested by the council;
- assist the council in the preparation of the strategic plan, annual plan, annual report and assessment of the council's performance against the plans;
- advise the mayor and the governing body on the development and implementation of policies and programs, including the appropriate form and scope of community consultation;
- coordinate proposals for the development of objectives, policies and programs for the consideration of the council;
- liaise with the mayor on the affairs of the council and the performance of its functions;
- manage the resources and assets of the council; and
- perform any other function the council decides.

The general manager is also responsible for appointing, directing and dismissing employees and developing human resource practices and procedures in accordance with council policy to ensure employees receive fair and equitable treatment.

The Act also provides that 'the general manager may do anything necessary or convenient to perform his or her functions under this or any other Act'.

WHAT COMMON ISSUES AFFECT THE ABILITY OF SOME GENERAL MANAGERS TO PERFORM THEIR ROLE?

In accordance with best practice governance, the councillors as a whole are responsible for setting the strategic direction and policy framework for the council, while the general manager and staff are responsible for operational matters.

There may be a need to clarify what constitutes the 'day-to-day operations and affairs of the council' and the separation of strategic and operational matters.

The day-to-day operational role involves providing information, advice and support to elected members and implementing the policies, programs and plans in accordance with these frameworks set by the council.

'Grey areas' and different interpretations of what is considered strategic and operational can be difficult for councils to manage. For example, whether the senior staffing structure of the council organisation is a strategic or operational matter.

Another example is whether some council policies, such as certain human resource policies, are operational or strategic in nature.

There may be some confusion around the requirement to 'provide advice and reports to the council', specifically what and how much information should be provided to councillors. For example, the amount of financial information that should be provided to councillors in order for the council to make fully informed decisions concerning the budget.

If elected members feel insufficient information is being provided, it can negatively affect the relationship between the council and senior staff.

There may be a need to clarify the requirement of general managers to 'liaise with the mayor'. A functional and effective working relationship between the general manager and mayor is essential if a council is to effectively serve its community.

Mayors and general managers will fail to adequately represent and serve the community if they continue to hold different views on their respective roles under the Act.

WHAT HAPPENS ELSEWHERE?

There are many similarities across jurisdictions regarding the role of general managers, but there are also some noteworthy differences.

In South Australia general managers are required to consult with the council when determining or significantly changing the organisational structure for the staff of the council.

In Victoria general managers are to manage interactions between council staff and councillors by ensuring appropriate policies, practices and protocols are in place defining appropriate arrangements for interaction between council staff and councillors.

New South Wales is considering reforms to the role of the general manager so among other functions it includes:

- to conduct the day-to-day management of the council in accordance with the governing body's strategic plans and policies;
- to ensure the mayor and councillors receive timely information, advice and administrative and professional support necessary for the effective discharge of their responsibilities;
- to implement lawful decisions of the governing body in a timely manner;
- to exercise such of the functions of the governing body as are delegated by the governing body to the general manager,
- to appoint staff in accordance with an organisation structure and resources approved by the governing body;
- to implement the council's workforce management strategy.

WHAT ARE THE OPPORTUNITIES FOR CHANGE?

It is important the Act supports general managers to effectively manage complex organisations and implement the council policy framework and strategies to deliver services to their communities.

Options for reform include:

- Specifying the type of interactions that could occur in the general manager liaising with the mayor, for example including:
 - weekly meetings between the mayor and general manager, and
 - joint oversight of council meeting agendas.

- Requiring the general manager to provide a specific level of information to the mayor and councillors, for example requiring general managers to:
 - advise the mayor and the governing body on the development and implementation of policies and programs, including the appropriate form and scope of community consultation.
- Clarifying what constitutes strategic matters that are the responsibility of the council and operational matters that are the responsibility of the general manager, for example whether the organisational structure is an operational or strategic matter.

WHAT DO YOU THINK?

- Q13 What should the requirement for general managers to liaise with mayors include?
- Q 14 What level of information should be provided to the council by the general manager?
- Q 15 Is a council's organisational structure a strategic or operational matter?
- **Q16** Should the strategic matters that are the responsibility of the council and the operational matters that are the responsibility of the general manager be clarified?

Monitoring how effectively councils serve our community

The Local Government Act (the Act) sets out how councils must operate in order to serve their communities effectively.

The Act provides a number of ways to monitor how effectively councils are serving their communities. These are:

- · an investigation by a Board of Inquiry;
- · a review by the Local Government Board;
- an investigation by the Director of Local Government;
- an investigation by the Code of Conduct Panel.

WHAT IS THE DIFFERENCE BETWEEN THE LOCAL GOVERNMENT BOARD AND A BOARD OF INQUIRY?

The Act provides for the establishment of two separate boards that can both consider the governance and operations of a council or councils and make recommendations to the Minister.

The Local Government Board is made up of four people appointed by the Minister for no longer than three years.

Membership of the Local Government Board includes the Chairperson, the Director of Local Government (or nominee), one person nominated by the Local Government Association of Tasmania and one person nominated by Local Government Professionals Australia (Tasmania).

A Board of Inquiry consists of one or more persons appointed by the Minister and is established when the Minister is satisfied a matter justifies its establishment. In practice, the Local Government Board generally undertakes strategic reviews of councils and/or broader local government matters, whereas a Board of Inquiry generally undertakes investigations into councils whose governance practices and behaviours are significantly impacting on how effectively it serves its community.

In summary, the scope for a Local Government Board review includes:

- governance and operations;
- boundaries;
- naming;
- declaration as city;
- · creation or abolition of area or district;
- division of area into districts;
- combining areas;
- creation or abolition of councils;
- · election of councillors;
- number of councillors;
- any matter referred to it by the Minister.

By comparison, a Board of Inquiry is to conduct an inquiry into any matter referred to it by the Minister. However, both the Local Government Board and a Board of Inquiry ultimately have the power to review or investigate any issue.

The last Local Government Board review was undertaken in 2013 and was a review of councillor numbers in Brighton, Derwent Valley, Dorset, Launceston City, Southern Midlands and Waratah-Wynyard councils.

Up until the recent Boards of Inquiry into the Huon Valley Council and Glenorchy City Council, the last Board of Inquiry was initiated in 2002 to investigate the Kentish Council. However, Boards of Inquiry have been initiated more recently to make recommendations regarding councillor allowances.

WHAT CAN THE BOARDS DO TO UNDERTAKE A REVIEW OR INQUIRY?

Both the Local Government Board and a Board of Inquiry may do anything necessary or convenient to perform its functions⁴.

Beyond this, the investigative powers of the Local Government Board are not expressed in the Act. However, the investigative powers of a Board of Inquiry are expressed and include that it may:

- summons a person to appear to give evidence on oath and answer any questions;
- require a person to produce any documents and take copies of documents;
- · adjourn the inquiry from time to time.

A Board of Inquiry may be conducted with 'as little formality and technicality as a proper consideration of the matter before it permits'.

However, a Local Government Board process requires consultation at different stages with both the affected council and the community.

A Local Government Board review must provide a council with at least 30 days' notice of the review commencement date and must provide reasonable opportunity for public consultation and submission from council.

WHAT ARE THE POSSIBLE OUTCOMES OF BOARD REVIEWS AND INQUIRIES?

Following a Local Government Board review, by order and on recommendation of Minister, the Governor may:

- create or abolish an area/council/district;
- alter and define boundaries;
- combine or divide areas/districts;
- name or change name of area/council/district;
- declare a city;
- dismiss <u>all</u> the councillors of a council;
- determine number of councillors;
- · declare an election.

When a Board of Inquiry is established, all the councillors of the council(s) under inquiry may be suspended for a period no longer than six months, if it is in the public interest.

Following a Board of Inquiry, the Minister may:

- direct a council to take action to mitigate or rectify, discontinue or give reasons for its actions;
- take any other action the Minister thinks necessary; or
- recommend the Governor dismiss the council – that is, <u>all</u> the councillors.

If a council fails to comply with a Ministerial direction, the Minister may recommend the Governor by order dismiss the councillors.

The Act does not currently provide for the suspension or dismissal of an individual councillor or councillors following a Local Government Board review or Board of Inquiry.

⁴ For a flowchart comparison of the Local Government Board review and Board of Inquiry processes see <u>Comparison of Local Government Board review and</u> <u>Board of Inquiry processes</u>.

WHAT IS HAPPENING ELSEWHERE?

Most other state and territory local government Acts provide for the establishment of entities with similar functions and powers to the Local Government Board and a Board of Inquiry.

In South Australia, the Ombudsman may review the practices and procedures of councils — a similar function to the Local Government Board. Similarly, in the Northern Territory the 'Agency' (equivalent to the Local Government Division) must establish a program of compliance reviews for councils.

Victoria is currently reviewing its Local Government Act 1989 and is considering removing provisions for its Local Government Panels and/or Boards of Inquiry. Instead, Victoria is considering whether investigations by Inspectors of Municipal Administration (equivalent to the Director of Local Government in Tasmania) or the Ombudsman are sufficient for investigating and reporting to the Minister on council governance issues.

WHAT ARE THE OPPORTUNITIES FOR CHANGE?

Good governance practices are vital to a council's capacity to effectively serve its community.

It is important we have reliable, valid and efficient procedures to strategically review local government issues and inquire into the performance of councils, to ensure they are effectively serving their communities.

Options for reform include:

- Combining the functions and powers of the Local Government Board and a Board of Inquiry.
 - Having only one board to conduct strategic reviews and inquiries into the governance and operations of councils, established when the Minister deems necessary, would reduce unnecessary administrative requirements.
- Providing power to the review/inquiry board to determine the procedures for the review/inquiry.
 - The process for a review or inquiry would be fit for purpose and the review/inquiry could be expedited if necessary, with respect to the rules of natural justice and procedural fairness.

This would also reduce prescription and unnecessary administrative requirements.

 Providing for additional potential outcomes of a review or inquiry, such as the suspension or dismissal of an individual councillor.

WHAT DO YOU THINK?

Q17 Is it necessary to have two separate bodies to perform the functions of conducting strategic reviews of and investigations into councils, or should the two be combined?

Q18 How can the processes for a Local Government Board review or Board of Inquiry investigation be improved?

Q19 Are the potential outcomes of a review or inquiry sufficient? Or should the Act provide additional potential outcomes following an inquiry or review, such as the suspension or dismissal of an individual councillor?

WHAT IS THE ROLE OF THE DIRECTOR OF LOCAL GOVERNMENT?

The Director of Local Government (Director) is appointed by the Governor and has responsibility for the general administration of the Act.

The Director's role includes investigating noncompliance and offences under the Act. The Director may undertake an investigation in response to a complaint or on his or her own initiative.

The Director's powers are broad – the Director may do 'anything necessary or convenient to perform any function under this or any other Act'. This broad power enables the more specific powers of the Director to be undertaken and is therefore not unlimited⁵.

The Director also has a role as a member of the Local Government Board.

WHAT CAN THE DIRECTOR DO IN CARRYING OUT AN INVESTIGATION?

The Director can request any information, documents or records from councils and can request further particulars about a complaint.

However, the Act does not prescribe any specific investigative powers for the Director, such as the power to summons a person to appear, provide or do something.

In other Tasmanian Acts, such as the Environmental Management and Pollution Control Act 1994 (s.92(1)) and the Work Health and Safety Act 2011 (s.171), coercive powers are clearly specified.

WHAT ARE THE POTENTIAL OUTCOMES OF AN INVESTIGATION BY THE DIRECTOR?

Following an investigation, the Director may:

- refer investigations into offences under the Act to the Director of Public Prosecutions for prosecution in the Magistrates Court (where penalty provisions exist); or
- recommend to the Minister that a matter be referred to the Local Government Board or a Board of Inquiry.

The Director does not have specific power to direct councils or councillors to take action in response to instances of non-compliance under the Act or regulations, especially for breaches of sections of the Act that do not have a penalty provision.

⁵ For more detail on the functions and powers of the Director of Local Government and the Minister for Local Government see <u>The functions and powers of the Director of Local Government and Minister for Local Government</u>.

WHAT IS THE ROLE AND PROCESS OF THE CODE OF CONDUCT PANEL?

The Local Government Code of Conduct Panel (the Panel) is responsible for the investigation and determination of code of conduct complaints against councillors.

The Panel receives a complaint that has been lodged with a general manager and decides whether a hearing is necessary or whether the complaint can be dealt with via investigation.

It assesses the evidence and decides whether to uphold or dismiss all or part of a complaint. The Panel has 90 days to make its determination.

WHAT ARE THE POTENTIAL OUTCOMES OF A CODE OF CONDUCT PANEL INVESTIGATION?

If the Panel upholds a complaint, it may:

- caution the councillor,
- · issue a reprimand to the councillor,
- · require the councillor to apologise;
- require the councillor to undertake training;
- suspend the councillor from office for up to three months, with no allowances.

A councillor may be fined by the Magistrates Court for failing to comply with a Panel's sanction.

The Minister may remove a councillor from office if the Panel imposes a third suspension on the councillor during one term of office or two consecutive terms of office.

ARE THERE ANY OTHER POTENTIAL OUTCOMES FOR BREACHING THE ACT?

A Magistrate may impose a fine, and in addition, dismiss or remove a councillor from office as a penalty for particular breaches of the Act including:

- failing to declare a pecuniary interest;
- disclosure of information;
- · improper use of information;
- misuse of office.

A Magistrate may also grant an order declaring that a councillor is unable to perform the functions of a councillor due to physical or mental incapacity.

WHAT IS HAPPENING ELSEWHERE?

In other jurisdictions, the Local Government Acts enable the Director of Local Government or equivalent to:

- conduct an investigation into any aspect of a council or its activities and make any recommendations to the Minister it considers appropriate (NSW).
- take disciplinary action against a councillor who has engaged in misconduct, including, among other things, suspending the councillor from office for a period not exceeding three months (NSW).
- appoint a financial advisor and/or financial controller if a council is not performing its responsibilities properly or complying with the relevant Acts (QLD).
- investigate a complaint against a member of council and may recommend the council reprimand the member, require them to attend training, apologise or take other steps, reimburse the council or ensure a complaint is lodged in the District Court (SA – Ombudsman).

In other jurisdictions, the Minister may:

- order the council, or any of its council members or employees to give effect to any of the recommendations of an inquiry panel (WA).
- advise the Governor the dismissal of a person suspended from office is necessary to protect the public standing of the council and the proper exercise of its functions (NSW).
- issue governance directions to a council (Vic).
- stand down a councillor against whom a complaint of serious or gross misconduct is made until the claim is heard (Vic).
- issue a performance improvement order if the Minister reasonably considers that action must be taken to improve the performance of the council (NSW).*
- issue a compliance order to a councillor who has failed to take action as required by a performance improvement order (NSW).
- suspend a councillor for a period not exceeding three months if satisfied the councillor has engaged in misconduct (NSW).

*Performance improvement orders were introduced to provide a fast and cost effective mechanism for directing a council to remedy an emerging issue quickly. A performance improvement order directs a council and/or individual councillors to do, or refrain from doing, anything as is necessary to improve council's performance within a specified time. It also outlines the actions that may be taken if the council and/or councillors do not comply with the order.

WHAT ARE THE OPPORTUNITIES FOR CHANGE?

To perform their role effectively, councils and individual councillors must act in the best interests of the community at all times.

It is important the Director of Local Government has sufficient powers to enable him or her to support councils and councillors to practice good governance and ensure they serve their communities effectively.

Options for reform include:

 Creating more specific investigative powers of the Director of Local Government, such as the power to summons councillors and council staff.

- Providing the Director of Local
 Government with the power to direct a council and/or individual councillor to take action following an investigation.
- Providing a mechanism to dismiss a council and/or individual councillor following an investigation by the Director of Local Government.
- Providing for rapid intervention in the instance where it is evident a council and/or individual councillor's performance is significantly impacting on the governance of the council and/or the service provided to the community.
- Providing for the suspension or dismissal of an individual councillor for breaches of the Act other than code of conduct.

WHAT DO YOU THINK?

Q20 Should the Director of Local Government have the power to summons councillors and council staff as part of his/her investigation?

Q2 I Does the Director of Local Government have sufficient power to enable him/her to support councils and councillors to practice good governance and comply with the Act (especially following an investigation)?

Q22 Should the Act contain a mechanism to dismiss a council and/or individual councillor following an investigation by the Director of Local Government?

Q23 Should the Act provide a mechanism for more rapid intervention (such as a performance improvement order) in the instance where it is evident a council and/or individual councillor's performance is significantly impacting on the governance of the council and/or the service provided to the community?

Q24 Does the Act provide sufficient powers to suspend or dismiss an individual councillor for breaches of the Act?

Q25 Do the penalty provisions in the Act need to be both increased and broadened to include other important sections of the Act?

HOW IS THE FINANCIAL PERFORMANCE OF COUNCILS MONITORED?

The Act sets out how councils are to manage and report on their finances.

The Act includes provisions for council borrowings, expenditure and investments, as well as budget processes, record keeping, financial statements and auditing (Part 8 – Financial Management).

The Act also requires councils to prepare a number of plans and strategies to demonstrate how they will manage their finances and assets to ensure financial sustainability (Part 7 – Administration).

There is also a suite of subordinate legislation that provides further guidance on and regulation of council financial management.

The Act requires the general manager to prepare and forward a copy of the council's financial statements to the Auditor-General annually, in accordance with the Audit Act 2008. Statements are to be in a format prescribed by the Auditor-General.

The Auditor-General reviews the financial statements and reports back to the councils on the findings. A consolidated report on the findings is also presented to Parliament. There is currently no requirement for councils to report back on any actions taken in response to the Auditor-General's findings.

RECENT REFORM OF THE ACT IN RELATION TO FINANCIAL MANAGEMENT

The financial management and administration parts of the Act have recently been reviewed; therefore there are not any significant issues to raise in relation to the financial management and administration parts of the Act.

In 2014, amendments to the Act (Parts 7 and 8) commenced that:

- require councils to develop and implement long-term policies, plans and strategies to support the financial and asset management framework; and
- require councils to establish audit panels to monitor the financial performance of council.

The Local Government (Miscellaneous Amendments) Act 2013 aimed to improve local government financial and asset management capacity and practices. The Auditor-General has commented that governance arrangements and asset management have improved across councils since these amendments⁶.

WHAT DO YOU THINK?

Q26 Should councils be required to report to the Minister on the actions taken in response to the Auditor-General's findings on their financial statements?

Q27 Does the Act provide for best practice in relation to keeping record of and reporting financial activities and transactions?

Q28 Has recent reform of Part 7 (Administration) and Part 8 (Financial Management) of the Act achieved the desired outcomes in relation to financial management and reporting?

⁶Tasmanian Audit Office. (2015). *Report of the Auditor-General No.7 of 2014-15, Volume 4*. Crown in right of the State of Tasmania.

Fair and transparent local government elections

The Local Government Act (the Act) divides Tasmania into 29 municipal areas, with each area having a council consisting of between 7 and 12 elected members (councillors), including a mayor and deputy mayor.

Elections for Tasmania's 29 councils are conducted by postal ballot every four years.

Mayors, deputy mayors and councillors are elected for four year terms. At the end of the four year term all are eligible for re-election.

Successful candidates for mayor and deputy mayor must be also elected as councillors to be able to accept the office of mayor or deputy mayor.

In relation to local government elections, the following matters are being reviewed:

- the general manager's electoral roll;
- electoral advertising;
- electoral funding.

WHO CAN VOTE IN LOCAL GOVERNMENT ELECTIONS?

A person is entitled to vote in a local government election if they are:

- enrolled on the House of Assembly electoral roll in respect of a residential address within a municipal area*; and/or
- enrolled on the electoral roll maintained by the general manager in a municipal area (general manager's roll).

*The House of Assembly electoral roll includes only the primary residential address of a person. Enrolment on this electoral roll grants a person eligibility to vote only in their electorate of primary residence.

WHAT IS THE GENERAL MANAGER'S ROLL?

The general manager of each council must maintain an electoral roll for their municipal area, referred to as the 'general manager's roll'.

The general manager's roll includes a list of persons who are not on the House of Assembly electoral roll for that area but are eligible to vote due to a vested interest in that area (eg. a business or shack owner).

Such persons have successfully lodged an enrolment form with the general manager declaring that they are not on the House of Assembly electoral roll, but are:

- over the age of 18 and not subject to a term of imprisonment; and
- an owner of land in the electoral area (but not necessarily a resident);
- an occupier of land in the electoral area; or
- a person nominated to vote on behalf of a corporate body in the electoral area.

General managers are required to make any alterations and additions to the electoral roll necessary to keep the roll accurate and updated.

During the 2014 local government elections there was a significant increase in the number of people enrolled on some general manager's rolls across Tasmania.

CAN PEOPLE WHO ARE NOT AUSTRALIAN CITIZENS VOTE?

Non-Australian citizens are not eligible to be enrolled on the House of Assembly electoral roll, but may vote in local government elections if they meet the eligibility criteria for and enroll on the general manager's roll.

Non-Australian citizens include permanent residents who are not yet Australian citizens, as well as non-permanent residents such as international students, refugees and asylum seekers, and other migrants on a range of visa classes.

There is some debate about whether it is fair and reasonable that non-permanent residents can vote in local government elections, given they are only accessing the services of the local government for a temporary period.

On the other hand, providing non-permanent residents with the right to vote aligns with the principles of inclusion and equity — principles which are at the core of local communities and local government.

CAN A PERSON VOTE MORE THAN ONCE?

Multiple voting is not permitted in state or federal government elections — each voter has one vote to elect the make-up of parliament.

A person can vote in multiple municipal areas, in their own right as an owner or occupier of land or as the nominee of a corporate body that owns or occupies land.

In some municipal areas there is a significant proportion of non-resident landholders (shack owners). The general manager's roll entitles these landholders to vote in the municipal areas where they do not permanently reside but do pay rates, as well as voting in the municipal area they permanently reside in.

The general manager's roll also provides the opportunity for commercial ratepayers and occupiers to vote within the municipal area of their business if they do not permanently reside in the area.

If a person is the nominee of a corporate body and the owner or occupier of land in the same municipal area, they are entitled to a maximum of two votes in that area — one in his or her own right and one on behalf of the corporate body. They have two votes for one council in the one municipality.

There is debate about whether it is fair that one person can have more voting clout than another person in a single election; it has been suggested this goes against the 'one vote, one value' principle of democracy.

WHAT IS HAPPENING ELSEWHERE?

Most other jurisdictions have an equivalent to Tasmania's general manager's electoral roll.

The exceptions are Queensland and the Northern Territory, where eligibility to vote in local government elections is based on enrolment on the equivalent to Tasmania's House of Assembly electoral roll. This means non-resident landholders are not able to vote in Queensland and the Northern Territory.

In all other jurisdictions, non-resident landholders have some entitlement to vote in all municipal areas in which they have a vested interest.

However, Tasmania is the only state that allows a person to have two votes in a municipal area where they are the nominee of a corporate body and also entitled to vote in their own right.

WHAT ARE THE OPPORTUNITIES FOR CHANGE?

It is important the rules for voting in local government elections are fair, people are aware of their entitlement to vote, and that there are effective processes for maintaining local government electoral rolls.

The integrity of the electoral process and the participation of the electorate are crucial to the formation of local government.

Options for reform include:

- Allowing a person to be enrolled only once in any single municipality (rather than potentially twice if they are the nominee of a corporate body and a resident).
- Including provisions to ensure voter awareness of eligibility to enrol and of enrolment, to ensure fairness and inclusion and maximise potential participation in the electoral process.

- Amending the general manager's roll to:
 - Include those aged 18 years and above who are either;
 - Australian citizens or permanent residents living in the municipality;
 - Owners of property in the municipality;
 - Lessees of non-residential property in the municipality.
- Abolishing the general manager's roll.
 Removing the roll completely would mean owners, occupiers or corporate body representatives cannot vote in a municipal area where they have a vested interest but are not enrolled on the House of Assembly electoral roll in respect of a residential address in the area.

WHAT DO YOU THINK?

- Q29 Should the general manager's roll be retained or abolished?
- Q30 If it is retained, should the general manager's roll be amended so it includes only Australian citizens or permanent residents living in the municipality, not non-permanent residents?
- Q3 I If it is retained, should the general manager's roll continue to include people who own or occupy a property in the municipality or are the nominee of a corporate body in the municipality?
- Q32 If the general manager's roll is retained, should it be amended so a person cannot vote in their own right as well as on behalf of a corporate body in a single municipality?
- Q33 If the general manager's roll is retained, should it be amended so a person may only vote in one municipality, rather than in any municipality where they own or occupy a property?

HOW MUCH CAN ELECTORAL CANDIDATES SPEND ON ADVERTISING?

It is generally accepted that the more money a candidate spends on advertising as part of their election campaign, the greater potential they have to communicate with voters, influence their voting behaviour and affect electoral outcomes.

To provide a level playing field for candidates, the Act restricts the amount of money a candidate may spend on advertising.

Total expenditure on advertising for an election campaign must not exceed:

- \$5 000 for a councillor candidate in respect of a single election;
- \$8 000 for a mayor and deputy mayor candidate in respect of a single election.

These limits apply only to the election period, which is defined as "...the period starting on the 30th day before the date of notice of election and ending at the end of the polling period".

There are no restrictions on the amount of money a candidate can spend outside of this period.

Candidates are required to lodge a return with the Tasmanian Electoral Commissioner (Commissioner) stating how much they spent on advertising, within 45 days following an election.

If a prospective candidate launches an advertising campaign prior to the election period, the amount spent in this time does not count towards their expenditure limit and the amount reported to the Commissioner.

WHAT IS HAPPENING ELSEWHERE?

Tasmania is the only state to restrict expenditure on election campaign advertising.

Like Tasmania, New South Wales and Western Australia require candidates to report on the amount spent on advertising during an election campaign.

WHAT ARE THE OPPORTUNITIES FOR CHANGE?

Considering whether campaign advertising expenditure should be regulated requires a value judgement: should the Act aim to ensure a level playing field or should candidates be free to choose how much they invest in campaign advertising?

Options for reform include:

- · Abolishing expenditure limits
- Increasing expenditure limits
 Allowing candidates to choose how much money they spend on election campaigns would bring Tasmania in line with other jurisdictions.

Increasing expenditure limits would recognise the increased costs and mechanisms available for advertising.

Either of these changes may deter potential candidates from standing for election if they do not believe they personally have the resources, nor the capacity to seek sufficient campaign donations, to campaign effectively.

WHAT DO YOU THINK?

Q34 Should electoral campaign advertising expenditure limits be abolished, retained or increased?

CAN A CANDIDATE RECEIVE DONATIONS FOR AN ELECTION CAMPAIGN?

Yes. Some local government candidates receive donations from their supporters to help fund their election campaign.

Campaign donations are part of a healthy democratic process, one of the legitimate ways of participating in politics. At the same time, campaign donations raise legitimate concerns that contribution to a candidate's election campaign may influence their decision making if elected.

The Act does not prescribe who can donate to a candidate or how much may be donated. Nor does the Act require candidates to publicly disclose donations received in the lead up to or during an election campaign.

WHAT IS HAPPENING ELSEWHERE?

All other jurisdictions have some requirements in relation to receiving and disclosing election campaign donations.

In all other Australian states, candidates are not permitted to accept anonymous donations that exceed a specified monetary value (between \$200 and \$500).

In New South Wales, candidates are not permitted to accept donations from prohibited donors or close associates of prohibited donors, including:

- property developers;
- tobacco industry business entities; and
- liquor or gambling industry business entities.

All other states also require the general manager or equivalent to keep a register of campaign donations. This register must be provided to the state Electoral Commission following the election to disclose the details of campaign donations.

At the State level in Tasmania, there are no restrictions on who can donate to a candidate or how much may be donated.

In addition, Tasmanian law does not require state electoral candidates to report campaign donations. However, the *Commonwealth Electoral Act 1918* requires political parties represented in the Tasmanian Parliament to report political donations to the Australian Electoral Commission.

WHAT ARE THE OPPORTUNITIES FOR CHANGE?

Transparency in election campaign donations is important to protect the integrity of both candidates and donors. It helps protect candidates from the actual or perceived impact of electoral donations on decision making.

Transparency and access to information is important to voters and the details of campaign funding may help to inform them.

Options for reform include:

 Placing restrictions on the donations local government electoral candidates are permitted to receive.

- Prohibiting anonymous donations and/or donations from specific industry entities would increase transparency and ensure potential conflicts of interest can be prevented, or are able to be revealed and addressed in council decision making.
- Requiring local government electoral candidates to disclose campaign donations (who they receive donations from and the monetary value of the donations).

Disclosure of campaign donations would increase transparency and enable public awareness of the level of financial and inkind support provided to candidates by individuals or organisations.

WHAT DO YOU THINK?

Q35 Should there be restrictions on the donations local government electoral candidates are permitted to receive? If so, what should the restrictions include?

Q36 Should local government electoral candidates disclose who they receive election campaign donations from and the monetary value of the donations?

Q37 If candidates are required to disclose donations received, should there still be limits on campaign advertising expenditure?

IS ELECTORAL CAMPAIGN ADVERTISING REGULATED?

The Local Government (General) Regulations 2015 (the Regulations) outline the election campaign advertising rules candidates must follow.

The Regulations provide rules for the following forms of advertising:

- television;
- radio;
- newspaper,
- posters and signage.

The rules relate to the size, space and time in duration of these methods of advertising, as well as requirements in relation to candidate authorisation to advertise.

The Regulations do not provide rules for using social media or internet based methods of campaign advertising.

Many candidates use social media to communicate with voters and it may be a form of free advertising. Candidates also have the option to purchase online advertising, through social media or other online advertising providers.

The absence of rules for online advertising means there is ambiguity about whether the purchase of advertising on the internet must be included in campaign expenditure reports.

The Act also prohibits a person from printing, publishing, broadcasting or distributing electoral advertising that contains the name, photograph or a likeness of a candidate or intending candidate without their consent during the election period. It is also an offence to make a false or misleading statement.

Whilst this protects candidates from potential slanderous claims by other candidates, it means electoral candidates are unable to share any knowledge of or experience working with other candidates with voters.

It may be helpful for voters to be aware of such knowledge and experiences, such as a candidate's participation in council meetings and voting patterns.

WHAT IS HAPPENING ELSEWHERE?

Most other jurisdictions have provisions in relation to the publication of advertising materials and define 'publish' to include by publication on the internet.

In most other jurisdictions it is an offence to make false or misleading statements, however there is not a specific provision prohibiting the use of another candidates name or photograph without their permission as there is in Tasmania.

For example, in Western Australia and Queensland, it is simply an offence to print, publish or distribute deceptive material; or to publish any false or defamatory statement in relation to the personal character or conduct of a candidate in the election.

At a State level, the *Electoral Act 2004* similarly defines 'publish' to include by publication on the internet and also prohibits a person from including the name, photograph or a likeness of a candidate in campaign advertising materials.

WHAT ARE THE OPPORTUNITIES FOR CHANGE?

Local government electoral candidates rely on the Act to guide the development and implementation of their election campaigns.

It is important the Act has provisions for contemporary marketing and communication methods to protect the interests of candidates and the audiences of different communication mediums. Options for reform include:

Creating rules about online electoral campaign advertising.

Including rules for online advertising will provide guidance for local government electoral candidates in using this form of advertising.

It will also ensure there is clarity about the requirement to include online advertising expenditure in reporting campaign expenditure.

WHAT DO YOU THINK?

- Q38 Should online electoral campaign advertising be included in the existing advertising regulations?
- Q39 Should internet advertising be included in the expenditure limit (if there is a limit)?
- Q40 Should an electoral candidate be able to name another candidate in campaign advertising?

Regional bodies

The Local Government Act (the Act) provides councils with the power to establish a joint authority in conjunction with one or more other councils. A joint authority may be established to:

- carry out any scheme, work or undertaking;
- provide facilities or services; and
- perform any function or exercise any power of a council under the Act.

Councils in the three Tasmanian regions have established a joint authority to represent their respective regional interests⁷. While the principle objectives and governance of these regional bodies differ, each has an important role in supporting the role and responsibilities of councils and providing a voice and vehicle for activities on a regional scale.

While councils are very effective at working for the regional development of their own municipality, it is recognised that in some instances they may find it difficult to address broader regional issues.

There is significant variance between the scale, funding, functions and staffing structures of the three regional bodies, as well as differences in governance arrangements, including industry and community representation.

Despite these differences, all three regional bodies have a focus on regional cooperation and engagement, regional advocacy and regional development. Given the growing significance of regional planning and decision making, it is important Tasmania's regional bodies are appropriately recognised in the Act. It may be necessary to provide for regional bodies beyond the prescription relating to joint authorities.

The Local Government Association of Tasmania (LGAT) is established under the Act to represent the interests of councils in Tasmania; promote efficient and effective local government and to provide services to members. The Act provides LGAT with the power to make its own rules relating to management, membership and powers.

Options for reform include:

The Act could specify that all three regional bodies have common over-riding functions, such as:

- promoting the interests of the region as a whole;
- providing a vehicle for council cooperation;
- supporting the identification of regional priorities.

WHAT DO YOU THINK?

Q4 I Should the regional bodies have a common governance structure or should there be a flexible approach on how they operate?

Q42 How will legislative recognition and prescription of common over-riding functions add value to regional decision making? How will it add value to the sector as a whole?

Q43 What roles and functions of regional bodies should be specified in the Act?

WHAT ARE THE OPPORTUNITIES FOR CHANGE?

⁷ Cradle Coast Authority, Southern Tasmanian Councils Authority, Northern Tasmanian Development Authority.

Reducing red tape

Any changes made as a result of the review will not increase unnecessary administrative requirements (red tape) for local government. In fact, we are seeking opportunities to reduce red tape in the areas where changes are proposed. Such opportunities for this are noted throughout the different sections of the discussion paper.

This aligns with the principle of making the Local Government Act (the Act) less prescriptive in nature and the move towards a framework based on principles rather than detail, which can often be legislated through other means such as ministerial orders, regulations or guidelines.

WHAT ARE THE OPPORTUNITIES FOR CHANGE?

Whilst the review will not involve combing the Act to identify opportunities to reduce red tape, we are interested to hear any feedback on opportunities to reduce red tape in the Act.

WHAT DO YOU THINK?

Q44 Are there any opportunities for reducing red tape in the Act to enable councils to more effectively govern themselves?

What do you think?

Please tell us what you think of the ideas presented in this discussion paper.

Your views are important to help us determine how the Local Government Act can be improved to ensure our councils are appropriately supported to effectively lead and serve our community.

Opportunities to provide feedback close on Friday, 10 June 2016.

The Steering Committee will consider all feedback and make recommendations to the Minister for Planning and Local Government in August 2016.

It is expected any changes to the Act will be tabled in Parliament in April 2017.

HOW CAN I PROVIDE FEEDBACK?

Have your say your way:

- Complete the online survey at www.dpac.tas.gov.au/lgd
- Provide a response to the questions in your own format and send to:
 - Email: Igd@dpac.tas.gov.au
 - Post: Local Government Division

Department of Premier and

Cabinet

GPO Box 123

HOBART TAS 7001

For further information please visit the <u>Local</u>
<u>Government Division website</u> or contact the Local
Government Division on (03) 6232 7022.

WHEN DOES FEEDBACK CLOSE?

Friday, 10 June 2016.

WHAT DO YOU THINK?

THE PEOPLE WHO LEAD AND SERVE OUR COMMUNITIES

- Q | What should the leadership role of the mayor include?
- Q2 What should the requirement for the mayor to liaise with the general manager include?
- Q3 Should mayors be required to undertake induction and training, particularly in the development of leadership skills?
- Q4 Should mayors be given a casting vote when decisions are tied, so that tied decisions are not automatically determined in the negative?
- Q5 Should the provisions requiring a person to be both a mayor and councillor candidate remain?
- Q6 What should the role of deputy mayor include?
- Q7 Should deputy mayors be appointed by the council rather than popularly elected?
- Q8 How should mayors fulfil their role of overseeing councillors in the performance of their functions?
- Q9 What protocols should councils develop to guide interactions between council staff and councillors?
- Q 10 Should elected members be required to participate in induction and professional development programs and, if so, what sort of training should they do?
- **QII** What role should mayors have in relation to the appointment and performance appraisal of general managers?
- Q12 Should the Act include principles for the selection, reappointment and performance appraisal of general managers?
- Q13 What should the requirement for general managers to liaise with mayors include?
- Q14 What level of information should be provided to the council by the general manager?
- Q15 Is a council's organisational structure a strategic or operational matter?
- Q 16 Should the strategic matters that are the responsibility of the council and the operational matters that are the responsibility of the general manager be clarified?

MONITORING HOW EFFECTIVELY COUNCILS SERVE OUR COMMUNITY

- **Q17** Is it necessary to have two separate bodies to perform the functions of conducting strategic reviews of and investigations into councils, or should the two be combined?
- **Q18** Can the processes for a Local Government Board review or Board of Inquiry investigation be improved?
- **Q19** Are the potential outcomes of a review or inquiry sufficient? Or should the Act provide additional potential outcomes following an inquiry or review, such as the suspension or dismissal of an individual councillor?
- Q20 Should the Director of Local Government have the power to summons councillors and council staff as part of his/her investigation?
- **Q2** Does the Director of Local Government have sufficient power to enable him/her to support councils and councillors to practice good governance and comply with the Act (especially following an investigation)?
- Q22 Should the Act contain a for a mechanism to dismiss a council and/or individual councillor following an investigation by the Director of Local Government?
- Q23 Should the Act provide a mechanism for more rapid intervention (such as a performance improvement order) in the instance where it is evident a council and/or individual councillor's performance is significantly impacting on the governance of the council and/or the service provided to the community?
- Q24 Does the Act provide sufficient powers to suspend or dismiss an individual councillor for breaches of the Act?
- Q25 Do the penalty provisions in the Act need to be both increased and broadened to include other important sections of the Act?
- Q26 Should councils be required to report to the Minister on the actions taken in response to the Auditor-General's findings on their financial statements?
- Q27 Does the Act provide for best practice in relation to keeping record of and reporting financial activities and transactions?
- Q28 Has recent reform of Part 7 (Administration) and Part 8 (Financial Management) of the Act achieved the desired outcomes in relation to financial management and reporting?

FAIR AND TRANSPARENT COUNCIL ELECTIONS

- Q29 Should the general manager's roll be retained in its current form, amended or abolished?
- Q30 If it is retained, should the general manager's roll be amended so it includes only Australian citizens or permanent residents living in the municipality, not non-permanent residents?
- Q3 I If it is retained, should the general manager's roll continue to include people who own or occupy a property in the municipality or are the nominee of a corporate body in the municipality?
- Q32 If the general manager's roll is retained, should it be amended so a person cannot vote in their own right as well as on behalf of a corporate body in a single municipality?
- Q33 If the general manager's roll is retained, should it be amended so a person may only vote in one municipality, rather than in any municipality where they own or occupy a property?
- Q34 Should electoral campaign advertising expenditure limits be abolished, retained or increased?
- Q35 Should there be restrictions on the donations local government electoral candidates are permitted to receive? If so, what should the restrictions include?
- Q36 Should local government electoral candidates disclose who they receive election campaign donations from and the monetary value of the donations?
- Q37 If candidates are required to disclose donations received, should there still be limits on campaign advertising expenditure?
- Q38 Should online electoral campaign advertising be included in the existing advertising regulations?
- Q39 Should internet advertising be included in the expenditure limit (if there is a limit)?
- Q40 Should an electoral candidate be able to name another candidate in campaign advertising?

REGIONAL BODIES

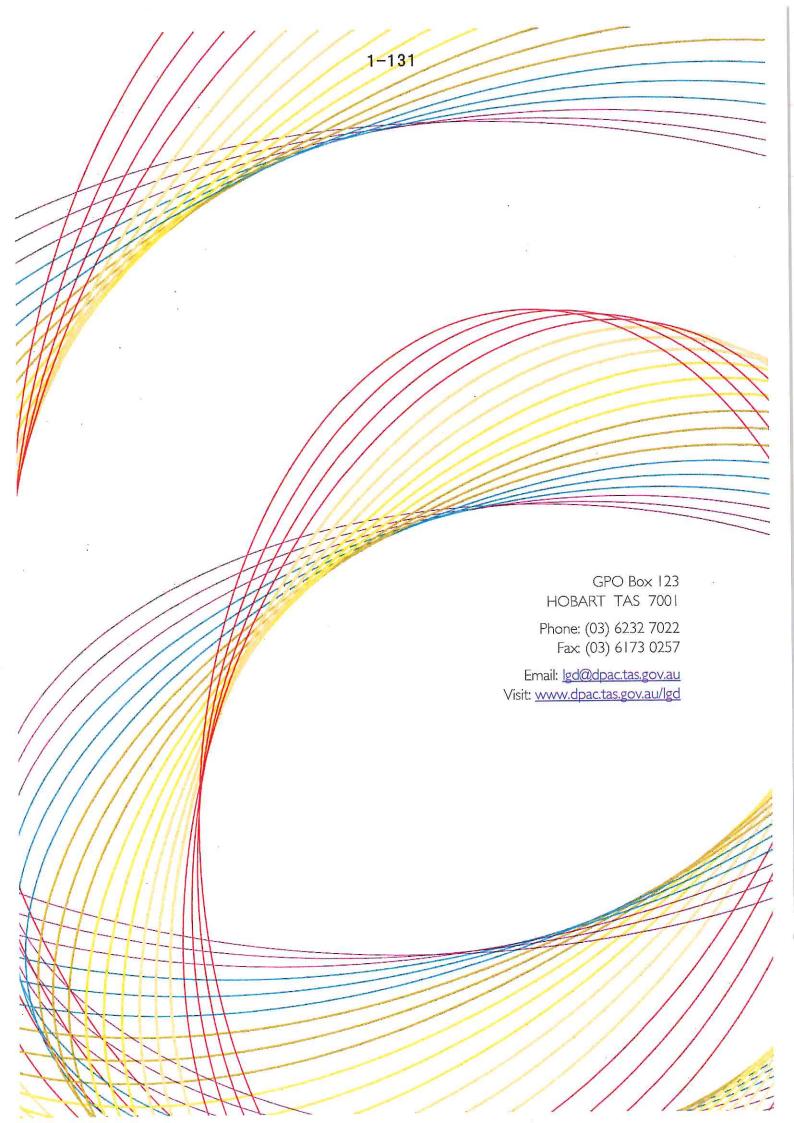
Q4 | Should the regional bodies have a common governance structure or should there be a flexible approach on how they operate?

Q42 How will legislative recognition and prescription of common over-riding functions add value to regional decision making? How will it add value to the sector as a whole?

Q43 What roles and functions of regional bodies should be specified in the Act?

RED TAPE

Q44 Are there any opportunities for reducing red tape in the Act to enable councils to more effectively govern themselves?



Gov 9

Des Jennings

From:

Maree Tetlow <maree@northerntasmania.org.au>

Sent:

Tuesday, 26 April 2016, 12:15 PM

To:

mick.tucker@bodc.tas.gov.au; Albert Van Zetten (Mayor@launceston.tas.gov.au); Cr

David Downie; craig perkins@rdatasmania.org.au; bridget.archer@icloud.com;

mayorhoward@dorset.tas.gov.au; carol.cox@flinders.tas.gov.au;

holmdahl@bigpond.net.au

Cc:

John Brown; robert.dobrzynski@launceston.tas.gov.au; Des Jennings; greg.preece@mvc.tas.gov.au; John.Martin@georgetown.tas.gov.au;

gm@dorset.tas.gov.au; raoul.harper@flinders.tas.gov.au; ian.pearce@wtc.tas.gov.au

Subject: Letter for Mayors re UTAS Transformation Project in the North

Attachments:

Letter from Mayors re UTAS Project to Andrew Nikolic - 27 April 2016.docx; Letter from Mayors re UTAS Project to Premier - 27 April 2016.docx; Education Driven Economic

Revitalisation of Northern Tasmania Principles....pdf; AVG Certification.txt

Dear Mayors of Northern Tasmania

I apologies if I haven't been able to make one-on-one contact with to this point. I have been visiting Councils around the North — and I look forward to meeting you soon if I haven't already.

Northern Tasmania Development has been approached to facilitate (if possible) the support by the Northern Councils for the UTAS Transformation Project.

Please find attached a letter to our Premier highlighting overall support.

Can you please take into account the following information:

- 1. The Prime Minister is likely to be visiting Tasmania this week and it is important that the Premier and our Federal Member for Bass is supportive of this project. Please be mindful that there are other projects being considered in Tasmania like a Bridgewater Bridge, the UTAS Stem Project in the South, etc etc. If the funds are not allocated to this project I have been advised by a good source they are likely to be re-allocated to one of these projects. This includes the State Government funds currently allocated to this project.
- Also attached is the MOU between the State Govt and UTAS that highlights what the State wants out of the project. I would think this covers most of your concerns raised with me and others in regard to the educational content and number of senior staff etc.
- 3. Please note for regional councils agricultural associate degrees and health qualifications will be an important consideration for your young people into the future that links to the jobs in your municipalities.
- 4. Can you advise if you are not willing to sign the letters attached if you would like to be briefed on this issue further by UTAS in the very near future and I will arrange it.

It is now a critical time to support this northern project, and I would encourage any further discussion. It would be great to see a more unified Northern approach.

Cheers

Maree Tetlow Executive Officer

NORTHERN TASMANIA DEVELOPMENT

Telephone: Mobile: 61 3 6380 6803 61 408 825 060

PO Box 603 LAUNCESTON TAS 7250 www.northerntasmania.org.au

Sign up for our e-newsletter here





Level 1, Cornwall Square Transit 12-16 St John Street, Launceston PO Box 603, Launceston TAS 7250 T 03 6380 6800 E admin@northerntasmania.org.au ABN 13 585 842 417 www.northerntasmania.org.au

27 April 2016

Mr Andrew Nikolic AM, CSC, MP Federal Member for Bass 100 St John Street LAUNCESTON TAS 7250

Dear Andrew,

RE: UTAS Transformation Project for Northern Tasmania

Northern Tasmania is struggling. Despite increasing tourism numbers and some sectoral growth, we continue to lag the State and nation for unemployment, investment and education amongst other important indicators.

The Launceston University relocation and education transformation project offers a truly once in a generation opportunity to underpin the future prosperity of the North of Tasmania.

As a region, we have many needs and many requests for funding that will be made in the lead up to this Federal election. Many are infrastructure requests which are vital to our future such as roads, bridges, water and sewerage infrastructure and community facilities amongst others. Many will relate to energy security and other pressing needs, however we have one problem which is immediate and urgent.

Our children and our workforces are not getting the education they need to find jobs, to develop in their jobs, or to support themselves and their industry employers to compete in an increasingly global market place. Some of this relates to the poor retention of students past years 10, much of it is also our startlingly poor level of post-secondary education. We are being rapidly left behind and no matter how much improved our infrastructure is in the region, if we can't provide our young people with the promise of participating in an ever changing technical world that requires a reasonable education and pathways to further specialisation - we are likely to continue to struggle and place an extra burden on the welfare system and other related issues such as health and petty crime.

The University Transformation Project in the north would rebuild pathways for student entry, provide greater links to industry development and our regional competitive advantages. The proposed areas of campus specialisation such as food and agriculture, tourism, health, wood industries, and advanced manufacturing, will link to the job opportunities in the region. This project offers us the best chance of a once in a generation chance to lift the region.

We have all had and even still have issues and concerns with the way the Norther campus of the University of Tasmania has been managed in the past, but the opportunity around a successful project would be a huge boost for our region, and consequently if it fails, the outlook would be too bleak not to be united in our desire to see this happen.



We note the State Government's very significant financial support and the University of Tasmania's very significant financial commitment. We also note that many of the issues of the communities we represent have been addressed in principle in the Principles and Shared Objects between the University of Tasmania and The State Government.

We do hope you continue to support our efforts to win this project in your upcoming meetings with Federal Ministers and your State Government colleagues.

Yours sincerely

Ald. Albert van Zetten

Mayor, Launcestom

Cr.Christina Holmdahl

Mayor, West Tamar Council

Cr. Craig Perkins

Mayor, Meander Valley

Cr. Greg Howard

Mayor, Dorset

Cr. David Downie

Mayor, Northern Midlands

Cr. Mick Tucker

Mayor, Break O'Day Council

Cr. Bridget Archer

Mayor, George Town

Cr. Carol Cox

Mayor, Flinders Island



Level 1, Cornwall Square Transit 12-16 St John Street, Launceston PO Box 603, Launceston TAS 7250 T 03 6380 6800 E admin@northerntasmania.org.au ABN 13 585 842 417 www.northerntasmania.org.au

27 April 2016

The Hon. Will Hodgman
Premier
11th Floor, Executive Building, 15 Murray Street,
HOBART TAS 7000

Dear Premier,

RE: UTAS Transformation Project for Northern Tasmania

Northern Tasmania is struggling. Despite increasing tourism numbers and some sectoral growth, we continue to lag the State and nation for unemployment, investment and education amongst other important indicators.

The Launceston University relocation and education transformation project offers a truly once in a generation opportunity to underpin the future prosperity of the North of Tasmania.

As a region, we have many needs and many requests for funding that will be made in the lead up to this Federal election. Many are infrastructure requests which are vital to our future such as roads, bridges, water and sewerage infrastructure and community facilities amongst others. Many will relate to energy security and other pressing needs, however we have one problem which is immediate and urgent.

Our children and our workforces are not getting the education they need to find jobs, to develop in their jobs, or to support themselves and their industry employers to compete in an increasingly global market place. Some of this relates to the poor retention of students past years 10, much of it is also our startlingly poor level of post-secondary education. We are being rapidly left behind and no matter how much improved our infrastructure is in the region, if we can't provide our young people with the promise of participating in an ever changing technical world that requires a reasonable education and pathways to further specialisation - we are likely to continue to struggle and place an extra burden on the welfare system and other related issues such as health and petty crime.

The University Transformation Project in the north would rebuild pathways for student entry, provide greater links to industry development and our regional competitive advantages. The proposed areas of campus specialisation such as food and agriculture, tourism, health, wood industries, and advanced manufacturing, will link to the job opportunities in the region. This project offers us the best chance of a once in a generation chance to lift the region.

We have all had and even still have issues and concerns with the way the Norther campus of the University of Tasmania has been managed in the past, but the opportunity around a successful project would be a huge boost for our region, and consequently if it fails, the outlook would be too bleak not to be united in our desire to see this happen.



We note that the Federal Government funding request at \$150M is significant, but it is supported by the State Government's very significant financial support and the University of Tasmania's very significant financial commitment. We also note that many of the issues of the communities we represent have been addressed in principle in the Principles and Shared Objects between the University of Tasmania and The State Government.

We do hope you continue to support our efforts to win this project in your upcoming meetings with your Federal colleagues.

Yours sincerely

Ald. Albert van Zetten

Mayor, Launcestom

Cr.Christina Holmdahl

Mayor, West Tamar Council

Cr. Craig Perkins

Mayor, Meander Valley

Cr. Greg Howard

Mayor, Dorset

Cr. David Downie

Mayor, Northern Midlands

Cr. Mick Tucker

Mayor, Break O'Day Council

Cr. Bridget Archer

Mayor, George Town

Cr. Carol Cox

Mayor, Flinders Island

Education Driven Economic Revitalisation of Northern Tasmania

State Government and University of Tasmania

Principles and Shared Objectives

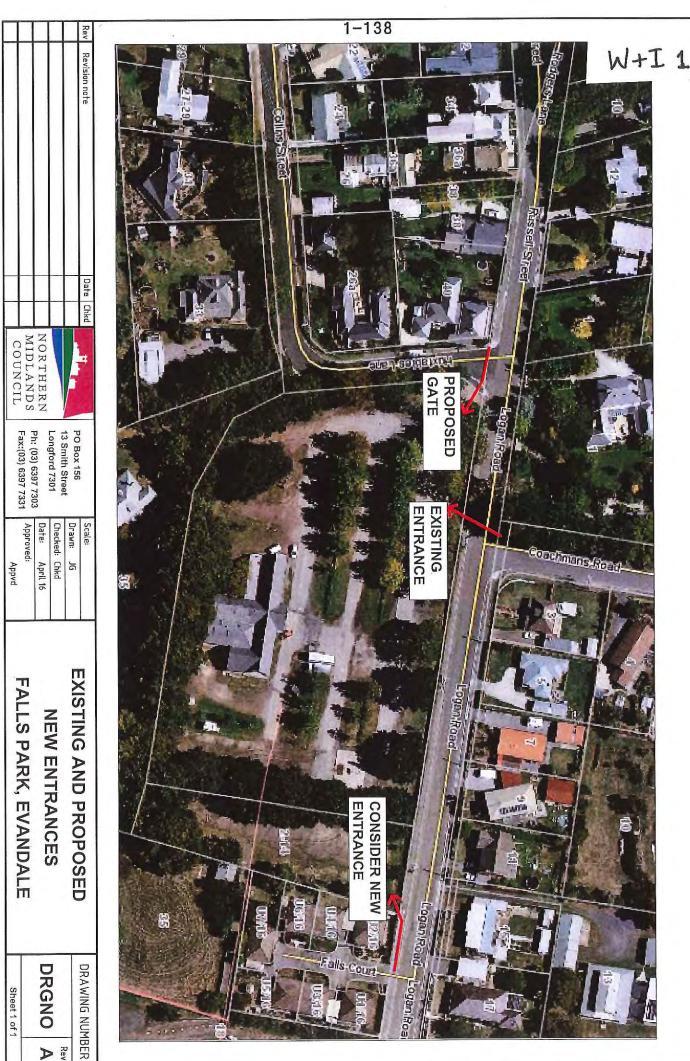
There are four principles that will underpin our commitment to the outcomes as partners in this proposal:

- Aspiration Northern campuses will work to meet increasing demand for higher education among growing numbers of school leavers and others seeking the advantages that education will bring.
- Influence Northern Campuses to have a voice influencing in the overall functioning of the University of Tasmania.
- Presence Northern campuses will be visible and integrate with the broader community
 making a positive contribution to the social and economic prosperity of our distinct
 communities in the North and North West.
- **Growth** clearly defined strategies will ensure the significant growth in student numbers necessary to underpin the sustainability of the Northern campuses.

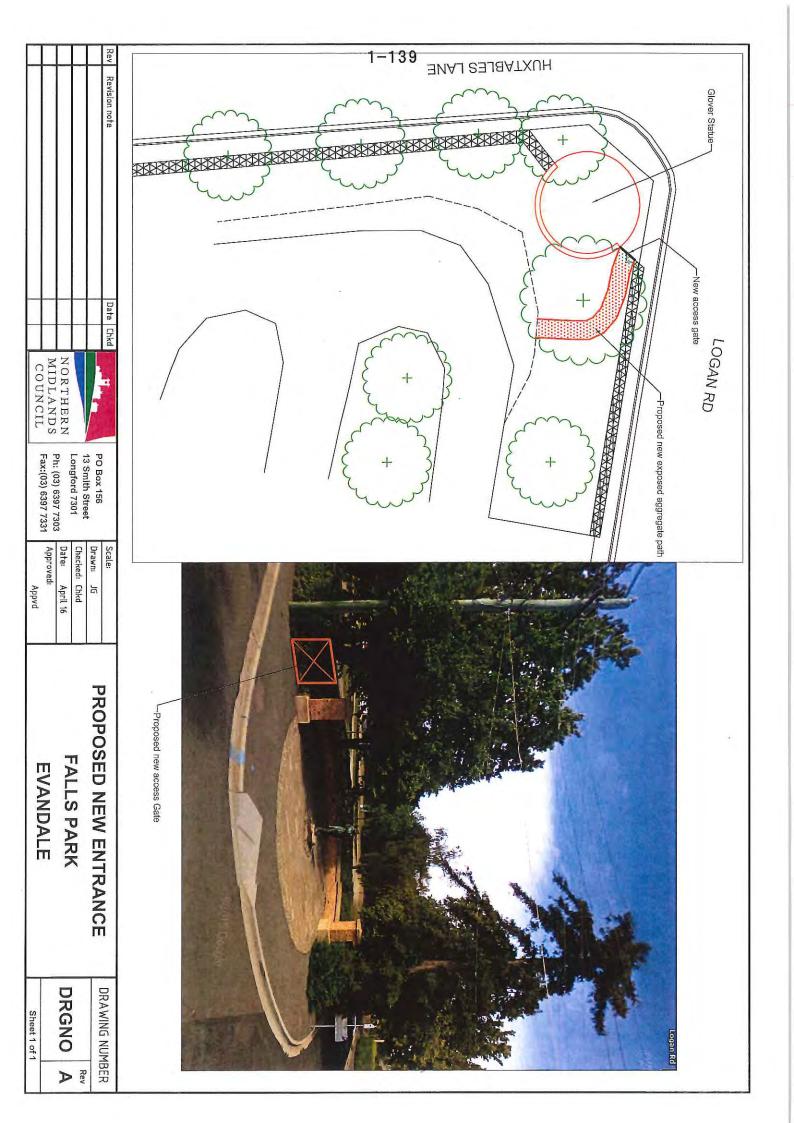
These principles will support commitment to the following shared objectives:

- Increasing student participation in existing and new Bachelor and Post Graduate degree programs.
- Expanding existing University programs through the development of a contemporary style of curriculum, including Associate Degrees.
- Growth in the senior staff and academic leadership required to deliver the above objectives.
- Development of programs in partnership with TasTAFE, Industry and other partners to meet the goal of 12,000 additional students which will underpin the ongoing sustainability of higher education in the North and North West.
- Establishment of an Institute and Centres of Excellence focussed on those sectors where the North has a competitive advantage; supported by senior staff to provide key academic leadership.
- Establishment of a Northern Tasmanian based teaching development and service delivery team responsible for the delivery of the new Associate Degree program, including senior academic and leadership positions.
- Use of Tasmanian timber and timber products where possible during the construction and fit-out stages of infrastructure developments, and research to develop a 'living laboratory' approach in respect of the use of Tasmanian timbers and energy technology.
- Ensuring the long term future for the AMC and working together with Government and Industry to support the growth, and expand opportunities, for the AMC.
- A transparent and open process with the Northern community for the development of uses for the Newnham campus with a focus on growing the economic and social outcomes in that location.
- University support for development in Launceston and Burnie that will enhance the student experience and in particular help attract international and interstate students.

The Tasmanian Government and the University of Tasmania will develop a process that allows timely consideration of any issues as they arise in the process of these developments and into the future, as well as reviewing annually the shared objectives outlined in the State Government and University of Tasmania Partnership Agreement.



D Rev





Northern Midlands Council Account Management Report

Income & Expenditure Summary for the Period Ended 30 April 2016 (83% of Year Completed)

Line Item Summary Totals	Operating Statement Governance	ent	Corporate Services	2020	Economic & Community Dev	munity Dev	Planning & Development	'n	Works		Total Operating Statement	87
	2015/16	2015/16	2015/16	2015/16	2015/16	2015/16	2015/16	2015/16	2015/16	2015/16	2015/16 Budget	
	Budget	Actual	546 051	ACTUAL 005	480 935	337 264	568 390	442 124	1 507 265	1.133.759	3.394.924.00	ŏ
Waterial & Services Expenditure	428 175	377,498	390,487	582,206	246,426	220,219		321,413	3,151,661	2,335,590	4,796,638.00	8 8
Material & Services Expenditure	47.360	39 480	53.040	44.200	69.030	57.510		13,840	4,861,800	3,756,180	5,047,850.00	0
Government Levies & Charges	7.360	356	565,650	203,695	10,020	6,532		888	79,590	64,897	662,620.00	8
Councillors Expenditure	187,332	149,007	0	0	0	0	0	0	0	0	187,332.00	8
Other Expenditure	491,087	109,252	408,336	424,134	125,169	78,303	19,988	10,436	112,295	84,991	1,156,875.00	ŏ
Oncost	126,192	116,121	234,471	180,013	80,150	62,048	N	176,751	557,928	430,608	1,236,661.00	ō
Internal Plant Hire/Rental	19,290	15,961	17,810	21,002	18,760	14,752		53,532	829,490	668,043	952,670.00	0
Internal Rental/Rates	300	0	590	0	20	0		0	11,250	0	12,160.00	U
Other Internal Transfers Expenditure	4,000	8,866	6,502	5,369,198	18,200	16,572	0	0	26,550	22,150	6,551,378.00	O
Oncosts Paid - Payroll	52.459	34,639		116,576	110,800	125,724	120,462	128,521	294,930	293,959	685,149.00	U
Oncost Paid - Non Payroll	92,806	71,863		114,546	133,933	89,233		133,675	461,126	352,817	1,036,904.00	_
Plant Expenditure Paid	11,150	10,517		3,968		10,998		16,017	596,080	358,568	658,420.00	1
	1,759,794	1,199,178	8,990,211	7,513,543	1,314,093	1,019,155	1,825,518	1,297,197	12,489,965	9,501,562	26,379,581	10
Rate Bevenue	0	0	(8,749,507)	(8,596,719)	0	0	(22,531)	(23,052)	(658,923)	(670,886)	(9,430,961.00)	
Recurrent Grant Revenue	(2,000)	(1,600)	(1,238,554)	(834,439)	(250,536)	(185,176)		o	(1,185,523)	(907,505)	(2,676,613.00)	
Fees and Charges Revenue	0	0	(210,382)	(183,690)	(357,523)	(255,046)	(751,671)	(688,622)	(401,758)	(380,879)	(1,721,334.00)	
Interest-Revenue	(352,000)	(178,825)	(45,000)	(100,182)	0	0		0	0	0	(397,000.00)	
Reimbursements Revenue	(2,600)	(2,102)	(39,018)	(44,385)	(15,269)	(38,396)		(26,400)	(18,749)	(30,209)	(102,076.00)	
Oncost Recoveries - Internal Tfer	(118,217)	(116,216)	(234,141)	(181,148)	(77,285)	(58,736)	_	(179,026)	(690,387)	(580,764)	(1,378,483.00)	
Plant Hire Income - Internal Tfer	(17,500)	(23,941)	(15,030)	(14,280)	(15,110)	(14,959)		(51,391)	(1,049,510)	(902,986)	(1,148,140.00)	
Other Internal Transfers Income	(33,641)	(28,041)	(451,925)	(30,754)	(546,887)	(456,020)	(655,448)	(558,110)	(5,253,479)	(4,339,897)	(1 151 645 00)	
Culei Veverine	(1.533.881)	(993,368)	(10.991,258)	(9,997,697)	(1,288,507)	(1,030,984)	(1,819,390)	(1,576,886)	(9,315,596)	(7,873,706)	(24,948,632)	
												11
Underlying (Surplus) / Deficit Before	225,913	205,810	(2,001,047)	(2,484,154)	25,586	(11,829)	6,128	(279,689)	3,174,369	1,627,856	1,430,949	100
Gain on sale of Fixed Assets	(60,000)	(60,001)	0	D	0	0	o	0	0	0	(60,000)	_
Loss on Sale of Fixed Assets	180,000	222,361		823		0		0	450,000	67,994	630,000	
Net Loss On Disposal of Fixed Assets	120,000	162,360	0	823	0	D	0	0	450,000	67,994	570,000	
Underlying (Surplus) / Deficit	345,913	368,170	(2,001,047)	(2,483,331)	25,586	(11,829)	6,128	(279,689)	3,624,369	1,695,850	2,000,949	w
1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2								5	20 400 770		10.100	•
Capital Grant Revenue	00	0 0	o o	0 0	0 0		0 0	0 0	(3,163,550)	(2,575,448)	(3,163,550)	
Suparvider Collumbations	0	0		0		0		0	(3,513,550)	(2,575,448)	(3,513,550)	
	245 040	268 470	לאח לחת כו	() ES ESP C)	25.586	(11.829)	6.128	(279,689)	110 819	(879 598)	(1.512.601)	



556%	-\$9,113	\$11,113	\$1,660	\$2,000
556%	-\$9,113	\$11,113	\$1,660	\$2,000
556%	-\$8,170 -\$9,113	\$8,170 \$11,113	\$1,660	\$2,000
147%	-\$943	\$2,943	\$1,660	\$2,000
% Annual Budget	Budget Variance	YTD Actual	YTD Budget	Annual Budget

Fleet, Plant & Equipment
780006 Gov - Office Equipment Purchases
780029 Gov - Council Chambers Additional Flag pole
Total Fleet, Plant & Equipment

Total Capital Expenditure - Governance

Grand Total

Capital Expenditure - Governance



53%	\$104,705	\$120,295	\$225,000 \$187,480 \$120,295	\$225,000
53%	\$104,705	\$120,295	\$187,480	\$225,000
53%	\$104,705	\$120,295	\$187,480	\$225,000
56% 8%	\$887 \$46,013	\$1,113 \$3.987	\$1,660 \$41.660	\$2,000 \$50,000
67%	\$57,805	\$115,195	\$144,160	\$173,000
0%	\$0	\$0	\$0	\$0
Budget	Variance	Actual	Budget	Budget
Annual	Budget	OT.	440	Annual
%		σ	for year to April 2016	Tor year t

Grand 1	Total Capital Expenditure - Corporate Services	Capital Expenditure - Corporate Services Equipment & Buildings - Corporate Services 700007 Fleet - F7 Pool Vehicle 715300 Corp - Computer System Upgrade 715310 Corp - Purchase Office Equipment 720113 Corp - Office / Council Chambers Improvements Total Equipment & Buildings - Corporate Services
Grand Total	Services	e Services



Account Management Report for year to April 2016 Northern Midlands Council

MIDLANDS	TOT year to	TOT year to April 2010			2
COUNCIL	Annual	đЦ	aT.	Budget	% Annual
	Budget	Budget	Actual	Variance	Budget
Capital Expenditure - Economic & Community Develop					
Equipment & Buildings	! 	})	200	000
707929 Evan - Aged Care Units Carpet Replacement	\$40,000	\$4,160 \$8,340	\$ €	\$10,000	0%
750202 Ec & Comm Dev - Sports Centre Equipment Purchases / Improvements	\$10,000	6 0 1	• () (
780025 Ec & Comm Dev - Purchase of Office Equipment	\$2,000 \$0	\$1,660 \$0	\$481	\$2,000 -\$481	0%
	\$17,000	\$14,160	\$481	\$16,519	3%
Tourism/Economic Development 780028 Tourism - Public WiFi. Touchscreens	\$20,000	\$16,660	\$1,908	\$18,092	10%
	\$20,000	\$16,660	\$1,908	\$18,092	10%
Total Capital Expenditure - Economic & Communit	\$37,000	\$30,820	\$2,389	\$34,611	6%
Grand Total	\$37,000	\$30,820	\$2,389	\$34,611	6%
-14		:			



Grand Total	Total Capital Expenditure - Planning & Developme	Capital Expenditure - Planning & Development Fleet, Plant & Equipment 700027 Fleet - F27 Animal Control 700182 Fleet - F182 Planner 715330 Plan & Dev - Purchase of Office Equipment Total Fleet, Plant & Equipment	COUNCIL
\$35,000	\$35,000	Budget \$18,000 \$15,000 \$2,000 \$35,000	Annual YT
\$29,160	\$29,160	Budget \$15,000 \$12,500 \$1,660 \$29,160	ALD ALL
\$12,148	\$12,148	Actual \$9,849 \$0 \$2,299 \$12,148	OTY YTD
\$22,852	\$22,852	Variance \$8,151 \$15,000 -\$299 \$22,852	Budget
35%	35%	Budget 55% 0% 115% 35%	% Annual



NORTHERN MIDLANDS COUNCIL

Account Management Report Northern Midlands Council

Recreation 707719 Ross - Cannon at War Memorial Restoration 707752 Lfd - Sports Centre Landscaping 707774 Evan - Lamp Posts Main Street 707792 Lfd - Recreation Ground Raw Water Watering System 707801 Rec - Private Power Poles All Areas 707814 Rec - Street Tree Program All Areas 707824 Ctown - Pool Chlorine Weigh System Indicator 707825 Cry - Pool Chlorine Weigh System Indicator 707826 Ross - Pool Chlorine Weigh System Indicator 707827 Lfd - NMC Marquee 707835 Lfd - Recreation Ground Topdressing 707887 Lfd - St Georges Square Bike Park Redevelopment 707913 Cry - Recreation Ground Sewer Dump Point 707924 Cry - Pool Roller cover and Signage 707925 Cry - Pool Roller cover and Signage 707936 Evan - Falls Park Fence	Capital Expenditure - Works Department Fleet, Plant & Depot 700001 Fleet - F1 Works Managers Vehicle 700011 Fleet - F2 Works Supervisors Vehicle 700012 Fleet - F3 Works Supervisors Vehicle 700013 Fleet - F11 Light Truck 700023 Fleet - F25 Utility Litter & Garbage Collection 700026 Fleet - F35 Street Sweeper 700037 Fleet - F35 Street Sweeper 700047 Fleet - F47 Grader & Roller 700048 Fleet - F47 Grader & Roller 700069 Fleet - F68 Mower Reserves South 700110 Fleet - F64 Tractor 700140 Fleet - F64 Tractor 700164 Fleet - F19 Building Management and Maintenance 700118 Fleet - F19 Building Management and Maintenance 700119 Fleet - F184 4x2 Utility Works - Purchase Small Plant 715338 Works - CCTV Installation 715338 Works - CCTV Installation 71638 Works - Comm Depot Improvements 720201 Works - Comm Depot Improvements 720205 Lfd - Archive Storage at Works Depot Total Fleet, Plant & Depot Total Fleet, Plant & Depot
\$20,000 \$25,000 \$15,000 \$15,000 \$80,000 \$10,000 \$50,000 \$45,000 \$25,000 \$25,000 \$25,000 \$25,000	Annual Budget \$20,000 \$15,000 \$20,000 \$350,000 \$360,000 \$40,000 \$40,000 \$15,00
\$16,660 \$20,840 \$4,160 \$12,500 \$66,660 \$0 \$41,660 \$37,500 \$20,840 \$1,660 \$1,660 \$1,660	Annual YTD Budget Budget \$20,000 \$16,660 \$12,500 \$25,000 \$25,000 \$17,500 \$17,500 \$31,660 \$38,000 \$291,660 \$38,000 \$250,000 \$38,000 \$33,334 \$66,000 \$38,000 \$31,660 \$31,660 \$31,660 \$31,660 \$15,000 \$12,500 \$12,500 \$15,000 \$1
\$1,300 \$3,445 \$10,676 \$5,137 \$5,137 \$0 \$1,476 \$1,476 \$1,476 \$1,476 \$10,979 \$10,451 \$287 \$20,648 \$0 \$0 \$0	YTD Actual Actual \$0 \$15,553 \$0 \$19,819 \$0 \$265,631 \$120 \$50,478 \$568 \$38,002 \$17,569 \$12,423 \$412,423 \$4,2423 \$4,2423 \$5,473 \$5,473 \$5,473 \$5,473
-\$1,300 \$20,000 \$21,555 -\$5,676 \$9,863 \$0,000 -\$1,476 -\$1,476 -\$1,476 -\$1,476 -\$1,476 -\$5,240 -\$979 \$39,549 -\$25,000 \$5,000 \$25,000 \$25,000 \$2,000	Budget Variance \$20,000 \$25,000 \$30,000 \$25,000 \$21,000 \$250,619 \$350,000 \$34,369 \$37,880 \$41,478 \$566,000 \$7,577 \$10,155 \$1,759 \$5,590 \$44,888 \$879,866
214% 14% 34% 0% 0% 110% 0% 21% 0% 0% 0%	% Annual Budget 60% 104% 00% 104% 00% -25% 00% 126% 00% 126% 00% 128% 32% 14% 63% 73% 10% 73%

Produced from Finesse	Produce				8
0%	-\$12,482	\$12,482	\$0	\$0	Excavation 550156.3 Ctown - Bond St Grant to High Reconstruction Base
0%	-\$23,212	\$23,212	\$0	\$0	750156.2 Ctown Bond St Grant to High Reconstruction
18% 0%	\$ 94,110 - \$ 20,635	\$20,890 \$20,635	\$95,840 \$0	\$115,000 \$0	Roads Ctown - Bond St Grant to High Reconstruction 750156. Ctown - Bond St Grant to High Reconstruction K&G 750156.1 Ctown - Bond St Grant to High Reconstruction
0% 33% 18%	\$25,000 \$20,208 \$45,208	\$0 \$9,792 \$9,792	\$20,840 \$25,000 \$45,840	\$25,000 \$30,000 \$55,000	Waste Management 712952 Waste - MGB Purchases 728755 Waste - WTS Improvements Total Waste Management
20% 1% 127 18 29% 29% 34%% 34%% 34%% 34%% 34%% 34%%	\$79,049 \$79,049 \$369,177 -\$11,296 \$28,496 \$28,496 \$2,559 \$13,815 \$20,000 \$13,235 \$10,000 \$15,000 \$18,455 \$25,000 \$15,000 \$15,000 \$15,000 \$144,933 \$64,118 \$397,941	\$91,823 \$91,504 \$17,933 \$2,441 \$6,765 \$6,765 \$0 \$4,545 \$0 \$5,067 \$0 \$5,067	\$66,660 \$384,126 \$35,000 \$35,000 \$33,340 \$4,168 \$16,660 \$12,500 \$16,660 \$12,500 \$12,500 \$12,500 \$12,500 \$12,500 \$12,500 \$12,500 \$12,500 \$12,500 \$12,500 \$12,500	\$80,000 \$80,000 \$461,000 \$42,000 \$40,000 \$5,000 \$20,000 \$15,000 \$15,000 \$20,000 \$15,000 \$39,000 \$39,000 \$3,100 \$3,100 \$64,118	illag ngs
100%% 0%%%%	\$20,000 \$1,200 \$11,000 -\$558 \$41,076	\$8,800 \$8,800 \$558 \$6,924	\$16,660 \$8,340 \$9,166 \$0 \$41,660	\$20,000 \$10,000 \$11,000 \$0 \$50,000	707937 Lfd - Rec Ground Scoreboard and Entrance Improve 707938 Pfh - Rec Ground Interchange Shed 707939 Lfd - War Memorial Hall Room Soundproofing 707940 Rec - Longford Village Green Destination Play Space 715255 Rec - Street Furniture & Playground Equip All Area
% Annual Budget	Budget Variance	6 YTD Actual	for year to April 2016 Annual YTD Budget Budget	for year t Annual Budget	

Page 2

		וטו אפמו ני	(A) (A) (A) (A)	C		n/
		Annual Budget	YTD Budget	YTD Actual	Budget Variance	% Annual Budget
750156.4	Ctown - Bond St Grant to High Reconstruction Prep for	\$0	\$0	\$3,708	-\$3,708	0%
750156.5 750156.7	Seal Ross - Bond St Reconstruction Grant to High Seal Ctown - Bond St Grant to High Reconstruction	\$0 0 80	\$ \$ 0	\$6,012 \$8,415	-\$6,012 -\$8,415	0%
750156.8	Naturestrips Ctown - Bond St Grant to High Reconstruction Princetors	\$0.	\$0	\$6,090	-\$6,090	0%
750156.9 750156.91		\$0	\$ \$ 0 0	\$4,988 \$20,983	-\$4,988 -\$20,983	0%
750175	Water Ltd - Brickendon Street Reconstruction Ch 14.60 to	\$10,000	\$8,334	\$5,922	\$4,078	59%
750175.1	16.30 Lfd - Brickendon Street Reconstruction Ch 14.60 to		\$0	\$0	\$0	0%
750175.2	Ltd - Brickendon Street Reconstruction Ch 14.60 to		\$0	\$0	\$0	0%
75 0175.3			\$0	\$0	\$0	0%
7 9 0175.4	Lfd - Brickendon Street Reconstruction Ch 14.60 to		\$0	\$0	\$0	0%
750175.5		\$0	\$0	\$4,170	-\$4,170	0%
750175.9		9 9 9 9 9	\$0	\$2,336	-\$2,336	0%
	Total Ctown - Bond St Grant to High Reconstruction	\$125,000	\$104,174	\$139,845	-\$14,845	112%
Ctown - 750493 750493.1 750493.2 750493.2	ഥ	\$350,000 \$0 \$0	\$291,660 \$0 \$0 \$0	\$47,445 \$59,580 \$62,314 \$49,283	\$302,555 -\$59,580 -\$62,314 -\$49,283	14% 0% 0%
750493.4 750493.5 750493.5	Ctown - Glenelg St Ch 0.285 to Ch 0.640 Prep for Seal Ctown - Glenelg St Ch 0.285 to Ch 0.640 Seal	\$00	\$ 60	\$9,076 \$43,010	\$9,076 -\$43,010	0%
7504 9 3.7 750493.8		\$ \$ \$0	\$ \$ \$ 0	\$38,528 \$8,630	-\$38,528 -\$8,630	0%%
750493.91	Ctown - Gleneig St Ch 0.285 to Ch 0.640 Stormwater Total Ctown - Gleneig St Ch 0.285 to Ch 0.640	\$3 50,000	\$0 \$291,660	\$21,830 \$ 340,669	-\$21,830 \$9,331	0% 97%
Cry - Del 750361 750361.1	₹	\$160,000 \$0	\$133,340 \$0	\$61 \$20,329	\$159,939 -\$20,329	0%
750361.2	Excavation Cry - Delmont Rd Reconstruction Ch 1.800 to 2.485 Subbase	\$0	\$0	\$100,876	-\$100,876	0%
750361.3		\$0	\$0	\$101,575	-\$101,575	. 0%

Account Management Report Northern Midlands Council

Produced from Finesse	Produce				
0%	-\$1,440	\$1,440	\$0	\$0	
0%	-\$85	\$85	\$0	\$0	750794.6 Cry - Macquarie St. Main to Cartenby Footbath
0%	-\$8,000	\$8,000	\$0	\$ 00	
0%	-\$2,984	\$2,984	\$0	90 0 €	
0%	-\$10.226	9/0 0/0 	# 6	# (
2%	-\$1K,001	\$5.541 \$1.00 1.00	# €	# €	
23%	\$45,975	\$14,025	\$50,000	\$60,000	Cry - Macquarie St, Main to Gatenby 750784 Cry - Macquarie St, Main to Gatenby K & G
	4	i i	# EE0, 100	\$ N C C C C C C C C C C C C C C C C C C	Total Cry - Macquarie Rd Ch 10.680 to 11.675 Reconstruct
79% 79%	\$ 57.083	\$3,083 *217 93 4	\$0 \$0	\$0 \$0	
0%	-\$22,894	\$22,894	\$0	\$0	750755.8 — Ctown - Macquarie Rd Ch 10,680 to 11,675 Other
0%	-\$34,024 -\$847	\$54,624 \$847	es €5 O O	# 6	
700	9 000	÷	}	ř	Seal
0%	-\$5,453	\$5,453	\$ €	\$ €	
0%	-\$58,877 -\$63,729	\$58,877 \$63,729	% % ○ ○	* \$ 0	
0%	-\$6,922	\$6,922	\$ 0	\$0	750755 Ctown - Macquarie Rd Ch 10.560 to 11.575 Excavation
1%	\$273,495	\$1,505	\$229,166	\$275,000	acq
100/6	-\$17,000	\$31,800	\$16,660	\$20,000	Total Cty - Gatenby St Macquarie to Spencers Lane
18 9 %	-\$4,788 ¢17 955	\$4,788	\$0	\$0	Seal 750460.5 Cry - Gatenby St Macquarie to Spencers Lane Seal
0%	-\$2,535	\$2,535	\$0	\$0	750460.4 Cry - Gatenby St Macquarie to Spencers Lane Prep for
0%	-\$6,353	\$6,353	\$0	\$0	
0%	-\$8,455	\$8,455	\$0	\$0	Excavation Excavation Spencers Lane Subbase
0%	-\$8,605	\$8,605	\$16,660 \$0	\$20,000 \$0	750460 Cry - Gatenby St Macquarie to Spencers Lane K&G 750460.1 Cry - Gatenby St Macquarie to Spencers Lane
36%	#43 880 880	7 200)		Cty - Gatenby St Macquarie to Spencers Lane
91%	\$35,839	\$354,161	\$325,000	\$390,000	750364 Cry - Delmont Rd Reconstruction Ch 3.910 to 4.920 Total Cry - Delmont Rd Reconstruction Ch 1.800 to 2.485
0%	\$30 000	#	5 0 0 0 0		750361.91 Cry - Delmont Rd Reconstruction on 1.800 to 2.463 Other
0%	-\$865	\$865	⊕ O	9	
0%	-\$24,651	\$24,651	\$0	\$0	Driveways 750361.9 Cry - Delmont Rd Reconstruction Ch 1.800 to 2.485
0%	-\$2,114	\$2,114	\$0	\$0	750361.8 Cry - Delmont Rd Reconstruction Ch 1.800 to 2.484
0%	-\$93,217	\$93,217	\$0	\$0	750361.5 Cry - Delmont Rd Reconstruction Ch 1.800 to 2.485
	1	÷		ě	750361.4 Cry - Deimont Rd Reconstruction Ch 1.800 to 2.485
0%	-\$10,473	\$10.473	9 0	2	
Annual Budget	Budget Variance	YTD Actual	YTD Budget	Annual Budget	
%		Ū	April 2016	for year to April	
				openial officers	

Northern Midlands Council

Account Management Report for year to April 2016

Pump Sned 714846.25 Ross - Main St Project Garden Beds Ross Drill Hall Total Ross Streetscape Improvements	Ross Streetscape Improvements 714846 Ross - Streetscape Improvements 714846.24 Ross - Main St Project Footpath Female Factory to Old	Pth - Fore St Construct Turning Head 750446 Pth - Fore St Construct Turning Head 750446.1 Pth - Fore St Construct Turning Head Excavation 750446.2 Pth - Fore St Construct Turning Head Subbase 750446.7 Pth - Fore St Construct Turning Head Nature Strips 750446.9 Pth - Fore St Construct Turning Head Other 750446.91 Pth - Fore St Construct Turning Head Other Stormwater 750446.91 Pth - Fore St Construct Turning Head Other	Evan - Relbia Rd Ch 1.375 to 2.530 751050.901 Edale - Relbia Rd Reconstruction Chn 1.375 to 2.530 Other Total Evan - Relbia Rd Ch 1.375 to 2.530	750718.9 Evan - Logan Road Verge Reconstruction No 48 to 58 750718.91 Evan - Logan Road Verge Reconstruction No 48 to 58 Total Evan - Logan Rd Verge Reconstruction No 48 to 58	Nature Strip 750718.8 Evan - Logan Road Verge Reconstruction No 48 to 58	360718.7 Evan - Logan Road Verge Reconstruction No 48 to 58	Prep for Seal 690718.5 Evan - Logan Road Verge Reconstruction No 48 to 58	Subbase Subbase 750718.4 Evan - Logan Road Verge Reconstruction No 48 to 58	750718.3 Evan - Logan Road Verge Reconstruction No 48 to 58	Excavation 750718.2 Evan - Logan Road Verge Reconstruction No 48 to 58	750718.1 Evan - Logan Road Verge Reconstruction No 48-58	Evan - Logan Rd Verge Reconstruction No 48 to 58 750718 Evan - Logan Road Verge Reconstruction No 48 to 58	750784.8 Cry - Macquarie St, Main to Gatenby Driveways 750784.9 Cry - Macquarie St, Main to Gatenby Other 750784.91 Cry - Macquarie St, Main to Gatenby stormwater Total Cry - Macquarie St, Main to Gatenby	
\$0,000 \$0	\$60,000 \$0	\$56,000 \$0 \$0 \$0 \$0 \$56, 000		\$0 \$0 \$8 1,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$81,000	\$0,000 \$0 \$0 \$0	Annual Budget
\$0 \$50,000	\$50,000 \$0	\$46,660 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$ 0	\$0 \$67, 500	\$0	\$ 0	\$0	\$0	\$0	\$0	\$0	\$67,500	\$50,000 \$0 \$0 \$0	YTD Budget
\$26,638 \$ 44,239	\$9,330 \$8,271	\$12,934 \$6,542 \$4,176 \$468 \$2,131 \$1,459 \$27,709	\$ \$0	\$6,308 \$11,722 \$ 100,722	\$987	\$5,905	\$11,333	\$3,939	\$20,460	\$10,910	\$16,202	\$12,956	\$5,564 \$1,816 \$793 \$ 63,335	YTD Actual
-\$26,638 \$15,761	\$50,670 -\$8,271	\$43,066 -\$6,542 -\$4,176 -\$468 -\$2,131 -\$1,459 \$28,291	\$ \$0 \$0	_\$6,308 -\$11,722 - \$19,722	-\$987	-\$5,905	-\$11,333	-\$3,939	-\$20,460	~ \$ 10,910	-\$16,202	\$ 68,044	-\$5,564 -\$1,816 -\$793 -\$3,335	Budget Variance
0% 7 4%	16% 0%	23% 0% 0% 0% 4 9 %	0% 0 %	0% 0% 124 %	0%	0%	0%	0%	0%	0%	0%	16%	0% 0% 0% 106 %	% Annual Budget

Resealing Program

Reports ACMGMAD. QRP generated at 2:12 PM on 05-May-2016 by Martin

Produced from Finesse

Page 5

Northern Midlands Council

Account Management Report for year to April 2016

Resheeting Program 715125 Southern - Resheeting 715460 Roads Northem - Resheeting Total Resheeting Program	715005. Roads - Reseal Markey St Ch 0.314 to 0.457 715005.0001dr - Reseal Anstey St Ch 0.314 to 0.457 715005.0002Avoca - Reseal Arthur St 0.099 to 0.152 715005.0002Avoca - Reseal Bishopsbourne Rd 3.936 to 9.915 715005.013Lfd - Reseal Bishopsbourne Rd 3.936 to 9.915 715005.013Lfd - Reseal Bishopsbourne Rd 3.936 to 1.894 715005.015Avoca - Reseal Bishopsbourne Rd 3.935 to 1.284 715005.024Lfd - Reseal Bishopsbourne Rd 3.935 to 0.284 715005.024Lfd - Reseal Bishopsbourne Rd 3.935 to 0.284 715005.024Lfd - Reseal Bishopsbourne Rd 3.935 to 0.283 715005.024Lfd - Reseal Bishopsbourne Rd 3.935 to 0.283 715005.024Lfd - Reseal Bishopsbourne Rd 3.936 715005.024Lfd - Reseal Catherine St Ch 1.590 to 1.693 715005.034Avoca - Reseal Falmouth St Ch 0.283 to 0.420 715005.034Lfd - Reseal Malcombe St Wellington to Laycock 715005.032Lfd - Reseal Malcombe St Laycock to Mariborough 725005.082Lfd - Reseal Malcombe St Laycock to Mariborough 725005.082Lfd - Reseal Mile Road ch 11.475 to ch 12,480 775005.093Evan - Reseal Nile Rd Ch 13.25 to Ch 13.485 775005.094Evan - Reseal Nile Rd Ch 13.25 to Ch 13.485 775005.095Evan - Reseal Roysal Rossarden Rd 1.510 to 2.000 715005.108Avoca - Reseal Roysal George Rd Ch 1.590-8.0 715005.108Avoca - Reseal Roysal George Rd Ch 1.855-7.190 715005.108Avoca - Reseal Roysal George Rd Ch 1.855-7.190 715005.108Avoca - Reseal Roysal George Rd Ch 1.6.35	
\$200,000 \$200,000 \$400,000	\$640,000 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	Annual Budget
\$166,666 \$166,666 \$333,332	\$533,333 \$53	year to April 2010 nnual YTD udget Budget
\$29,625 \$115,367 \$144,992	\$4,144 \$1,654 \$4,144 \$1,654 \$26,396 \$4,116 \$4,116 \$4,116 \$3,259 \$4,1183 \$3,795 \$3,186 \$8,163 \$3,186 \$8,163 \$3,186 \$8,163 \$3,186 \$7,594 \$16,236	YTD Actual
\$170,375 \$84,633 \$2 55, 008	\$640,000 -\$4,144 -\$1,654 -\$16,096 -\$26,396 -\$2,6396 -\$3,259 -\$4,116 -\$3,259 -\$3,163 -\$3,750 -\$3,175 -\$3,186 -\$3,186 -\$3,186 -\$3,186 -\$3,186 -\$3,186 -\$3,186 -\$3,186 -\$3,186 -\$3,186 -\$3,186 -\$3,186 -\$3,186 -\$3,186 -\$3,186 -\$3,186 -\$3,186 -\$3,186 -\$15,262 -\$15,262 -\$15,262 -\$15,262 -\$15,262 -\$15,262 -\$15,262 -\$15,262 -\$15,262 -\$15,262 -\$15,262 -\$15,262 -\$15,262 -\$15,262 -\$15,262 -\$15,262 -\$15,262 -\$27,558 -\$27,558 -\$27,558 -\$27,558 -\$27,558 -\$2,469 -\$3,615 -\$3,709 -\$1,285	Budget Variance
15% 58% 36 %	7 000000000000000000000000000000000000	% Annual Budget

	Tot your to		•			
	Annual Budget	YTD Budget	YTD Actual	Budget Variance	% Annual Budget	
Black Spot Projects 750401 Pth - Elizabeth / Main Street Instersection Total Black Spot Projects	\$51,432 \$51 ,432	\$42,860 \$4 2,860	\$76,959 \$7 6,959	-\$25,527 -\$ 25,527	150% 150 %	
Footpath Construction Program 750037.6 Pth - Arthur St Fairtlough to Clarence Footpath	\$110,000	\$91,660	\$98,934	\$11,066	90%	
	\$20,000 \$22,000	\$16,660 \$18,340	\$21,145 \$213	-\$1,145 \$21,787	106% 1%	
	\$24,000 \$0	\$20,000 \$0	\$20,014 \$38	\$3,985 \$3.8	83% 0%% 83%	
	\$0 \$23,000 \$0	\$19,160 \$0 \$0	\$104 \$30,044 \$12,609	-\$104 -\$7,044 -\$12,609	0% 131% 0%	
Driveways 750460.9 Cry - Gatenby St Macquarie to Spencers Lane Other	\$0	\$ 0	\$944	-\$944	0%	
_	\$0 \$24,000	\$0,000	\$2,162 \$0	-\$2,162 \$24,000	0%	
	\$70,000 \$0	\$58,334 \$0	\$62,624 \$8,405	\$7,376 -\$8,405	89%	
	\$9.000 \$9.000	\$0 \$7,500	\$ 8	\$0 000,e\$	0%%	
	\$11,000 \$18,000	\$9,160 \$9,160	475 0\$	\$11,000 \$17,925	0%	
	\$55,000	\$45,840	\$26,900	\$28,100	49%	
	\$30,000 \$25,000	\$25,000 \$20,840	\$ \$	\$25,000	0%	
	\$31,500 \$0	\$26,240 \$0	\$14,323 \$14.323	\$17,177 -\$14.323	45% 0%	
751558.6 Ltd - St Georges Square Smith to Tasman Footpath	\$50,000	\$41,660	\$5,852	\$44,148	12%	
751571.6 Pth - Callistemon Ct to Banksia Grove Walkway 751999.6 Evan - War Memorial Hall Reserve Footpath Total Footpath Construction Program	\$17,000 \$0 \$ 539,500	\$14,160 \$0 \$449,554	\$34,225 \$1,756 \$ 354,690	-\$1,756 -\$1,756 \$184,810	%0 0%	
Pth - Cromwell St Ch 0.073 to North 750329 Pth Cromwell St Ch 0.073 (End of Kerb Southern End)	\$50,000	\$41,660	\$251	\$49,749	1%	
750329.1 Pth Cromwell St Ch 0.073 (End of Kerb Southern End)	\$0	\$0	\$7,169	-\$7,169	0%	
750329.2 Pth Cormwell St Ch 0.073 (End of Kerb Southern End)	\$0	\$0	\$8,356	-\$8,356	0%	
750329.3 Pth Cromwell St Ch 0.073 (End of Kerb Southern End)	\$0	\$0	\$8,380	-\$8,380	0%	
750329.4 Pth Cromwell St Ch 0.073 (End of Kerb Southern End)	\$ 0	\$0	\$1,787	-\$1,787	0%	
750329.5 Pth Cromwell St Ch 0.073 (End of Kerb Southern End)	\$0	\$0	\$12,115	-\$12,115	0%	
750329.7 Pth Cromwell St Ch 0.073 (End of Kerb Southern End)		\$0	\$0	\$0	0%	1
ReportsIACMGMAD.QRP generated at 2:12 PM on 05-May-2016 by Martin				Produce	Produced from Finesse	

Page 7

\$14,829 \$1,997,118
\$2,956,913
\$87,529 \$120,028
\$52,529 \$69,045 \$0 \$38
\$0 \$0 \$0 \$35,000 \$33,286
\$285,000 \$426,576
\$0 \$34,526
\$0 \$11,432
\$0 \$4,099
\$0 \$110,022
\$0 \$9,569
\$0 \$124,984
\$0 \$95,373
\$250,000 \$15,164 \$0 \$21,406
\$0 \$190 \$41,660 \$37,731
\$0 \$1,200
\$0 -\$1,716
YTD YTD Budget Actual
1

Page 8

Account Management Report Northern Midlands Council

	for your	for year to April 2016	, ,			
	ioi year	2011	ā		%	
	Annual	TD	TD	Budget	Annual	
	Budget	Budget	Actual	Variance	Budget	
Cry - Bridge 3177: Powranna Rd Macquarie River	\$150,000	\$125,000	\$0	\$150,000	0%	
Cry - Bridge 3259; Lake River Rd Dabool Rivulet	\$140,400	\$117,000	\$155,306	-\$14,906	111%	
Avoca - Bridge 3767; Royal George Rd, Unnamed Crk	\$100,000	\$83,340	\$56,967	\$43,033	57%	
Evan - Bridge 6500: Kingston Rd Broad Valley Crk	\$0	\$ 0	\$136	-\$136	0%	
Cry - Bridge 7350: Cressy Rd, Lake River	\$1,250,000	\$1,041,660	\$28,085	\$1,221,915	2%	
Total Bridges	\$3,562,400	\$2,968,658	\$2,252,442	\$1,309,958	63%	
Stormwater Drainage	3	3				
Fin - Stormwater West Feith Catchinent Street	Ф73 ДВЛ	727 73 3	\$74 550 550 550 550 550 550 550 550 550 550		101%	
Crown - Stormwater Gleneig Street	\$ 0	\$0	\$1,125	-\$1,125	0%	
Lfd - Flood Levee Pump Testing Site South Esk	\$10,000	\$8,340	\$11,644	-\$1,644	116%	
Pth - Frederick St Stormwater	\$10,000	\$8,334	\$8,970	\$1,030	90%	
Pth - Stormwater Cromwell St	\$0	\$0	\$1,666	-\$1,666	0%	
Evan - Stormwater Translink Upgrade	\$200,000	\$166,668	\$135,963	\$64,037	68%	
Storm Water Management Plans	\$135,000	\$112,500	\$21,011	\$113,989	16%	
Pth - Seccombe St Stormwater Extension Minerva Drive to Fairtleurch	\$55,000	\$45,834	\$0	\$55,000	0%	
Lfd - Town Hall to pit in Mitre 10	\$0	\$0	\$4,860	-\$4,860	0%	
Total Urban Stormwater Drainage	\$483,485	\$402,913	\$270,081	\$213,405	56%	
otal Capital Expenditure - Works Department	\$10,189,970	\$8,491,506	\$6,086,362	\$4,103,608	60%	
Grand Total	\$10,189,970	\$8,491,506	\$6,086,362	\$4,103,608	60%	

743177 743259 743767 746500 747350

Urban Stormwater Drainage

738565 788576 788588 788594 788597 788601 788605 788605 788605

Total Capital Expenditure - Wor

DRAFT TASMANIAN CAT MANAGEMENT PLAN P+D 2.

SUMMARY

APRIL 2016

The purpose of the Tasmanian Cat Management Plan is to improve the management of feral and domestic cats in Tasmania, and reduce the negative impacts they have on the environment, agriculture and human health. Public comment is being sought on the information and recommendations in this Draft Plan before the Plan is finalised.

For the Draft Cat Management Plan (the "Plan") to succeed, all levels of Government as well as the community will need to work cooperatively. This work will need to be guided by a shared understanding that there is a need on the one hand to encourage responsible cat ownership, accepting the positive role that cats can play in our community, and on the other hand to understand and mitigate the negative impacts that cats can have.

1. INTRODUCTION

This Plan has been prepared by the Department of Primary Industries, Parks, Water and Environment (DPIPWE). It embodies the considered analysis and proposals of the Tasmanian Cat Management Reference Group, which represents the key cat management stakeholder groups in the State. The Reference Group was established by the Minister for Primary Industries and Water, Jeremy Rockliff MP, to provide advice on the development of the Draft Plan.

The Minister will consider the Plan and the submissions from the public before approving a final Plan.

Members of the Reference Group come from a range of organisations with a direct interest in the management of cats:

- Australian Veterinary Association, Tasmanian Division
- Cat Association of Tasmania
- Hobart Cat Centre
- Landcare Tasmania
- Local Government Association of Tasmania
- Natural Resource Management regional bodies (represented by NRM South)
- . RSPCA
- Tasmanian Conservation Trust Inc.
- Tasmanian Farmers and Graziers Association
- University of Tasmania

2. CAT MANAGEMENT IN TASMANIA – WHY DO WE NEED A CAT MANAGEMENT PLAN?

Individuals respond to cats in different ways and they can be many things to different people: much-loved pets valued for enjoyment and companionship; useful animals that control rats and other vermin; nuisance animals that annoy neighbours; and feral pests that spread disease and impact on native wildlife and agriculture. The polarised views in the community about cats make cat management a difficult and often emotive issue.



Despite cats being in Tasmania for more than 200 years, our understanding of the ecological role cats play as predators and as competitors with other species, both native and introduced, is not strong. This limits the effectiveness of attempts to manage many catrelated issues. Therefore improving our understanding of cats and their impacts, and of the most effective management and control techniques, is critical to ensure that our available resources are used effectively and efficiently.

This Plan outlines the objectives and practical proposals for improved cat management in Tasmania.

3. PROPOSALS TO ACHIEVE BETTER CAT MANAGEMENT IN TASMANIA

This Plan recognises that cat management is a complex and community-wide issue and all sectors of the community have a role in managing the impacts of cats, both feral and domestic. It also recognises the significant impact that feral cats have. The Plan acknowledges that given there is a self-sustaining feral cat population in Tasmania, it is not feasible to totally eradicate feral cats across the State with current resources and techniques, and therefore implementation of the Plan will require a long-term effort and commitment.

The Plan is designed to be flexible, providing the ability to implement the actions over an extended period.

Successful implementation of the Plan will require all levels of Government to participate. The Tasmanian Government is seeking to work with the Australian Government in considering a range of opportunities to leverage the outcomes from their shared resources. State and Local Government will also need to clarify their respective roles and responsibilities, and identify further opportunities to collaborate.

The Plan is built around seven objectives, and the following points summarise the key elements of those objectives:

(a) Clarify the roles and responsibilities of State and Local Government

Clarifying the roles and responsibilities of State and Local Government in relation to the management of cats is a key objective of the Plan. In addition to its overarching legislative powers, the State Government and its statutory land management authorities (including business enterprises) are directly responsible for the management of a majority of the State's land area. The aim is to encourage liaison between all relevant agencies and Local government to arrive at agreed roles and responsibilities. These agreements will also need to recognise the roles played by the Australian Government and non-government organisations.

(b) Improve knowledge about the ecological and disease-carrying impacts of cats, to inform more effective on-ground actions

There are three broad areas where we need better knowledge to underpin improved management of the impacts cats may have: the environment, primary industries and human health. The Plan goes into detail to identify specific research questions in each area. The aim is to conduct better targeted research that will broaden the knowledge base available to underpin improved cat management. The specific areas of interest include:

The Environment

- Quantifying the actual impacts of feral cats on native fauna, and identifying costeffective means of protecting native fauna from feral cat predation.
- Clarifying how cats respond to control activities, and identifying effective means of controlling, trapping and euthanasing feral cats.

Primary Industries

Quantifying the costs of cat-borne diseases on primary industries, and identifying
how best to control the spread of cat-borne disease, including the potential role of
vaccinations for stock.

Human health

- Quantifying the potential impacts of cat-borne diseases on human health.
- (c) Encourage the adoption of 'best practice' techniques and principles in cat control programs

When planning and assessing cat control and management programs for funding or implementation encourage the following points to be considered:

- Are the problems and the impacts to be addressed clearly defined and assessed, on the basis of relevant data?
- Are there clear and measurable methods for demonstrating that the expected outcomes are being achieved?
- Is there evidence that the proposed activities represent the most effective means of achieving the expected outcomes?
- How do we ensure there are acceptable returns on investment?

(d) Minimise the impacts of cats, particularly on areas of high conservation value and on agriculture

Through DPIPWE, the State Government will seek to work with Federal agencies, local government and landowners to develop localised cat management programs.

High conservation value assets will be prioritised across Tasmania, in terms of the potential or actual impacts of cats on those assets. Setting priorities is essential to inform management decisions (e.g. managing cats in the vicinity of shearwater colonies). Similarly, agricultural areas (and even human populations) that are particularly vulnerable to the disease-carrying impacts of cats will be identified. This information can then be fed into the process for considering project proposals for cat control, or education and awareness programs. Once priority areas have been identified, targeted control programs can be developed and implemented over time.

(e) Encourage responsible pet cat ownership

A range of actions are being proposed to achieve this objective. The aim is to help cat owners act more responsibly and to prevent additional cats joining the stray or feral populations. The proposals include amendments to the Cat Management Act 2009 (the Act) and awareness raising activities targeting cat owners with regards to the potential impacts of inadequately controlled cats. The most important changes proposed in the Plan are:

- Desexing of cats to be made compulsory (except for registered breeding purposes or valid vet certification).
- Age to desex cats to be reduced.
- Microchipping of cats to be made compulsory.

• The provision for 'care agreements' to be replaced with more effective options to cover the sale of cats.

In addition, the Plan identifies further actions as potentially important. However, it recognises that these require further community consultation, both to maximise community acceptance and to settle on the details:

- The number of cats allowed at a property without a permit to be limited (the specific number to be determined).
- Cats to be confined to the property of their owners.

(f) Improve Administrative Elements of the Act

There are some administrative elements of the Act that require amendment to improve their operation and effectiveness, and they are detailed in the Plan.

4. HOW TO PROVIDE COMMENTS ON THE DRAFT MANAGEMENT PLAN

The material for this consultation includes:

- This Summary (4 pages).
- The Draft Management Plan, detailing the proposals and recommendations of the Reference Group (20 pages).
- A Background Paper, including detail on the evidence base behind the proposals in the Draft Management Plan (44 pages).

All documents are available on the DPIPWE website: www.dpipwe.tas.gov.au/catmanagementplan

Copies of these documents can also be obtained by phoning 03 61653085

or by emailing: catmanagementplan@dpipwe.tas.gov.au

If you would like to comment on any information or recommendation in these documents, please forward your written submission, with your name and contact details, to:

Draft Tasmanian Cat Management Plan Biosecurity Tasmania, DPIPWE GPO Box 44 HOBART TAS 7001

The closing date for submissions is 30 June 2016.

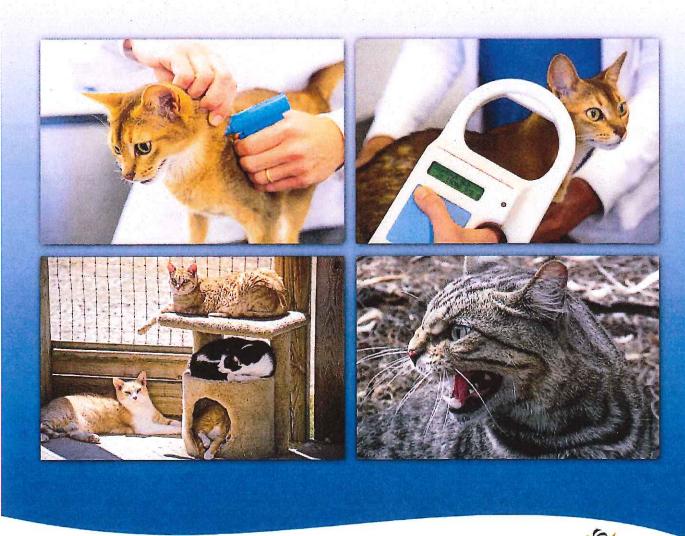
All submissions will be treated as public documents and made available on the Department's website. If you wish your submission to be treated as confidential, either in whole or in part, please note this in writing at the time of making your submission. (However, see below on the Right to Information Act 2009)

The Right to Information Act 2009 and confidentiality

By law, information provided to the Government may be provided to an applicant under the provisions of the *Right to Information Act 2009*. If you have indicated that you wish all or part of your submission to be confidential, the statement that details your reasons will be taken into account in determining whether or not to release the information in the event of a right to information application for the assessed disclosure of the submission.

Draft Tasmanian Cat Management Plan

Background Paper
April 2016







CONTENTS

1. INTR	RODUCTION	1
2. OVEI	RVIEW and SCOPE	3
3. CAT	MANAGEMENT in TASMANIA – CURRENT SITUATION	4
3.3	1 Owned Cats	5
3	3.1.1 Principals of responsible ownership	5
3	3.1.2 Cats kept for breeding purposes	6
3	3.1.3 Animal welfare	6
3.	.2 Feral Cats	7
3	3.2.1 Introduction	7
3	3.2.2 Distribution	7
3	3.2.3 Feral cats and Tasmania's natural environment	8
3	3.2.4 Feral cats and Tasmanian agriculture – cat-borne diseases	12
3.	.3 Adverse Human Health Impacts from Cats	17
4. ACH	HEVING BETTER CAT MANAGEMENT IN TASMANIA	18
4.	.1 Roles and Responsibilities	18
4.	.2 Managing Environmental Impacts of Feral Cats	18
4.:	.3 Managing the Impacts of Cats on Agriculture	21
4	4.3.1 Recommendations to reduce disease spread	22
4.	.4 Reducing the Adverse Impacts of Cats on Human Health	23
4.	.5 Guidelines for More Effective Decision-Making	24
4.	.6 Recommendations for Future Regulatory Change	25
USEFUL	L WEBSITES	32
REFERE	FNCFS	33

Published by: the Department of Primary Industries, Parks, Water and Environment April 2016

Recommended Citation:

Department of Primary Industries, Parks, Water and Environment (2016). *Draft Tasmanian Cat Management Plan – Background Paper*. Department of Primary Industries, Parks, Water and Environment, Hobart, Tasmania.

The development of this *Background Paper* has been overseen by the Tasmanian Cat Management Reference Group and includes significant writing contributions from Tom Jackson, Sue Robinson, Eric Schwarz, Jack Davey, Craig Elliott and Michael Askey-Doran.

Disclaimer: To the extent permitted by law, the Tasmanian Department of Primary Industries, Parks, Water and Environment (including its employees and consultants) excludes all liability to any person for any consequences, including but not limited to all losses, damages, costs, expenses and any other compensation, arising directly or indirectly from using information or material (in part or in whole) contained in this publication.

ACKOWLEDGEMENTS

The development of the *Draft Tasmanian Cat Management Plan* has been overseen by the Tasmanian Cat Management Reference Group. In May 2015, the Minister for Primary Industries, Jeremy Rockliff invited a number of organisations with a direct interest in the management of cats in Tasmania to be represented on a Reference Group, with the primary task of developing this draft plan. Those organisations include:

The Hobart Cat Centre

The RSPCA

The Tasmanian Farmers and Graziers Association

The Tasmanian Conservation Trust

The Australian Vets Association

The Cat Association of Tasmania

Landcare Tasmania

Local Government Association of Tasmania

Tasmanian Natural Resource Management Regional bodies (represented by NRM South)

University of Tasmania

In addition to the Reference Group members a number of individuals with expertise in particular areas were also invited to participate in working groups to look at the issues related to socialised cats and feral cats — The contributions from Nick Mooney, Eric Woehler (Birds Tasmania), John Toohey (Clarence City Council), Kaylene Allan (Kingborough Council), Brian Baxter (Landcare Tasmania), Bruce Jackson (DPIPWE), Sue Robinson (DPIPWE) and Danielle Madden-Hallett on the working groups and the members of the Reference Group is greatly appreciated. Thanks also to Jack Davey who wrote much of the information on catborne diseases as part of a study placement to DPIPWE from the Charles Sturt University.

1. INTRODUCTION

Cats are an integral part of Tasmanian society but the role they play is a complex one. This one species can be many things to different people, including much-loved pets valued for enjoyment and companionship; useful animals that control rats and other vermin; nuisance animals that annoy neighbours, and invasive animals that spread disease and impact on native wildlife and agriculture. The polarised view of cats in the community makes cat management a difficult and often emotive issue.

Despite cats being in Tasmania for approximately 200 years, the depth of understanding of the role cats play as a predator and competitor with other species, native and introduced to Tasmania, is not strong. This limits the effectiveness of attempts to manage many cat-related issues.

In Tasmania initiatives to improve awareness about the issues associated with the ownership and management of cats have been underway through a range of public awareness programs. This includes use of television media, published information and webbased information. Some councils, vets and volunteer organisations have supported discounted and free microchipping events for cat owners. However, there is still much to do, especially in increasing levels of responsible ownership of cats and in defining roles and responsibilities.

State and Local Government are the two tiers of Government that can support regulatory actions related to the management of cats. State Government has a role administering the *Cat Management Act 2009*, but Local Government is able to appoint authorised officers under the *Act* and can create by-laws covering cats. However, the roles and responsibilities for State and Local Government in relation to cat management are not clear and need to be better clarified.

Non-government organisations such as the RSPCA and the Hobart Cat Centre play a central role in managing unwanted and stray cats. Not only do both organisations play a role in finding new owners for unwanted animals, they also play a crucial role in educating people about their responsibilities as pet owners.

There are gaps in our knowledge of the actual impacts of cats, especially that of stray and feral cats. Understanding how cats behave and respond to the presence of prey and other predators (including other cats) is integral to designing effective programs to protect vulnerable species and control feral cats. The approach to improving the way in which we manage cats in Tasmania and addressing the gaps in knowledge is intended to be collaborative with the aim of bringing the community, different levels of Government, industry and research institutions together.

Nationally, the Australian Government has published the *Threat Abatement Plan for Predation by Feral Cats* (Department of Environment 2015a). This plan establishes a national framework to guide and coordinate Australia's response to the impacts of feral cats on biodiversity. This plan identifies a range of actions, including research needs, that are required to help ensure the long-term survival of native species and ecological communities that are being impacted upon by feral cat predation. Supporting this plan is the *Background Document for the Threat Abatement Plan for the Predation by Feral Cats* (Department of Environment 2015b). The background document contains information on feral cat characteristics, biology and distribution; impacts on environmental, social and cultural values; and current management practices and measures. The *Threat Abatement Plan* is linked closely to the Australian Government's *Threatened Species Strategy* (Department of Environment 2015c).

The *Draft Tasmanian Cat Management Plan* and this supporting *Background Paper* describe how the management of cats in Tasmania should occur. They have been prepared with extensive consultation and input from a range of stakeholders, including recommendations provided to the DPIPWE from the Tasmanian Cat Management Reference Group, and addresses the management of feral (wild) and domestic cats.

2. OVERVIEW and SCOPE

This Paper provides background to the management and impacts of cats in Tasmania and supports the objectives and recommendations of the *Draft Tasmanian Cat Management Plan*. That draft plan aims to increase the levels of responsible ownership, clarify roles and responsibilities, improve our knowledge and understanding of various aspects of cats, and improve the effectiveness of legislation.

The *Draft Tasmanian Cat Management Plan* is built around seven objectives, although a number of the issues identified in this plan cross multiple objectives. The draft plan's objectives are summarised below:

- Objective 1: Encouraging responsible ownership of pet cats
- **Objective 2:** Promoting best practice techniques to guide the planning, management and control of stray and feral cats
- Objective 3: Increasing community awareness and involvement
- Objective 4: Improving the knowledge about feral cats to better inform management
- **Objective 5:** Minimise impacts of cats in areas of high conservation value and agricultural assets
- Objective 6: Undertake legislative amendments to facilitate and support other objectives
- **Objective 7:** Clarify roles and responsibility of Local Government and State Government regarding cat management

Categories of cats

It is important for public debate that it is recognised that all cats in Tasmania are the same species (*Felis catus*) and the categorisation of domestic, stray and feral are labels of convenience. The categories and definitions used in this *Background Paper* are:

- Feral cats are those that live and reproduce in the wild, largely or entirely removed from humans, and survive by hunting or scavenging; none of their needs are satisfied intentionally by humans.
- Stray cats are those found in and around cities, towns and rural properties; they may
 depend on some resources provided by humans but have no identifiable owner.
- Domestic cats are those which are identifiable as owned; most of their needs are supplied by their owners. They may roam beyond their owner's property, including into bush and park land, but they spend most of their time with a specific person/family/property.

3. CAT MANAGEMENT in TASMANIA – CURRENT SITUATION

As a species that is both a widespread introduced pest and a much loved companion animal, cats play a complex role in the Tasmanian community. This one species fulfils numerous roles including valued pets; useful animals that control rats and other vermin; nuisance animals that annoy neighbours, and invasive animals that spread disease and impact on native wildlife and agriculture. The formal management structures around cats reflect these contradictory roles.

In July 2012 the *Cat Management Act* 2009 was proclaimed, along with the *Cat Management Regulations 2012*, with the aim of achieving the following objectives:

- · promote the welfare and responsible ownership of cats;
- provide for the effective management of cats, allowing for the humane handling and management of unidentified, stray and feral cats; and
- · reduce the negative effects of cats on the environment.

The Department of Primary Industries, Parks, Water and Environment (DPIPWE), has primary responsibility for administration of the legislation, but the legislation also provides for the involvement of Local Government through the appointment of authorised officers (under this Act or under the Dog Control Act 2000) and the ability to make by-laws under the Local Government Act 1993. Currently Latrobe Council is the only Local Government area to establish cat management by-laws, but a number of other councils are currently exploring their options. Some councils have or are in the process of establishing prohibited areas on land they manage. This will give councils the capacity to trap and seize stray and feral cats.

The legislation identifies the RSPCA and Hobart Cat Centre as cat management facilities and details their management responsibilities, including the management of seized, unclaimed and surrendered cats. These two organisations bear the majority of the daily cat management responsibility and are usually the first contact for cat management in Tasmania.

Community groups and councils have initiated a number of cat management projects in recent years. Kingborough Council, in partnership with the Tasmanian Conservation Trust has hosted a Cat Management Officer. That initiative has delivered several valuable outcomes including: a responsible cat ownership awareness campaign focusing on microchipping; desexing and confining cats to their owner's property; community attitudes survey; and projects to reduce the impacts of cats on the environment (Boronia Reserve and Bruny Island).

Community feral cat trapping programs have been undertaken in a number of areas around the State including the Upper reaches of the Meander Catchment and in the Weymouth and Bellingham areas of the north-east. Tamar NRM has been active in promoting the problems caused by feral cats by sponsoring a number of forums on feral cat management and control.

In recent times there has also been significant amount of research undertaken into the impacts of feral cats on native fauna, feral cat behaviour and feral cats and the spread of toxoplasmosis. This research has provided us with important insight into how feral cats behave across different landscapes and how that might influence the success or failure of control and trapping programs. Nonetheless, further research is required to address a variety of cat-management related issues.

3.1 Owned Cats

Australia has one of the highest rates of pet ownership in the world, and cats are the second most common pets with 29% of households owning a cat (Animal Health Alliance 2013). This equates to 15 in every 100 people in Australia having a cat. In Tasmania, it is estimated that 34% of households own a cat, the highest rate in Australia (Roy Morgan Research 2014). This highlights the fact that cats play an important role in the social fabric of Tasmanians.

This relationship between cats and people, as with other companion animals, is complex and often conflicting. Cats provide companionship for their owners and are valued as animals that will also help control rats and mice. However, cats are also inherent wanderers and their agility allows them to move easily between different properties. Cats that roam can be a nuisance and the cause of conflict between neighbours. They can bother and even attack other people's pets, including other cats; defecate in other properties; risk spreading diseases such as toxoplasmosis; and kill native wildlife.

Cats that roam persistently effectively become stray cats and may be fed by and/or even live with multiple owners. Stray cats, as opposed to feral cats, remain at least partly habituated to humans but can be found hunting in adjoining bush and reserve areas where they kill native wildlife and contribute to the spread of various cat-borne diseases.

3.1.1 Principals of responsible ownership

A key objective of improving the way in which cats are managed in Tasmania is to ensure that cat ownership occurs in a responsible manner. It is important that people who choose to own a cat understand what their responsibilities are. The notion of being "responsible" relates to many different aspects of owning cats. It includes being responsible for what your

cat does, including impacts on wildlife and the nuisance it may cause to other people and their properties. Being responsible also includes the health and wellbeing of the cat. Cats that are allowed to wander may not only create a nuisance but are also at risk of being injured by vehicles or other animals, of contracting diseases or becoming pregnant.

Desexing helps prevent unwanted pregnancies and microchipping ensures a lost animal can be returned to its owner. By providing a safe environment within the property and confining the cat so it doesn't wander helps protect the animal's well-being.

3.1.2 Cats kept for breeding purposes

An important aspect of cat ownership relates to cats that are kept for breeding. Breeding of cats occurs for a range of reasons – personal ownership of particular breed types; showing of cats; and commercial breeding for sale. In Tasmania, breeders of cats are required to be registered, and this can occur either through the recognised breeder associations or with the Department of Primary Industries, Parks, Water and the Environment (DPIPWE). The breeder associations play a different role to that of DPIPWE in terms of the requirements for registration and the type of breeders registered. The breeder associations have a strong focus on protecting the integrity of breeds and encouraging responsible ownership, whereas DPIPWE's focus is more towards preventing uncontrolled breeding of cats and the risk of undesexed and non-microchipped cats being sold. For those who wish to breed non-pedigree cats, the opportunities outside of the DPIPWE registration process are more limited, especially if the breeder believes the formal cat breeder associations are not appropriate to their needs.

The breeder associations operate under a constitution with a code of ethics and a defined set of rules and regulations. The associations have the power to cancel the membership of any member who breaches the code of ethics or rules and regulations. Whilst the DPIPWE can de-register breeders it has registered, it has no power to de-register those breeders registered with a cat association.

In the interests of encouraging responsible cat ownership, there is a need for a clearer framework to be established for the registration of breeders that covers non-pedigree breeding and reduces the level of uncontrolled cat breeding.

3.1.3 Animal welfare

The Cat Management Act requires that cats be treated humanely whenever they are the subject of cat management actions. These actions include the trapping, seizing and humane destruction of cats. Currently cats can be trapped and/or euthanased when found on properties involved in livestock grazing for primary production, or are more than one

kilometer from the nearest residence, or are found on prohibited land. The destruction of an animal must occur quickly and without causing the cat undue suffering.

The welfare of a cat is also protected through the *Animal Welfare Act 1993* – Part 2 of this *Act* covers the welfare of animals including duty of care, management of animals, cruelty and the use of traps.

3.2 Feral Cats

3.2.1 Introduction

Cats were introduced to Tasmania in 1804 (Abbott 2008) and by the 1840s were reported as 'feral in some parts of the Colony' (Breton 1846). Records of predation by cats on native animals were first made in the 1840s and 1850s (Abbott 2008). Recent genetics studies (e.g. Spencer et al. 2015) have determined that cats took approximately 70 years to spread across mainland Australia; they can therefore be assumed to likely have occupied all suitable habitat in Tasmania fairly rapidly. Cats are now considered firmly established across the state and eradication of cats from mainland Tasmania is not considered feasible with the tools and techniques currently available.

While the impacts of feral cats on (small) island environments are well documented and understood, the impacts of feral cats on 'mainland' environments (including big islands such as Tasmania) are generally poorly understood. Therefore a key challenge for cat management in Tasmania is addressing the extensive knowledge gaps regarding the impact of feral cats on wildlife and agriculture. Potential impacts on the environment are likely to be wide ranging and include livestock and poultry losses from predation and disease transmission, and wildlife impacts from disease transmission, competition and predation of native species. Diseases associated with feral cats, such as toxoplasmosis, are known to affect humans. These issues will be discussed in detail in the subsequent relevant sections.

3.2.2 Distribution

The distribution of feral cats in Tasmania is effectively statewide. Cats are now considered to be widely distributed throughout all ecosystems in the state with the highest densities in urban and peri-urban areas, particularly around Hobart and Launceston, and lowest in the more remote and wetter regions of the southwest. There are no accurate population estimates for feral cats in Tasmania, and limited value in making them as from a management perspective, the density and the potential impact of cats are more important considerations. There is, however currently limited data available on both of these factors.



Figure 1. Feral cat records (red dots are spatially suspect) for Tasmania from the Atlas of Living Australia database (www.ala.org.au). Image produced on 1st March 2016.

3.2.3 Feral cats and Tasmania's natural environment

The problem

Feral cats are generally considered to be a serious and widespread vertebrate pest in Australia, and have been linked to the decline and extinction of a number of species of fauna. There is substantial evidence of cats predating on a range of Tasmanian species, however there is little clear data on whether cats have had a significant impact on any species, at a state-wide level. While there have been no extinctions of potential prey species in Tasmania, there is substantial anecdotal evidence of cats having significant effects on vulnerable wildlife populations at a local level.

Management of vertebrate pests needs to take into account the capacity to achieve effective outcomes and to direct efforts to those priorities where the greatest gains can be made. The "invasion curve" provides a means by which realistic priorities can be established for the control of introduced vertebrate pests, including cats. After an initial incursion of an animal(s) there may be a brief window of opportunity where eradication is achievable. However, over time that initial population will grow and may eventually reach a level where eradication is no longer feasible. At this point management switches to containment and then, at some point, to asset protection.

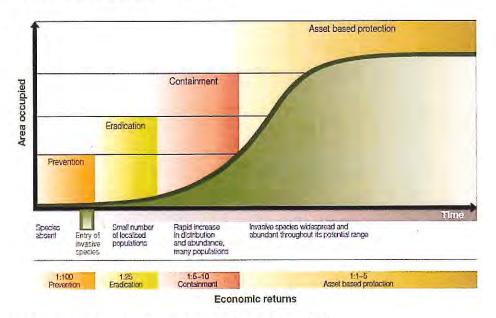


Figure 2. Species Invasion Curve (Agriculture Victoria 2015)

The invasion curve also provides a guide to the costs of control compared to the amount of effort required to control the pest. This 'return on investment' diminishes the further along the curve you go. In Tasmania, in terms of cat management, we have progressed towards the further end of the curve; i.e. cats are established across the state and should be managed on the basis of 'asset protection' with a focus on reducing the *impact* of cats, rather than focusing on the *numbers* of cats.

As previously discussed, eradication of cats from mainland Tasmania is not considered feasible with the tools and techniques currently available. Consequently strategic targeting of priority areas, such as areas with specific vulnerability to cat impacts (e.g. shearwater colonies) and offshore islands is appropriate. An additional and significant component of managing feral cats will be the effective regulation of the domestic and stray cat populations and a concurrent change in cat owner behaviours.

Realistically, the greatest benefit will come from targeted and well planned programs that may reduce the impacts of feral cats in areas where natural values or agricultural assets need to be protected. Local councils, rural stakeholder groups, and regional natural resource management groups should be encouraged to develop local or regional feral cat management strategies to assist with coordinating activities and reducing impacts over the longer term.

The Impacts

The knowledge and level of understanding of the dynamics of feral cat impacts in non-island environments, such as mainland Tasmania, is not great. However, Tasmania has been settled by Europeans for over two hundred years and the domestic cat can be assumed to have been present in most areas for much of that time, yet Tasmania has a relatively intact native fauna, including several species that have become extinct or extremely rare on the mainland. The two major differences between the settlement process in Tasmania and the Australian mainland are a lower level of habitat clearance and the absence of the fox.

Considering this, there is therefore strong evidence that Tasmania's indigenous fauna can cope with the presence of the domestic cat as long as the original habitat is reasonably intact. While there is ample evidence that predation by feral cats does have an impact on Australia's native fauna and has caused local if not total extinctions (e.g. Dickman1996), the absence of cat-related extinctions in Tasmania's fauna indicates that the distribution and abundance of species in this state is largely determined by factors other than predation by cats; the most typical being habitat availability (Frith 1979). However, as land is cleared or the native vegetation becomes degraded, resulting in smaller more isolated populations, the impact that cats have is likely to increase. In this situation predation by cats may become the proverbial "last straw", driving the species to local extinction. There are a number of other potential "last straws" however, including wildfire (an increasingly significant factor given climate predictions), disease, and in the longer term, inbreeding (King 1984).

Cats are considered opportunistic carnivores, with a diverse diet, although one Tasmanian study found indications of selective predation on small native marsupials (Schwarz 1995). Cats are generally considered to directly predate on vertebrates weighing up to 3kg (Dickman 1996), and there is limited evidence that individuals may occasionally take prey up to approximately 4 kg in weight (e.g. Fancourt 2015). However, mammals weighing up to 220g and birds less than 200g are likely most impacted by cats (Dickman 2015). Bird species which forage or nest on the ground are the most vulnerable. Cats may also kill and eat a broad range of reptiles, amphibians and invertebrates (Dickman 1996).

Much of the Tasmanian fauna, particularly mammals less than 3kg and burrowing seabirds, are considered to be key targets for predation and notwithstanding the absence of extinctions, feral cats are likely to contribute to localised extinctions of fauna under certain

circumstances, including (i) of burrowing sea bird colonies and (ii) through exacerbating the effects of habitat loss by preying on vulnerable remnant populations (Schwarz 1995).

The impacts of feral cats on native fauna are thought to be wide ranging and not restricted to predation, with competition and associated changes in ecosystem function also being significant consequences of their presence. The potential risks to native wildlife are clear though and have resulted in 'predation by feral cats' being listed as a Key Threatening Process under the *Environmental Protection and Biodiversity Conservation Act 1999*.

The interaction between cats, *T. gondii*, and native wildlife are not understood although it has been surmised that there may be negative impacts in terms of recruitment, health and/or survivorship for some species as a consequence of infection with *T. gondii*. The potential impact of *T. gondii* needs to be considered on a species-by-species basis as the impact is likely to vary considerably. Overall, marsupials are considered highly susceptible to toxoplasmosis and infection can cause a range of symptoms including lethargy, unnatural daytime activity, loss of appetite, respiratory distress, neurological disturbances, and death (Eymann *et al.* 2006). These symptoms may change the potential vulnerability of individuals and/or species to predation; research is required to assess the impacts on species of conservation significance.

A relatively recent complication in cat management is the impact of the Tasmanian Devil Facial Tumour Disease (DFTD). First observed in the late 1990s in north east Tasmania, DFTD has led to total population of >60%, and in some instances, such as the northeast, in excess of 90% (McCallum *et al.* 2009). The broader impacts stemming from this require substantial research to ascertain if and how it has changed relationships between Tasmanian devils, cats and the rest of Tasmania's fauna.

Indirect changes in the environment can potentially alter environmental relationships, and consequently inter-species interactions. For example it has been suggested that declines in Tasmanian devil (*Sarcophilus harrisii*) populations, due to the DFTD, have released cats from competitive suppression resulting in increased predation on species, by cats, such as eastern quoll (Fancourt *et al.* 2015) and has also led to an increased spread of toxoplasmosis (e.g. Fancourt and Jackson, 2014).

3.2.4 Feral cats and Tasmanian agriculture – cat-borne diseases

Introduction

The cat's distribution now includes all of Tasmania's agricultural areas. As a host to a number of significant diseases, which impact on stock and human health, management of the interactions between cats and agriculture needs to be a major component of cat management in Tasmania.

Common disease-causing parasites utilize the cat as a host to reproduce and propagate disease: *Toxoplasma gondii*, *Sarcocystis* and *Cryptosporidium* species are the most prevalent of the various cat-borne diseases affecting livestock. Not only do these parasites affect the livestock industries through direct economic impacts from lost production, but also through a number of indirect impacts such as increased meat inspection, herd health management, feral cat control and even the potential impacts on human health. As a result, management strategies and control programs are required to mitigate these deleterious effects. Each of these three parasites will be individually addressed in the following sections.

Background

The increasing rural-urban interface has resulted in a large overlap between the territory of cats (feral and domestic) and agricultural land. Subsequently, a number of infective diseases transmitted by the cat are being more readily identified in Tasmania.

Toxoplasmosis, the disease caused by *T. gondii*, can cause sheep and goats and occasionally pigs to abort. Contaminated meat can lead to infections in humans consuming undercooked meat. Sheep can become infected with toxoplasmosis if they eat feed or drink water contaminated with cat faeces. The level of toxoplasmosis in feral and stray cats in Tasmania is some of the highest in Australia and worldwide (Fancourt and Jackson 2014). Other pathogens that cats can transmit include sarcosystosis (sarcosporidiosis) and cryptosporidiosis which can infect cattle and sheep.

In recent years outbreaks of *T. gondii* infections have been identified with cases of 'abortion storms' causing severe impacts on affected farmers and many subclinical losses going unnoticed. Equally, detection of the presence of *sarcocystis* by abattoirs during processing has resulted in the need for carcass trimming and even entire carcass condemnation resulting in substantial financial losses. Management of feral, domestic and stray cats needs to account for these impacts on Tasmania's agricultural industry.

Feral cats are not commonly recognized by national environmental legislation as an agricultural pest, although the Tasmanian legislation does permit primary producers and private land holders to manage cat populations, including destruction of the animal(s) if the

land is used for livestock grazing or more than one kilometer from any place genuinely used as a place of residence.

Toxoplasma gondii

T. gondii, commonly known as 'Toxo', is a parasitic protozoa in which the cat is required for sexual reproduction (i.e. it is the definitive host). As a result only the cat can excrete environmentally resistant oocysts (Dubey 1995). Whilst it occurs globally, Tasmania has high rates of T. gondii infection; reports of greater than 60% of Tasmanian blood donors had antibodies to the parasite compared with Australia's national average of 30 to 50% of the adult population (Milstein 1997). A study of feral cats sampled from Tasmanian sheep grazing areas found 96% tested positive (Gregory 1976), while a second study found 84% of feral cats tested across the state were carrying T. gondii (Fancourt and Jackson 2014). Sheep and pigs have been identified as more susceptible to infection than cattle with antibodies titres significantly greater than those of cattle (Munday 1970, Munday 1975). Tasmania's cool climatic conditions have been shown to be favourable for T. gondii oocyst survival in the environment, potentially being a major contributor to the increased prevalence in Tasmania's livestock (25.7% of sheep) compared to that of other states (Munday 1970, Fancourt and Jackson 2014).

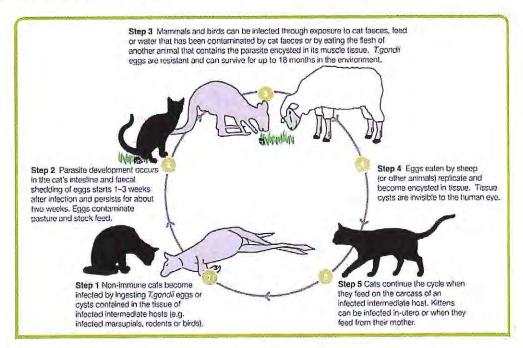


Figure 3. Toxoplasmosis life cycle (source Jackson Fact Sheet no. 10)

Even though the lifecycle of *T. gondii* relies on the cat as its definitive host, the parasite has been found to infect almost all warm blooded animals (Ferguson 2009, Berfer-Schoch 2011). The intermediate host becomes infected by consuming infective oocysts on contaminated

food, soil, or water (Dubey 2004, Dubey & Jones 2008, Elmore et al., 2010). The parasite further develops in the infected intermediate host finally forming latent tissue cysts (Dubey and Frenkel 1976).

Clinical toxoplasmosis can occur in susceptible species, or immunocompromised animals resulting in acute signs however most healthy, non-pregnant individuals remain asymptomatic. Within 1-2 weeks of tissue cysts being consumed by the cat, millions of oocysts are passed into the environment through the faeces, completing the lifecycle (Dubey et al 1970, Buxton et al 2007, Fancourt and Jackson 2014). If infection occurs during pregnancy, the parasite may be transmitted vertically from the mother to the progeny (Figure 1) (Langham and Charleston 1990, Tenter et al 2000, Buxton et al., 2007).

Disease impact: Toxoplasma gondii

Infection of *T. gondii* is typically asymptomatic (no signs) although infection of naïve (unexposed) animals, including humans, can result in a number of deleterious effects. If naïve animals become infected with the parasite during pregnancy vertical transmission (from mother to progeny) may occur resulting in abortion, still birth, or congenital disease leaving the neonate weak (Jackson and Hutchinson 1989, Charleston 1994, Tenter et al., 2000). In addition to the obvious detrimental effects on humans, this process can result in large losses in livestock. An early study conducted in the mid 1960's indicated toxoplasmosis contributed to a large proportion (46%) of outbreaks of ovine abortion/neonatal death in Tasmania (Munday 1970).

A number of papers have assessed potential risk factors for stock including farm size, feed storage, animal gender, animal age, and housing with varied results (Berger-Schoch et al., 2011, Buxton et al., 2007, Klun et al. 2006). It was implied by Klun, et al. (2006) that although these variables may have been shown to have significance, it is still merely the presence of infected cats and rodents that results in disease spread (Klun et al. 2006). An unpublished DPIPWE (2015) assessment of the costs imposed by *T. gondii* in Tasmania estimated annual economic losses of approximately \$1.7 million. This compares with an extensive study conducted in Uruguay, which estimated the annual economic losses to be approximately US\$1.4-4.7 million (Freyre et al. 1997).

Sarcocystis

There are currently over 100 species of Sarcocystis described in the literature with most species relying on an obligatory two-host life cycle. The lifecycle relies on the transmission of the parasite between the cat and the sheep via faecal-oral transmission from the cat to the sheep and then back to the cat *via* consumption of the developed cysts within the sheep. It should be noted that these feline species of sarcocystosis cannot be transmitted to humans *via* either route.

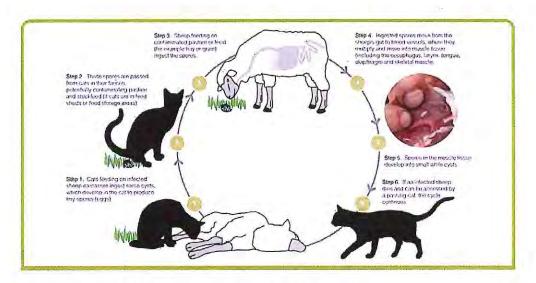


Figure 4. Sarcosystis life cycle (source Jackson Fact Sheet no. 9)

The two species most relevant for cat management purposes are *S. ovifelis* (formerly *S. gigantean*) (Formisano 2013) and *S. medusiformis*, both of which rely on the cat as the definitive host and the sheep as the intermediate host in which macroscopic sarcocysts may be seen (Charleston 1994). The two cat-borne species may potentially be carried by foxes (Levine 1986).

In comparison with many other internal parasites, *sarcocystis* is remarkably resilient to environmental conditions making the management of pastures, feed and carcasses more difficult. Infected cats shed large numbers of sporocysts in their faeces (up to 7000 cysts per gram) commencing around 10 days after consuming infected sheep tissues. These cysts have been shown to survive a wide range of environmental conditions including various disinfectants. In contrast, extensive heating (over 50-60°C), ultraviolet radiation (4000 ET), or prolonged storage in water (at 24°C) either killed the cysts or reduced their ability to encyst (McKenna and Charleston 1992). To a lesser extent, freezing (-18°C) and desiccation reduced the survival of the sporocysts with an inverse relation between survival and humidity. Other research has demonstrated that the macrocycts can withstand heating to 50 and 52.5°C and still possess the ability to infect kittens (Collins and Charleston 1980). Likewise, metabolic activity of the parasite was not compromised after freezing cysts at minus 14°C for two months.

The survivability of faecal cysts should be considered when reviewing management and grazing strategies. Equally, cat management strategies should consider the prevalence and survivability of the sarcocysts in sheep carcasses in order to prevent the continuation of the life cycle.

The small macroscopic sarcocysts that develop throughout the sheep appear as small 'grains of rice' visible to the naked eye around 10 to 14 months after infection with cysts reported

as early as 8.5 months (Ford 1986, Munday and Obendorf 1984). Sites include muscles of the esophagus, tongue, masseter, larynx, pharynx, diaphragm, and abdominal muscles (Charleston 1994, Lindsay *et al.* 1995). Due to the slow growing nature of the parasite within the sheep the cysts are typically seen in sheep greater than one year of age (Ford 1986).

Disease impact: Sarcocystis

Unlike *T. gondil*, the cat-borne species of *Sarcocystis* does not cause clinical disease in sheep, rather the cysts render parts or all of the carcass unacceptable. The cysts themselves must be removed during carcass processing to ensure meat and offal products comply with market standards. This results in increased carcass trimming, downgrading, or condemnation of carcasses and/or offal. Research has suggested that over 90% of Tasmanian sheep and cattle are infected by *Sarcocystis* spp. which possesses negative implications for the carcass quality of older stock (Munday 1975b). Research through a Tasmanian abattoir identified between 6 to 21% of stock slaughtered had visual evidence of *Sarcocystis* cysts in the carcass, and hence trimming or condemnation was required (Hernandez-Jover and Jackson 2014). On Kangaroo Island (South Australia) an abattoir estimated \$15,000 worth of stock has been condemned due to excessive contamination with sarcocysts. The same abattoir estimated trimmings to cost on average \$1.50 per sheep across a total of 150,000 head equating to \$225,000 or \$2,000 per average flock in 2003 (Kangaroo Island Cat Control Committee).

Indirect effects of *Sarcocystis* can be identified in both abattoirs and by primary producers. In 1994 an assessment of the financial impact of sarcocysts on abattoirs in New Zealand revealed cost of the labour required to detain and re-inspect carcasses was on average NZD\$0.17 per carcass resulting in a national cost of NZD\$100,000 per year (Charleston 1994). It was described that the economic loss due to detained and devalued carcasses was difficult to accurately determine as a large number of variables were involved. Likewise, the indirect costs of managing cats, both feral and 'barn cats', is difficult to directly assess: many difficult to measure factors, such as the farmers' labour, resources, infrastructure, and even the health care of 'barn cats', would contribute to such costs.

Cryptosporidium

Cryptosporidium species are parasites which have the ability to infect many species of mammals, birds, and reptiles, with zoonotic potential (i.e. they can be passed between animals and humans) (Angus 1983, Juranek 1995). This pathogen typically manifests in scours (diarrhea), mild fever, dehydration, acid-base deficits, and sometimes lethargy (Fleming et al. 1997). Typically young stock is the most susceptible with infection of calves commonly occurring after two weeks of age. Cryptosporidium has been shown to be transmitted through a large number of methods including surface water (opposed to ground water), manure, sewage treatment plant discharge, wildlife, treated drinking water, and

other sources of sewage (Fleming et al. 1997, Wallis et al. 1996). Contact with livestock is an important risk factor for zoonotic transfer of *cryptosporidium* (Savioli 2006), opposed to companion animals (dogs and cats) which were identified as having a negative association (Hunter and Thompson 2005). Other commonly handled hosts shown to carry the parasite include mice, rabbits, guinea pigs, foals, parrots, snakes, and monkeys (Angus 1983).

3.3 Adverse Human Health Impacts from Cats

Of the different cat-borne parasites, *T. gondii*, has the most significant, potential disease implications for humans. Cats are the primary host for the parasites *T. gondii*.

Toxoplasmosis can have detrimental effects on pregnant women and immune compromised people. Toxoplasmosis can cause illness in the very young, the old, and those who are immunosuppressed. Pregnant women who become infected with *T. gondii* can suffer miscarriages or pass the infection onto the unborn infant resulting in problems for the new born later in life. Nationally, an estimated 520-650 babies are born each year with congenital toxoplasmosis (Gideon Online 2012).

Recent work in Tasmania by Fancourt and Jackson (2014) found 84 per cent (224 of 266) of feral cats trapped from across the state tested positive for *Toxoplasma* antibodies. This level of toxoplasmosis is some of the highest in Australia and globally (Fancourt and Jackson 2014).

Research over the past 20 years has indicated that toxoplasmosis can cause changes in human behaviour in those who are infected (Flegr 2007, 2013, Flegr et al. 2003, Havlicek et al. 2001). Toxoplasmosis has also been implicated in the development of schizophrenia (Celik et al. 2015, Webster et al., 2012) and a prevalence to self-harm (Pederson et al., 2012).

A number of other parasites can also be transmitted to humans *via* cats, including *Cryptosporidium* (*C. felis*) and *Giardia*. Cats can also be a source of cat scratch disease (*Bartonella henselae*), ringworm and roundworm (Toxocariasis).

4. ACHIEVING BETTER CAT MANAGEMENT in TASMANIA

4.1 Roles and Responsibilities

Tasmania has a two-tiered Government system, with a State Government structure and a Local Government structure composed of twenty-nine councils. Responsibilities between the two levels of Government in relation to the management of cats is not clearly defined.

The Cat Management Act reaffirms that councils can make by-laws under the Local Government Act 1993 in relation to the management of cats within its municipal area. Local councils may also declare council-controlled land as "prohibited areas", or declare "cat management areas" to support local management initiatives. There is also nothing in the Act that prevents council officers from being authorised under the Act.

Additionally, the State Government and its statutory land management authorities (including business enterprises) have responsibility for the management of land including environmental matters such as feral cats. This broad range of organisations that have responsibility for the management of different land tenures and implementation of different pieces of legislation creates a complex mosaic of responsibilities that limits the effectiveness of cat management in Tasmania.

4.2 Managing Environmental Impacts of Feral Cats

Any management response adopted for feral cats must acknowledge the polarised views of the community towards this animal. Whilst some in the community regard cats negatively due to perceived environmental and other impacts, others have a positive perception of cats due to their role as a companion animal and predator of other invasive species. Some may also be generally opposed to control activities on animal welfare grounds.

Observational data indicates that feral cats are widely established in Tasmania and consequently eradication state-wide is not considered feasible with current resources and techniques. Eradication on mainland Tasmania is not possible due to the inability to prevent recruitment from within the feral and domestic cat populations during the process, the high costs and extreme difficulty associated with attempting eradication of a large well-established feral cat population from across an extensive area. Once feral cat populations have become established and widespread, focus for management and control becomes largely focused on asset protection. In addition, the eradication of feral cats may be achievable in limited areas such as offshore islands or fenced (predator proof) reserves where biosecurity may be achievable.

For the most effective outcomes when managing widespread feral cat populations, management must focus on mitigating impacts in specific areas such as islands and small reserves (Dickman *et al.* 2010) or on protecting priority species where there are significant threats to biodiversity (or agricultural production). The key priority is to suppress or eradicate (in the case of islands) cats in areas containing high priority assets that cats can directly affect.

In areas of high conservation value, where measurable declines in native fauna populations have occurred (e.g. burrowing seabird colonies and coastal strips with shore birds), protection and improved breeding success can be achieved through programs aimed at controlling several threats at the same time (e.g. rats and mice, vehicle and dog access, habitat loss, weeds) as well as feral cats.

The most effective pest management option is not always focused solely on the destruction of the target species. Trapping and shooting can be effective whilst baiting is considered to have had variable success as a control measure (Denny and Dickman 2010) and can be a risk to non-target species.

Progress in control programs must be monitored to ensure that objectives of the program are being achieved and to allow management actions to be adapted to changing circumstances. The importance of this with regard to cat management was highlighted in a recent study (Lazenby et al. 2014) assessing the impact of low intensity cat control, which found that the removal of dominant adult cats from a wild population actually resulted in a significant increase in the local cat population; the perceived 'benefit' achieved by control was, in fact not achieved and instead significantly increased the number of cats, and therefore potential predation levels, in the study areas. Unfortunately, what constitutes an effective or worthwhile level of control was not determined.

In parallel to managing impacts, it is a desirable aim to limit the number of cats entering the feral population through a range of community education and awareness programs, and enforcement of effective cat management legislation.

Controlling Feral Cats

A number of new technologies are currently being developed that will potentially provide more humane and effective means of trapping and humanely destroying feral cats. The *Background Document for the Threat Abatement Plan for Predation by Feral Cats* (Commonwealth of Australia 2015b) provides detailed information on the range of different options for controlling feral cats, including determining feasibility of eradication. Information on the different methods covered in the *Background Document* include trapping, shooting, exclusion fencing, baiting, alternative methods to deliver toxins, lures, other predators as deterrents, biological control, fertility control and habitat management. Consequently, only some of the newer methods are detailed in this *Background Paper*.

Development work and trialling is currently occurring with a number of new and innovative methods. Grooming traps provide a target-specific trap that uses sensors to detect the presence of a feral cat and sprays a lethal dose of toxic gel onto its fur from up to four meters away. The feral cat ingests the gel when it is grooming. New options for baiting have been developed and registration for use in Australia is being sought. *Curiosity®* uses para-aminopropiophenone (PAPP) which is encapsulated in a hard plastic pellet and is inserted into a small meat-based sausage. Feral cats, which are highly susceptible to PAPP tend to swallow without chewing, whereas native animals tend to chew and will reject the capsule. Unfortunately, PAPP may not be suitable for use in Tasmania as trials have shown Tasmanian devils will take up the capsules. An alternative bait known as *Hisstory*, which, as with Curiosity®, also uses a hard plastic pellet, but with sodium monoflouroacetate (compound 1080) rather than PAPP is being field trialed. Native Tasmanian carnivores such as quolls and Tasmanian devils have a high tolerance to 1080 poison and would need to be exposed to a substantial number of baits in a short period of time to be at risk of poisoninng.

Best Practice Control and Management of Cats

There is a demand in Tasmania for the use of traps to catch stray or feral cats but not everyone understands what their obligations are with regards the welfare of the trapped animal, which at times will include non-target species such as native animals. The development of codes of practice around the handling, trapping and humane destruction of stray and feral cats will provide a mechanism to ensure the humane treatment of cats occurs. In relation to feral cats, the *Model code* of practice for the humane control of feral cats (Sharp and Saunders 2012) could be adopted.

The adoption of best practice control methods will produce more effective and sustainable outcomes, especially where land managers work together. The success of control activities can be assessed by monitoring invasive and native species populations or disease transmission before, during and after control activities.

4.3 Managing the Impacts of Cats on Agriculture

The diseases described in section three have unique host relationships and modes of transmission, and therefore control may be achieved through effective cat management programs and appropriate livestock programs that reduce disease transmission rates between cats and livestock. Control methods to reduce the spread of Toxoplasmosis, Sarcosystis and Cryptosporidium are outlined below.

Toxoplasmosis

The control of this parasite is important not only for the economic impacts on primary producers but also for the impacts on human health. The life cycle of this parasite allows for management strategies to be implemented for both the cat and livestock which may reduce the spread of this disease.

The management and control of cats may significantly reduce the prevalence of this disease by reducing the environmental contamination by oocysts (Buxton et al. 2007). This can be achieved through methods that reduce the number of cats around grazing areas. Feral cats may be controlled by limiting their breeding, limiting the spread of cats, and limiting the total number of cats around grazing areas.

It is important to adopt an integrated approach that includes several control strategies to minimise the risk of Toxoplasmosis because relying on the lethal control of the feral cat population alone is unlikely to be effective in preventing *T. gondii* spread and outbreaks of abortions (Tracey *et al.* 2015).

Socialised and semi-socialised cats can be managed by feeding parasite-free commercial diets or processed food (cooked or frozen) and hence breaking the lifecycle of the parasite. Although farm cats may be beneficial at deterring feral cats, they may in fact be a source of *T. gondii* due to consumption of infected rats, mice or rabbits, and hence propagating the disease (Charleston 1994) — consequently, feeding them "safe" food can reduce this risk. Since cats are territorial animals, in some cases 'immune' desexed cats can be utilised around barns, food stores, and other places that may otherwise attract feral and potentially infected cats (Abu-Dalbou *et al.* 2010).

In other countries such as New Zealand and the United Kingdom the use of Toxovax® has significantly reduced losses to the sheep industry from congenital toxoplasmosis (Charleston 1989; Mévélec et al. 2010). The vaccine has been developed to utilise a strain of *T. gondii* (strain 48) that is able to produce immunity in sheep but is unable to form cysts or complete the life cycle (Wilkins and O'Connell, 1992). As a result there are no potential human health effects of eating the meat of sheep that received the live vaccine. Reports indicated an average increased lambing percentage of 3% and decrease in dry ewe percentage of 13.5% (Wilkins and O'Connell, 1992; Charleston 1994). The vaccine is currently not registered

under the APVMA. And therefore, until such time as it becomes available, alternative strategies are required. Ultimately, a large proportion of control and management strategies rely on the efforts of primary producers and the rural communities around them, therefore education of both groups is fundamental in achieving a significant level of control.

Sarcocystosis

Due to the two host lifecycle, it is possible to break the spread of feline Sarco through two major pathways; (1) through the faecal-oral route from the cat to the sheep, and (2) through the consumption of ovine cysts by the cat. Theoretically, if the faecal contamination of pastures could be prevented the lifecycle would no longer continue in livestock, but without this ability other methods must be employed in addition to control of cat populations (Collins and Charleston 1979). In addition to controlling cat numbers, the access of cats to livestock feed stores should be stopped to prevent supplementary feeds becoming a vector for infection. This is particularly important in drought years as the proportion of supplementary feed use increases, hence increasing the potential spread of *Sarcocystosis*.

There is currently no available vaccination available for the *Sarcocystosis* species for either cats or sheep.

Emphasis should be placed on the prevention of feline infection. This crucial step in the lifecycle may be prevented through removing carcasses from paddocks or other areas accessible by cats. Cat proof carcass pits, bins, or containers may be used in an effort to completely prevent feral cat infection. Socialised and semi-socialised cats may be fed commercial feeds or animal meat cooked so that all parts are exposed to at least 60°C for 20 minutes (Collins and Charleston 1980).

Cryptosporidium

Due to the large number of hosts and transmission methods, it is unlikely that the control of feral cats will significantly reduce the spread of *cryptosporidium* and hence reduce the number of cases of cryptosporidiosis in livestock. There is therefore, little that can be done to manage this species, in respect of cats.

4.3.1 Recommendations to reduce disease spread

- Feral cat control should be systematic, strategic and ongoing.
 - Limiting the presence of feral cats on and around grazing land should be considered as a method of reducing the prevalence of these diseases but first the viability of such an effort should be assessed.

- Promptly dispose of carcasses preventing cats (and other animals) from consuming the meat. Carcasses should be buried, burnt, or suitably disposed of to minimize access to this potential source of infection (Scott et al. 1993).
- Government and industry to investigate the introduction of the Toxovax® vaccine
 in high risk areas for Toxoplasmosis to reduce losses to the sheep industry from
 congenital toxoplasmosis (Mévélec et al. 2010).
- · Management of socialized and semi-socialized cats
 - Cats can be used to protect barns, food stores, and other places that may otherwise attract feral and potentially infected cats (Abu-Dalbou et al. 2010).
 - o Feed commercial diets or processed food to domestic or 'barn cats'
 - o If animal meat is to be fed to cats it should be cooked so that all parts are exposed to at least 60°C for 20 minutes (Collins and Charleston, 1980).
 - Ensure cats are desexed to prevent the repopulation of feral cat populations.
 - Rodent control using rodenticides containing diphacinone or coumatetralyl should be part of a cat control program
- Ensure owned cats are desexed.

4.4 Reducing the Adverse Impacts of Cats on Human Health

In order to reduce the risk of being exposed to or infected by a cat-borne disease and in conjunction with control programs to reduce the prevalence of diseases such as Toxoplasmosis, the following measures should be implemented to prevent the spread of the *Toxoplasma* parasite to humans:

- Handling of potentially infected cats, particularly their faeces, should be done with caution (Hill and Dubey 2002). Gloves should be worn while handling faeces, litterboxes, and any faecal contaminated items which may extend to gardens, children's sandboxes, and livestock feed.
- T. gondii oocysts can survive for months in faeces or water (Dumètre and Dardé 2003) and require constant freezing (for 1 or 7 days at -21°C and -6°C respectively) (Frenkel and Dubey 1973), or heating to 60C for 1 minute (Dubey 1998).
- Pregnant women, children and immunocompromised individuals should not handle high risk items such as cat litterboxes due to the increased likelihood of infection occurring (Hill and Dubey, 2002).
- Contaminated meat can lead to infections in humans consuming undercooked meat.
 Undercooked and raw meat should not be consumed.

4.5 Guidelines for More Effective Decision-Making

Governments at both a state and national level are increasingly focused on the impacts of cats, especially feral cats. The Australian Government, in supporting the delivery of the *Threatened Species Strategy* and other similar initiatives along with investments at the State level are potential sources of funding and resources to encourage responsible cat ownership and tackle feral cats. However, it is important that where public funds and resources are being allocated to projects and programs that there are clear and achievable outcomes identified. Management actions need to be able to demonstrate that they are capable of delivering the planned outcomes and they are sustainable into the long term. For example, projects that aim to protect particular native species should be able to clearly demonstrate that those species will actually benefit from the proposed management actions; or projects that aim to reduce the incidence of toxoplasmosis in sheep can demonstrate that the proposed management actions will be effective. To achieve these outcomes alternative solutions may be required, such as; establishing feral cat exclusion areas; habitat modification to favour native species; or vaccinations to protect stock from disease (when available).

It is important to consider all options and have a good understanding of the extent and nature of the impacts being caused. Only limited benefit may accrue if the strategy defaults to simply 'culling' a feral cat population without first identifying the impacts of the target species and the most effective and efficient methods to nullify those impacts. Often the focus is only on trapping and shooting but the use of alternatives to lethal control measures such as managing farm cats and exclusion fencing should be considered. Activities that lead to more resilient native species populations or encourage post-control recovery of the native species have a role to play.

Over-arching principles that underpin a planned approach to feral cat management include:

- Identification of the actual problem.
- Identification of natural values to be protected including areas of high conservation value and threatened species impacted by feral cats.
- Identification of agricultural assets to be protected.
- Identifiable human health issues.
- Clear and measureable methods to be able to demonstrate that the expected outcomes are being achieved.
- Evidence that the proposed activities represent the most effective means of achieving the expected outcomes.

The criteria would seek to ensure that effective, sustainable long-term solutions are implemented; that projects can demonstrate "value for money" and in general have support

of governments, the community and industry. These criteria would not over-ride criteria that have been established for specific funding programs, but should help to inform them.

4.6 Recommendations for Future Regulatory Change

As part of the development of the *Draft Tasmanian Cat Management Plan* a review of the existing legislation was undertaken. From that review, which includes feedback from a range of stakeholders and community members, as well as the members of the Tasmanian Cat Management Reference Group recommendations for regulatory changes have been developed. Whilst these recommendations will have an impact on cat owners it is considered that these changes will importantly, improve the effectiveness and functionality of the regulatory arrangements governing cat ownership. The proposed amendments and inclusions to the *Act* are detailed below.

Compulsory desexing of cats

It is recommended that compulsory requirements are introduced for a cat owner to have their cat desexed by a certain age with penalties for non-compliance. Currently there are no such penalties, making compliance difficult to enforce. Two exceptions are provided for:

- · if a vet has certified that desexing would affect the health and welfare of the cat; or
- if the cat is owned by a registered breeder for the purpose of breeding.

This recommendation contributes to preventing unplanned breeding and unwanted litters, and works to prevent unwanted cats which are abandoned or destroyed. It also removes the ambiguity in the existing desexing arrangements by clearly establishing what the cat owner is required to do and the penalties that apply for failing to do so..

Age to desex

The Act currently prescribes the maximum age (six months) at which cats should be desexed. However, cats are capable of breeding once they reach puberty, which may be as young as four months of age.

Consideration should be given to better defining the most appropriate age or age range (eg. 4-6 months) at which compulsory desexing should occur. Necessary welfare provisions would also need to be considered, such as where a vet has certified that desexing would adversely affect the health and welfare of the cat. This would ensure that necessary welfare and ethical standards are incorporated into management provisions.

Compulsory Microchipping of cats

Under the current legislation there are no penalties that would ensure it is compulsory for a cat to be microchipped. This recommendation would require that all cat owners must have their cat microchipped once their cat reaches a certain age. It also includes the provision of penalties to assist enforcement. It is proposed that one exception be provided, and that is where a vet has certified that microchipping would affect the health and welfare of the cat. This recommendation is expected to help ensure that cats can be identified and returned to their owner if they are found away from their home property. It also helps to prevent cats being unnecessarily re-homed, sold, or destroyed at cat management facilities because their owner cannot be identified; and additionally it supports cat management more broadly by determining whether a cat is feral or not.

Furthermore, this recommendation removes the existing ambiguity of the current microchipping arrangements by clearly specifying what cat owners must do.

Remove the option of a Care Agreement

Under the existing legislation, a person may sell a cat that is not desexed or microchipped by entering into a care agreement. A care agreement is a written agreement made between the seller and the buyer to have the cat desexed or microchipped at a later date. Care agreements are not easily monitored nor are they registered with any organisation. As such, these agreements are difficult to enforce and have been identified by stakeholders as an ineffective management strategy.

It is recommended that all provisions for care agreements are removed from the legislation. This will remove the existing loophole by which a person can claim they will enter into a care agreement to microchip or desex a cat at a later date in order to buy or sell a cat. It also supports the recommendations regarding enforceable microchipping and desexing.

This recommendation provides for greater control over the sale of cats but it does not mean that all cats sold have to be microchipped or desexed.

No compulsory registration of cats

Based on stakeholder advice through the Cat Management Reference Group, the registration of cats is considered to be an ineffective way of controlling the roaming of cats. The issue of securing roaming cats and then identifying them and their owner is very difficult, and a different proposition to dogs. Feedback from Local Government indicates that dog registration fees do not cover the costs to operate the service. However, the option for individual councils to register cats should continue to be available.

If other measures recommended here are adopted, such as compulsory microchipping, limiting the number of cats at a property (see below) and the requirement to confine a cat

to the property (see below) the issue of roaming cats and the need for registration should become less of an issue.

Confining cats to premises

Cat owners are not required to contain their cat within their property under the current arrangements unless required by a local council by-law. Some current provisions of the *Act* provide restrictions on cats (eg. prohibited areas and cat management areas) but do not impose requirements on cat owners to prevent their pet leaving their property.

This recommendation introduces the requirement that the owner of a cat(s) confine their cat(s) to their property. Non-compliance could result in enforcement action including seizure of the cat(s) and fines.

This recommendation supports cat welfare measures and helps to stop cats wandering from an owner's property, and potentially being injured or killed by traffic, or suffering injuries from other animals. It also takes measures to prevent cats becoming a nuisance within neighbourhoods, such as fouling gardens, creating noise, odour, damage, attacking other pets, or impacts on native wildlife, or spreading diseases such as toxoplasmosis.

It can be expected that the introduction of such requirements will require a significant shift in attitude the owners of cats that currently allow their animals to roam. Whilst constructing outdoor cat runs or enclosures may pose a challenge and cost to the owner, it should be noted that there are several good examples of cost-effective enclosures available.

It is recommended that if this measure is adopted that it is phased in over time and is supported by an education and awareness strategy. The length of phase-in period is still to be discussed in detail.

Limiting the number of cats allowed at a property without a permit

There is currently no limit to the number of cats a person may keep in the absence of a bylaw by a local Council. This recommendation limits the number of cats a person may keep. The number of cats is not specified here (suggested limits have ranged from 3-5 cats per property). A person would only be able to keep more than the specified number of cats if they had a permit to do so or if they were a registered breeder.

This recommendation supports existing management measures by reducing the number of cats per owner. It discourages hoarding of cats and recognises the financial and animal welfare implications associated with responsible cat ownership. It does not prevent people from having more than the prescribed maximum number of cats, but requires that they have a permit to do so or otherwise are a registered breeder.

This recommendation would have a direct impact on registered breeders of cats, all of who are required to properly house their animals as part of membership to a breeders association. Registered breeders would need to be able to obtain a permit to keep more than a prescribed number of animals in order to ensure genetic diversity is maintained. Costs associated with the permits also need to be considered.

Improve arrangements to support landholders undertaking cat management actions

Under the current legislation only primary producers involved in livestock production can trap, seize, or humanely destroy a cat on their property, all other primary producers are required to be at a least a kilometre from the nearest residence before they can undertake cat management actions. This proposal allows all landowners involved in primary production to be able to undertake cat management actions. Additionally, landowners not involved in primary production were also constrained by the one kilometre rule and this proposal removes that distance criteria but only allows for trapping and seizing of a cat found on their land.

Recommended amendments to the protection of property from roaming cats would include:

- on any land used for primary production cat management action (trap, seize, humanely destroy) can be undertaken regardless of proximity to nearest residence;
- on any other private property type the affected landowner is able to trap/seize a cat, but not destroy ¹.
- Exceptions would be on prescribed land such as reserves and cat prohibited areas where cat management action could be undertaken regardless of proximity to nearest residence.

Improving arrangements for registered cat breeders

In Tasmania, breeders of cats can be registered by cat breeding associations as well as the State Government. The cat breeding associations have a focus on pedigree cats, and are particularly interested in protecting the pedigree lines for the various breeds. The role of the State Government in the registration of breeders differs to that of the breeder associations in that its primary interest is to reduce the level of unregulated breeding and by that reduce the numbers of unwanted cats. This potentially brings the Government into conflict with the cat breeding associations.

The role of State Government in registering breeders potentially creates a number of other problems. The capacity of Government to properly regulate the breeders that are registered through its process is limited. This includes both undertaking the proper checks of individuals applying for registration as well as the capacity to ensure compliance. There

have been instances where the Government registration has been advertised as part of the sale of cats that appear to be being mis-represented as a pedigree breed. The current arrangements are not effective and difficult to enforce.

Development of a code of practice the operation of cat management facilities

Currently there is no code of practice to guide the operation of cat management facilities. Two organisations operate cat management facilities in Tasmania, the RSPCA and Hobart Cat Centre. The development of a code of practice would codify the manner in which existing and future cat management facilities are expected to operate from both an animal welfare perspective and in relation to the legislation. A code of practice would also provide a framework around which animal refuges that deal with cats could operate.

Amendments to the Act covering administrative components

In addition to the changes and amendments listed above, a group of amendments were identified from a Departmental review of the *Cat Management Act* completed in 2014. They have been included as a cluster of recommendations as they relate largely to administrative components of the *Act*. One exception is proposal 3 – recommencing section 24 of the *Act*. This affects the operation of cat management facilities and further thought needs to be given to how this should operate. This section of the *Act* aims to ensure that a cat cannot be re-claimed unless the animal has been microchipped and desexed.

Proposal 1: Amend the definitions for feral cats and stray cats

This proposal seeks to change the definition of "feral cat" to be consistent with the terms defined in this *Background Paper* for cats (Section 2).

Proposal 2: Define the term "breeding".

It is proposed that the term "to breed" is defined as the intentional breeding of cats to produce offspring for any purpose including for commercial gain, showing, maintenance of a breed or personal ownership.

Proposal 3: Commence section 24 of the Act, under which cats are to be microchipped and desexed before being reclaimed from a cat management facility

This proposal would commence section 24 of the *Act*, preventing an owner from reclaiming their cat from a cat management facility unless it is microchipped and desexed.

Commencing this section helps to ensure that cats claimed from cat management facilities are desexed and microchipped. It also means that cats that have strayed or escaped once will be more easily identified and incapable of contributing to unwanted cat populations were they to stray or escape again. In commencing this section of the *Act*, consideration needs to be given to the implications it has for existing cat management facilities.

Proposal 4: Simplify minimum holding time requirements at cat management facilities

Holding times for cats at cat management facilities vary depending on whether the cat is microchipped, not microchipped, or is a surrendered or stray cat.

This proposal simplifies holding time provisions based on whether the cat has an identifiable owner or home and a potential ambiguity between section 25(1) and section 25(3). Under this proposal, there would only be two holding periods defined for cats at cat management facilities.

Proposal 5: Remove reference to 'working days' for holding times at cat management facilities

Current holding times of cats at cat management facilities are based on working days.

This proposal removes the requirement that holding days have to be working days. It would include weekends and public holidays as part of the holding period.

Proposal 6: Notification of owners in writing by cat management facilities to be amended to verbal notification

Currently, Section 23 of the *Act* requires the operator of a Cat Management Facility to notify the owner of a cat, where the owner is identifiable, in writing that the cat is held at the facility.

Under this proposal, the requirement to notify an owner in writing would be amended to allow the notification to occur verbally or by any other means, including in writing.

Proposal 7: Define what is meant by the term primary production as it relates to undertaking cat management action.

This proposal seeks to create a definition for 'primary production'. The definition for primary production would be consistent with its use in other Tasmanian legislation (eg Land

Tax Act 2000) and would determine under what circumstance cat management action could be undertaken to protect property.

Proposal 8: Provide for a person acting on behalf of a landowner to trap, seize or humanely destroy a cat found on private land under certain conditions

Under section 17(2), only the owner of the private land may trap, seize or humanely destroy a cat found on their land. This prevents a person acting on behalf of the landowner (e.g. a manager, tenant, contractor etc.) to carry out cat management actions such as trapping or seizing. This proposal allows for a third person, including any occupier of the land, to act on behalf of a private landowner.

Proposal 9: Provide for authorised persons to issue a notice requiring a person to undertake cat management action

The Act outlines powers of authorised persons, but restricts the ability of an authorised person to require or direct a person to rectify breaches of the Act.

This proposal would allow an authorised person to serve a notice on an individual who breaches the legislation. The notice would require the person to take reasonable measures within a specified period, to comply with the requirements of the legislation. This would be similar to requirement notices found in other legislation. Failure to act on a requirement notice would result in an infringement notice being served and a possible fine.

USEFUL WEBSITES

Australian Veterinary Association - http://www.ava.com.au/

DPIPWE - http://dpipwe.tas.gov.au/invasive-species/cat-management-in-tasmania

Department of Environment – http://www.environment.gov.au/biodiversity/invasive-species/feral-animals-australia/feral-cats

Threat abatement plan for predation by cats (Department of Environment) - http://www.environment.gov.au/biodiversity/threatened/publications/tap/threat-abatement-plan-feral-cats

Hobart Cat Centre - https://www.hobartcatcentre.com.au/magento/

Kingborough Council - http://www.kingborough.tas.gov.au/page.aspx?u=578

PestSmart - http://www.pestsmart.org.au/pest-animal-species/feral-cat/

RSPCA Knowledge Base - http://kb.rspca.org.au/34/

Ideas for cat enclosures/runs:

http://agriculture.vic.gov.au/pets/cats/cat-confinement-enclosures-and-fencing

http://www.kingborough.tas.gov.au/webdata/resources/files/Cat%20Safe%20Enclosure.pdf

REFERENCES

Abbott, I. (2008) The spread of the cat, <u>Felis catus</u>, in Australia: re-examination of the current conceptual model with additional information. *Conservation Science Western Australia* **7**, 1-17.

Abu-Dalbou M.A., Ababneh M.M., Giadinis N.D., and Lafi S.Q. (2010). Ovine and caprine toxoplasmosis (<u>Toxoplasma gondii</u>). *Iranian Journal of Veterinary Science and Technology*. **2**, 61-76.

Agriculture Victoria (2015). Invasive Plants and Animals Policy Framework. http://agriculture.vic.gov.au/agriculture/pests-diseases-and-weeds/protecting-victoria-from-pest-animals-and-weeds/invasive-plants-and-animals-policy-framework

Angus, K.W. (1983). Cryptosporidiosis in man, domestic animals and birds: a review. *Journal of the Royal Society of Medicine*. **76**, 62-70.

Animal Health Alliance (2013). Pet Ownership in Australia 2013. Canberra, ACT.

Bomford, M. and O'Brien, P. (1995). Eradication of Australia's vertebrate pests: a feasibility study. In: *Conservation through sustainable use of wildlife*, G.C. Grigg, P.T. Hale and D. Lunney (Eds.). Bureau of Rural Sciences.

Breton, W. H. (1846). Excursion to the Western Range, Tasmania. *Tasmanian Journal of Natural Science*. **2(7)**, 121-141.

Berger-Schoch, A.E., Herrmann, D.C., Schares, G., Müller, N., Bernet, D., Gottstein, B. and Frey, C.F. (2011). Prevalence and genotypes of Toxoplasma gondii in feline faeces (oocysts) and meat from sheep, cattle and pigs in Switzerland. *Veterinary Parasitology*. **177**, 290-297

Buxton D. (1990). Ovine toxoplasmosis: a review. *Journal of the Royal Society of Medicine*. **83**, 509-511.

Buxton, D., Maley, S.W., Wright, S.E., Rodger, S., Bartley, P. and Innes, E.A. (2007). <u>Toxoplasma gondii</u> and ovine toxoplasmosis: New aspects of an old story. *Veterinary Parasitology*. **149**, 25-28.

Campbell, K. J., Harper, G., Algar, D., Hanson, C. C., Keitt, B. B., Robinson, S., (2011). Review of Feral Cat eradications on Islands. In *Island Invasives: Eradication and Management.*Proceedings of the international Conference on Island Invasives. C. R. Veitch, M. N. Clout, D. R. Towns (Eds.) Galnd, Switzerland: IUCN and Auckland, New Zealand

Çelik, T., Ş. Kartalci, Ö. Aytaş, G. Akarsu, H. Gözükara and S. Ünal (2015). Association between latent toxoplasmosis and clinical course of schizophrenia - continuous course of the disease is characteristic for <u>Toxoplasma gondii</u>-infected patients. *Folia Parasitologica* **62**(1), 15-15.

Charleston, W. A. G. (1994). <u>Toxoplasma</u> and other protozoan infections of economic importance in New Zealand. *New Zealand Journal of Zoology*. **21**, 67-81.

Collins, G. and Charleston, W. (1979). Studies on <u>Sarcocystis</u> species: 1. Feral cats as definitive hosts for sporozoa. *New Zealand Veterinary Journal*. **27**, 80-84.

Collins, G. and Charleston, W. (1980). Studies on <u>Sarcocystis</u> species VII: the effect of temperature on the viability of macrocysts (<u>Sarcocystis gigantea</u>) of sheep. *New Zealand Veterinary Journal*. **28**, 189-191.

Commonwealth of Australia (2015a). *Threat abatement plan for predation by feral cats*. http://www.environment.gov.au/system/files/resources/78f3dea5-c278-4273-8923-fa0de27aacfb/files/tap-predation-feral-cats-2015.pdf

Commonwealth of Australia (2015b). Background document for the Threat abatement plan for predation by feral cats.

http://www.environment.gov.au/system/files/resources/78f3dea5-c278-4273-8923-fa0de27aacfb/files/tap-predation-feral-cats-2015-background.pdf

Denny, L. and Dickman, C. R. (2010). Review of cat ecology and management strategies in Australia. Invasive Animals CRC, Canberra.

Dickman, C. R., Denny, L. and Buckmaster, T. (2010). *Identification of sites of high conservation priority impacted by feral cats*. Report for the Australian Government Department of the Environment, Water, Heritage and the Arts. Canberra, Australia.

Dickman, C.R. (1996). Overview of the impacts of feral cats on Australian native fauna. Report to the Australian Nature Conservation Agency, Canberra

Dickman, C. R. (2015). Environmental Impacts of feral cats. In Tracey, J., Lane, C., Fleming, P., Dickman, C., Buckmaster, T. and McMahon (Eds.) *National Feral Cat Management Workshop Proceedings.*, Canberra 21-22 April 2015.

Deag, J., Manning, A. and Lawrence, C. E. (2000). Factors influencing the mother-kitten relationship in Turner, D. C. and Bateson, P. (Eds.). *The domestic cat: the biology of its behaviour*, Cambridge University Press, Cambridge.

Dubey, J.P. (1995). Duration of immunity to shedding of <u>Toxoplasma gondii</u> oocysts by cats. The *Journal of Parasitology*. **81**, 410-415.

Dubey, J.P. (2004). Toxoplasmosis – a waterborne zoonosis. *Veterinary Parasitology*. **126**, 57-72.

Dubey, J. (1998). <u>Toxoplasma gondii</u> oocyst survival under defined temperatures. *Journal of Parasitology*: **84(4)**, 862-865.

Dubey, J.P. and Jones, J.L. (2008). <u>Toxoplasma gondii</u> infection in humans and animals in the United States. *International Journal for Parasitology*. **38(11)**, 1257-1278

Dubey J, Frenkel J. (1976). Feline Toxoplasmosis from Acutely Infected Mice and the Development of Toxoplasma Cysts*. *Journal of protozoology*. **23**, 537-546.

Dubey, J., Miller, N.L. and Frenkel, J. (1970). The Toxoplasma gondii oocyst from cat feces. *Journal of experimental medicine*. **132**, 636-662.

Dumètre, A. and Dardé, M-L. (2003). How to detect <u>Toxoplasma gondii</u> oocysts in environmental samples? *FEMS Microbiology Reviews*. **27**, 651-661.

Elmore, S.A., Jones, J.L., Conrad, P.A., Patton, S., Lindsay, D.S. and Dubey, J.P. (2010). <u>Toxoplasma gondii</u>: epidemiology, feline clinical aspects, and prevention. *Trends in Parasitology*. **26**, 190-196.

Eymann, J., Herbert, C.A., Cooper, D.W. and Dubey, J.P. (2006). Serologic survey for <u>Toxoplasma gondii</u> and <u>Neospora caninum</u> in the common brushtail possum (<u>Trichosurus vulpecula</u>) from urban Sydney, Australia. *Journal Parasitology*. **92(2)**,267-72.

Fancourt, B. A. (2014). Rapid decline in detections of the Tasmanian bettong (<u>Bettongia gaimardi</u>) following local incursion of feral cats (<u>Felis catus</u>). *Australian Mammalogy* **36**(2), 247-253.

Fancourt, B. A. (2015). Making a killing: photographic evidence of predation of a Tasmanian pademelon (<u>Thylogale billardierii</u>) by a feral cat (<u>Felis catus</u>). <u>Australian Mammalogy</u>. **37**(1), 120-124.

Fancourt, B. A., Hawkins, C.E., Cameron, E.Z., Jones, M.E. and Nicol, S.C. (2015). Devil Declines and Catastrophic Cascades: Is Mesopredator Release of Feral Cats Inhibiting Recovery of the Eastern Quoll? *PLoS ONE*. **10**(3), 25pp.

Fancourt, B. A., Hawkins, C.E. and Nicol, S.C. (2013). Evidence of rapid population decline of the eastern quoll (<u>Dasyurus viverrinus</u>) in Tasmania. <u>Australian Mammalogy</u> **35**(2), **1**95-205.

Fancourt, B. A. and Jackson, R.B. (2014). Regional seroprevalence of <u>Toxoplasma gondii</u> antibodies in feral and stray cats (<u>Felis catus</u>) from Tasmania. *Australian Journal of Zoology* **62**(4), 272-283.

Fancourt, B. A., Nicol, S.C., Hawkins, C.E., Jones, M.E. and Johnson, C.N. (2014). Beyond the disease: Is <u>Toxoplasma gondii</u> infection causing population declines in the eastern quoil (<u>Dasyurus viverrinus</u>)? *International Journal for Parasitology: Parasites and Wildlife* 3(2), 102-112.

Fancourt, B. A. and Jackson, R.B. (2014). Regional seroprevalence of <u>Toxoplasma gondii</u> antibodies in feral and stray cats (<u>Felis catus</u>) from Tasmania. *Australian Journal of Zoology* **62**(4), 272-283.

Ferguson, D.J. (2009). <u>Toxoplasma gondii</u>: 1908-2008, homage to Nicolle, Manceaux and Splendore. *Memórias do Instituto Oswaldo Cruz.* **104**,133-148.

Flegr, J. (2013). Influence of latent <u>Toxoplasma</u> infection on human personality, physiology and morphology: pros and cons of the Toxoplasma—human model in studying the manipulation hypothesis. *Journal of Experimental Biology.* **216**(1), 127-133.

Flegr J. (2007). Effects of <u>Toxoplasma</u> on human behavior. *Schizophrenia Bulletin*. **33**, 757-760.

Flegr, J., M. Preiss, J. Klose, J. Havlíček, M. Vitáková and P. Kodym (2003). Decreased level of psychobiological factor novelty seeking and lower intelligence in men latently infected with the protozoan parasite <u>Toxoplasma gondii</u> Dopamine, a missing link between schizophrenia and toxoplasmosis?" *Biological Psychology*, **63**(3), 253-268.

Fleming, R., McLellan, J., Alves, D., Hilborn, D., Pintar, K. and MacAlpine, M. (1997). <u>Cryptosporidium</u> in Livestock, Manure storages, and Surface waters in Ontario. Ontario Federation of Agriculture.

Ford, G.E. (1986). Completion of the cycle for transmission of sarcosporidiosis between cats and sheep reared specific pathogen free. *Australian Veterinary Journal*. **63**:42-44.

Formisano, P., B. Aldridge, Y. Alony, L. Beekhuis, E. Davies, J. Del Pozo, K. Dunn, K. English, L. Morrison, N. Sargison, A. Seguino, B. A. Summers, D. Wilson, E. Milne and P. M. Beard (2013). Identification of <u>Sarcocystis capracanis</u> in cerebrospinal fluid from sheep with neurological disease. *Veterinary Parasitology*. **193** (1-3), 252-255.

Frenkel, J., and Dubey, J. (1973). Effects of freezing on the viability of toxoplasma oocysts. *Journal of parasitology*. **59**, 587-588.

Freyre, A., Bonino, J., Falcón, J., Castells, D., Correa, O. and Casaretto, A. (1997). The incidence and economic significance of ovine toxoplasmosis in Uruguay. *Veterinary Parasitology*. **73**, 13-15.

Frith, H. J. (1979). Wildlife Conservation. Angus and Robertson, London.

Gideon Online (2012). Toxoplasmosis in Australia and New Zealand. http://www.gideononline.com/2012/01/05/toxoplasmosis-in-australia/

Gregory, G.G. and Munday, B.L. (1976). Internal parasites of feral cats from the Tasmanian Midlands and King Island. *Australian Veterinary Journal*. **52**, 317-320.

Havlícek, J., Gašová, Z., Smith, A., Zvára, K., and Flegr, J. (2001). Decrease of psychomotor performance in subjects with latent 'asymptomatic' toxoplasmosis. *Parasitology*. **122**, 515-520.

Hernandez-Jover, M. and Jackson, B. (2014). 'Sarco' in sheep in Tasmania - 2009 to 2013. Pers Com.

Hill, D. and Dubey, J.P. (2002). <u>Toxoplasma gondii</u>: transmission, diagnosis and prevention. *Clinical Microbiology and Infection*. **8**, 634-640.

Hone, J. and Buckmaster, T. (2014). How many are there? The use and misuse of continental-scale wildlife abundance estimates, *Wildlife Research*. **41**, 473-479.

Jackson, M. and Hutchison, W. (1989). The prevalence and source of <u>Toxoplasma</u> infection in the environment. *Advances in Parasitology*. **28**, 55-105.

Juranek, D.D. (1995). Cryptosporidiosis: sources of infection and guidelines for prevention. *Clinical Infectious Diseases.* **21**, S57-S61.

King, C. (1984) 'Immigrant Killers: Introduced predators and the conservation of birds in New Zealand'. Oxford University Press, Auckland.

Klun, I., Djurković-Djaković, O., Katić-Radivojević, S., and Nikolić, A. (2006). Cross-sectional survey on <u>Toxoplasma gondii</u> infection in cattle, sheep and pigs in Serbia: Seroprevalence and risk factors. *Veterinary Parasitology*. **135**, 121-131.

Langham, N.P.E. and Charleston, W.A.G. (1990). An investigation of the potential for spread of Sarcocystis spp. and other parasites by feral cats. *New Zealand Journal of Agricultural Research*. **33**, 429-435.

Lazenby, B. (2012). <u>Do feral cats affect small mammals? A case study from the forests of southern Tasmania</u> Ph.D. Thesis, University of Sydney.

Lazenby, B. T., Mooney, N.J. and Dickman, C.R. (2015). "Effects of low-level culling of feral cats in open populations: a case study from the forests of southern Tasmania." <u>Wildlife</u> Research **41**(5): 407-420.

Levine, N.D. (1986). The taxonomy of <u>Sarcocystis</u> (protozoa, apicomplexa) species. The *Journal of Parasitology* 72(3): 372-382

Lindsay, D.S., Blagburn, B.L. and Braund, K.G. (1995). <u>Sarcocystis</u> spp. and sarcocystosis. *Bacteriological Analytical Manual* **5**(3): 249-254

McAllister, M.M. (2005). A decade of discoveries in veterinary protozoology changes our concept of "subclinical" toxoplasmosis. *Veterinary Parasitology* **132**: 241-247

McCallum, H., M. Jones, C. Hawkins, R. Hamede, S. Lachish, D. L. Sinn, N. Beeton and B. Lazenby (2009). Transmission dynamics of Tasmanian devil facial tumor disease may lead to disease-induced extinction. Ecology **90**(12): 3379-3392.

McKenna, P.B. and Charleston, W.A.G. (1992). The survival of <u>Sarcocystis gigantea</u> sporocysts following exposure to various chemical and physical agents. *Veterinary Parasitology* **45**: 1-16

Mévélec, M-N., C. Ducournau, A. Bassuny Ismael, M. Olivier, É. Sèche, M. Lebrun, D. Bout and I. Dimier-Poisson (2010). Mic1-3 Knockout <u>Toxoplasma gondii</u> is a good candidate for a vaccine against <u>T. gondii</u>-induced abortion in sheep. *Veterinary Research* **41**(4): 49.

Milstein, T.C., and Goldsmid, J.M. (1997). Parasites of feral cats from southern Tasmania and their potential significance. *Australian Veterinary Journal* **75**: 218-219

Mitchell, B. and Balogh, S. (2007) Monitoring techniques for vertebrate pests: Feral Cats. NSW DPI Orange.

Munday, B.L. (1975). Prevalence of Toxoplasmosis in Tasmanian meat animals. *Australian Veterinary Journal*; **51**: 315-316.

Munday, B.L. (1970). University of M. The epidemiology of toxoplasmosis with particular reference to the Tasmanian environment. Tasmanian Dept. of Agriculture, Hobart.

Munday, B.L. and Obendorf, D.L. (1984). Morphology of Sarcocystis gigantea in experimentally-infected sheep. *Veterinary Parasitology* **16**: 193-199

Munday, B.L. (1975). The prevalence of sarcosporidiosis in Australian meat animals. *Australian Veterinary Journal* **51**: 478-480

O'Donoghue, P.J. (1978). Factors influencing the epidemiology of the ovine sarcosporidioses/and the development of <u>Sarcocystis tenella</u> in specific-pathogen-free (SPF) sheep. Department of Zoology. University of Adelaide.

Pan, S., R. C. A. Thompson, M. E. Grigg, N. Sundar, A. Smith and A. J. Lymbery (2012). Western Australian Marsupials Are Multiply Infected with Genetically Diverse Strains of Toxoplasma gondii. PLoS ONE 7(9).

Paton, D. C. (1993). Impacts of domestic and feral cats on wildlife. In 'Cat Management Workshop. Proceedings — 1993'. Pp. 9-15. (Queensland Department of Environment and Heritage: Brisbane.)

Pedersen, M. G., P. Mortensen, B. Norgaard-Pedersen and T. T. Postolache (2012). <u>Toxoplasma gondii</u> infection and self-directed violence in mothers. *Archives of General Psychiatry* **69**(11): 1123-1130.

Roy Morgan Research 2014 - http://roymorgan.com.au/findings/6272-pet-ownership-in-australia-201506032349

Saunders, G.L. (2006). Foxes in Tasmania-A Report of an Incursion by an Invasive Species. Invasive Animals Co-operative Research Centre.

Savioli, L., Smith, H., Thompson, A. (2006). Giardia and Cryptosporidium join the 'Neglected Diseases Initiative'. *Trends in Parasitology* **22**: 203-208

Schwarz, E.R. (1995) *Habitat use in a population of mainland Tasmanian feral cats, Felis* catus, Unpublished Honours Thesis, University of Tasmania

Scott, P., Watt, N., Woodman, M., McGorum, B. and McDiarmid, A. (1993). Protozoan encephalomyelitis causing pelvic limb paresis in a yearling sheep. *New Zealand Veterinary Journal* **41**: 139-141.

Sharp, T. and Saunders, G. (2012). *Model code of practice for the humane control of feral cats*. Invasive Animals CRC (available from the PestSmart website - http://www.pestsmart.org.au/wp-content/uploads/2012/09/catCOP2012.pdf).

Sheep Connect (Fact Sheet no. 9). Sarcosystis. Tasmanian Institute of Agriculture. https://sheepconnecttasmania.files.wordpress.com/2013/04/sc-factsheet-no9-sarcocystis-lr.pdf

Sheep Connect (Fact Sheet no. 10). Toxoplasmosis. Tasmanian Institute of Agriculture. https://sheepconnecttasmania.files.wordpress.com/2013/04/sc-factsheet-no10-toxoplasmosis lr.pdf

Spencer, P. B. S., Yurchenko, A. A., David, V. A., Scott, R., Koepfli, K-P, Driscoll, C., O'Brien, S. J., and Menotti-Raymond, M. (2015). The population origins and expansion of feral cats in Australia. *Journal of Heredity*, 1-11.

Tenter, A.M., Heckeroth, A.R. and Weiss, L.M. (2000). <u>Toxoplasma gondii</u>: from animals to humans. *International Journal for Parasitology* **30**: 1217-1258

Tracey, J., Lane, C., Fleming, P., Dickman, C., Buckmaster, T. and McMahon (eds) (2015). National Feral Cat Management Workshop Proceedings, Canberra 21-22 April 2015.