

NOTICE OF MEETING



BIODIVERSITY ADVISORY COMMITTEE MEETING

An Biodiversity Advisory Committee Meeting of Byron Shire Council will be held as follows:

Venue	Conference Room, Station Street, Mullumbimby
Date	Monday, 11 February 2019
Time	3.15pm

A handwritten signature in black ink, appearing to read 'S Burt', is located in the bottom left area of the page.

Shannon Burt
Director Sustainable Environment & Economy

I2019/134
Distributed 04/02/19

CONFLICT OF INTERESTS

What is a “Conflict of Interests” - A conflict of interests can be of two types:

Pecuniary - an interest that a person has in a matter because of a reasonable likelihood or expectation of appreciable financial gain or loss to the person or another person with whom the person is associated.

Non-pecuniary – a private or personal interest that a Council official has that does not amount to a pecuniary interest as defined in the Local Government Act (eg. A friendship, membership of an association, society or trade union or involvement or interest in an activity and may include an interest of a financial nature).

Remoteness – a person does not have a pecuniary interest in a matter if the interest is so remote or insignificant that it could not reasonably be regarded as likely to influence any decision the person might make in relation to a matter or if the interest is of a kind specified in Section 448 of the Local Government Act.

Who has a Pecuniary Interest? - a person has a pecuniary interest in a matter if the pecuniary interest is the interest of the person, or another person with whom the person is associated (see below).

Relatives, Partners - a person is taken to have a pecuniary interest in a matter if:

- The person's spouse or de facto partner or a relative of the person has a pecuniary interest in the matter, or
- The person, or a nominee, partners or employer of the person, is a member of a company or other body that has a pecuniary interest in the matter.

N.B. “Relative”, in relation to a person means any of the following:

- (a) the parent, grandparent, brother, sister, uncle, aunt, nephew, niece, lineal descends or adopted child of the person or of the person's spouse;
- (b) the spouse or de facto partners of the person or of a person referred to in paragraph (a)

No Interest in the Matter - however, a person is not taken to have a pecuniary interest in a matter:

- If the person is unaware of the relevant pecuniary interest of the spouse, de facto partner, relative or company or other body, or
- Just because the person is a member of, or is employed by, the Council.
- Just because the person is a member of, or a delegate of the Council to, a company or other body that has a pecuniary interest in the matter provided that the person has no beneficial interest in any shares of the company or body.

Disclosure and participation in meetings

- A Councillor or a member of a Council Committee who has a pecuniary interest in any matter with which the Council is concerned and who is present at a meeting of the Council or Committee at which the matter is being considered must disclose the nature of the interest to the meeting as soon as practicable.
- The Councillor or member must not be present at, or in sight of, the meeting of the Council or Committee:
 - (a) at any time during which the matter is being considered or discussed by the Council or Committee, or
 - (b) at any time during which the Council or Committee is voting on any question in relation to the matter.

No Knowledge - a person does not breach this Clause if the person did not know and could not reasonably be expected to have known that the matter under consideration at the meeting was a matter in which he or she had a pecuniary interest.

Participation in Meetings Despite Pecuniary Interest (S 452 Act)

A Councillor is not prevented from taking part in the consideration or discussion of, or from voting on, any of the matters/questions detailed in Section 452 of the Local Government Act.

Non-pecuniary Interests - Must be disclosed in meetings.

There are a broad range of options available for managing conflicts & the option chosen will depend on an assessment of the circumstances of the matter, the nature of the interest and the significance of the issue being dealt with. Non-pecuniary conflicts of interests must be dealt with in at least one of the following ways:

- It may be appropriate that no action be taken where the potential for conflict is minimal. However, Councillors should consider providing an explanation of why they consider a conflict does not exist.
- Limit involvement if practical (eg. Participate in discussion but not in decision making or vice-versa). Care needs to be taken when exercising this option.
- Remove the source of the conflict (eg. Relinquishing or divesting the personal interest that creates the conflict)
- Have no involvement by absenting yourself from and not taking part in any debate or voting on the issue as if the provisions in S451 of the Local Government Act apply (particularly if you have a significant non-pecuniary interest)

RECORDING OF VOTING ON PLANNING MATTERS

Clause 375A of the Local Government Act 1993 – Recording of voting on planning matters

- (1) In this section, **planning decision** means a decision made in the exercise of a function of a council under the Environmental Planning and Assessment Act 1979:
 - (a) including a decision relating to a development application, an environmental planning instrument, a development control plan or a development contribution plan under that Act, but
 - (b) not including the making of an order under Division 2A of Part 6 of that Act.
- (2) The general manager is required to keep a register containing, for each planning decision made at a meeting of the council or a council committee, the names of the councillors who supported the decision and the names of any councillors who opposed (or are taken to have opposed) the decision.
- (3) For the purpose of maintaining the register, a division is required to be called whenever a motion for a planning decision is put at a meeting of the council or a council committee.
- (4) Each decision recorded in the register is to be described in the register or identified in a manner that enables the description to be obtained from another publicly available document, and is to include the information required by the regulations.
- (5) This section extends to a meeting that is closed to the public.

BYRON SHIRE COUNCIL
BIODIVERSITY ADVISORY COMMITTEE MEETING

BUSINESS OF MEETING

1. APOLOGIES

2. DECLARATIONS OF INTEREST – PECUNIARY AND NON-PECUNIARY

3. ADOPTION OF MINUTES FROM PREVIOUS MEETINGS

3.1 Biodiversity Advisory Committee Meeting held on 10 December 2018

4. STAFF REPORTS

Sustainable Environment and Economy

4.1	Brunswick Valley Landcare - Landcare Support Officer Report	4
4.2	Flying Fox Project Reference Group	8
4.3	Biodiversity Conservation Strategy Consultation	19
4.4	Integrated Pest Management Strategy - mapping and revised timeframes for project delivery	22
4.5	2019 Meeting dates.....	41
4.6	Submissions Report on the draft Pest Animal Management Plan.....	43

STAFF REPORTS - SUSTAINABLE ENVIRONMENT AND ECONOMY

Report No. 4.1 Brunswick Valley Landcare - Landcare Support Officer Report

Directorate: Sustainable Environment and Economy

Report Author: Sharyn French, Manager Environmental and Economic Planning

File No: I2019/4

Theme: Sustainable Environment and Economy
Planning Policy and Natural Environment

Summary:

Council considered an allocation of funds in the 2018/19 budget to support the Brunswick Valley Landcare, Landcare Support Officer position for 1 day per week to continue to deliver the Land for Wildlife Program and respond to customer enquiries.

This report tables the activities of the Landcare Support Officer for the September to December period.

RECOMMENDATION:

That the Biodiversity Advisory Committee note the report.

Attachments:

- 1 Landcare Support Officer report December 2018, E2019/45 , page 6 [↓](#)

REPORT***Background***

The Biodiversity Advisory Committee considered a [report](#) at the 12 March 2018 meeting on the services that Brunswick Valley Landcare provide to Council and the community and the changes to grant funding that enables these services.

The Committee recommended that Council consider an allocation of funds in the 2018/19 budget to support the Brunswick Valley Landcare, Landcare Support Officer position for 1 day per week to continue to deliver the Land for Wildlife Program and respond to customer enquiries.

Council supported this funding and attached is the report from the Landcare Support Officer for the Committees reference.

STRATEGIC CONSIDERATIONS***Community Strategic Plan and Operational Plan***

Objective 3	We protect and enhance our natural environment
Strategy 3.1	Partner to protect and enhance our biodiversity, ecosystems and ecology
Action 3.1.2	Restore degraded areas and habitats that have or provide significant or high environmental and or community value
Activity: 3.1.2.3	Train and mentor community Landcare and Dunecare groups

Legal/Statutory/Policy Considerations

Nil

Financial Considerations

Funding allocated in 2018/19 budget.

Consultation and Engagement

Nil



Landcare Support Officer Report for Byron Shire Council

11th September – 18th December 2018

LFW

Total of 104 properties registered in Byron Shire

43 registered by BVL, 62 registered by BSC

- Site visits on 18/10/2018 for
 - Chris Malaby - Goonengerry
 - Kevin Virgen - Goonengerry
- Site visits on 26/11/2018 for
 - Daniel Rawson - Goonengerry
- Registrations completed = 3
 - Chris Malaby
 - Kevin Virgen
 - Daniel Rawson
- Attended a phone meeting with John Asquith from Community Environment Network (CEN) and Mark Shanahan from Biodiversity Conservation Trust (BCT) on 3rd December about entry level private land conservation. Discussions on aligning the Land for Wildlife program forms and mapping with the BCT processes so Land for Wildlife can be the entry level private land conservation agreement – rather than Wildlife Refuges. A review of current Wildlife Refuges will be conducted in 2019 to convert them to either Land for Wildlife or a Conservation Agreement.

LANDCARE GROUPS

- 25 BVL locality groups – 16 working on council owned land
- 2 BVL special interest groups
- 10 Incorporated Landcare groups working in Byron Shire (not under BVL's umbrella)
- Supporting a new BVL Locality group forming in Tallwood Ridge – attended 2 meetings of interested community members.
- Supporting a new Inc Landcare group forming in Federal – help with Incorporated Association paperwork and constitution.

COUNCIL

- Worked with Jo Green and John Turnbull from TSC to deliver Native Species Planting Guide project. Contacted garden clubs and offered to give a talk on the resource in the New Year.
- Worked with Andy Erskine re the National Landcare Program Environmental Small Grants for the walking track in Yallakool Reserve, Ocean Shores. The regen team dug the holes for the community tree planting – 250 plants and 19 attendees on Saturday 1st December. Board walk is currently under construction.
- Submitted ET R&R grant for "Ridge to River: Mooibal Spur Corridor Restoration Stage 1" for \$99,873. For regen and reveg work on Council community land, road reserve and 3 private properties along the ridge between Tallwood Ridge and Brush Box Drive. To be announced in approx July 2019.
- Working with Andrew Cameron to submit a Smart Farms grant due 11th Jan 2019. Will be to develop a rural living booklet for new landholders to the area. BVL to partner on delivering education days.
- Worked with Karen Love to check the mapping of Landcare group sites for the Integrated Pest Management Strategy.
- Circulated notice of the Biodiversity Conservation Strategy meeting by request from Peter Boyd, also suggested groups that should be invited.
- Visited Walker Farms project with Andrew Cameron on 27th November.

19 December 2018 Report by Alison Ratcliffe

BYRON SHIRE COUNCIL

STAFF REPORTS - SUSTAINABLE ENVIRONMENT AND ECONOMY

4.1 - ATTACHMENT 1

ENQUIRY TOPICS/ ISSUES

Phone	Email	Walk in	Info Stall
3 x Help with ET Grant	6 x Grants for private property		6 x Weeds
2 x Indian Myna's	4 x Contacts		2 x Contacts
2 x Contacts	2 x Support for project		2 x Grants for private property
2 x Grants for private property	2 x Talk at an event		Land for Wildlife
Wetland species	2 x Newsletter		Native Species Planting Guide
Volunteering	2 x Post MLNG		Goonengerry Landcare contact
Camphor no longer classified as noxious	2 x Volunteering		Bangalow Landcare contact
Wanting to remove umbrella trees on council land	Native Species Planting Guide		
TAFE CLM course	Tree planting – species lists		
	Mapping		
	Coral Trees and Camphors		
	New Landcare group assistance		
	Creek restoration		
	Pasture grasses		
	Glossy black cockatoo sighting		
14	28		14
TOTAL 56			

19 December 2018 Report by Alison Ratcliffe

Report No. 4.2
Directorate: Sustainable Environment and Economy
Report Author: Peter Boyd, Project Officer - Environmental Projects
File No: I2019/5
Theme: Sustainable Environment and Economy
Planning Policy and Natural Environment

Summary:

The Flying Fox Project Reference Group (PRG) aims to provide advice, advocacy, reporting, community feedback and suggestions to Council, via the Biodiversity Advisory Committee, in relation to matters of on-ground actions and education and awareness strategies in the management of flying foxes in Byron Shire.

This report:

- Provides a summary of the first two meetings held since establishment of the PRG on 2 October and 27 November 2018, and outcomes from these meetings.
- Recommends the Committee endorse the adoption of the amended Constitution of the Flying Fox Project Reference Group (Attachment 1).
- Recommends the Committee endorse the decision to not replace the Councillor representative on the PRG based on the premise that the PRG reports to the Biodiversity Advisory Committee on which there are 3 nominated Councillors.

RECOMMENDATION:

That the Biodiversity Advisory Committee:

1. **Note the outcomes of the two meetings held on 2 October 2018 and 27 November 2018.**
2. **Recommend to Council that the amended Constitution of the Flying Fox Project Reference Group (Attachment 1 - E2018/109946) be adopted.**
3. **Recommend to Council that the Councillor representative not be replaced on the Flying Fox Project Reference Group as it reports to the Biodiversity Advisory Committee on which there are 3 nominated Councillors.**

Attachments:

- 1 Flying Fox Project Reference Group - CONSTITUTION (Amended) - 29 November 2018, E2018/109946 , page 11 [↓](#)

Report

On 24 September 2018 Council resolved (**Resolution 18-623**)

- 5 1. *Appoint the nominated eight (8) community members one (1) wildlife carer representative and one (1) representative each from the Office of Environment & Heritage and the Department of Industry Crown land to the Flying-fox Project Reference Group.*
2. *Appoint Cr Hunter to the Flying-fox Project Reference Group.*
- 10 3. *Staff continue to identify two (2) community representatives from Butler Reserve camp in Byron Bay.*
4. *Support the draft Flying Fox Project Reference Group Constitution to be further considered and reviewed at the first Flying-fox Project Reference Group meeting in September / October 2018 and to provide for measurable outcomes to support the Flying Fox Camp Management Plan implementation.*

15

As such, the Flying Fox Project Reference Group was formed, coordinated by the Biodiversity Officer with meetings reported to the Biodiversity Advisory Committee.

Meetings and Outcomes

20

On **2 October 2018**, the PRG held its first meeting with Councillor Hunter, Council staff, community, wildlife and state government representatives. At the first meeting, the PRG considered the draft PRG Constitution and were provided with a budgetary update.

25

In considering the draft PRG Constitution, there was a general agreement to the Goal (i.e. the aim or desired result) and Purpose of the PRG, but some debate around the PRG's Objectives.

30

The Goal of the PRG is to provide advice, advocacy, reporting, feedback to Council and Council officers, state agencies and the community in order to assist Council to implement the Flying Fox Camp Management Plan (the Plan) effectively and efficiently.

35

The Purpose of the PRG is for Council and community to be better informed of the aspirations and expectations of Council and community in regards to a strategic approach to the management of flying-foxes and their habitat in the Byron Shire local government area.

The proposed Objectives of the draft PRG Constitution are:

40

- a) To provide a vital communication link to and from Council to interest groups, state agencies and the community in general.
- b) To further assist Council with prioritising on-ground actions and education and awareness strategies under with available resources.
- c) To inform Council of community aspirations and expectations in regard to on-ground actions and raise awareness and education about flying foxes
- d) To engage with the broader community during future direction setting on its strategic approach to the management of flying-foxes and their habitat
- 45 e) To monitor key measures of success as per the Flying Fox Camp Management Plan

50

At this meeting Cr Hunter suggested incorporating into the Constitution a number of alternative objectives that sought to quantify (measure) the reported impacts as outlined in the Plan. For example, for the PRG to help set an 'acceptable' level of noise that could be measured by decibels (or dBA) or to investigate the actual (not perceived) impacts of faecal droppings on water quality.

Members noted the Plan already identified the impacts but quantifying the impact would further delay Plan implementation, which community are expecting Council to commence in FY2018-19. Also, the Plan was developed following due consideration and considerable consultation with the community and relevant expert stakeholders.

5 On 22 October 2018, Cr Hunter advised of his resignation from the PRG.

10 The next PRG meeting was held on **Tuesday 27 November 2018**. A further review of the Constitution was carried out and the proposed Objectives of the Constitution were accepted by the PRG (with minor editorial/administrative amendments).

The PRG agreed to the amended Constitution (Attachment 1) and for it to be recommended for adoption by the Biodiversity Advisory Committee.

15 Discussion also included clarification on the Plan's management actions that may or may not be paid for by various grants and/or funding programs. Council has allocated funds in this years budget to apply for funding opportunities that become available through the Office of Environment and Heritage (OEH). Staff have been liaising with OEH and there is a program expected to be announced in the near future which will support the creation of vegetation buffers around Flying

20 Fox camps. It is noted that buffers created through vegetation removal cannot be funded through the present Environmental Trust grants program but may be funded through the proposed OEH grants program.

25 Further discussion occurred regarding the activities and outcomes of Council's Flying Improvements Project funded through the Environmental Trust which commenced November 2018.

30 The PRG was updated on the results of the National Flying Fox Census count from 15-16 November 2018 where 5 camp sites were counted. The current roost size and location within the 5 camps was discussed and compared to Feb 2018 maps. Only Grey Headed Flying foxes were observed and no Black Flying foxes observed.

STRATEGIC CONSIDERATIONS

35 *Community Strategic Plan and Operational Plan*

CSP Objective	L2	CSP Strategy	L3	DP Action	L4	OP Activity
Community Objective 3: We protect and enhance our natural environment	3.1	Partner to protect and enhance our biodiversity, ecosystems and ecology	3.1.1	Protect and enhance our natural environment and biodiversity	3.1.1.5	Implement the Flying Fox Camp Management Plan

Legal/Statutory/Policy Considerations

40 Nil

Financial Considerations

Nil

45 *Consultation and Engagement*

N/A



BYRON SHIRE COUNCIL

FLYING FOX

PROJECT REFERENCE GROUP

CONSTITUTION

#Doc No E2018/109946

BYRON SHIRE COUNCIL

STAFF REPORTS - SUSTAINABLE ENVIRONMENT AND ECONOMY

4.2 - ATTACHMENT 1

INFORMATION ABOUT THIS DOCUMENT (INTERNAL USE ONLY)

Date Commenced	24 September 2018	Timeframe to carry out objectives	2018-2023
Date Group to be Disbanded	30 June 2023		
Convenor / Facilitator	Council Officer, Sustainable Environment and Economic Planning		
Review Timeframe	Annually		

5 *Document History*

Doc No.	Date Amended	Details Comments e.g. Resolution No.
E2018/69378	20 August 2018	Res 18-623
E2018/109946	29 November 2018	Following PRG meeting 27/11/18

Further Document Information and Relationships

Actions (Operational Plan)	2018-19 Operational Plan Action 3.1 Implement the Flying Fox Camp Management Plan
Related Legislation	Local Government Act 1993 Section 451 Government Information (Public Access) Act) 2009 NSW Biodiversity Conservation Act 2016 National Parks & Wildlife Act 1974 Prevention of Cruelty to Animals Act 1979 Environmental Planning & Assessment Act 1979 Crown Lands Act 1989 Local Government Act 1993 Environment Protection and Biodiversity Conservation Act 999
Related Policies	Code of Conduct Policy 2016 Privacy Management Plan (E2013/32774) Work Health Safety Policy OEH Flying-Fox Camp Management Policy 2015
Related Procedures/ Protocols, Statements, documents	Agenda Template for PRG Meetings Minutes Template for PRG Meetings Action List Template for PRG Meetings

Table of Contents

	1.	Preamble	2
5	2.	Goal, Purpose and Objectives	2
	3.	Timeframe for Group	2
	4.	Membership.....	2
	5.	Chairperson	3
	6.	Quorum	3
10	7.	Dispute Resolution.....	3
	8.	Performance Indicators.....	3
	9.	Confidentiality	3
	10.	Convenor/Facilitator.....	4
	11.	Voting	4
15	12.	Majority Decision	4
	13.	Convening Meetings	4
	14.	Reporting.....	4
	15.	Meetings Open to the Public	4
	16.	Invited Guests.....	4
20	17.	Vacation of Office	5
	18.	Publicity	5
	19.	Records of meetings (agenda and minutes).....	5
	20.	Section 377 Delegation.....	5
	21.	Miscellaneous	6
25			

1.

Preamble

The Project Reference Group is a group formed by the Council and does not have executive power or authority to implement actions.

The role of the Project Reference Group is to carry out specific objectives as stated in this Constitution.

2. Goal, Purpose and Objectives

The goal of the Flying Fox Project Reference Group is to provide advice, advocacy, reporting, feedback to Council and Council officers, state agencies and the community in order to assist Council to implement the Flying Fox Camp Management Plan effectively and efficiently.

The purpose of the Flying Fox Project Reference Group is for Council and community to be better informed of the aspirations and expectations of Council and community in regards to a strategic approach to the management of flying-foxes and their habitat in the Byron Shire LGA.

The objectives of the Flying Fox Project Reference Group are:

- a) To provide a vital communication link to and from Council to interest groups, state agencies and the community in general.
- b) To further assist Council with prioritising on-ground actions and education and awareness strategies with available resources.
- c) To inform Council of community aspirations and expectations in regard to on-ground actions and raise awareness and education about flying foxes
- d) To engage with the broader community during future direction setting on its strategic approach to the management of flying-foxes and their habitat
- e) To monitor key measures of success as per the Flying Fox Camp Management Plan

The objectives have been considered by Council on 24 September 2018 and further confirmed by the nominated members on 27 November 2018.

3. Timeframe for Group

The Project Reference Group has 60 months to complete its objectives.

This group will be disbanded on 30 June 2023.

The Council may dissolve the group at any time.

4. Membership

Membership is to include a maximum number of 15 (TBC) members. This includes the following:

- Ten (10) community representatives (2 community representatives from each of the five (5) subject urban camps. These community representatives will also be from within 300m of each of the subject camps, and not represent an animal welfare group).
- one (1) representative from a suitable animal welfare group;
- one (1) each representative from the relevant NSW State Government agencies including Office of Environment & Heritage and Department of Industry – Crown land, and
- one (1) Council officer

- one (1) nominated Councillor (to be confirmed)

Note: Staff members and agency representatives participating on the working group do not have any voting entitlements.

5

Members will be appointed by the Council.

5. Chairperson

The Chair of the PRG is to be elected from Councillors nominated to the PRG. If there are no Councillors on the PRG, then the PRG is chaired by the relevant staff member.

10

If the designated Chair is not available to attend a meeting, then a Council representative proxy (referred to as the Acting Chair) will be responsible for convening and conducting that meeting. The Acting Chair is responsible for informing the Chair as to the salient points/decisions raised or agreed to at that meeting.

6. Quorum

15

A quorum is to constitute at least half the number of appointed community members.

Note: Council officers and agency representatives are not counted as part of a quorum.

7. Dispute Resolution

20

All efforts shall be made to resolve conflict and disputes between Guidance Group members amicably and swiftly through open discussion. Where conflict and disputes cannot be resolved via these means a mediator shall be appointed. If the mediation process fails to resolve the conflict or dispute satisfactorily, a request shall be made by Council for members to replace the representatives involved in the conflict or dispute

25

8. Performance Indicators

- At least 4 meetings each year
- Regular attendance by a minimum of 7 members.
- Regular contact and communication with individual members.
- Member's positive satisfaction ratings with each meeting; and that the issues raised and outcomes being achieved and delivered are seen as being valued by Council and meaningful and relevant to the endorsed Flying Fox Management Plan.
- Biannual reports to Biodiversity Advisory Committee on the implementation of the Flying Fox Camp Management Plan.
- Annual list of Council outcomes that have been based on the guidance, direction and advice of the PRG.

30

35

9. Confidentiality

Members of the Project Reference Group will, in those circumstances where confidential matters are subject to deliberation, maintain confidentiality.

40

10. Convenor/Facilitator

The Convenor/Facilitator of the Project Reference Group will, in most cases, be the staff member unless otherwise decided by the Council.

45

11. Voting

Each member of the group (with the exception of staff members and agency representatives) is to have one vote. If the vote is tied on any particular matter it will be referred to the Biodiversity Advisory Committee.

12. Majority Decision

A majority decision of the committee requires a majority of elected members to be present and voting on any item subject to the requirements of a quorum being met at the meeting.

13. Convening Meetings

Meetings will be held in accordance with a schedule determined by the Project Reference Group.

Note: The frequency of the meetings will be influenced by the timeframe and the objectives of the Project Reference Group to be completed in that timeframe.

14. Reporting

- a) The minutes of meetings are to be circulated to members of the group within 21 days of the meeting so that they can provide feedback through the Chair on the draft unconfirmed minutes.
- b) The Project Reference Group reports to Biodiversity Advisory Committee.

15. Meetings Open to the Public

PRG meetings are not public meetings as they have no executive function. Public transparency is provided for when the reports of these meetings are reported to the Biodiversity Advisory Committee.

16. Invited Guests

The PRG Convenor/Facilitator may request to seek further expertise and consultation as agreed to by the group and, if necessary, arrange attendance of a person providing the expertise at a PRG meeting. Any request for information to be at no cost to Council unless a budget is allocated by Council and the expenditure has been authorised in writing by staff with requisite delegations.

17. Vacation of Office

Any Project Reference Group member wishing to resign from the group shall do so in writing.

Invited Members: If an invited member on the group who represents an Organisation resigns, an invitation to the Organisation for an alternate delegate will be requested. If no alternate delegate is nominated by the Organisation then that position will become redundant.

Community Representatives: If a community representative resigns and if more than half of the timeframe to complete the PRG's objectives still exists, and an alternate delegate has been appointed by Council, then that appointed person will become the new community representative. If no alternate delegate has been appointed by Council, or the alternate delegate declines to accept the vacant position, then that position will become redundant.

18. Publicity

PRG members are not authorised by Council to promote, advertise or to make public statements to through public media's on the group's activities on behalf of the PRG and or Council.

19. Records of meetings (agenda and minutes)

- a) The Convenor/Facilitator of the group will prepare the Agenda and Action Lists of the group's meetings formatted in accordance with Council's templates.
- b) The minutes of meetings are to be circulated to members of the group within 21 days of the meeting so that members can provide feedback through the Chair on the draft unconfirmed minutes.
- c) The minutes of the group's meetings are to be reported to Council when required. The Council webpage will indicate at what meeting Council will be considering the PRG's reports.
- d) If the PRG considers it necessary, reports from each PRG meeting may be placed on Council's website for access by the public and Councillors after each meeting.
- e) If the timeframe allocated to complete the objective/s is 6 months or more the PRG is to provide an annual progress report to the Biodiversity Advisory Committee.
- f) At the end of the PRG's term a final status report is to be presented to Council on the outcomes of each objective.

20. Section 377 Delegation

The Project Reference Group does not have any delegated functions pursuant to section 377 of the Local Government Act (1993) and does not have the power to direct staff.

21. Miscellaneous

Insurance: All group members are covered by the public liability policy of Council insofar as they are acting in their capacity as a group member, within the scope of the PRG's Constitution and in accordance with the Code of Conduct and statutory obligations. This insurance does not preclude the group from due diligence and all Council policies must be adhered to.

Code of Conduct: All group members to abide by Council's adopted Code of Conduct at all times.

Pecuniary Interest: Pecuniary Interest may be defined as an interest that a person has in a matter, as a group member or employee of a company or other body, because of a reasonable likelihood or expectation of appreciable financial gain or loss to the person, or another person with

whom the person is associated. Such other person includes the spouse or de-facto partner or relative of the group member.

Section 446 of the Local Government Act states that:

“a member of a council committee, other than a committee that is wholly advisory, must disclose pecuniary interests..”

Even though the Local Government Act provides an exemption to disclose pecuniary interests Council's preference is for all members to declare pecuniary interests where applicable.

Privacy: All group members are to abide by Council's Privacy Management Plan (see <http://www.byron.nsw.gov.au/publications?P>) relating to their access to personal information.

Meeting Practice: If any other issue arises regarding meeting practice not covered under this constitution, it is to be referred to the General Manager or delegate or, if required, Council for a determination to be made.

Work Health Safety: All group members are required to comply with the “Worker Responsibilities” as prescribed in the Work Health Safety Policy.

Report No. 4.3 **Biodiversity Conservation Strategy Consultation**
Directorate: Sustainable Environment and Economy
Report Author: Peter Boyd, Project Officer - Environmental Projects
File No: I2019/6
5 **Theme:** Sustainable Environment and Economy
 Planning Policy and Natural Environment

Summary:

10 Community engagement is a large component of project delivery for the revised Biodiversity Strategy (Strategy) and will help inform the development of the revised Strategy. The Consultant (Ecosure) and council staff have already held meetings with a variety of relevant stakeholders during late 2018, and will continue engagement during early 2019.

15 Late last year a Farmers Workshop was held at Huonbrook and a Community and Interest Groups Workshop was held in Mullumbimby, along with discussion with Council management and staff. Meetings with traditional owners and other public land managers are being organised for early February 2019.

20 To further inform the development of the Strategy, engaging with the Biodiversity Advisory Committee is a key step. At today's meeting, Ecosure will discuss with the Committee the project to gain insight into the more specific areas of concern regarding biodiversity in the Shire. Key questions asked will include *what biodiversity values are important to the Committee, and what are the key issues and threats to Biodiversity?*

25 Council also has a Community Survey available on Council's website for members of the community that may not have been able to attend an engagement event.

30 The Strategy is presently on-track to be delivered to Council by May 2019.

RECOMMENDATION:

That the Biodiversity Advisory Committee:

- a) **Note that community engagement forms a key part of developing the revised Biodiversity Conservation Strategy.**
- b) **Inform the Consultant of the key biodiversity values, issues and threats important to the Committee.**

Report

Background

As advised in a report to the March 2018 meeting, a revised Biodiversity Conservation Strategy (Strategy) is currently under development. This Strategy will highlight what Council should do in the next 10 years (including an implementation plan for the first 5 years), what hurdles Council might face and what Council may need to do to continue to protect and restore Byron's biodiversity. It will be shaped by community values, changing legislation, population growth, consumption patterns and climate change.

The revised Strategy will aim to serve as a roadmap for Council's stewardship of our local environment. It will guide our planning decisions and policy making in all areas that have the ability to influence or impact on the environment.

Key issues

Important issues relevant to the Strategy include (but are not limited to):

- Important biodiversity values
- Threatened species including the iconic Koala
- Managing biodiversity on private land
- Diversifying farm income through private land conservation
- Coastal wetlands and the intertidal environment
- Managing pest animals and weeds
- Corridors and connectivity
- Relevant new legislative and policy framework including:
 - Biodiversity Conservation Act 2016
 - Biodiversity Conservation Investment Strategy 2018

All feedback gathered through engagement activities will assist in developing the Strategy which is presently on-track to be delivered to Council by May 2019.

Consultation and Engagement

Critical to the development of the revised Strategy is consultation with relevant stakeholders. To ascertain community values and inform how to go about protecting these values, the Consultant (Ecosure) has already held meetings with relevant stakeholders during December 2018, and will continue to engage with during early 2019. Stakeholders include the broader community, environmental groups, Traditional Owners, Public Land Managers, Council Managers and Directors as well as the Biodiversity Advisory Committee.

A Farmers Workshop was held on 5 September 2018 at Huonbrook specifically for members of the farming community. A Community and Interest Groups Workshop was held in Mullumbimby on 5 December 2018, along with discussion with Council management and staff also on the same day. The general Community and Interest Groups Workshop was attended by 50 community members and was highly successful with a number of great initiatives and feedback gained.

Meetings with traditional owners and other public land managers are being organised for early February 2019.

To further inform the development of the Strategy, engaging with the Biodiversity Advisory Committee is a key step. At today's meeting, Ecosure will be presenting to the Committee to discuss the project and gain insight into the more specific areas of concern regarding biodiversity in the Shire. Key questions asked will include *what biodiversity values are important to the Committee, and what are the key issues and threats to Biodiversity?*

STRATEGIC CONSIDERATIONS

Community Strategic Plan and Operational Plan

Objective: 3:	We protect and enhance our natural environment
Strategy 3.1:	Partner to protect and enhance our biodiversity, ecosystems and ecology
Action 3.1.1	Protect and enhance our natural environment and biodiversity
Activity: 3.1.1.2	Continue to undertake the Biodiversity Strategy review

5

Legal/Statutory/Policy Considerations

- Biodiversity Conservation Act (2016)
- 10 Biosecurity Act (2015)
- Strategic Plan for Biodiversity 2011–2020
- Australia's Biodiversity Conservation Strategy 2010-2030
- Australia's Threatened Species Strategy
- Australian Pest Animal Strategy 2017-2027
- 15 Australian Weeds Strategy 2017-2027
- Draft Biodiversity Conservation Investment Strategy 2017-2037
- NSW Biosecurity Strategy 2013-2021 (launched on 22 May 2013)
- Draft NSW Invasive Species Plan 2017–2021
- North Coast Regional Weed Management Plan 2017-2022
- 20 North Coast Regional Pest Animal Management Plan

Financial Considerations

N/A

25

Report No. 4.4 Integrated Pest Management Strategy - mapping and revised timeframes for project delivery

Directorate: Sustainable Environment and Economy

Report Author: Karen Love, Research Officer – Integrated Pest Management

File No: I2019/7

Theme: Sustainable Environment and Economy
Planning Policy and Natural Environment

Summary:

In 2014, Council resolved (**Res 13-621**) to develop an Integrated Pest Management (IPM) Policy and Strategy for Council owned and managed land.

The IPM Policy (Policy) is complete and was adopted by Council in August 2018 (**Res 18-565**). The IPM Strategy (Strategy) is currently in preparation and will deliver the objectives outlined within the Policy.

The Biodiversity Advisory Committee was previously updated on the status of the project milestones on 30 April 2018. This report provides the Committee a further update on the development of the Strategy, status of project milestones, and information on two key tools developed as part of the Policy's objectives.

Draft mapping of Council owned or managed land to identify pesticide exclusion and minimisation zones has been prepared through consultation with key staff including the IPM internal working group. The mapping delivers part of Objective 2 in the Policy and will be presented for consultation at public workshop(s) in 2019. As baseline data, the exclusion and minimisation zones inform on-ground works within Council's Infrastructure Services Directorate across roadsides, town centres, parks, reserves and buildings owned and managed by Council.

In addition, a draft 'Pesticide Use decision Tree' has been developed to enable transparency across Council services, where pesticide use may be required due to legislative requirements e.g. *Biosecurity Act* 2015. It is a tool for management that facilitates procedural process where none existed before and will also be publically available once the IPM Strategy is adopted.

A Communications Plan (Attachment 2) has been prepared to guide the roll-out of the IPM Strategy.

RECOMMENDATION:

That the Biodiversity Committee:

- 1. Note the report and update on delivery of the project key milestones.**
- 2. Recommend to Council to endorse in principle the IPM Strategy Communications Plan (Attachment 2 – E2018/115375).**
- 3. Review the Draft IPM exclusion and minimisation mapping (Attachment 1 E2019/1847), Draft Pesticide Use Decision Tree (Attachment 3 – E2019/2054) and provide feedback by 12 March 2019.**

Attachments:

- 1 DRAFT IPM Mapping example 2019, E2019/1847 , page 27 [↓](#)
- 2 IPM Strategy Communications Plan 2019 E2018/115375, E2018/115375 , page 28 [↓](#)
- 5 3 DRAFT 7 Pesticide Use Decision Tree & Managers Protocol, E2019/2054 , page 40 [↓](#)

REPORT**Background**

Council resolved (**Res 13-621**) to develop an IPM Policy (adopted by Council, 23 August 2018; **Res 18-565**) and IPM Strategy for Council owned and managed land.

Since passing the resolution, pesticide use by Council staff has ceased in all children's playgrounds, formal bus stops, town and village centres, on roadsides and on 15 of 23 sports fields. The cessation of pesticide use has been achieved through adopting some IPM principles, however the consequences of cessation have only recently been studied and interpreted. In April 2018, the IPM Directions Document (DD), which accompanied the IPM Policy's exhibition, defined the aspirations of the original Resolution, provided information on the emerging issues and gave insight into lessons learned thus far. As a result, the data presented in the DD has informed the development of the IPM Policy and underpins the IPM Strategy.

Project Delivery

An update on the status of the development of the IPM Strategy with an outline of completed tasks is provided below. The current body of work is focussed on Milestone 9 and 10, with an outline of these key tasks provided in further in this report.

Table 1: IPM Strategy Project Key Milestones

#	Key Milestones	Due Date
1	Consultant to independently review the preparation of an IPM Strategy engaged	Complete
2	Research Officer appointed to deliver the project	Complete
3	Project Plan and Communications Plan	Complete
4	Project Kick Off meeting	Complete
5	Internal Strategic Planning Workshop with Working Group	Complete
6	Develop IPM Mapping layers – current exclusion zones	Complete
7	Biodiversity Advisory Committee meeting (replaced the SPW for Councillors)	11 February 2018
8	Develop criteria for Pesticide Exclusion & Minimisation Zones	Complete
9	Utilise criteria and map proposed Pesticide Exclusion (PEX) and Minimisation (Pmin) Zones	Current
10	Develop Pesticide Use-Decision Tree	Current
11	Community Engagement – Peer review incl Rous & B.A.C. (Confidential)	March 2019
12	Consultation with State Depts of Draft IPM Strategy	April 2019
13	Draft Strategy reported to Council for endorsement to go to Public Exhibition	23 May 2019
14	Draft IPM Strategy for public exhibition (6 weeks)	June-July 2019
15	Public information sessions	June-July 2019
16	Review submissions	July 2019
17	Final Draft Strategy reported to Council for endorsement	22 August 2019

Council's adopted IPM Policy supports the development of both the Pesticide Exclusion and Minimisation mapping and the decision tree - refer to relevant IPM Policy extract in grey box below:

Objective 2. Establish decision-making tools to underpin and inform Integrated Pest Management. These tools include (but are not limited to):

(i) **a digital map** that identifies a Pesticide Exclusion Zone in which pesticides are no longer used; as well as a Pesticide Minimisation Zone where pesticide use may remain a necessary and justifiable part of an integrated pest management toolkit but is minimised on a continuous improvement basis. The principles of this mapping is to be consistent with the intent of Council Resolution 13-621 that reflects (i) cessation of the use of pesticide in high public use areas on Council-managed areas and (ii) minimisation of the use of pesticides in other areas on a continuous improvement basis,

(ii) **a set of protocols** to enable Council managers to approve the use of a pesticide in a Pesticide Exclusion zone in an emergency or where this is deemed necessary to meet its legislative and other obligations (including public safety, biosecurity, the maintenance of infrastructure and responsible financial management) in a manner that results in the lowest adverse outcomes for people and the environment. This will include:

- a. criteria and a decision tree to assist staff decide on whether to use a pesticide and, if so, which pesticide; and,
- b. examples of thresholds and pest action points in which a pesticide may need to be used

Milestone 9 - IPM Mapping

An example of the draft IPM Mapping (Attachment 1) is provided, for discussion with Committee members. All feedback is sought by 12 March 2018. With regards to the mapping, the newly enacted *Crown Land Management Act 2016* has resulted in discussions with Governance regarding the future of Crown Lands where Council are the current Trust Manager. Consequently, the IPM mapping will only include Crown Land parcels actively managed as Bush Regeneration Sites, with all other Crown Reserves under Council Management excluded.

Milestone 10 - Pesticide Use Decision Tree

A Draft Pesticide Use Decision Tree (Attachment 3) has been developed which includes information that must be considered to change the methodology for pest control in a current 'Exclusion' zone. It is not exhaustive and is an early draft requiring further consultation with management, the IPM Working group and relevant Stakeholders. It aims to provide managers with a protocol that is transparent while delivering legislative requirements regarding pest control within the jurisdiction of Council.

The Draft Pesticide Use Decision Tree is provided for review and comment by Committee members with feedback sought by 12 March 2018.

Both tools will form the practical side of the IPM Strategy and as such are required to be easily utilised by a large stakeholder group across all directorates, as well as the general public. The requested feedback from the Biodiversity Advisory Committee regarding both tools will be presented at the next IPM Working Group Meeting on 13 March 2019.

Community and Stakeholder Engagement

A Communications Plan (Attachment 2) has been prepared to guide the roll-out of the IPM Strategy and is provided for the Committees consideration.

STRATEGIC CONSIDERATIONS

Community Strategic Plan and Operational Plan

Objective: 3:	Community Objective 3: We protect and enhance our natural environment
Strategy 3.1:	Partner to protect and enhance our biodiversity, ecosystems and ecology
Action 3.1.1	Protect and enhance our natural environment and biodiversity
Activity 3.1.1.4	Prepare a Shire Wide Integrated Pest Management Strategy

5

Legal/Statutory/Policy Considerations

Biosecurity Act 2015

Biosecurity Regulation 2017

Roads Act 1993

10 Work Health and Safety Act (2011) & Work Health and Safety Regulations (2017)

Crown Land Legislation Amendment Act 2017

Financial Considerations

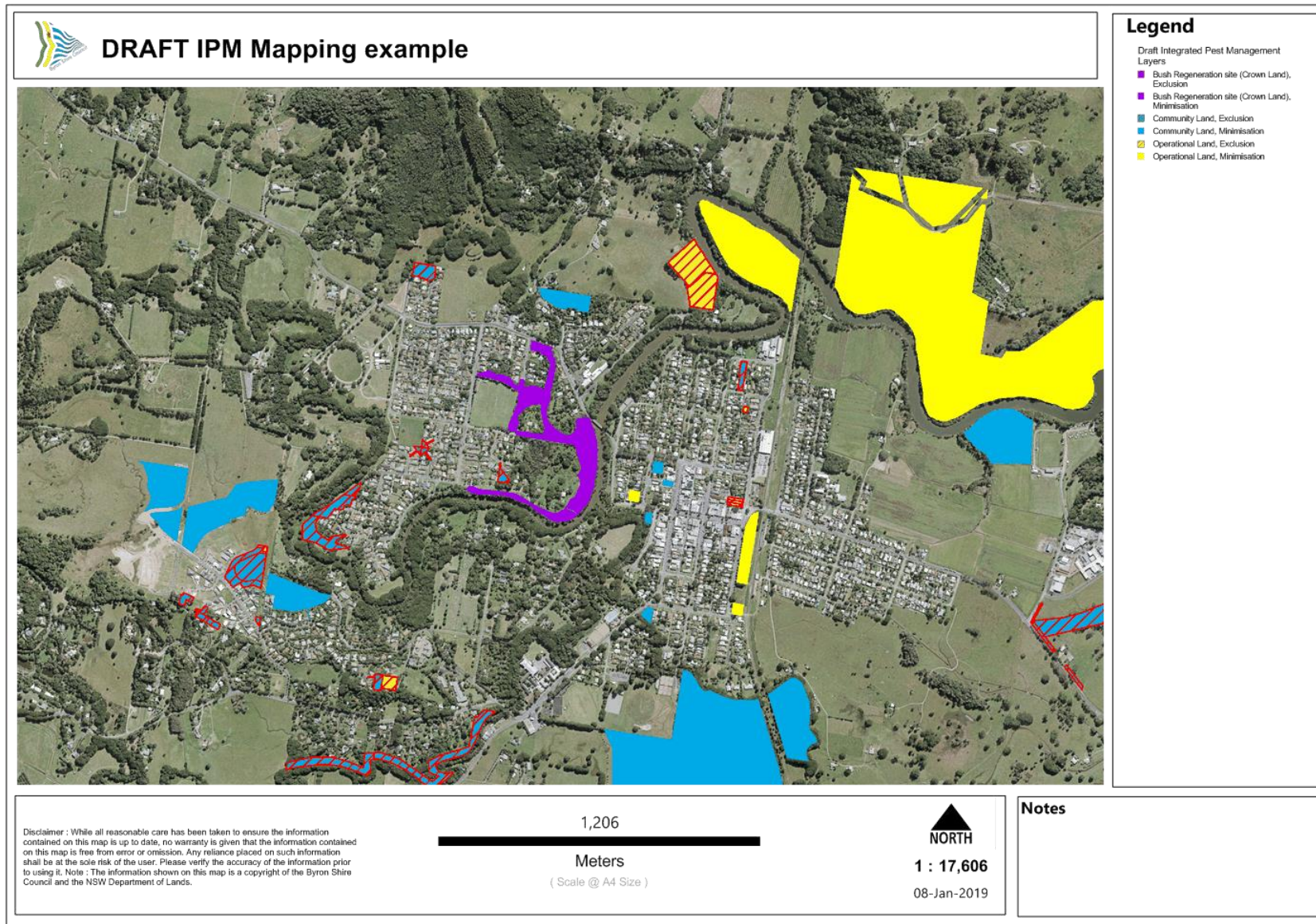
Nil

15

Consultation and Engagement

Comments from the Biodiversity Advisory Committee on the Draft IPM exclusion and minimisation mapping (Attachment 1), Draft Pesticide Use Decision Tree (Attachment 3) and requested by 12 March 2019.

20



BYRON SHIRE COUNCIL

ERROR! NO DOCUMENT VARIABLE SUPPLIED. ERROR! NO DOCUMENT VARIABLE SUPPLIED. -
ATTACHMENT ERROR! NO DOCUMENT VARIABLE SUPPLIED.



Communication and Engagement Plan

#E2018/115375

Project name	Integrated Pest Management Strategy
When	July 2018-June 2019
Background	This communications plan is necessary to ensure via engagement, Council will receive a robust and well considered IPM Strategy inclusive of staff and community advocacy resulting in a greater level of acceptance from key stakeholders. This will be Council's first strategy incorporating an Integrated Pest Management (IPM) framework, and will in part, be guided and underpinned by Council's IPM Policy (Resolution 18-565). At a national level, Australia is a signatory to the Intergovernmental Agreement on Biosecurity (Agreement) which aims to strengthen the working partnership between governments and to improve the national biosecurity system minimising the impact of pests and disease on Australia's economy, environment and the community. The recent enactment of the NSW <i>Biosecurity Act 2015</i> and <i>Local Lands Service Act 2013</i> with subsequent NSW Invasive Species Plan, Regional Strategic Weed and Pest Animal Management Plans identifies priorities and actions for pest management. Council is responsible for pest management on Council owned and managed land for a range of purposes including infrastructure management and protection of the environment. Historically, Council has applied an integrated pest management approach i.e. prevention of pests or their damage, through a combination of prevention, cultural practices, biological control, pesticide use and monitoring. For several years, Council has also been lobbied from some sectors of the community to cease pesticide use, particularly glyphosate based pesticides. In part response to community lobbying, but more so Council's desire to actively lead in responsible use of pesticides, Council resolved (Resolution 13-621) to develop an integrated pest management policy and strategy to guide cessation and minimisation of pesticide use on Council managed land by adopting IPM principals. It is envisaged that an IPM Strategy be developed in accordance with the <i>Biosecurity Act 2015</i> to co-ordinate pest management priorities and actions of all key stakeholders and deliver integrated pest management activities. Partners who will be integral to the success of the delivery and implementation of the IPM Strategy include stakeholders such as the NSW National Parks and Wildlife Service, North Coast Local Land Services, Rous County Council, local communities, businesses, industry representatives and Council. Such a strategy should: ➤ demonstrate examples of 'proof of performance' i.e case studies ➤ illustrate cost analysis of differing methods applied to manage the same situations (e.g. hand weed Vs use of pesticides). ➤ include two important tools adopted as part of the final IPM Strategy: 1. digital maps that identify: ✓ Pesticide Exclusion Zones in which pesticides are no longer

BAC Agenda

11 February 2019

page 1

BYRON SHIRE COUNCIL

ERROR! NO DOCUMENT VARIABLE SUPPLIED. ERROR! NO DOCUMENT VARIABLE SUPPLIED. - ATTACHMENT ERROR! NO DOCUMENT VARIABLE SUPPLIED.

	used; ✓ Pesticide Minimisation Zones where pesticide use may remain a necessary and justifiable part of an integrated pest management toolkit but is minimised on a continuous improvement basis. 2. a set of protocols/procedures enabling Council managers to approve the use of a pesticide in a Pesticide Exclusion Zone in an emergency. For example, if deemed necessary to meet legislative or other obligations but in a manner that results in the lowest adverse outcomes for people and the environment. This will include criteria and a decision tree to assist staff decisions on whether to use a pesticide and if so, which pesticide (threshold/trigger – where a level of pest presence above which is unacceptable amounts of danger or injury to the public and/or operators health and safety and/or biosecurity and/or asset protection is likely to occur, therefore a pest action is required). ➤ be developed through a genuine in-depth social engagement process with stakeholders and internal work units of Council. ➤ align with the priorities and directions set by higher order (National, State and Regional) pest management documents e.g. Australian Weeds and Pest Strategy and North Coast Regional Strategic Weed and Pest Management Plans. It is also intended that an IPM Strategy will establish local priorities for pest species, areas to be managed and identify the required pest management strategies, with implementation timeframes and responsibilities assigned. An initial 5-year strategic goal component will be prepared in consultation with staff across five operational sectors of Council (sports field's and playgrounds, village centre, roadsides, bushland and pest animals). This component will include mechanisms and timeframes for monitoring and reporting on its implementation, and successes in managing the impacts of pest species within Byron Shire while aspiring to cease or minimise pesticide use. Commencing when it is formally adopted by Council, the IPM Strategy will outline minor reviews at year 3 and 5 with a full review in year 10.
Governance	N/A
Objectives	1. To develop a meaningful IPM Strategy with reasonable and feasible actions that can be delivered by Council within resources and capacity. 2. To achieve stakeholder acceptance and successful adoption by Council. 3. To provide clear information to all stakeholders. 4. To provide key internal stakeholders with an understanding of the benefits of the strategy and assist with advocacy and strategy development.
Challenges	1. Political expectations 2. Potential over-consultation as a result of seeking community feedback on a range of concurrent Council projects, low participation amongst community and key stakeholders resulting in the reduction of a diversity of views. 3. Managing the community expectations regarding the scope of Council's role in pest management and the associated resource and budget implications of implementing the IPM Strategy. 4. Budget allocation for communication and engagement activities.
Key messages	1. Strategy development and implementation 1.1 The Strategy applies to all Council owned and managed land across the Shire. It does not apply to private land, Commonwealth land or Crown

BAC Agenda

11 February 2019

page 2

BYRON SHIRE COUNCIL

ERROR! NO DOCUMENT VARIABLE SUPPLIED. ERROR! NO DOCUMENT VARIABLE SUPPLIED. - ATTACHMENT ERROR! NO DOCUMENT VARIABLE SUPPLIED.

	land where Council act as Trust manager and are actively managing the land for ecological purposes. 1.2 Council understands that the management of Council land and the relevant use of pesticide is important to people that live in Byron Shire. 1.3 Council invites community involvement and collaboration in the development of the IPM Strategy. 1.4 The IPM Strategy will establish a framework enabling Council staff to make informed decisions regarding pest management while aligning with <i>Resolution 13-621</i>. 2. Engagement process 2.1 Council is excited to work with community and key stakeholders to develop the new IPM Strategy. 2.2 Council is engaging broadly and has established a thorough process to ensure that it has a comprehensive understanding of community and key stakeholder views on Integrated Pest Management. 2.3 The community and key stakeholders will have a number of opportunities to inform Council decisions on Integrated Pest Management. This includes workshops with key stakeholders, collaboration with a community reference group and the opportunity to provide a submission on the IPM Strategy while on public exhibition. 2.4 Council will draw on the findings of the community and stakeholder engagement to develop and inform the IPM Strategy. 2.5 Council expects the IPM Strategy will be ready during 2019 for public exhibition. 2.6 Council will provide regular progress updates through its E-news, website and social media. 3. General communication 3.1 The recent enactment of the NSW <i>Biosecurity Act 2015</i> and <i>Local Lands Service Act 2013</i> alongside the release of supporting management plans, have significantly changed the regulatory and policy framework regarding pest management. 3.2 The <i>Biosecurity Act 2015</i> has clear legislative requirements with regards to specific pest species that must be administered by Council on Council owned and managed land. 3.3 Information will be sort across a range of stakeholders for case studies showcasing varying pest management techniques and cost analysis. 3.4 You can help by registering to attend one of the workshops or by providing a submission when the new IPM Strategy is on public exhibition. 3.5 Council welcomes all community members who have information or views about Integrated Pest Management to participate.
Media spokesperson	▪ Simon Richardson - Mayor ▪ Mark Arnold - General Manager ▪ Shannon Burt - Director Sustainable Environment and Economy ▪ Sharyn French - Manager Environmental and Economic Planning ▪ Karen Love - IPM Research Officer ▪ TBC – Biodiversity Officer

BYRON SHIRE COUNCIL

BYRON SHIRE COUNCIL

ERROR! NO DOCUMENT VARIABLE SUPPLIED. ERROR! NO DOCUMENT VARIABLE SUPPLIED. - ATTACHMENT ERROR! NO DOCUMENT VARIABLE SUPPLIED.

Work contact	TBC Biodiversity Officer Phone: 02 E-mail:	
Emergency Services	NO	
Potential level of impact	☒ Level 1 – high impact on local government area	
IAP2 Public Participation Spectrum	☒ Inform ☒ Consult ☒ Involve ☒ Collaborate	
Stakeholders (also refer to Stakeholder analysis)	Internal ☒ All staff ☒ Executive team ☒ Biodiversity Advisory Committee ☒ Arakwal MOU Advisory Committee ☒ Councillors	External ☒ Ratepayers ☒ Residents ☒ Industry interest groups ☒ Environmental Groups including anti pesticide groups ☒ Eco-tourism business groups ☒ Indigenous groups ☒ Tamara Smith Member for Ballina ☒ NSW State government ☒ Neighbouring LGAs ☒ Local media
Our promise	INFORM <i>We will keep you informed.</i> INVOLVE <i>We will listen to and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision.</i> CONSULT <i>We will work with you to ensure that your concerns and aspirations are considered in the alternative developed and provide feedback on how public input influenced the decision.</i> COLLABORATE <i>We will look to you for advice and innovation in formulating solutions and where possible incorporate your advice and recommendation into the decision.</i>	

BYRON SHIRE COUNCIL

BYRON SHIRE COUNCIL

ERROR! NO DOCUMENT VARIABLE SUPPLIED. **ERROR! NO DOCUMENT VARIABLE SUPPLIED.** -
ATTACHMENT **ERROR! NO DOCUMENT VARIABLE SUPPLIED.**

Evaluation	1. Number of engagement activities, community consulted and submissions received on the draft Strategy. 2. Active participation in the development of the Strategy by cross directorate working group members. 3. Successful adoption of the Strategy by Council.	
Internal staff	YES Biodiversity Officer to notify relevant staff at start of the consultation period	
Submitted to Director or Manager		Date:
Reported to ET		Date:
Reported to Communications Panel		Date:

BYRON SHIRE COUNCIL

BYRON SHIRE COUNCIL

ERROR! NO DOCUMENT VARIABLE SUPPLIED.ERROR! NO DOCUMENT VARIABLE SUPPLIED. - ATTACHMENT ERROR! NO DOCUMENT VARIABLE SUPPLIED.
Stakeholder analysis

The analysis of key stakeholders, stakeholder groups, and analysis of their interests and/or views and their role in the development and implementation of the new Strategy is detailed in **Table 1**.

Table 1 Stakeholder analysis

Stakeholder group	Key stakeholder	Interest/views	Role
Internal			
Byron Shire Council	- Staff - Executive Team - Biodiversity Advisory Group - Mayor and Councillors	- Legislative responsibility to manage pests - Balancing community expectations of Council's role in pest management against budget and resource realities - Importance of integrated approach (State/local/private) - Costs and effectiveness - Effective engagement of Landcare / volunteers and placing value on their efforts - Impacts and benefits	- Keep informed on the engagement process and the development of the Strategy - Consult on their views, suggestions and priorities (Biodiversity Advisory Group) - Consult on how best to involve Council in cost analysis and technique comparisons
External			
Ratepayers & Residents	- Lifestyle landholders (including hobby farmers via Alison Ratcliffe Landcare) - Urban landholders	- Managing pest weeds and animals on private land - Potential for diversifying farm income through private land conservation - Managing pest animals and weeds that impact biodiversity - Managing companion animals	- Consult on their views, suggestions and priorities - Consult on how best to involve rural landholders in private land conservation
Industry interest groups	- Commercial farmers - Australian Macadamia Society - NSW Farmers Association - Council's Farmers Cluster - Via Alison Ratcliffe Landcare	- Represent the interests of commercial landholders - Impacts on land management practices and cost effectiveness	- Consult on their views, suggestions and priorities - Consult on how best to involve rural landholders in pest control and their legislative requirements

BYRON SHIRE COUNCIL

STAFF REPORTS - SUSTAINABLE ENVIRONMENT AND ECONOMY

4.4 - ATTACHMENT 2

BYRON SHIRE COUNCIL

ERROR! NO DOCUMENT VARIABLE SUPPLIED.ERROR! NO DOCUMENT VARIABLE SUPPLIED. - ATTACHMENT ERROR! NO DOCUMENT VARIABLE SUPPLIED.

Environmental interest groups including Landcare & Dunecare	· Mullum SEED · Byron Environment Centre · Cumbebin Wetland Reserve Trust · Green & Clean Awareness Team · Biodiversity Interest Group · Upper Mullumbimby Creek – Ridgewaves · Federal Bushfood Living Classroom · Byron Shire Chemical Free Landcare · National Toxic Network · Bangalow Land and Rivercare · Big Scrub Landcare · Brunswick Valley Landcare · Brunswick Valley Dunecare · Goonengerry Landcare · Wilson Creek Landcare · Yallakool Landcare · Upper Coopers Creek Landcare · Wilsons Creek Huonbrook Landcare · Nashua Landcare · North Byron Shire Coastal Landcare · Broken Head Dunecare · North New Brighton Dunecare · South Golden Beach Dunecare · South New Brighton Dunecare · Suffolk Park Dunecare	· Managing pests and their impacts on Council owned and managed land. · Managing biodiversity on Council owned and managed land vs privately owned land. · Potentially divergent views about pesticide use. · Potentially divergent views about strategies and priorities	· Consult on their views, suggestions and priorities · Consult on how best to involve volunteers in implementation · Consult on how to include differing technologies for pest management within the IPM Strategy
---	--	--	---

BYRON SHIRE COUNCIL

BYRON SHIRE COUNCIL

ERROR! NO DOCUMENT VARIABLE SUPPLIED.ERROR! NO DOCUMENT VARIABLE SUPPLIED. - ATTACHMENT ERROR! NO DOCUMENT VARIABLE SUPPLIED.

Indigenous groups	- Madhima Gulgan Community Association - Arakwal MOU Advisory Committee - Tweed-Byron LALC - Ngulingah LALC - Jali LALC - Bundjalung of Byron Bay Aboriginal Corporation	- Managing pests on Aboriginal owned/managed land - Managing Aboriginal cultural heritage in relation to pest management practices	- Consult on their views, suggestions and priorities - Consult on how best to involve local Aboriginal people in pest management practices
NSW State Government	- Office of Environment and Heritage - National Parks and Wildlife Service - North Coast Local Land Services - North Coast Regional Pest Animal Committee - Rous CC - Department of Primary Industries	- Legislative responsibility to manage pests - Increasing the protected area estate through private land conservation	- Keep informed on the engagement process and the development of Strategy - Consult on how to include differing technologies for pest management within the IPM Strategy
Neighbouring LGAs	NR JO NRM group	Regional LGA group	- Consult on how to include differing technologies for pest management within the IPM Strategy - Consult on their views, suggestions and priorities
Local media	- Byron Shire Echo - Byron Shire News - Bay FM	- General interest in pest management (i.e. 'the environment') and potential divergence in community views - Balancing community expectations against Council's budget and resource realities	Communicate to the community the relevance of pest management to the community and Council's role

BYRON SHIRE COUNCIL

STAFF REPORTS - SUSTAINABLE ENVIRONMENT AND ECONOMY

4.4 - ATTACHMENT 2

Communication & engagement action plan								
Action (Method)	Objective	Stakeholders	Description	Resources Required	When	Tasked to	Cost \$	Completed Date
Workshop	Inform, consult & involve	Staff	Communicate IPM Policy; seek input to drafting of Pesticide Exclusion and Minimisation mapping	Staff	10 Oct 2018	Biodiversity Officer Research Officer	Consultant time built into contract. Staff time	10 Oct 2018
Report to Biodiversity Advisory Committee (Report to Director 28 January 2019)	Inform & consult	Biodiversity Advisory Committee	Pesticide Use Decision Tree Draft Pesticide Exclusion and Minimisation mapping Report Comms plan (E2018/115375) to B.A.C. DRAFT IPM Strategy to come later for comment (Mid March)	Staff	11 February 2019	Biodiversity Officer	Staff time	
Letter/email to specific stakeholders for input to first DRAFT	Inform & consult	Private invitation to 4 members of the public representing both views on the IPM Policy as well as Rous.	Invite to participate and inform the Strategy - private and confidential stakeholders, Rous County Council & members of the B.A.C.	Staff & invited peer review in confidence	March 2019	Biodiversity Officer Research Officer	Staff time	
Report to Executive Team (Report to Director 1 May 2019 for Council Ordinary Meeting)	Inform & consult	Executive Team	Final Draft before going to Council Ordinary Meeting 23 May 2019 for recommendation for Public Exhibition on 6 June 2019 for 6 weeks (tbc)	Staff	15 May 2019	Biodiversity Officer	Staff time	

9

BYRON SHIRE COUNCIL

STAFF REPORTS - SUSTAINABLE ENVIRONMENT AND ECONOMY

4.4 - ATTACHMENT 2

Communication & engagement action plan								
Action (Method)	Objective	Stakeholders	Description	Resources Required	When	Tasked to	Cost \$	Completed Date
Consultation	Inform, consult & involve	NSW State Governments, Rous, OEH	What are their aspirations for the Strategy? How can Council promote, support and complement their IPM activities, opportunities to collaborate, gaps?	Staff Conference Room/possible info sharing via email – pest species list & actions required from legislation	April 2019	Biodiversity Officer Research Officer	Staff time Catering \$200	
Consultation	Involve collaborate	Landcare National Toxic Network Chem-Free Byron & Industry	By invite only – to privately review working draft; and help further assist on drafting Vision & Mission Statements, Strategy objectives, and actions	Staff Consultant Conference Room	April 2019	Biodiversity Officer Research Officer	Staff time Consultant time built into contract. Catering \$200	
Public Exhibition (6 weeks) 6 June-18 July 2019								
Letter/email to specific stakeholders, Website notice, adverts, Facebook, e-news, media release, FAQs, Council bulletin, Council dairy	Inform	All stakeholders	To explain Strategy and invite attendance to public information session Will contain dates and venues of information session	Staff	Prior to the Public Exhibition period. (23 May 2019) two weeks to organise till 6 June 2019	Biodiversity Officer Research Officer Project Support Officers	Staff time	
Information Session Drop in	Inform	All stakeholders	Outline Draft IPM Strategy and how submissions can be made -Mapping, decision tree, actions all on separate tables -What new info can you	Staff	During Public Exhibition -6 June – 18 July 2019	Biodiversity Officer Research Officer	Staff time Consultant time built into contract. Venue Hire	

10

BYRON SHIRE COUNCIL

STAFF REPORTS - SUSTAINABLE ENVIRONMENT AND ECONOMY

4.4 - ATTACHMENT 2

Communication & engagement action plan								
Action (Method)	Objective	Stakeholders	Description	Resources Required	When	Tasked to	Cost \$	Completed Date
			provide on IPM?				\$550 Catering \$200	
Bay FM	Inform	All stakeholders	To inform community of the Strategy and invite feedback. Based on 1 x announcement per day for 7 days each fortnight \$20.00 per announcement (\$140 per week x 3 weeks) plus production of the announcement is \$99.00	Nil	1 Ad per day	Project Support Officers	Staff time Radio \$520	
Online Engagement	Inform	Wider Community	Have your say Byron Shire. Think about what questions? Is this necessary? Needs to be strategic – get people thinking... Could be generic: Do you believe Byron needs a more integrated approach to pest management? Do you believe roadsides would benefit from a different maintenance regime than currently practiced? What pest species are the most important to control in Byron Shire? Do you believe bio-control of certain pests is a viable option?	Nil	Notice to be online commencing April 2019	Communications Team	Staff time	

11

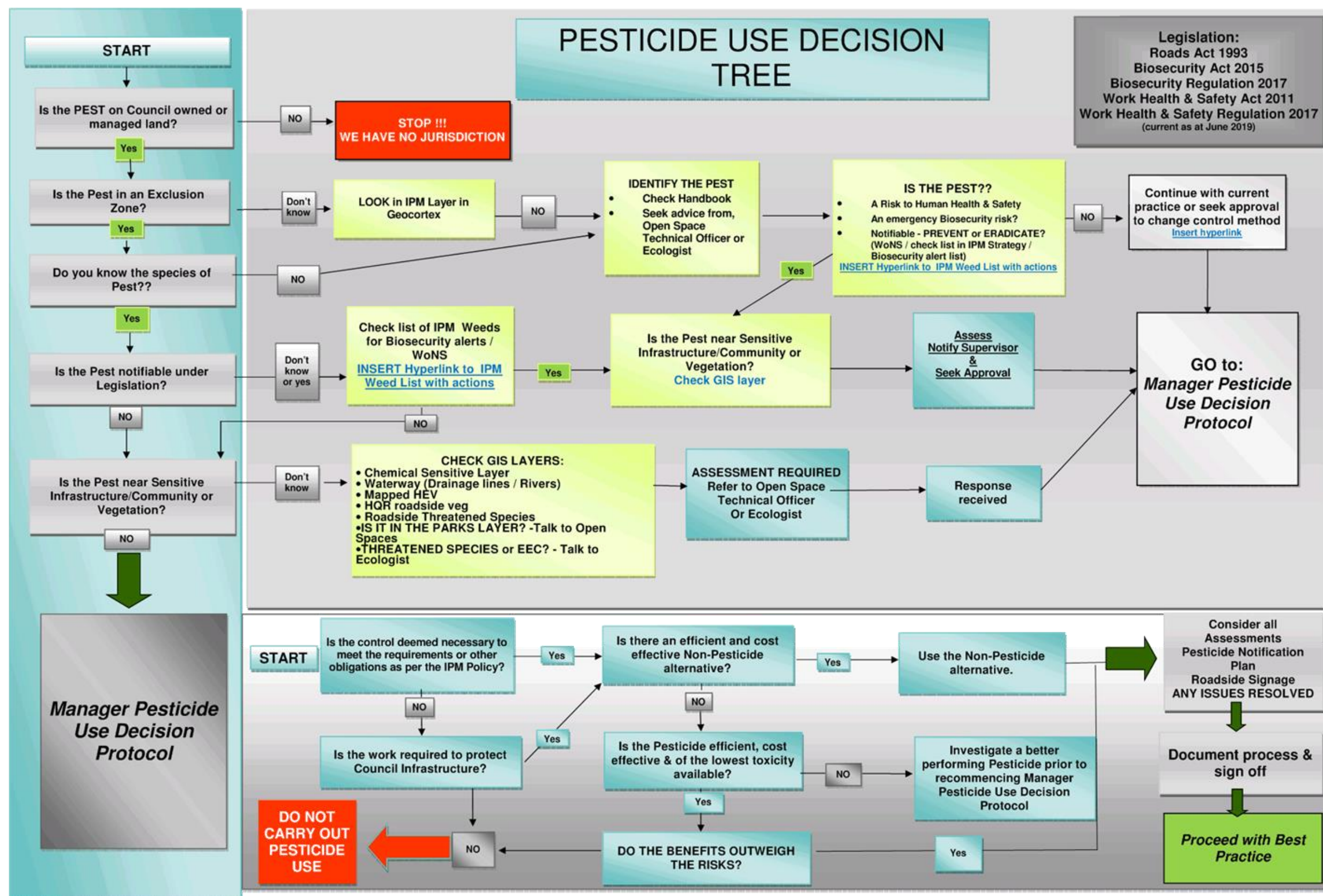
BYRON SHIRE COUNCIL

STAFF REPORTS - SUSTAINABLE ENVIRONMENT AND ECONOMY

4.4 - ATTACHMENT 2

Communication & engagement action plan								
Action (Method)	Objective	Stakeholders	Description	Resources Required	When	Tasked to	Cost \$	Completed Date
E-news general	Inform	Wider Community	As required: - Notification of the process with link to details about Strategy etc. - Notification of closing date for submissions and what will happen from there.	Nil	Notice to be online commencing May 2019	Communications Team	Staff time	
Media Releases	Inform	Wider Community	2 x media releases to: - To inform community of the Strategy and invite feedback. - Notify about closing date for submissions, and details about what happens from here.	Nil	Notice to be online commencing May 2019	Communications Team	Staff time	
Report to Council (31 July 2019 to Director with submissions report)	Seek approval	Mayor & Councillors	Recommend Draft Strategy is adopted at Ordinary Council Meeting 22 August 2019	Nil	22 August 2019		Staff time	
TOTAL	Nominal Budget - Environmental Levy (2606.27) (Funds available \$8,400)							

Please note that implementation of the above actions/tasks dependent upon approved budgets and resourcing. Cost is estimated based on previously similar projects.



Report No. 4.5
Directorate: Sustainable Environment and Economy
Report Author: Michelle Chapman, Project Support Officer
File No: I2019/42
Theme: Sustainable Environment and Economy
Planning Policy and Natural Environment

Summary:

This report is for noting of the 2019 Biodiversity Advisory Committee meeting dates, with a change required for the previously resolved 10 June date.

Point 12 of the Constitution of the Committee advises, in regard to convening meetings:

Meetings will be held as required, generally every quarter. An annual timetable of meetings will be prepared in advance, and adopted by Council every October/November for the following 12 months. A meeting of the committee may be convened in response to either the direction of the Mayor (or in the Mayor's absence the Deputy Mayor) in written form to the General Manager; or two Councillors in written form to the General Manager, or by resolution of the Council.

RECOMMENDATION:

That the Biodiversity Advisory Committee note the 2019 meeting dates, with the June meeting date to be Monday 17 June in lieu of Monday 10 June 2019.

REPORT***Background***

At 13 December Council meeting, the following dates were resolved to hold our Biodiversity

5 Advisory Committee 2019 meetings:

- Monday 11 Feb at 3.15pm
- Monday 10 June at 3.15pm
- Monday 11 November at 3.15pm.

10 The 10 June meeting needs to be rescheduled, as this is a public holiday.

Options

If Mondays at 3.15pm are still the most convenient time, then any of the three other Mondays in June are available:

- 15
- Monday 3 June
 - Monday 17 June
 - Monday 24 June

The Conference Room is available for these dates, at time of writing this report.

20

STRATEGIC CONSIDERATIONS***Community Strategic Plan and Operational Plan***

Objective: 3:	Community Objective 3: We protect and enhance our natural environment
Strategy 3.1:	Partner to protect and enhance our biodiversity, ecosystems and ecology
Action 3.1.1	Protect and enhance our natural environment and biodiversity

25

Legal/Statutory/Policy Considerations

Nil

Financial Considerations

30 Nil

Consultation and Engagement

N/A

35

Report No. 4.6 **Submissions Report on the draft Pest Animal Management Plan**
Directorate: Sustainable Environment and Economy
Report Author: Peter Boyd, Project Officer - Environmental Projects
File No: I2019/58
Theme: Sustainable Environment and Economy
 Planning Policy and Natural Environment

Summary:

Council has reviewed its Pest Animal Management Plan 2018-2023 (Plan) to enable Council to meet its statutory requirements under the *NSW Biosecurity Act 2015 and Local Land Services Act 2013*. The Plan identifies the problem of pest animals and desired outcomes, objectives and actions to address and manage their impacts on Council-managed land particularly in the areas of prevention, eradication, containment, and asset protection.

The Plan was publicly exhibited for 6 weeks from 9 August to 21 September 2018. A total of 9 submissions were received during the exhibition period. Overall, most comments were positive and commended the development of the Plan (Attachment 1).

This report summarises the main issues raised during public exhibition, staff comments to these issues and any recommended changes proposed to the Plan. It is proposed that the Biodiversity Advisory Committee recommend Council adopt the Plan (Attachment 2) as amended with the changes outlined in Table 1 of this report.

RECOMMENDATION:

That the Biodiversity Advisory Committee:

- 1. Note the submissions received during the public exhibition period (9 August to 21 September 2018), issues raised and staff comments.**
- 2. Recommend to Council to adopt the Pest Animal Management Plan (Attachment 2- E2018/108387) as amended following public exhibition and outlined in Table 1 of this report.**

Attachments:

- 1 Combined Submissions Draft Pest Animal Management Plan, E2018/109031 , page 48 [↓](#)
- 2 Pest Animal Management Plan - Final - post public exhibition with all amendments made, E2018/108387 , page 63 [↓](#)

REPORT**Background**

The Pest Animal Management Plan 2018-23 (Plan) provides a framework for the management of pest animals on Council managed land. It also acknowledges opportunities for Council to assist with pest animal management on private land when resources permit and the land meets certain criteria.

The Plan enables Council to meet its statutory requirements under the NSW Biosecurity Act 2015 and Local Land Services Act 2013, whilst fostering a collaborative, cross-tenure approach to pest animal management.

Under the Biosecurity Act 2015 all land managers, regardless of whether on private or public lands have a shared responsibility to manage pests and their impacts.

To meet these legislative requirements, Council will focus efforts on Council owned and managed land. Council will support private land managers to fulfil their obligation to manage pest animals and encourage a collaborative approach by offering technical advice and support and acting as a conduit between relevant stakeholders

Public submissions

A total of 9 submissions were received during the exhibition period (Attachment 1).

Each submission was considered by staff and the Consultant. The submission issues, staff response and recommended change/s to the Plan (if applicable) are provided below in Table 1. The recommended changes have been made to the final Plan in Attachment 2.

Table 1. Summary of public submissions, staff response and recommendations.

#	Submission issue	Staff comment and recommended change/s
1	There should be an addition of another priority area where Council may support landholders with pest control on private land	Council has identified and prioritised supporting on-ground control on private land when resources permit and land meets key criteria (6.2). Recommended Change: No change.
2	How does the plan distinguish between wild dogs and dingoes?	DNA testing and hybrid issues are discussed in 7.1.1 The Plan aims to protect key assets, especially Koala populations. Council's activities focus on all free-ranging dogs. Recommended Change: The plan will adopt the OEH definition of wild dogs and dingoes. Two scientific names to be added to plan to differentiate the species and assist the information about hybrids (7.1.1).
3	Some Pest Control methods have been omitted and should be justified.	1. 1080 poison is promoted as a control in the plan but not used by BSC on Council land. Some community submissions have expressed concern about the affects of 1080 on target and off target animals

#	Submission issue	Staff comment and recommended change/s
		2. The plan does not mention control method para-aminopropiophenone (PAPP) Recommended Change: 1. Information on native animal resistance to 1080 to be added (7.1.1) 2. PAPP to be added to the discussion of possible control methods (3.2.1) 3. Reference to why 1080 is used to be added from <i>DPI primefact</i> sheet (3.3.1) 4. Preferred control methods on Council Managed Land to be justified in accordance with Council's Integrated Pest Management Strategy (3.2.1 & 7.1.1)
4	Add alert species to the list	Yellow Crazy Ant has been found in the neighbouring Council area at Lismore and The Channon. Recommended Change: Yellow Crazy Ant to be added with a photo and details as an alert species (Appendix 3).
5	Council rates and/or environmental levy should support works on private lands	Council has contributed to activities on private lands in the past and the plan commits to working on private land if resources permit. Section 1.1 of the plan discusses Councils and other landholder's statutory requirements under the new Acts. Section 6.2 outlines how Council has identified and prioritised supporting on-ground control on private land when resources permit. Recommended Change: No change.
6	Council should have ongoing pest programs for all priority pests	The continued allocation of funds to the program (until FY 2022/23) will enable Council to meet its statutory requirements for managing free-ranging dogs (wild dogs), foxes, feral cats, European rabbit, Indian myna and cane toads on Council managed land, however, Council's capacity to continue undertaking free-ranging dogs (wild dogs), foxes and feral cats on private land may be limited (9.3.1). Recommended Change: No change.
7	Council should seek external funds to support the implementation of the plan	Grant and funding opportunities for Council and the community to implement pest management are outlined in section 9.3.2. Recommended Change: No change.

#	Submission issue	Staff comment and recommended change/s
8	Native, aquatic and insect pest species are not included in the plan	The plan defines a pest animal as introduced (non-native) animals that present a biosecurity threat. The plan also states <i>“Not included in the scope of the plan are aquatic pests, native (nuisance) animals, domestic or public health pests (including rodents, mosquitoes, midges and cockroaches), or pathogens of humans, domestic animals and livestock”</i> (1.4). Recommended Change: No change.
9	There is a lack of clarity on how some pest species will be controlled	Control options for rabbits e.g. RHDV1 K5 are discussed (7.1.6). Actions in the Plan are to develop Operational Plans for rabbits, Indian mynas and cane toads which will identify best practice control methods. (SA1.2.1 and Table 5). Prohibiting rabbits as pets in NSW is a matter for state government. Recommended Change: No change.
10	The domestic cat issue needs to be addressed by education and council regulations	Section 8, Table 4 – ‘Strategic actions linked to objectives of the Plan’ (Action SA1.1.1) aims to increase community understanding on pest animal management through development and implementation of an Educational Awareness Plan for all target animals. Recommended Change: No change.
11	Why are STPs such an issue with priority pest species?	They are a priority to Council as they are the largest areas of Council Land, not because they have a big pest animal problem. Council owned and managed land is illustrated in Figures 5 & 6. The ‘Draft Wild Dog, Fox and Feral Cat Operational Plan’ identifies the STPs as a priority site (Appendix 4). Recommended Change: No change.
12	Wild dogs are carriers of Hydatid worms which can cause transfer to cattle, other livestock and domestic dogs	This comment is correct and supported by NSW DPI <i>primefact</i> amongst other sources. Recommended Change: Add hydatid information to 3.3.1- ‘Community feedback’.
13	Concern that the Trapper is only engaged for February	It was misinterpreted by the respondent that the trapper is engaged and only operating in the month of February (Table 5). Engagement actually refers to being contracted in Feb for the whole year. Recommended Change: Wording to be changed to reflect actual engagement via a 12 month contract (Table 5 Desired Outcomes 1).

#	Submission issue	Staff comment and recommended change/s
14	Clarity is required on the amounts of on-going funding available and if it can be spent on crown lands.	The Plan states that \$10k has been allocated for trapping between Jan-Jun 2018, with a further 20k allocated in 2018-19FY. Additionally Infrastructure Services provide additional funds for work on the sewage treatment plants. Funding allocations for subsequent years will be part of Councils budget process (9.3.1). Recommended Change: No change.
17	Cats feed mainly on rabbits and save farmers and other animals from the destruction of plants caused by rabbits. Cats have no impact on Australian wildlife. Cats are protected in European countries e.g. Italy and should be protected here.	The first 2 parts of this statement are incorrect. A law was passed in 1991 in the City of Rome protecting their stray cat and dog population. Recommended Change: Information on the impacts of feral cats on Australian wildlife to be strengthened to highlight the detrimental impacts of feral cats. (7.1.3).

In addition minor editorial changes have been made to the Plan by staff following the exhibition of the draft for the purpose of clarifying points and issues.

5

STRATEGIC CONSIDERATIONS

Community Strategic Plan and Operational Plan

CSP Objective	L2	CSP Strategy	L3	DP Action	L4	OP Activity
Community Objective 3: We protect and enhance our natural environment	3.1	Partner to protect and enhance our biodiversity, ecosystems and ecology	3.1.1	Protect and enhance our natural environment and biodiversity	3.1.1.7	Complete and commence implementation of the Pest Animal Management Plan

10

Legal/Statutory/Policy Considerations

NSW Biosecurity Act 2015

Local Land Services Act 2013

Integrated Pest Management Policy 2018

15

Financial Considerations

Nil

Consultation and Engagement

20 **The draft Plan was publicly exhibited for a period of 6 weeks from 9 August to 21 September 2018.**

Draft Pest Animal Management Plan

My comments and suggestions on the draft management plan

I have read through the management plan and overall find it to be a very thorough document, though I do have a couple of suggestions and queries as listed below for your perusal.

Page 12/13 – wild dog issues – Hydatid worms not mentioned. Wild dogs carry Hydatid worms and cause transfer to cattle, other livestock and domestic dogs (and is possible to transfer to humans). I had to put down a cow 6 months ago due to cysts on the liver from Hydatid worm infestation that was identified by my vet after autopsy.

Page 33 SA1.1 – Partners should include Local Land Services (LLS)

Page 35 SA13.1 – *“Most targeted pest animal management by Council is within peri-urban or urban environments, except free ranging dogs (wild dogs), European red fox and feral cat management which generally occur in remote and isolated areas,”*

This statement is I believe incorrect as the pest animals identified are commonly found in peri urban areas and are causing the most problems in peri urban areas.

Page 42 – table 5 – Trapper – Feb – why just then? We need a trapper control officer available whenever outbreaks are reported. Has the trapper been in discussion as to when is the best times for control efforts to be instigated? On page 29 7.1.1 states Autumn is the time of most dog activity ...“mating takes place between March through to June”...

Page 46 – funding for trapper – I am a bit confused, only \$10,000/yr – cannot achieve much with so little funds, then goes on to say \$20,000 for subsequent years with \$6,000 for specific council lands, does this include crown lands as described in earlier section of the document.

Regards,

Dave Thorpe

From:
To: [submissions](#)
Subject: Pest Animal Management Plan
Date: Monday, 27 August 2018 5:06:45 PM

To Whom it May Concern :

I note that the above Plan does not include Brush Turkeys.

From my own observations, and communication with many other residents in Byron Shire, the Brush Turkeys have increased exponentially in number. When I first moved to Byron Shire, I saw them only at Clarkes Beach, Byron; now they are seen all over the Shire.

I, and many other residents I have spoken to, are having great difficulty maintaining our gardens, because of the habits of the Brush Turkey in raking everything up into their mound.

I would like to grow my own vegetables, etc., and it is impossible because two of these "pests" regard my land as their territory, and constantly "patrol" here.

I really feel the time has come for Brush Turkeys to be listed on the Pest List, and their populations managed.

I look forward to hearing your comments.

Regards,
Jennifer Trueman.

From:
To: [submissions](#)
Subject: Submission to Draft Pest Animal Management Plan
Date: Tuesday, 11 September 2018 1:06:48 PM

To Whom It May Concern:

If no assistance is given to landholders for feral animals the problem will grow with far larger impacts and far larger costs for all, including Council. Council has in the past been involved financially in control programmes in partnership with community groups and individuals which have proven effective in this Shire. I suggest that Council allocates an appropriate \$ amount each year to directly fund a trapper at the appropriate times of year and directs that dollar to the areas identified as hot spots in the Plan. At the same time Council should look for opportunities to achieve grant funding and additionally seek to work collaboratively with State and Federal bodies to develop this space in a way which might tackle the issue in a holistic way. Byron Shire is an ecological hotspot. We should take that responsibility seriously enough not to shy away from committing resources to helping find workable solutions to problems that if controlled will have great benefit to our region.

Kind regards,
James Mayson

From:
To: [submissions](#)
Subject: SUBMISSION – Byron's Draft Pest Management Plan
Date: Friday, 17 August 2018 3:49:45 PM
Attachments: [180808_Draft_Pest_Animal_Management_Plan_public_exhibition_version.pdf](#)
[180808_WildDog-GBG-web.pdf](#)

Dear Clare

I've read through the Council's Draft and think it an excellent and mostly comprehensive document. I've added a few comments to the attached version ... I hope you can access them.

In case you can't access my markups, I made the following points:

1. the word "compliment" appears in a few places where I think "complement" was intended (if I'm wrong, no problems: I'm sure the community will benefit from free services/resources);
2. disappointing the Council has chosen not to run baiting programs using 1080 (see Appendix 4, p. 60). Or have I misread this? If so, no mention has been made of para-aminopropiophenone [PAPP] toxin, lethal trap devices or canid pest ejectors as alternatives (see Glove Box Guide for Managing Wild Dogs, attached, p. 10f). Rejecting 1080 as an options appears contradictory to the referencing of 1080 throughout the body of the Plan, which seems somewhat supportive.
3. most native animals have a high resistance to 1080, given its natural occurrence in parts of the Australian environment, particularly in the north (gidgee bush, heartleaf) ... this lends support to the careful use of 1080 for baiting but isn't mentioned anywhere;
4. 'Alert Species' should now include the yellow crazy ant, given its proximity to the Byron Shire (Lismore).

Other markups in the attached are generally editorial (typos).

Kind regards

Justin Toohey

8th September 2018**Submission to Byron Shire Council****Goonengerry Landcare Group****Re: Draft Pest Animal Management Plan**

We would like to make the following points to the Draft Plan;

By way of background; Goonengerry Landcare has for about a decade now been coordinating a community lead approach to feral animal control in our area. We have learnt a lot and feel comfortable that our approach has developed into a sensible on ground plan that involves property residents and Council working together. While we accept that Council has no legal responsibility to control feral animals outside of the specific lands it actually manages as legislative responsibilities lay with the land owner and state bodies, which at the moment is the Local Land Services NSW (to which rural landholders pay annual rates partly to fund such actions). However the reality is that over the years, and when called different names, this body has either been unwilling to assist very much on anything but land used for livestock or has not been able to use its preferred control method, 1080 poison, because of the numbers of domestic pets in the vicinity. This is why locals fully funded the contracting of a trapper using humane methods. Eventually we encouraged Council to fund the retainer part of the trapper's fees for at least some portion of each year. Council paid their share by attaining grants or directly from its Biodiversity Levy Fund. We also accept that Council must plan for activities around other pest animals other than those we are discussing here. Goonengerry Landcare has in the past participated in cane toad and Indian Myna eradication programmes and has consistently argued for such programmes to be designed to be ongoing rather than one offs.

What is our local approach right now? We have come to realise over the years that (a) even if we wanted to we would never get rid of all the feral animals in the area. (b) Wild dogs have always been a part of the ecology and that rather than aim for eradication we need to aim for a balanced situation. That said the balance is easily tipped in favour of the feral animals as we have many absentee landholder and amongst those active on their lands there are few who control numbers themselves with their own guns or trapping. (c) it doesn't work to focus on one feral species and not another as there can be unintended consequences, as an example; wild dogs hunt mostly small wallabies of which there are plenty (more die on our roads than by wild dog attack), but of course we would not want wild dog numbers to get too large. If we cull large numbers of wild dogs their absence seems to create a void which is quickly filled by foxes and cats (who feel safer to be about and breed without dogs around). Both these species, cats and foxes, actually prey on threatened species of native fauna which are more threatened than wallabies.

So we must approach any control plan with a holistic approach. We don't react to every individual feral dog sighting but we do collect the sighting information and act when we truly know we have a specific need to target a particular problem pack of dogs or fox den.

We have been involved with research for Centre for Invasive Species by collecting sighting and culled information and additionally sending dna samples of feral trapped.

https://invasives.com.au/research#pest_animals

Additionally we have discussed our approach with Guy Ballard, Research Officer - Wild Dog Management, Vertebrate Pest Research at NSW Dept of Primary Industry and he would be willing to involve us in his research as financing becomes available as he has long used our community approach as a case study for future approaches;

We remain hopeful that these relationships will result in long term funding for our area and would encourage Council to develop these as well.

Given the above we would submit;

- We do not accept that just because it is not Council's legislative responsibility to contribute funding to assist landholders to control feral animals on their lands that Council should therefore not make contributions. Council continues to contribute monies to all manner of things to which it has no legal obligation to do so.
- Council has in the past been involved financially in control programmes in partnership with community groups and individuals which have proven effective in this Shire. Actual dollar costs to Council have been low and yes improvements could be made to project delivery but the partnership methodology is workable. This approach has been successful in other parts of NSW and is being supported by research by both The Dept of Industry and the Centre for Invasive Solutions.
- The Draft is too quick to handball the responsibilities to other bodies such as Local Land Services. It is clear from their publications and from discussions with them that that organisation sees its role as bringing state holders together to achieve best outcomes. This approach seems extremely similar to Councils in this plan. Both approaches have and will result in many discussions but no willingness to assist the landholder. The landholder it must be remembered already pays rates to both the LLS and Council.
- One thing is clear, that is if no assistance is given to landholders, as is the present state of affairs, the problem will grow into an emergency with far larger impacts and far larger costs for all, including Council.
- The expenditure of relatively small amounts in an ongoing and sustainable way will never eliminate the issue but it will provide a maintenance approach which will assist us to achieve something approaching a balance.
- The Draft Plan's concept of Council controlling feral pest animals on Council land only is simply just not workable. To state the obvious, pest animals don't either know about property boundaries or care about them. This is why the pooling of

community member's resources along with Council's has a far broader impact on a large landscape basis. Moving outwards this approach could then be joined with similar approaches with our neighbouring Shires.

- We accept that the solutions do not simply lay with Council, however by doing nothing the problem will certainly be one for Council to deal with and on a much larger scale.
- Council cannot solve the big problem but it can act with its community locally to make a difference.
- We would submit that Council inverts its approach slightly from that which is proposed in the Draft Plan. We suggest that Council allocates an appropriate \$ amount each year to directly fund a trapper at the appropriate times of year and directs that dollar to the areas identified as hot spots in the Plan. At the same time Council should look for opportunities to achieve grant funding and additionally seek to work collaboratively with State and Federal bodies to develop this space in a way which might tackle the issue in a holistic way. Byron Shire is an ecological hotspot. We should therefore take that responsibility seriously enough not to shy away from committing resources to helping find workable solutions to problems that if controlled will have great benefit to our region.

From:
To: [submissions](#)
Subject: Pest Animal Management Draft Plan
Date: Wednesday, 8 August 2018 10:41:14 AM

Hello

I have looked at the above draft plan and have the following comments:

- Upper Coopers Creek should be added to the list of priority localities, since wild dogs wander into the valley from Whian Whian, Goonengerry and Wanganui Gorge. In the past, many wild dogs (up to 20) have been trapped in the Valley itself.
- How do you propose to distinguish between wild dogs and dingoes? Is there a rapid dna test available that you could use something like hair? I'm not sure that it is good practice or sensible to take out the natural apex predator in the area, however wild dogs are more destructive, breed more often, and not a native predator.

Thank you

regards

Maggie Wheeler

From:
To: [submissions](#)
Subject: Draft Pest Animal Management Plan 2018-2023
Date: Wednesday, 22 August 2018 11:27:50 AM

A very comprehensive document however there is a lot of repetition of content, thus the document is too long. To maximise community feedback and avoid repetition the document should be no longer than 20 pages (excluding references and Appendices).

Specific comments:

The Executive Summary should state that the Plan does not include aquatic and insect pests.

It is not clear how the European rabbit will be controlled and managed. There is mention of calicivirus in SA1.2.2. Maybe prohibit keeping domestic rabbits as in Queensland.

Guinea pigs make far better pets.

It is not clear how the Indian myna and cane toads will be controlled and managed. Plan states "Best practice control methods". 'Trapping' of Indian mynas gets a mention but no details are given.

Cats both domestic and feral have the largest detrimental impact on small native wildlife.

The domestic cat issue also needs to be addressed by education and council regulations.

A domestic cat is always a "wild cat" and a natural killer.

The use of 1080 is acknowledged as the most cost-effective management tool for wild dogs and foxes but the Plan states council will not use this method. Why??

Strategic Action.

1. Education and Awareness – GOOD Highly commended
2. Operational – GOOD . "humane control "of feral cats and Indian myna – no details given
3. Best Practices Approaches- GOOD Highly commended
4. Technical Advice - Good Highly commended

Engagement Method (Appendix 2). Highly commended.

Why are the sewage treatment plants such an issue with wild dogs/foxes and feral cats and the focus for the operational plan? No explanation is given.

Regards

Margaret Greenway

To: [Manning, Clare](#)
Subject: RE: Draft Pest Animal Management Plan
Date: Friday, 10 August 2018 1:15:27 PM
Attachments:

Hi Clare

The draft plan is looking fabulous. Byron Council (and you and the plan development team of course) are to be commended for the quality of this this document.

Below are my (very minor) comments.

1. Page 9, paragraph 4. There is a word missing from the last sentence.
2. Page 11. Paragraph 3. First sentence – maybe has a word missing?
3. Section 7.1.2. I found it tricky to understand what is being said in the last sentence of this section.
4. Section 7.1.4 makes reference to a community portal. Would it be possible to expand on this a little either in this section or elsewhere in the document?
5. Is there any option to be more prescriptive in the management options for reducing the impacts of domestic dogs and cats on both social and environmental values? I realise this is a big ask, but even if just for if they are found roaming in Council managed areas?

Overall though, this is a really good example of a vertebrate pest animal management plan. You are doing a great job 😊

Thanks for the opportunity to be involved Clare.

Kind regards
Pam

Pamela Gray
Program Leader - Pest Management



p [\(02\) 6670 2778](#) m [0428 628 434](#)

[contact us](#) | [website](#) | [your say tweed](#) | [our values](#)



To: [submissions](#)
Subject: Pest Management Plan
Date: Tuesday, 18 September 2018 3:06:37 PM

Dear People,

The impact of climate change on mammals and birds to date is currently greatly under-estimated and reported upon. The co-author of a study, Dr James Watson of the Wildlife Conservation Society and University of Queensland, wrote: "Australia has ferocious hot summers—and it's getting worse. Fruit bats die daily by their thousands from extreme heat, as do mammals. Australia also has great losses of wildlife from bush fires. Millions of Australian wildlife animals are killed every year by drivers on roads. Australia uses 1080 poison and traps causing long agonizing deaths to wild dogs. Animals who ingest 1080 endure vomiting, screaming fits, drooling, seizures, frenzied behaviour and uncontrolled paddling. This awful poison has been banned in most countries around the world. Birds too, die when they feed on the carcasses. The Australian federal government is allowing land clearing in Queensland, which has accelerated to almost 300,000 hectares each year, [to destroy the habitat of threatened species and increase pollution on the Great Barrier Reef](#), according to

analysis by WWF. *Eleanor Ainge Roy* *The Guardian*

Cats are dumped in the bush and become feral. Cats are often maligned, unjustly —*Time* magazine published research some years ago that showed wild cats were feeding mainly on rabbits and were saving farmers and other animals from the destruction of plants caused by rabbits. A minister in the Australian Government, Mr. Greg Hunt, has issued a mistaken strategy to *save wildlife* by killing approximately 2 million cats by 2020! It has spurred the heroic, dedicated animal rights activist, Brigitte Bardot, to write to him: "*Your country is sullied by the blood of millions of innocent animals so please, don't add cats to this morbid record.*" Bardot said the government should instead look at sterilisation of cats, a position backed by animal rights group Peta Australia, which called the planned cull cruel and said it was unlikely to succeed. There are many reasons why this is wrong. First, the cats are not the ones causing Australian wildlife to become endangered. For the most part, it's humans themselves. Development or logging activity destroys

habitat and causes colony collapse. As humans destroy nature, wild animals find themselves trapped or with no home. Humans displace and kill our wildlife when they build homes, commercial buildings, roads, gardens, spray poisons on the land, let their dogs run free (decimating koala populations), play deafening music and use machinery, amongst other things. Snakes are the number two killers of humans in the world (mosquitos are no.1). Snakes eat birds; they even climb trees to get the nesting birds. They also eat other creatures, from the smallest to the largest, in great numbers. "A 99 percent reduction of fur-bearing animals" in the Everglades has been reported due to ravenous Burmese pythons. "Past attempts to decrease the cat population have proven that killing cats is not an effective or humane way to do this. As litters of kittens are born, the population of cats will, slowly but surely, continue to rise. If you truly must decrease the number of cats in an area, use the trap-neuter-release method, a humane strategy that will, slowly at first, lower the number of cats in an area.

In Australia, a council posted a bounty

on the scalp of any cats that were caught and killed. After the Banana Shire Council offering a \$10 reward for a cat scalp, People for the Ethical Treatment of Animals (PETA) negotiated with an outdoor advertiser to put up a billboard near the council's headquarters in Biloela urging everyone to keep cats indoors in order to protect them from falling victim to the cruel scheme.

"It's never safe to let animal companions outdoors unattended, even for 'just a minute'," says PETA Associate Director of Campaigns Ashley Fruno. "And feral cats who are shot or poisoned suffer in the same way and feel the same pain that our companion feline friends would." Feral cat colonies don't spring up out of nowhere. They're the direct result of the irresponsible actions of people who abandon their unaltered cats or allow them to roam outside.

Every day, koalas and their homes are being destroyed by excessive tree-clearing, driving them to the brink of extinction. Also people letting their dogs roam and kill koalas. One woman was woken up by screams from an animal being savaged by dogs. When she went to investigate she saw two dogs mauling a koala who had a baby in her pouch. She managed to rescue the baby but couldn't save the mother from the dogs. She said, "*I will never forget her screams as long as I live.*" There is a photo of a koala mother holding her baby in one arm—the other arm has been torn off.

Italians are the most compassionate, caring, civilized people in the world. They don't mind stray animals and it's a part of their beliefs to not kill stray animals like they do in other countries. Cats are a cultural feature of Rome. Rome's municipal council, according to an Italian national law of 1991, banned the killing of stray cats and dogs, and protects the cats by giving them a *biocultural patrimony* label. Spaying and neutering are important priorities, and the public veterinary service provides for free sterilisation of cats who belong to these feline settlements. In addition, there are voluntary organisations who raise funds to provide medical help and food for the strays. An organisation called Friends of Roman Cats is American based and offered tours at one time. 300,000 cats live in the Eternal City; 180,000 in houses and 120,000 in the streets. The latest

animal census was commissioned by the [Office for Animal Rights](#), and counted more than 4,000 colonies of cats.

Cats are omnipresent in Rome; they can rightly be considered citizens and a symbol of the Eternal City. They are so popular that a regional law states that a group of more than 5 cats in the natural urban habitat constitutes a protected feline colony. There the animals are entitled to food, shelter and protection, and cannot be kicked out. Sterilisation keeps the feline population under control. Romans love cats, because they are graceful, harmless, clean and keep the rats at bay.

It is not usual if you mention *cats* in Rome, whether to a porter in the lift of a hotel, a manager of a chic shop, or a driver of a limousine, to elicit these responses: "Ah, you must see this photo on my phone of my beloved Siamese cat *Aurelia*." "Please, take a look at these photos of my beautiful *Leonardo* and his brother *Dante*!" "My wife suffered very bad from depression. I didn't know what to do. One day I brought home a kitten, *Baci*. It has changed her. Saved her life and our marriage!" Italian men absolutely adore their cats.

The cats hang around tourist attractions in Rome and have become an attraction themselves. In Rome there are thousands of people who voluntarily feed, provide medical care and sterilise cats. They used to be mainly women (so-called *gattiere*) but now both sexes are represented. Some of them have created an association, the ARCA, which numbers 1,000 members. See romancats.de for an example. About 200 cats live in the Colosseum, fed regularly by older women called *gattiere*. They are happy and healthy and the cats receive not only canned food, but also fresh liver and meat, and lots of loving care. http://www.the-colosseum.net/around/gatti_en.htm

The toxoplasmosis flag is waved every now and then, striking terror in the hearts of Australian pregnant women. They've been doing that for years. Perhaps because people have stopped taking any notice of these scare tactics (how many people's lives have been undone because of this? Do you know any?) So now they're blaming wild life dying, on cats again. How pathetic! They tried to blame all sorts of things on the cancerous growths of the poor Tasmanian Devils when the cause was there all along—pesticides poisons from the timber

plantations. Humans again. The devils! As the wonderful Swedish philosopher, writer and physician, Axel Menthe, wrote: "The wild, cruel animal is not behind the bars of the cage. He is in front of it." I know someone who traps cats. I've been haunted by what he does to cats. Does he ever think what a cat, a sentient creature must feel when he or she find themselves trapped in one of his traps? Beating themselves against the metal, trying to break free? Being attacked by ants, snakes, wasps, wild weather, hail, blazing heat, wild dogs, humans? Not being able to return to feed and protect their young? And how hypocritical of him to have several dogs on his property when we know what dogs do to koalas—and to farm animals. More than one dog is a pack and they are killers.

There is a wonderful film called "Kedi" (Turkish for cat) on the Internet. Feral cats roam the streets of the city. Each with a distinct personality. They are welcome in bazaars, cafes and restaurants, bringing smiles to people's face. The residents of the city love the cats, feed them, protect them and take them to the vet if they're sick. Cat videos are number one on the Internet, bringing joy and laughter as they do. So why this intense hatred amongst some Australians? We see horrific stories of animal suffering, especially in the vile Live Export Trade. It takes only one cruel, powerful politician or corporation, to give Australians a bad name.

Australia is a backward country when it comes to animal protection. A government which is indifferent to animal suffering will not care for its people. "Australia's suicide rate has peaked to a terrifying new height." Young men are particularly vulnerable. So are women and children caught in domestic violence. Human lives are connected with our fellow creatures.

V.A. Thompson



BYRON SHIRE COUNCIL



Pest Animal Management Plan 2018 - 2023

November 2018

Pest Animal Management Plan 2018 - 2023



In preparation of this document Council acknowledges the Bundjalung of Byron Bay - Arakwal People are the Traditional Custodians of the land in Byron Shire, and form part of the wider Aboriginal nation known as the Bundjalung.

Byron Shire Council and the Traditional Custodians acknowledge the Tweed Byron Local Aboriginal Land Council and the Jali Local Aboriginal Land Council under the Aboriginal Land Rights Act 1983.

Council also acknowledges all Aboriginal and Torres Strait Islander people who now reside within the Shire.

Citation:

Byron Shire Council (2018). Pest Animal Management Plan 2018-23. Byron Shire Council, Mullumbimby NSW.

Document History

Doc No.	Date Amended	Details (e.g. Resolution No.)
#E2018/61028	June 2018	Public exhibition version - Reported to 2 August Council meeting Res 18-495
#E2018/41172	October 2018	Draft version post Public Exhibition amended with track changes
#E2018/108387	January 2019	Final version following public exhibition for reporting to Biodiversity Advisory Committee for endorsement to go to Council



Executive summary

The Byron Shire Council Pest Animal Management Plan 2018-23 provides a framework for the management of pest animals on Council managed land but with opportunities for Council to assist with pest animal management on private land when funds allow.

The Plan enables Council to meet its statutory requirements under the NSW *Biosecurity Act 2015* and *Local Land Services Act 2013*, whilst fostering a collaborative, cross-tenure approach to pest animal management.

Under the *Biosecurity Act 2015* all land managers, regardless of whether on private or public lands have a shared responsibility to manage pests and their impacts.

To meet these legislative requirements, Council will focus efforts on Council owned and managed land. Council will support private land managers to fulfil their obligation to manage pest animals and encourage a collaborative approach by offering technical advice and support and acting as a conduit between relevant stakeholders. Where additional or new financial resources can be secured to allow Council to undertake off-tenure management, the Plan identifies priority target areas on private land where Council may undertake targeted pest animal management. Efforts will be prioritised based on opportunities to complement existing pest control programs, and in areas with high environmental, cultural, social and economic values.

The Plan provides desired outcomes, objectives and actions to address and manage the impacts of pest animals. These actions are based on the principles of pest animal management being, prevention, eradication, containment and asset protection. Objectives include increasing community understanding of the benefits of integrated pest animal management, encouraging community-led, coordinated and integrated pest animal control activities, using safe, effective and humane approaches to pest animal management and promoting research and development.

Priority pest animals were selected based on regional strategies, local impacts and community consultation, and include free-ranging dogs (wild dogs), European red fox, feral cats, European rabbit, Indian myna and cane toads. Aquatic and insect pest are not included in the Plan. The strategic actions and species-specific actions will guide targeted control of priority pest animals as well as emerging and alert species. The Plan also provides an implementation program that outlines measures of success, stakeholders and responsibilities, and incorporates mechanisms for monitoring, evaluation and reporting of the Plan's effectiveness.

The Plan draws on the experience and knowledge of multiple stakeholders including but not limited to private trappers, NSW State Government agencies and local community members who provided advice and input during the development phase.



Acknowledgements

This Plan required significant resources, research and dedication. Still, development would not have been possible if Council did not have the support of many individuals and organisations. Therefore, we would like to extend our sincere gratitude to them.

First of all, we are thankful to NSW Government for their financial support through its Saving our Species Program, which enabled the engagement of Ecosure Pty Ltd, Ph3 Consulting and the University of Technology Sydney to prepare the plan in close collaboration with Council staff.

We express our gratitude towards the Arakwal Bundjalung People and the wider Bundjalung Nation as traditional owners and custodians of the land, in particular Mik Smith CEO of Jali Local Aboriginal Land Council for an Aboriginal perspective on pest animals.

We are also grateful to other public land managers including the National Parks and Wildlife Service, North Coast Local Land Services, Department of Primary Industries and Tweed Shire Council for provision of expertise, and technical support in the development of the Plan, as well as access to pest animal data for Byron Shire.

We thank Friends of the Koala who provided access to pest animal data in relation to attacks on koalas in Byron Shire. This will allow us the opportunity to prioritise areas for future management on private land.

Importantly, we would like to thank Jim Rogers of JR Trapping and the community members who provided their valuable time and knowledge to inform the Plan through a community workshop and completing an online survey. This input was critical to developing a Plan that will guide a collaborative cross-tenure approach to effectively manage pest animals and their impacts on the community.

It is with provision of expertise, and technical support from many individuals and organisations that we can progress towards shared solutions to help manage pest animals across our landscape.

Definitions, acronyms and abbreviations

Biosecurity Threat	Biosecurity is a critical part of the government's efforts to prevent, respond to and recover from pests and diseases that threaten the economy and environment
DPI	Department of Primary Industries
EPBC Act	Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>
EP&A Act	NSW <i>Environmental Planning and Assessment Act 1979</i>
IPM	Integrated Pest Management
LALC	Local Aboriginal Land Council
LLS	Local Land Services
LLS Act	NSW <i>Local Land Services Act 2013</i>
NPWS	NSW National Parks and Wildlife Service
NCLLS	North Coast Local Land Services
OEH	Office of Environment and Heritage
Pest animal	Is an introduced (non-native) animal that present a biosecurity threat
Pesticide	An agricultural chemical substance as defined by the <i>Agricultural and Veterinary Chemicals Code Act 1994</i> . Definition of pesticides covers, bactericides, baits, fungicides, herbicides, insecticides, lures, rodenticides and repellents. Pesticides are used in commercial, domestic, urban and rural environments (<i>Pesticides Act 1999</i>). A pesticide may be natural or synthetically produced. For the purposes of this definition, a pesticide continues to be regarded as a pesticide even when it is mixed with some other substance (whether or not the other substance is a pesticide). Products that are pesticidal in their action but are entirely based on biological agents not harmful to humans are not considered a pesticide for the purposes of this definition.
Private land managers	Individual community members that own or occupy land within Byron Shire
SOP	Standard Operating Procedures

Contents

Executive summary.....	ii
Acknowledgements.....	iii
Definitions, acronyms and abbreviations.....	iv
List of Figures.....	vii
List of Tables.....	vii
1 Introduction.....	1
1.1 Background.....	1
1.2 Purpose.....	1
1.3 Our strategic framework.....	2
1.4 Scope.....	3
1.5 Commencement and duration.....	4
1.6 Plan structure.....	4
2 Planning context.....	5
2.1 Commonwealth.....	5
2.2 State and regional.....	5
2.3 Byron Shire Council.....	5
3 Development of the plan.....	8
3.1 Historical and current management plans, programs and issues.....	8
3.1.1 Monitoring requirements.....	9
3.2 Integrated pest management.....	10
3.2.1 Integrated pest management policy.....	11
3.3 Consultation.....	11
3.3.1 Community feedback.....	12
3.3.2 Development and approval process.....	14
3.3.3 Implementation and review of the plan.....	15
4 Pest animal impacts.....	16
4.1 Environmental.....	16
4.2 Economic.....	16
4.3 Social.....	16
4.4 Cultural.....	16
5 Principles of pest animal management.....	22
5.1 Supplementary management principles.....	24
6 Priority areas in Byron Shire.....	25
6.1 Council managed land.....	25
6.2 Privately managed land.....	25
7 Target pest species program.....	29
7.1.1 Free-ranging Dogs (wild dog).....	29
7.1.2 European red fox.....	30
7.1.3 Feral cat.....	31
7.1.4 Indian myna.....	31
7.1.5 Cane toad.....	32
7.1.6 European rabbit.....	32
7.2 Emerging species.....	32



Pest Animal Management Plan 2018 - 2023

7.2.1	Feral goat	32
7.2.2	Feral pig.....	33
7.2.3	Feral deer	33
7.3	Alert species	33
8	General strategic action plan	34
9	Target strategic action plan	42
9.1	Stakeholder roles and responsibilities	42
9.2	Target species action plan	42
9.3	Funding sources	47
9.3.1	Council.....	47
9.3.2	State	47
9.3.3	Commonwealth.....	48
	References	49
Appendix 1	Overview of relevant legislation, policies and plans	53
Appendix 2	Engagement methods	56
Appendix 3	Identifying pest animals	58
Appendix 4	Draft Wild Dog, Fox and Feral Cat Operational Plan	62
Appendix 5	Operational Plan template	67

List of Figures

Figure 1 Structure of the plan	4
Figure 2 The NSW Biosecurity framework for invasive species in NSW	7
Figure 3 FeralScan is an online resource to assist in recording pest animal data.....	10
Figure 4 Generalised invasion curve (Source: Victorian Government 2010).....	22
Figure 5 Priority 1 - Council owned and managed land (northern sector of Byron Shire).....	26
Figure 6 Priority 1 - Council managed land (southern sector of Byron Shire)	27
Figure 7 Council and private lands priority areas for wild dog, fox and cat control.....	28

List of Tables

Table 1 Target pest species within the scope of this Plan	3
Table 2 Stakeholders invited to assist in development of the Plan	12
Table 3 Summary of impacts of selected pest animals.....	18
Table 4 Strategic actions (SAs) linked to objectives of the Plan	34
Table 5 Target Species Action Plan	43



1 Introduction

1.1 Background

The risk of invasion of non-native organisms is accelerating with human population growth and globalisation (McNelly 2011). Despite quarantine services in Australia, expansion of trade has seen increases in purposeful and accidental introductions, and their negative impacts are regarded as second only to activities associated with human population (Fleming et al, 2017). Pest animals are recognised as a significant threat to biodiversity and agricultural productivity and have the ability to impact with human lifestyle and health e.g. acute and chronic distress, depression and anxiety. Effective management of pests requires a clear and strong commitment from the State Government, Council and the community. The cost to manage pest animals is significant and growing annually (Invasive Animals CRC 2014a). The most cost-effective method of managing pest animals is to prevent further invasions.

The average cost of rabbits, wild dogs, foxes, feral pigs and other vertebrate pests on the Australian agricultural industry is as high as \$596 million per year – with free-ranging dog (wild dog) costs nearly double, since the last analysis (Invasive Animals CRC 2014a). In NSW alone, the average cost on the agricultural industry is \$151.5 million per year.

The NSW *Biosecurity Act 2015* came into effect on 1 July 2017 and replaces all or part of 14 Acts. The *Biosecurity Act 2015* together with the *Local Land Services Act 2013* (LLS Act) identifies that all land managers, regardless of whether on private or public land, have the same responsibilities to manage pest animals.

Our Pest Animal Management Plan 2018-23 (the Plan) has been prepared to help Council meet its statutory requirement under the NSW *Biosecurity Act 2015* and the LLS Act and to help reduce the impacts of pest animals on biodiversity and agricultural productivity.

The Plan acknowledges the responsibility of not only Council in the management of pests in the Shire, but the responsibilities of Commonwealth and State governments and those of the wider community. This includes the control and effective management of pest species and the protection of environmental, social, economic and cultural values of the Shire.

All land managers, regardless of whether on private or public land, have the same responsibilities to manage pest animals.

1.2 Purpose

Our Plan has been developed to ensure that Council meets its statutory obligations, but also complement cooperative management of pest animals undertaken by public and private land managers across Byron Shire. Priorities for pest management within the Shire are identified, and strategies that address the environmental, social, economic and cultural impacts of pests are established.



Pest Animal Management Plan 2018 - 2023

The Plan also identifies priority pest animal species to ensure that resources are allocated appropriately and provides detail for the monitoring, evaluation, reporting and improvement of pest animal management activities. The Plan will serve as a framework to provide strategic direction for a consistent and effective approach to pest animal management by Council in the Byron Shire.

The Plan supports the *Biosecurity Act 2015*, LLS Act and the North Coast Regional Strategic Pest Animal Management Plan 2018-23 (North Coast Local Land Services [NCLLS] 2018).

Council's vision is to foster a collaborative, cross-tenure approach to pest animal management to reduce the impacts of pest animals on environmental, economic, social and cultural values in Byron Shire.

1.3 Our strategic framework

Between 2018 and 2023, Council will aim to achieve the desired outcomes and objectives, which are further detailed in Sections 8 and 9.

Desired outcome 1: Negative impacts of pest animals are reduced, with Council meeting its responsibility to manage pest animals on Council-managed land

- Objective 1.1 Increase community understanding of the benefits of pest animal management in Byron Shire.
- Objective 1.2 Proactively manage pest animals to reduce their impacts via a prioritised strategy of prevention, eradication, containment or asset based protection of priority pest animal species.
- Objective 1.3 Use safe, effective and humane approaches to pest animal management.
- Objective 1.4 Promote the availability of technical advice and resources to private land managers in Byron Shire for pest animal management.

Desired outcome 2: Coordination of pest animal management across Byron Shire is strengthened and collaborative

- Objective 2.1 Foster good collaborative and coordinated community relations by acting as a conduit to community led coordinated and integrated pest animal control activities by all land managers throughout Byron Shire.
- Objective 2.2 Ensure continued input and feedback on Council's pest animal management program from all land managers.

Desired outcome 3: The way pest animals are managed by Council is continually reviewed.

- Objective 3.1 Improve the mechanisms used to carry out, monitor, evaluate and report on pest animal management by Council.
- Objective 3.2 Support pest animal research and development.



Pest Animal Management Plan 2018 - 2023

1.4 Scope

Under the NSW *Biosecurity Act 2015*, pest animals are not defined by species. The Plan defines a pest animal as introduced (non-native) animals that present a biosecurity threat. All land managers, regardless of whether on private or public land, have a **General Biosecurity Duty** to prevent, minimise or eliminate any biosecurity risk under the Act. The general biosecurity duty is a principle that can be used by all land managers to encourage or in some cases enforce best practice behaviours to achieve effective pest animal management.

This Plan applies to Council managed land, including land owned or controlled by the State Government (e.g. Crown land). It is also intended to guide private land managers, which Council will support in their legislative obligation to manage pest animals.

The Plan does not apply to land owned by the Commonwealth, however all private or public land managers will benefit from Council's approach to pest management activities.

Pest animals targeted in this Plan are shown in Table 1. These are based on known impacts within the Shire, community feedback received in developing the Plan, and priority species identified in the North Coast Regional Strategic Animal Management Plan 2018-23.

The Plan's focus will be on preventing the incursion of new species, eradicating new species, and preventing the spread and reducing the impacts of established species.

Table 1 Target pest species within the scope of this Plan

Established species Management aims: Contain Spread and Protect Assets (reduce impacts)	Emerging species Management aim: Eradicate where possible or Contain Spread	Alert species Management aim: Prevent
Free-ranging dog (wild dog)	Feral goat	Red-eared slider turtle
European red fox	Feral pig	Red imported fire ant
Feral cat	Feral deer	Big headed ant
Indian myna		Yellow Crazy ant
Cane toad		Indian ring-necked parrot
European rabbit		

Not included in the scope of our Plan are, aquatic pests, native (nuisance) animals, domestic or public health pests (including rodents, mosquitoes, midges and cockroaches), or pathogens of humans, domestic animals and livestock.

Responsibility for the prevention and management of aquatic pests is shared between several State and Commonwealth government agencies. Under the *Biosecurity Act 2015*,



Pest Animal Management Plan 2018 - 2023

the NSW Department of Primary Industries is responsible for the conservation and management of the fish and marine vegetation including management of aquatic pests and diseases. For example, the NSW Department of Primary Industries is involved in the National System for the Prevention and Management of Marine Pest Incursions.

In some instances, native animals such as Brush turkeys, kangaroos, flying-foxes, corellas or possums can be perceived as pests. For example, an abundant population of kangaroos can compete with native animals or livestock for food. Native animals are not included in the scope of the Plan and are managed separately in accordance with the NSW *National Parks and Wildlife Act 1974* and *Biodiversity Conservation Act 2016*. The grey-headed flying-fox is listed as a threatened species under the *Biodiversity Conservation Act 2016*. Part 2 Division 3 of the *Biodiversity Conservation Act 2016* provides for issuing of Biodiversity Conservation Licences to manage flying-foxes.

The Plan encompasses principles, goals and priorities across the four stages of pest animal management: prevention; eradication; containment; and asset protection.

1.5 Commencement and duration

Our Plan is a five year plan, which is to remain in place until 2023. The Plan will not come into force until it has been formally adopted by resolution of Council.

1.6 Plan structure

The overall structure of the Plan is presented in **Figure 1**.

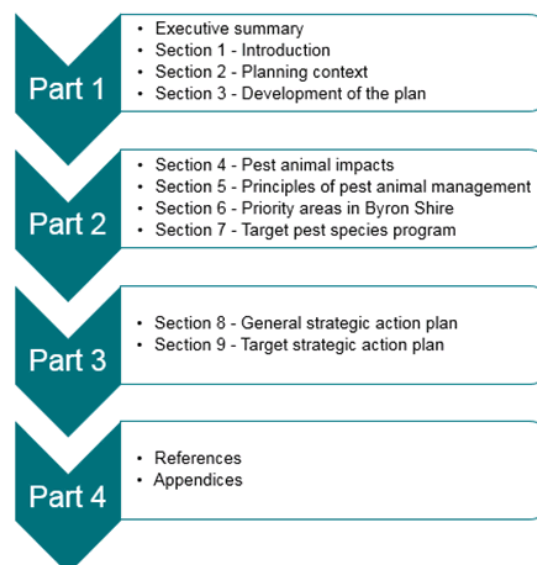


Figure 1 Structure of the plan



2 Planning context

Pest management in Australia occurs at three levels of government. A summary of key pest animal legislation and strategies are provided below and in **Figure 2**. Appendix 1 provides a comprehensive overview of legislation, policies and plans relevant to pest animal management in the Shire.

2.1 Commonwealth

The Australian Government provides national guidance on best practice pest animal management in the Australian Pest Animal Strategy 2017 - 2027 (Invasive Plants and Animals Committee 2016). The strategy sets national priorities and goals, discusses principles of effective pest animal management and encourages a coordinated and strategic approach across a range of stakeholders.

2.2 State and regional

The New South Wales Biosecurity Strategy 2013 – 2021 (Department of Primary Industries 2013) provides the strategic direction for the management of plant and animal pests, weeds and diseases. The strategy focuses on biosecurity risks that impact the environment, community and economy (Department of Primary Industries 2013).

Within the regional context, the North Coast Regional Strategic Pest Animal Management Plan has recently been released (North Coast Local Land Services 2018). This plan assists with the regional implementation of the NSW *Biosecurity Act 2015*. It identifies regional priorities for pest animal management and activities and provides guidance for all land managers to meet their biosecurity duty (North Coast Local Land Services 2018). **Figure 2** illustrates the NSW Biosecurity framework for invasive species in NSW (North Coast Local Land Services 2018) with this Pest Animal Management Plan (local management plan) being guided by the regional strategy.

Everyone is obliged to comply with animal welfare standards in the *Prevention of Cruelty to Animals Act 1979* when undertaking pest animal control. Other key state legislation detailed in Appendix 1 include the *Companion Animals Act 1998* which specifies requirements for responsible pet ownership, and the *Pesticides Act 1999* which governs the use of pesticides.

Under the NSW Biosecurity Act 2015, Council has a legislative requirement to manage pest animals on Council managed land.

2.3 Byron Shire Council

Pest animal management in the Byron Shire was guided through the existing Feral Animal (wild dog, fox and cat) Management Plan 2013-2015 (Byron Shire Council 2013). This Plan will replace and expand upon the existing management plan. This Plan will also contribute to Council's Biodiversity Conservation Strategy (currently in preparation) to protect and restore Byron Shire's biodiversity and the Integrated Pest Management Strategy (currently in preparation).



Pest Animal Management Plan 2018 - 2023

The Byron Shire Rural Land Use Strategy 2017 provides a strategic framework to guide future land zoning and use, protection and/or development of rural areas, including the environment, community, economy and infrastructure. The aims of the strategy are to provide a framework to allow Council and the community to deliver improved outcomes in rural areas. The strategy identifies the need to provide information and advice on pest management to the community (Byron Shire Council 2018).



Pest Animal Management Plan 2018 - 2023

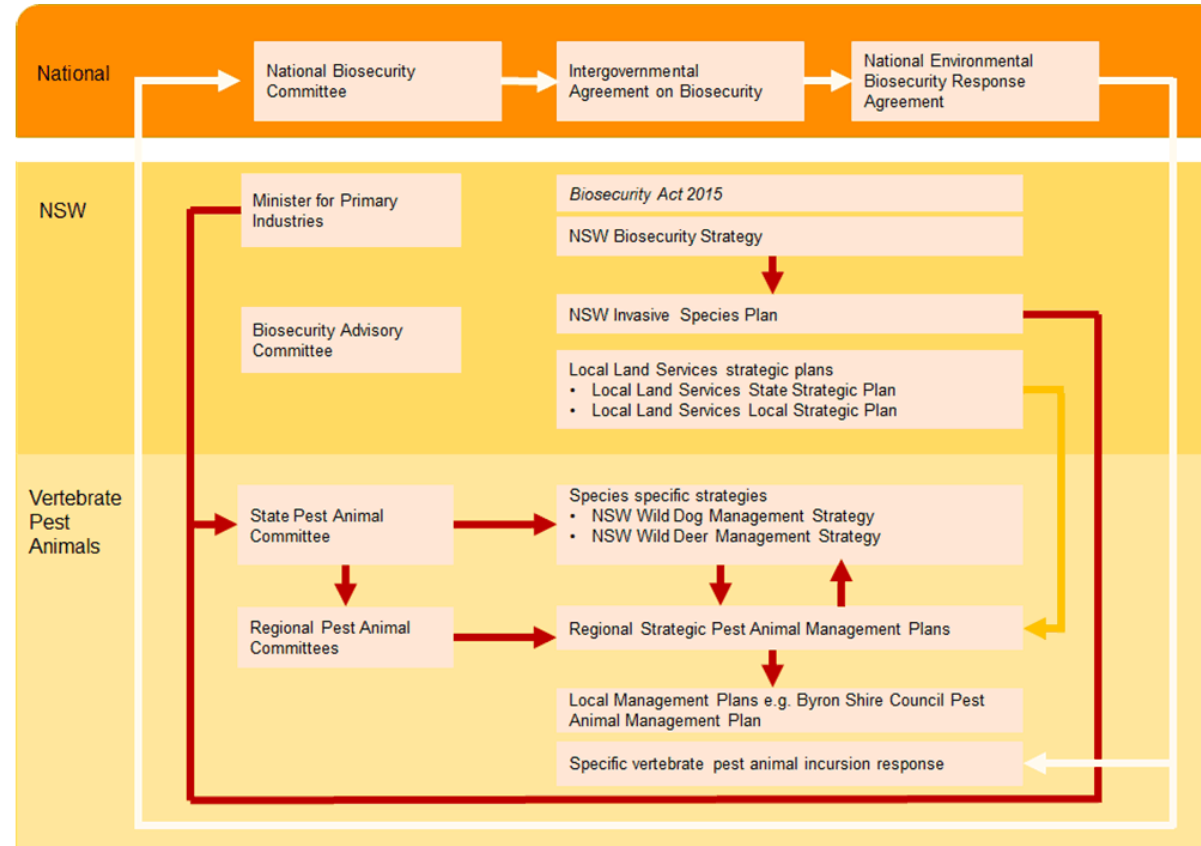


Figure 2 The NSW Biosecurity framework for invasive species in NSW (Adapted from: North Coast Local Land Services 2018)

3 Development of the plan

3.1 Historical and current management plans, programs and issues

In late 2011, Council commenced planning for a pest animal management program targeting free-ranging dogs (wild dogs), European red fox and feral cats on Council managed land and private land, which led to the development of the Feral Animal Management Plan 2013-15. In 2012, the operational actions identified within the Feral Animal Management Plan 2013-15, which included a soft jaw trapping program between autumn and spring each consecutive year was implemented, except in 2017. By 2015, 64% of the actions identified in the Feral Animal Management Plan 2013-15 were fully completed while 14% of the actions were partly completed and 22% of the actions were not completed. Actions that were incomplete related to monitoring and evaluation activities.

Council's management of pest animals has been previously funded by Council with additional financial support from NSW Government funds and private land managers. For example, Council covered the full cost to retain a private trapper on a weekly bases, while a fee per head of carcass for the target pest animal trapped was payable by private land managers. In some cases, multiple private land managers worked in partnership with a private trapper and collectively agreed that regardless of whose property the target pest animal was captured on, the fee per head carcass for each pest animal trapped and euthanized was equally funded by the participating private land managers.

This collaborative approach by private land managers showed to be highly efficient in terms of surveillance to enable timely detection of pest animal incursions. It promoted support and coordinated localised on-ground action, shared responsibility and cost across private land tenure. In addition, the approach also recognised that pest animals move across multiple land tenures. For example, free-ranging dogs (wild dogs), have an average home range or territory of 100 square kilometres, depending on the available resources. Although, in 2016, a free-ranging dog (wild dog), was tracked west of Coffs Harbour before going on a record exploration of some 530 km in six months via the base of the steep escarpment under Dorrigo and up the Bellinger past Thora, eventually reaching Bellbrook on the Macleay via the upper Nambucca, and from there up onto the Tablelands through the Styx River catchment (Dr. Paul Meek, pers. comm. 27 March).

Furthermore, community feedback demonstrates that data communicated regularly can also help motivate participating private land managers to keep going with a program. Sharing positive results through newsletters, meetings and local media helps to boost support from the community and maintains the social license needed to continue pest management (Bernice Sigley, pers. comm. 2 April 2018).

A collaborative approach to pest animal management provides the best outcomes for public and private land managers, the community and the environment.

Pest Animal Management Plan 2018 - 2023

For a period of time Council funds were complemented by NSW government grants. This presented Council with an opportunity to extend beyond its statutory requirements to manage pest animals on Council managed land and expand the soft jaw trapping program across broader areas of private land. This appears to have promoted localised support and initial coordinated on-ground action, but, over time it may have also falsely raised private land manager expectations that Council has an obligation to fund and or undertake actions to manage pest animals on private land, when it is the landowner's responsibility.

Over time, Council may have falsely raised private land manager expectations that Council has an obligation to fund removal of pest animals on private land.

Similarly, NSW government grants have enabled Council to periodically appoint an Invasive Species Officer to undertake activities with the community to manage other pest animals such as cane toads (*Rhinella marina*, formerly *Bufo marinus*) and Indian mynas (*Acridotheres tristis*). The management of these species also relied heavily on trained community volunteers that were supported by Council technical advice and resources. The programs were well received by the broader community and have partly continued beyond the grant, but associated travel expenses incurred by trained community volunteers places uncertainty over the future of these types of services. Concerns have also been raised relating to animal ethics.

Additionally, uncertainty over whether NSW government grants will continue, together with the commencement of the NSW *Biosecurity Act 2015* means Council must first prioritise pest animal prevention, eradication and management strategies on Council managed land. Given this uncertainty, a triage approach to pest management must be established to make the best use of limited Council capacity and resources.

Council is prioritising pest management activities on Council managed land due to legislative requirements under the Biosecurity Act 2015 and uncertainty around external grant funding.

3.1.1 Monitoring requirements

Monitoring is a crucial part of management but requires a lot of time, financial resources and effort, so it is important to determine the monitoring objectives: what information needs to be collected and why, when, where and how data will be collected and stored. Importantly, it needs to be clear how the information will be used to provide evidence that the desired outcomes are being achieved through management. As such, it is recommended that Council adopt a method for collection and sharing of pest animal sighting, distribution, impact and control information.

FeralScan (www.feralscan.org.au) is a free online resource that allows anyone to record pest animal activity, evidence of pests, pest damage and control actions (**Figure 3**). Data entered

into FeralScan can be used to help coordinate on ground control to address the problems pest animals are causing in a local area. FeralScan can be used by farmers, community groups, pest controllers, local government, catchment groups and individuals managing pest animals and their impacts. FeralScan can assist with planning and implementing a control program. It can also be used to map rabbits, free-ranging dogs (wild dogs), foxes, feral cats, feral pigs, feral fish, feral camels, myna birds, cane toads, feral goats, and starlings, and will soon provide the capacity to map feral deer.

If land managers choose to use FeralScan as a data recording/sharing medium it needs to be cautioned that users may want to make their entries private. This is particularly relevant to pests such as feral pigs and goats, which may attract illegal hunters who do not necessarily do the right things by land managers. Additionally, FeralScan is not linked to Local Land Services, the lead public land manager and holder of pest animal data. This means that while FeralScan is a resource available to store information, any data captured still needs to be provided directly to Local Land Services. This is important for supporting funding applications for pest animal control at a landscape scale in which all land managers would potentially benefit from.



Figure 3 FeralScan is an online resource to assist in recording pest animal data

3.2 Integrated pest management

Pest animal management is a reality for local government whether for the economy, asset protection, the protection of the environment, or community health and welfare. Pest animal management must therefore aim for the efficient and effective control of pest animals, while avoiding any adverse effects on the economy, public assets, ecosystems and people.

With increasing knowledge and understanding of the potential negative consequences of pesticides, safer and more environmentally friendly pest and disease control methods are

becoming increasingly popular on public and private land. Integrated Pest Management (IPM) is one such approach that aims to reduce the use of pesticides through a series of pest management evaluations and decisions that progressively improve the competitive ability of desirable plants and animals, coupled with the application of alternative pest control methods. These control methods include but are not limited to biological control, fire, steam, slashing and manual methods (for plants), and biological control, trapping and shooting (for animals).

Thus, integrated pest management is not a single pest control method, but rather a holistic approach that integrates ecological factors with a range of control methods to manage and ideally reduce pest species. This concept has subsequently been widely accepted as a mainstream approach in the management of production and amenity landscapes around the world.

There have been many definitions for integrated pest management but it has been defined by the Food and Agriculture Organization of the United Nations Code of Conduct on the Distribution and Use of Pesticides as *"the careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations and keep pesticides and other interventions to levels that are economically justified and reduce or minimize risks to human health and the environment."*

3.2.1 Integrated pest management policy

On 24 August 2018, Council resolved (18-565) to adopt an Integrated Pest Management Policy. The Policy aims to provide a policy framework for the effective and efficient control of pests on Council managed land through an Integrated Pest Management approach that uses a range of appropriate prevention and control methods while minimising the use of pesticides on a continuous improvement basis. As such the Policy seeks to support a transition from a reliance on pesticides.

Council recognise there are a variety of different lethal and non-lethal control methods available to control pest animals. These include but not limited to poison baits (sodium fluoroacetate (or '1080') or para-aminopropiophenone (PAPP)), traps, shooting, fencing, guard animals and aversion techniques (such as lights, alarms, and flagging) and biological control (rabbit haemorrhagic disease virus (RHDV)). Not all tools are useful for a given area; each tool varies in its effectiveness, depending on a range of factors specific to the local situation. The use of many control tools is also subject to various laws and regulations.

In most pest animal management situations, a combination of management options is generally proven to be the most efficient, effective and cost-effective approach to managing the target pest animal species. However, in supporting the Policy as well as the general small areas of Council managed land (≤ 120 ha), the use of pesticides such as 1080 may not be the preferred or most efficient method and therefore other options to manage pests such as free-ranging dogs (wild dogs), foxes and feral cat will need to be employed (refer to Section 7).

3.3 Consultation



Pest Animal Management Plan 2018 - 2023

There are a range of stakeholders who are directly or indirectly affected by pest animals or who are interested in pest animal management, all of whom were invited to share their thoughts and provide advice and input in the development of the Plan (Table 2). Extensive effort was made to engage with the community and other stakeholders in development of the Plan. Methods included a number of workshops for public land managers, Traditional Owners, private land managers and the broader Byron Shire community, as well as an online survey. This Plan will also be placed on public exhibition and submissions will be considered in finalising the Plan.

Further detail on engagement methods is provided in Appendix 2.

Table 2 Stakeholders invited to assist in development of the Plan

Stakeholders	
Bangalow Koala	Northern Rivers Regional Organisation of Councils
Byron Bird Buddies	Byron Shire Council including Councillors and staff
Landcare and Dunecare	Biodiversity Advisory Committee
WIRES – Northern Rivers	Arakwal MOU Advisory Committee
Northern Rivers Wildlife Carers	Tweed Shire Council
Friends of Koala	Ballina Shire Council
Private and volunteer trappers	Lismore City Council
NSW Farmers Association	North Coast Local Land Services
Australian Macadamia Society	Department of Primary Industries
Bundjalung of Byron Bay Aboriginal Corporation	National Parks & Wildlife Service
Jali Local Aboriginal Land Council	Office of Environment & Heritage
Tweed-Byron Local Aboriginal Land Council	Private land managers
Ngulingah Local Aboriginal Land Council	Community members

3.3.1 Community feedback



A summary of the feedback from the online survey is as follows:

- A total of 24 valid submissions were received to inform the development of the draft.
- Based on the cumulative preference totals of the top six ranked pest animals of concern by users, free-ranging dogs (wild dogs), feral cat, European red fox, European rabbit, Indian Myna and feral pig ranked the highest as the priority pest animals.
- Free-ranging dogs (wild dogs), were reported to have the greatest impact on biodiversity, especially wallabies, followed by impacts on agricultural productivity with loss of livestock and suspicion of transferring a reproductive disease, neosporosis, to cattle. Neosporosis is a reproductive disease that causes abortions, low conception rates, decreased calving rates and milk production, and weaner and calf loss, and is estimated to cost the Australian beef and dairy industries in excess of AUD \$110 million annually (Invasive Animals CRC, 2014). Hydatid disease (also known as hydatidosis or echinococcosis) is caused by a tapeworm which infects dogs, dingoes and foxes. Hydatid disease also causes losses in livestock with the downgrading of edible meat by-products because of the presence of the hydatid cysts (NSW DPI primefact 2007).
- The use of 1080, while acknowledged to be an effective management tool for the management of free-ranging dogs (wild dogs) and European red fox (NSW DPI primefact 2018), was the least preferred management option. Ten respondents were concerned about the risks to native wildlife and nine respondents concerned about the risks to domestic animals. However, seven respondents expressed no concern about the use of 1080 or other pesticide use to control pest animals. The most preferred management option was trapping and shooting, equally followed by exclusion fencing and 'do nothing'.
- Eight respondents stated they undertook control of pest animals on their land.
- Eleven respondents acknowledged knowing that under legislation, pest animal management is a shared responsibility between all land managers, regardless of whether on private or public land.
- Fourteen survey respondents were willing to participate in coordinated community efforts to control pest animals.
- Questions with open answer options provided extremely polarised views that reflected concerns by some for the welfare of pest animals, while others supported the view that pest animals should be eradicated.
- The overall feedback from the community received via the online survey and workshops favoured pest animal management measures that:
 - meet statutory requirements
 - are cost-effective
 - provided a coordinated and sustainable long-term solution
 - reduced the impact of pest animals on biodiversity, agricultural productivity, cultural values and social wellbeing.

Pest Animal Management Plan 2018 - 2023

A summary of the feedback from other engagement activities is as follows:

- 1,172 total visits to Facebook
- 27 total Facebook postings
- 6,280 informed individuals including email subscriptions
- 98 total visits to Council's website
- 24 completed an online survey
- 7 participants at a community workshop
- 11 participants in public agency and Traditional Owner workshop.
- 11 submissions on the draft Plan with 3 submissions from other public agencies
- 9 submissions received on draft Plan (refer to Submissions report to the BSC Biodiversity Advisory Committee 11 February 2019)

Community feedback has shown that wild dogs are the number one concern to the community at present. Feral cat, European red fox, European rabbit, Indian myna and feral pig were the next top six animals of concern.

*There was some confusion as to what were pest animals compared to what are native (nuisance) animals (e.g. native species of wildlife that some people see as pest species such as Australian magpie (*Gymnorhina tibicen*), Australian brush turkey (*Alectura lathami*) and grey-headed flying fox (*Pteropus poliocephalus*). Over 82% of survey respondents were willing to participate in community efforts to control pest animals. The survey showed strong support for humane control methods, trapping and shooting.*

In terms of priorities for management measures, Council's need to meet statutory requirements was ranked the highest with cost-effectiveness, coordinated and sustainable long-term solutions to reduce the impact of pest animals on biodiversity, agricultural productivity, cultural values and social wellbeing ranked equally.

3.3.2 Development and approval process

The process for the Plan's development and approval was as follows:

1. NSW Government Saving our Species funding announced and secured
2. Project Team established to provide advice on preparation of draft Plan
3. Internal and external stakeholder analysis for preparation of desired outcomes and species prioritisation
4. Stakeholder and Community Engagement Plan completed and implemented



Pest Animal Management Plan 2018 - 2023

5. Draft plan provided to NCLLS and DPI for comment
6. Draft plan released for public exhibition (9 August to 20 September 2018)
7. Submissions reviewed, draft plan amended as required and seek Council endorsement for adoption of the Plan (early 2019)
8. Approved and adopted plan implemented by Council.

3.3.3 Implementation and review of the plan

Our Plan remains in place for a five year period and during that time will be implemented by Council to the fullest extent practicable. The Plan has been developed to demonstrate the annual actions to be implemented during its five year lifespan.

Minor reviews of the implementation and effectiveness are to occur annually, and where required, minor amendments can be made without the need for re-exhibition and adoption of the amended document. Any changes in pest distribution and population dynamics are able to be incorporated through these reviews. It is imperative that the Plan and the suite of actions are adaptable to these changing conditions.

A full review of the Plan will be undertaken nearing the end of the five year period.

Council intends to complete the annual review of the implementation plan a minimum of six months before the end of each financial year to align with the operational budget process.

The implementation plan will be evaluated through analysis of the Plan's success measures against the annual action plans.



4 Pest animal impacts

Pest animals have major environmental economic, social and cultural impacts, and most Australian states have legislation requiring land managers to manage pests on the land they own or occupy to reduce impacts (Thompson et al 2013). In the majority of scenarios, there is an inter-relationship between the environmental, economic, social and cultural impacts. Table 3 provides a summary of the range of impacts selected pest animals have in Australia.

4.1 Environmental

Environmental impacts occur through a range of mechanisms. These include competition or direct predation on native animals, displacement of natives from niche roles, spread of diseases into and within native animal populations, overgrazing of native plants, soil degradation and loss of organic matter and soil structure leading to increased soil erosion, habitat destruction, and fouling of waterways with commensurate degradation of water quality. Environmental impacts can be variously quantitatively and qualitatively assessed.

4.2 Economic

Economic impacts are traditionally qualitatively assessed. Economically, pest animal impacts include damage to infrastructure such as machinery, fences and watering points, predation on livestock, diminished livestock production due to either harassment of livestock or loss of primary productivity due to grazing pressure, and the overall cost burden of pest animal control and damage mitigation. This latter is borne by the community as a whole.

4.3 Social

Social impacts can best be defined as affecting mental health and interactions between individuals and groups. As such, social impacts include increased fear and apprehension of pest animal attacks, distress associated with witnessing injury or death of pets, wildlife and livestock, distress at methods used to control pest animals, stress associated with loss of income or increased costs, social conflicts over responsibility for control, and community divisions over animal welfare issues. The issues surrounding animal rights are becoming an increasing source of social contention, and sometimes arise when pest animal control activities are proposed.

4.4 Cultural

A study of attitudes to pest animal management (Rose, 2007) indicated that some Australian indigenous cultures have a view that there is not necessarily any incompatibility between native and introduced animals using the land together, and that any physical damage caused by pest animals was regarded as one of the nuisances that comes from sharing the land with animals. Even when the presence of large numbers of pest animals is recognised as negatively impacting on the country, the study by Rose (2007) indicated that some

indigenous people did not see a need to carry out special forms of management. In contrast, some Aboriginal people see pest animals as an important resource for food, employment and recreation (Aslin and Bennet 2000). Pest animals have become an important component for subsistence, especially in Aurukun Cape York, far north Queensland, where many native prey have become scarce or extinct and feral pigs have become a major source of protein, replacing native prey in the local diet (Bomford and Caughley 1996).

The Bundjalung people are the custodians of the northern coastal areas of New South Wales. Bundjalung country extends from Grafton on the Clarence River in northern New South Wales, to the town of Toowoomba in southern Queensland, and down around the other side of the Great Dividing Range. From an Aboriginal perspective, the impact of pest animals continues across Country including Bundjalung Country (this includes land that is referred to by Council as Byron Shire). As well as damaging the natural environment, pest animals can impact on totems and degrade sites of cultural significance such as Aboriginal rock art sites, burial places, caves, middens and other historically significant structures (Mik Smith, pers. comm. 27 March 2018).

Aboriginal spirituality is totemic. A totem is a natural object, plant or animal that is inherited or given by members of a clan or family as their spiritual emblem. Totems define peoples' roles and responsibilities, and their relationships with each other and creation. By being connected to totems and what they represent Aboriginal people, individually and collectively, share responsibility for each other and Country. For example, the primary totems for the Bundjalung people are the three provenance species of goanna including coastal sand goanna (*Varanus gouldii*) and snakes (any species) (Mik Smith, pers. comm. 27 March). Whereas for the Arakwal people of Byron Bay there are totems such as the Miwing, the sea-eagle, is the men's totem, and the clan totem is *Kabul*, the carpet snake (Arakwal of Byron Bay, 2018).

Cane toads have an array of highly toxic chemical defences available to them at almost all stages of their lives. The toxins occur in their skin and organs and can be secreted by large glands at the back of the animal's head when it is threatened. As a result, cane toads will poison many predators that attempt to eat them, and this includes important totems for the Bundjalung people (Mik Smith, pers. comm. 27 March 2018). This may include the coastal sand goanna which inhabit most of mainland Australia, except a narrow coastal strip beginning in northern NSW and following the coastline to approximately the Yorke Peninsula in South Australia. Free-ranging dogs (wild dogs), red foxes and feral cats are also responsible for consuming traditional food sources, especially herpetofauna. They can exert significant downward pressure on varanids, turtles and other prey with cultural significance.



Pest Animal Management Plan 2018 - 2023

Table 3 Summary of impacts of selected pest animals

Pest species	Economic impacts	Environmental impacts	Social impacts	Cultural impacts
Free-ranging dogs (wild dogs),	- Affect domestic livestock industries such as sheep, cattle, goats and poultry - Attack small stock animals, particularly sheep and goats - Reduced flock size and dispersed flocks leading to loss and stress - Lambs are particularly vulnerable - Reduced wool and meat yield - Reduced breeding stock - Increased management costs (baits, fencing, trapping) - Enterprise change as a result of free-ranging dogs (wild dogs), impacts can lead to adverse impacts on rural economies - The combined cost of free-ranging dogs (wild dogs), impacts and associated control is estimated to be in excess of \$80 million annually across Australia, and around \$20 million in NSW alone (McLeod, 2016)	- Possible predatory impacts on native species such as small marsupials and rodents - Significant impact on remnant and isolated koala populations in urban and peri-urban environments (Department of Transport and Main Roads, 2017; Allen et al 2016) - Possible predatory impacts on non-native animals (e.g. feral cats, rabbits, foxes) - Non-target impacts from baiting and trapping - Spread of disease or parasites to native animals - Scientific debate exists about the role free-ranging dogs (wild dogs), play as an apex predator in controlling other predatory pest animals such as feral cat and foxes (Allen et al 2011)	- Individual and family stress from free-ranging dogs (wild dogs), impacts on livestock - Financial stress - Possible enterprise change as a result of free-ranging dogs (wild dogs), impacts can change the social landscape of rural communities - Dangers posed to domestic pets including domestic dogs, horses and free ranging chickens - People can be fearful of enjoying the natural environment due to concerns with encountering free-ranging dogs (wild dogs), Social disharmony due to community attitudes to management methods, particularly in heterogeneous communities	- Free-ranging dogs are embedded in a complex cultural and social relationship to Aboriginal society (Smith & Litchfield, 2009) - Impact on Bundjalung totems and Country

Wild dogs can have positive and negative impacts on livestock and threatened species. These impacts can be economic, environmental or social. If wild dogs are killing livestock or koalas, they are likely to be considered a problem. If wild dogs are killing foxes, feral cats or rabbits, they are likely to be considered more favourably. Wild dogs can have positive impacts in some situations, but may present negative impacts when the situation changes. Management of wild dogs to balance these positive and negative impacts is an important challenge for public and private land managers



Pest Animal Management Plan 2018 - 2023

Pest species	Economic impacts	Environmental impacts	Social impacts	Cultural impacts
European red fox	\$28 million in sheep production losses in Australia \$12 million in sheep production losses in NSW - NSW annual cost of fox control is estimated to be \$15 million and is almost equally shared between landholders and NSW State Government (McLeod, 2016)	- Most significant contributing pest animal species associated with the decline and extinction of native species in Australia - Legitimate dispersers of weeds via seeds they consume and defecate. A seed takes 4 to 48 hours to pass through a fox's digestive system, allowing time for viable seeds to be distributed over wide distances. It is also likely that seeds are dispersed by attaching to fox fur	- Significant distress and hardship when they kill livestock such as poultry and lambs - Carry diseases and parasites that are transmissible to domestic pets or humans such as sarcoptic mange, hydatids, distemper and leptospirosis - Urban foxes harass domestic animals, eating pet food, raiding rubbish bins, defecating or digging in gardens, and chewing infrastructure such as garden hoses and irrigation systems - May prey upon domestic animals including unprotected poultry, rabbits, guinea pigs and aviary birds	Impact on Bundjalung totems and Country
Feral cat	- Transmission of infectious diseases which lead to abortions in livestock reducing productivity, and create scar tissue in livestock meat which reduces agricultural incomes (Bomford and Hart, 2002) - Expenditure on management and research of feral cats has been estimated at \$2 million per year (PestSmart, Invasive Animal Cooperative Research Council, 2011)	- Significant impact on native animal populations for example, feral cats kill 61 reptiles $\text{km}^2 \text{ yr}^{-1}$, and an individual feral cat kills 225 reptiles yr^{-1} (Woinarski et al., 2018) - Caused the extinction of some ground-dwelling birds and small to medium-sized mammals (DEWHA, 2008) - Approximately 80 threatened native species are at risk from feral cat predation in Australia (DEWHA, 2008) - Compete with native species for food or cause displacement from traditional habitats - Carry infectious diseases which can be transmitted to native animals, domestic livestock and humans (Fancourt et al, 2014)	- Night time noise - Smell caused by urination/markings around buildings, and the presence of faecal deposits in gardens - Diminishing of human interactions/sightings with birdlife, and the presence of semi-consumed wildlife carcasses is distressing to many in the community - Conversely, cats are highly valued as domestic companions by many in the community. Cat control programs are almost certainly a source of conflict between different sectors of the community	Impact on Bundjalung totems and Country



BYRON SHIRE COUNCIL

STAFF REPORTS - SUSTAINABLE ENVIRONMENT AND ECONOMY

4.6 - ATTACHMENT 2

Pest Animal Management Plan 2018 - 2023

Pest species	Economic impacts	Environmental impacts	Social impacts	Cultural impacts
Indian myna	Economic impact is unquantified, although Common mynas can cause serious damage to ripening fruit, such as grapes and blueberries (Invasive Animals CRC, 2014)	- Directly competes with native birds for breeding sites, living space and available food sources - In Australia, their presence has been attributed to a decline in at least nine species of native birds	- Their aggressive nature results in the disappearance of a range of native birds in backyards and surrounding bushland, thus impacting people's enjoyment of the natural environment - Roosting and nesting near residential areas often results in noise and health and safety concerns - Known to carry diseases, such as avian influenza and salmonellosis, and parasites such as mites, which can cause dermatitis in humans (Invasive Animals CRC, 2014)	Impact on Bundjalung totems and Country
Cane toad	- Unlikely to have a negative impact on the general economy, although subsequent local control activities are likely to be a direct cost to natural resource management - May impact tourism industries due to the propensity for high numbers of toads to congregate around campsites and amenities	- If <i>eaten</i>, their toxin can kill most native animals that normally eat frogs - The range of the cane toad in New South Wales extends along the coast from the Queensland border to the Iluka/Yamba area. It would be expected that any populations of spotted-tail quoll in the area are likely to be adversely impacted. The cane toad front moves at about 40-60km per year (Storm 2016) - Outcompetes native species as cane toads breed quickly allowing them to rapidly colonise and dominate an area	- If <i>eaten</i>, dangers posed to children and domestic pets - Blocking of drains - Fouling of swimming pools - Visual impacts (unattractive and in large numbers) - Night time noise	- Impact on Bundjalung totems and Country - Declines in bush tucker species such as monitor lizards, snakes and turtles are likely to have significant cultural and economic impacts upon Aboriginal communities (Taylor and Edwards 2005)

Pest Animal Management Plan 2018 - 2023

Pest species	Economic impacts	Environmental impacts	Social impacts	Cultural impacts
European rabbit	- Directly compete with livestock for pastures, resulting in lower quality and quantity of production - Estimated to cost the livestock industry approximately \$2 per rabbit per year in lost production alone. This cost rises dramatically to approximately \$5 per rabbit per hectare per year for horticultural industries - Cost of damage to forestry plantations is approximately \$800 per hectare of the life of the plantation (PestSmart Invasive Animal Cooperative Research Council 2012) - Additional cost of controlling invasive weeds which occur due to habitat modification by rabbits and ongoing rabbit control	- Competition and land degradation by overgrazing of native pastures lead to loss of plant biodiversity and deprive native animals of food and shelter - Warren building and overgrazing causes land degradation and erosion and increases the spread of invasive weeds - Grazing pressures inhibit the regeneration of many native trees and shrubs - Fox occurrence is very strongly correlated with rabbit distribution. The presence of rabbits is likely to encourage high numbers of foxes which, during times of rabbit control, will prey-switch to available native species with commensurate negative impacts	- Damage to recreational activities such as horse riding and sporting activities due to presence of rabbit warrens - Activity in cemeteries is also distressing for relatives who find evidence of rabbits tunnelling at grave sites. - Disturbance to backyard gardens, normally used as a source of enjoyment for family members	Impact on Bundjalung totems and Country

5 Principles of pest animal management

The principles of pest animal management can be broadly divided into core and supplementary categories depending on what stage of the invasive timeline each species is, and how to best manage those species and impacts. The generalised invasive species curve is used to determine what resources are required and what actions are achievable (**Figure 4**). There are four phases from 'prevention' through 'quarantine' and other biosecurity measures to 'asset-based protection' for established and widespread biological invaders (Braysher 2017). These management principles are summarised below.

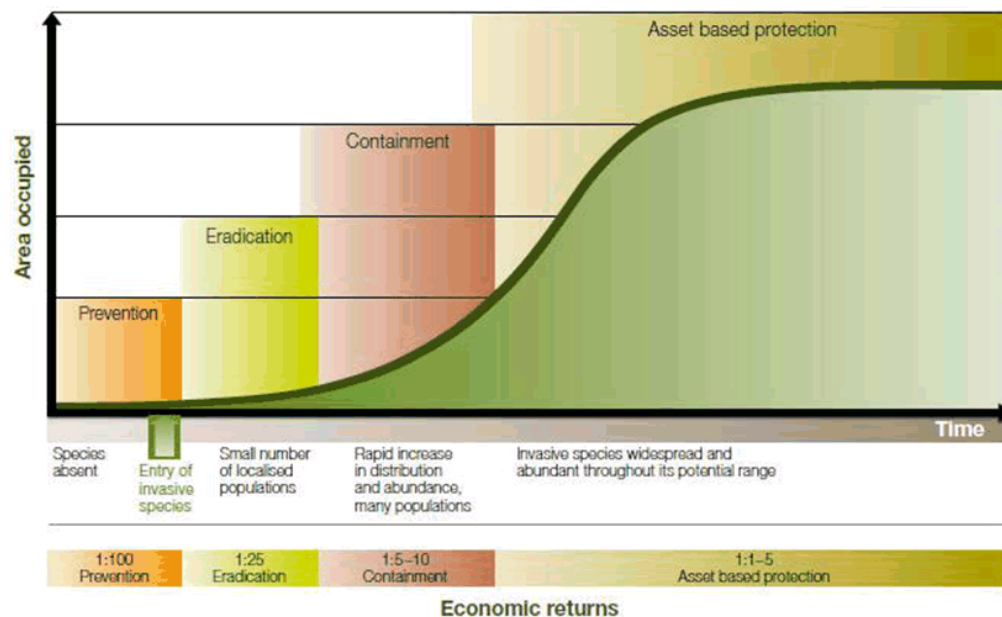


Figure 4 Generalised invasion curve (Source: Victorian Government 2010)

Prevention

Perusal of the generalised invasion curve reiterates the importance of prevention and eliminating small invasions early before establishment. This is when such actions are more likely to be logistically feasible and cost-effective. Border protection, good biosecurity processes, and sound monitoring, along with community vigilance and clear reporting mechanisms are instrumental to effective prevention.

Eradication

Once a pest is detected inside the area of interest, eradication is vital to stop that species becoming established and being the subject of ongoing control. By its very nature, eradication is potentially the most expensive and disruptive in the short term, but the most cost-effective strategy in the long term.

Pest Animal Management Plan 2018 - 2023

However, because the requirements for eradication are rarely met except for pests detected early on during an incursion, most pests are here to stay. Therefore, management to remove or reduce the impacts of pests will be ongoing.

Containment

If the pest, having escaped biosecurity measures, becomes established, focus can be shifted to containment in regions of establishment to limit the impacts to only those areas. In many ways, this is similar to the initial strategy of prevention on a smaller scale with the aim of preventing it spreading into non-infected areas. Sometimes a strategy of initial containment can be part of a longer-term eradication strategy.

Asset based protection

Once a pest has become established, investment should be wound back to target the protection of high-value assets - whether they are economic, cultural or environmental. Often, the impacts of the established pest are such that investment must be continuous to protect the assets (Fleming et al. 2001; Braysher 2017). Cost-Benefit Analysis is also useful, particularly when looking at economic asset protection.

*An example of Asset Protection is targeted European fox control to protect threatened shorebirds, a cost which can be shared with programs such as the NSW state-funded Saving Our Species program. This can be highly effective, for example the fledgling rate of the endangered little tern (*Sternula albifrons*) was 36% higher in some areas with fox control compared to sites without (OEH 2016).*



5.1 Supplementary management principles

When deciding the best way to manage a pest problem, it is useful to focus on the following principles that are likely to result in the most effective management.

Nil tenure

Pest animals do not recognise boundaries. They have home ranges and are likely to occur across multiple land tenures. For example, European fox territories range from 2 to 5 km² and vary with type of habitat, population density of foxes and availability of food.

An effective management strategy is a shared responsibility between all land managers, regardless of whether on private or public land, as all land managers have the same responsibilities to manage pest animals.

Coordination

A coordinated approach ensures that all individuals of a pest species are placed at risk, without allowing any to seek refuge on unmanaged land. Additionally, it is important to ensure that coordination takes into account inter-species interactions - will controlling one species cause another species to increase its impacts.

Focus on the impact

It's important to not lose sight of the problem. The reason pest animals are managed is to reduce impacts. Managing pest animals with no resultant reduction in impacts is not a wise allocation of limited resources.

Best practice

Best practice management integrates the techniques acquired over time that are proven to have the best outcomes in terms of mitigating impacts. Factors that go into making up best practice include the availability of multiple control techniques, animal welfare concerns, timing of actions, and species interactions.

6 Priority areas in Byron Shire

6.1 Council managed land

Council will focus on Council managed land as a first priority (**Figures 5 and 6**). This will enable Council to meet its General Biosecurity Duty and contribute to reducing pest animal impacts across the Shire.

6.2 Privately managed land

Council may assist private land managers to target free-ranging dogs (wild dog), European red foxes and feral cats on land owned or occupied by private land managers, if resources are available and private land managers enter into a proposed Pest Animal Control Agreement. In supporting Council's Rural Land Use Strategy, including policy directions for our rural environment and rural economy, Council will prioritise and support on-ground pest control programs on private land when resources permit and on land identified as having one or more of the following criteria:

- Mapped areas of high environmental values (e.g. threatened species, wildlife corridors)
- Significant Farmland as identified on the NSW Far North Coast under Section 9.1 Directions (previously s117) of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act)
- Cultural value
- in-situ and/or adjoining existing pest animal control management programs (e.g. NPWS, LLS and/or known private land managers actively managing target species)

The areas of private land within the Shire having all of the above criteria have been mapped (**Figure 7**). These 3 areas will be priority areas when considering private landholder support for pest control activities if resources are available.

These areas include (in no specific or prioritised order):

- Area 1 - Upper Wilsons Creek, Huonbrock, Wanganui and Goonengerry (adjoined by Mount Jerusalem National Park, Nightcap National Park, Whian Whian State Conservation Area, Snows Gully Nature Reserve and Goonengerry National Park)
- Area 2 - Broken Head and Suffolk Park (adjoined by Broken Head Nature Reserve, Ti Tree Lake Aboriginal Area and Ti Tree (Taylors) Lake Aboriginal Place)
- Area 3 - Tyagarah and Brunswick Heads (adjoined by Tyagarah Nature Reserve and Brunswick Nature Reserve).



Pest Animal Management Plan 2018 - 2023

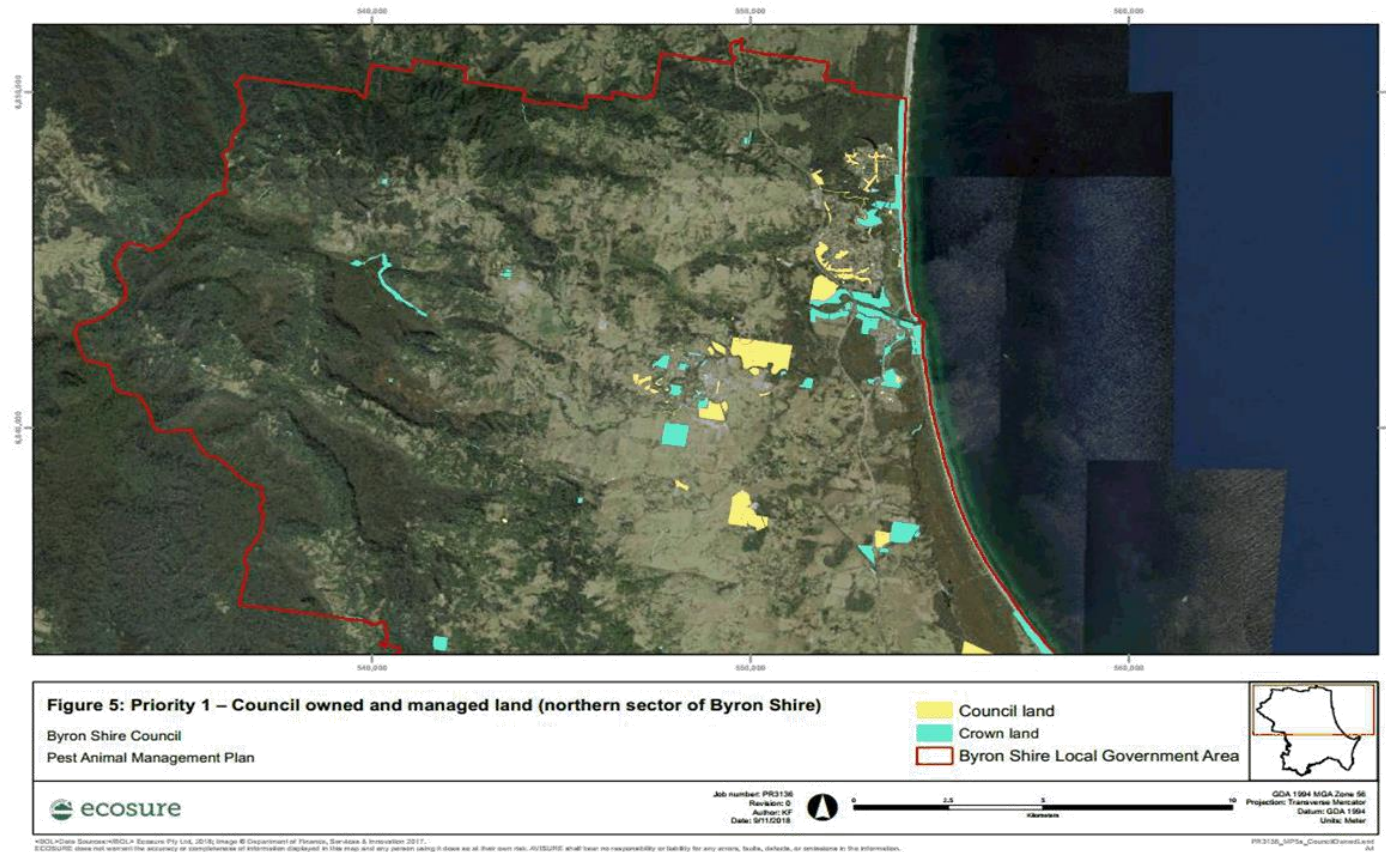


Figure 5 Priority 1 - Council owned and managed land (northern sector of Byron Shire)

Pest Animal Management Plan 2018 - 2023

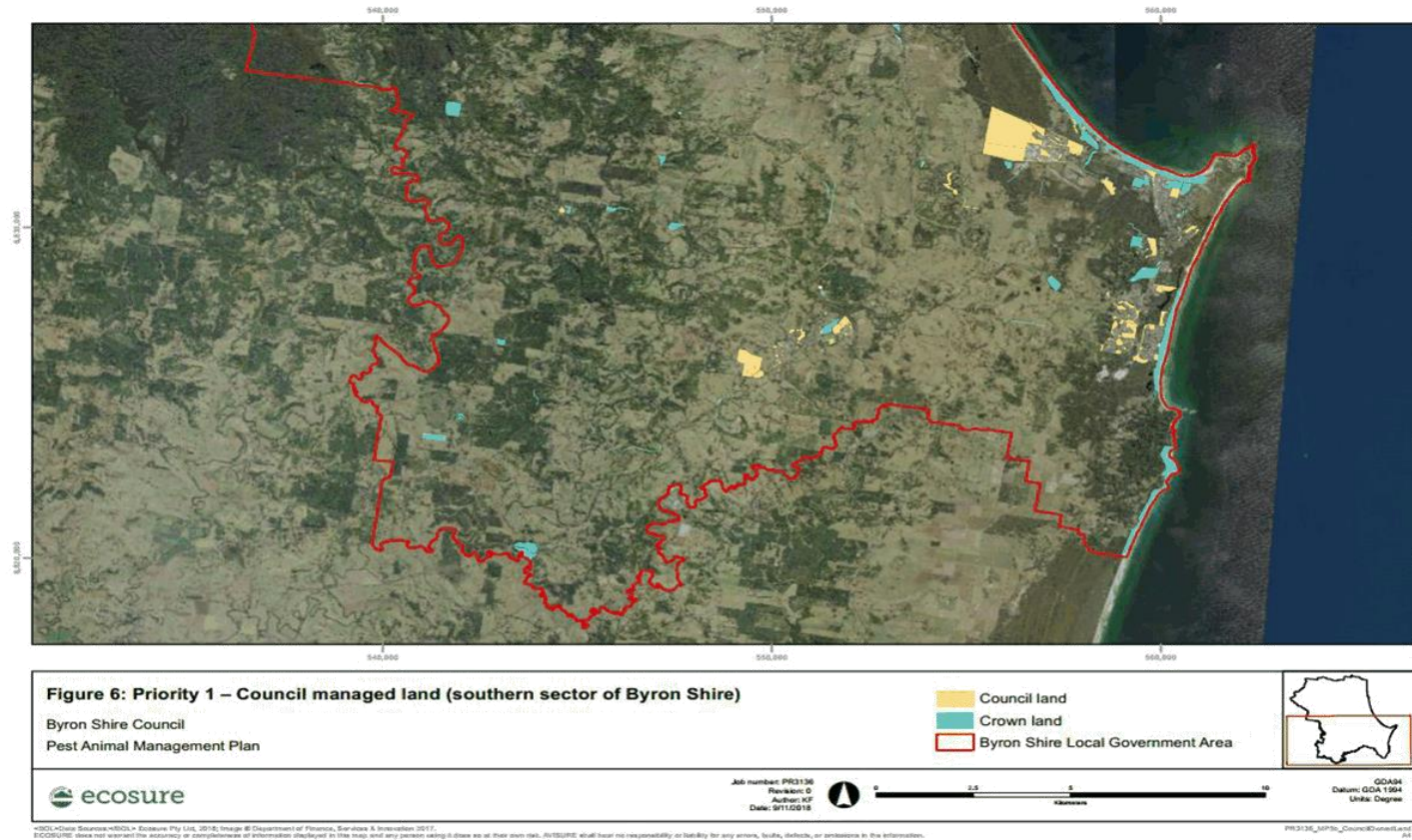


Figure 6 Priority 1 - Council managed land (southern sector of Byron Shire)



7 Target pest species program

Within the Shire, the Plan targets the pest animal species free-ranging dogs (wild dogs), European red fox, feral cat, European rabbit, cane toads and Indian myna. These species were assessed as having the greatest impacts within the North Coast Local Land Service Region which includes Byron Shire (North Coast Local Land Services 2018). Through Council's community consultation process these pest animal species were also identified to be of most concern.

Additionally, emerging and alert species have been identified and management responses will be directed to these or other new pest species incursions as required.

As a priority, Council will focus on carrying out pest animal management on Council owned land. If resources become available, Council may consider pest animal management activities on land owned or occupied by private land managers.

7.1.1 Free-ranging Dogs (wild dog)

People were responsible for the introduction of dingoes (*Canis lupus dingo*). Dingoes evolved from an ancient breed of dog *Canis lupus familiaris* which were introduced from South-East Asia ~4500 years before present (Jackson et al. 2017), that subsequently became a pest (Fleming et al. 2014) and invaded most Australian environments (Johnson and Letnic 2014).

A wild dog is any dog living in the wild, including feral dogs (*Canis lupus familiaris*), dingoes (*Canis lupus dingo*) and their hybrids (NSW OEH 2018).

The colour of a wild dog's pelt is not a very useful indicator of genetic purity. Pure free-ranging dogs are not always the typical yellow colour most people associate them with, and hybrids can often have this typical yellow colouring. Characteristics besides coat colour are needed to determine whether or not a free-ranging dog is a pure bred or a hybrid.

DNA testing can be used to determine the purity level of a free-ranging dog. By taking a piece of ear tissue, a cheek swab or some hair from a free-ranging dog, geneticists can analyse a number of specific 'markers' (small pieces of the animal's total DNA) that are known to be different in free-ranging dogs. A free-ranging dog might have all dingo-like DNA or a mixture of dingo and domestic dog DNA. Very few domestic dogs (such as escaped pets or working dogs) are found in the wild on the mainland. You cannot distinguish between a dingo and other wild dogs simply by looks alone. Only DNA testing will verify the genetic makeup of a free-ranging dog. In 2012, results from 27 free-ranging dog DNA samples from across Byron Shire have shown that the percentage of hybrids in the wild is generally higher in areas with larger human populations. More remote areas of the Byron Shire (typically to the west of the Byron Shire) have higher levels of free-ranging dog purity, with up to 81% *Canis lupus dingo* purity whereas samples from areas with higher human population have 51% *Canis lupus dingo* purity.

Economic and environmental protection of key assets – especially remnant koala populations – will be the focus of Council's activities for all free-ranging dogs, regardless of breed under Australian legislation and policy (Jackson et al., 2017).



Autumn may provide a welcome break from the heat of summer, but it also signals the time when free-ranging dogs (wild dogs) activity increases as they go in search of a breeding partner and establish territories. These territories can be defended aggressively, often to the detriment of domestic dogs that are seen as a threat or encroach on their territory. Most mating takes place between March and June with the majority of births (between 1-10 pups but on average, 5 pups) occurring between May and August, though there is some variation to this timing due to location and drought (Catling et al. 1992), and with the increase in hybridisation, breeding may occur over a longer period of the year.

Management of wild dogs in peri-urban environments can create issues due to the large number of properties involved and close proximity to residences. There are a variety of lethal and non-lethal tools available for controlling wild dogs that include poison baiting using 1080 or PAPP (para-aminopropiophenone), canid pest ejectors and trapping. 1080 poison baits have been conventionally used across a number of jurisdictions, with an advantage being that native animals display a high resistance to 1080 given its occurrence in parts of the natural environment (NSW DPI *primefact* 2018). However, Council will not seek to include 1080 as a means of control, particularly due to its restricted use in peri-urban areas (to comply with the *Pesticides Act 1999*). Council's preferred control method using soft-jaw trapping is in support of Council's IPM Policy and use within the generally smaller land parcels being targeted in this plan.

7.1.2 European red fox

Economic and environmental asset protection is the priority focus for managing the established nature of the European red fox (*Vulpes vulpes*). Aligning fox control to key livestock events e.g. birthing, is key to asset protection.

Attention should be paid to aligning fox control with rabbit control events, to reduce the likelihood of prey switching to native animals. Overall population reduction is a secondary priority and required fox control needs to be an integral part of overall canid control program.

A variety of methods exist for controlling foxes including poison baiting, canid pest ejectors, shooting, trapping and non-lethal means such as exclusion fencing and habitat modification. Ground baiting using 1080 is the most commonly employed method, with aerial baiting being undertaken in more remote regions. Shooting and trapping are considered too labour intensive for broad-scale control; however both methods can be employed in specific instances such as small areas. Exclusion fencing and habitat modification have their limitations in terms of effectiveness and economics.

Council will not use 1080 baits to control the European red fox due to its restricted use within peri-urban areas (to comply with the *Pesticides Act 1999*). Council's preferred control method of soft-jaw trapping aligns with Council's IPM policy as Council managed land is generally made up of relatively small land parcels across the Shire.

7.1.3 Feral cat

Wildlife protection is the key driver for any feral cat (*Felis catus*) related activities. This will require key biodiversity assets to be adequately identified and protection strategies sourced and implemented. Feral cats are responsible for the extinction of a number of ground-dwelling birds and mammals and are the major cause of decline for animals such as the bilby, bandicoot and numbat. Currently, the survival of over 100 native species is threatened by feral cat predation. Feral cats also carry the disease toxoplasmosis which can infect and kill a range of native animals.

Currently, there are a range of feral cat baits being trialled for use with the key challenge to eliminate harm to non-target species. Detector dogs have also been trialled in various locations in order to identify feral cat locations so that trapping and culling can be undertaken. Other control methods include ground shooting, and use of baited cage traps, and soft-jaw or soft-net traps. While cage traps can be effective in peri-urban areas, difficulties can be faced due to the cautious nature of feral cats not entering the trap, particularly if food resources are readily available elsewhere.

Feral cats should be included as an integral part of ongoing pest animal control programs but are unlikely to be effective in the absence of strong measures to prevent recruitment from the pet and stray population. Programs to improve cat ownership and behaviour should be strengthened to support and increase responsible pet ownership.

7.1.4 Indian myna

The strategy for Indian myna (*Acridotheres tristis*) control will focus on key asset protection and alleviation of social impacts. Updated information on the Byron Shire Council web site will enable community members to be informed of the potential impacts of Indian myna, as well as showcase best practice management tools and techniques for reducing the impacts of Indian mynas.

The Indian myna is an introduced pest covered in this Plan. The noisy miner (*Manorina melanocephala*) is a native species, and while it may be perceived as a nuisance, it is not the subject of control or covered by this Plan. Appendix 3 provides a guide to distinguishing these two species.

Methods of controlling pest bird populations can include lethal and non-lethal techniques. Non-lethal methods work as deterrents, and lethal methods include shooting, trapping and poisoning. Trapping and euthanizing Indian mynas is most effective when undertaken just prior to the breeding season, resulting in a greater density reduction over the long term.

Loaning of traps to the public for Indian mynas is addressed in the General Strategic Action Plan (Section 8). Objectives include a review of Council's 'on-loan' system to ensure correct use by lessee's and compliance with WHS standards. Council will also investigate incentive opportunities with veterinary clinics to assist with discounting humane control of trapped pest species.



7.1.5 Cane toad

At a regional level, the focus for cane toad (*Rhinella marina*) is to eradicate the species within a Cane Toad Biosecurity Zone. This includes all NSW local government areas except Tweed, Byron, Lismore and Ballina LGAs, and portions of Richmond Valley, Kyogle and Clarence Valley LGA (NCLLS 2017). Within these LGA areas, a Core Infestation Area is proposed aimed to contain cane toads, to prevent incursion and establishment in the Cane Toad Biosecurity Zone and to undertake asset based protection e.g. environmental assets.

Currently there is no effective tool for broad-scale control of cane toad populations. Short-term management relies on surveys and hand removal of toads followed by euthanasia. Collected cane toads are usually held in closed, ventilated containers until euthanised via a recommended technique such as gassing with carbon dioxide for greater than four hours or spraying with Hopstop®.

Key assets are to be identified and strategies developed for asset protection including areas of high conservation value (e.g. littoral rainforest and coastal vine thicket) or threatened entities at high risk of threat. Cane toads are reported to occupy the settlement ponds at the Byron Bay Resource Recovery Centre, where they are connected to the Belongil Catchment.

7.1.6 European rabbit

The priority for European rabbit (*Oryctolagus cuniculus*) management is containment, potentially local eradication, and key asset protection. The aim is to reduce impacts on Council owned infrastructure and reduce degradation on Council controlled land, especially in Byron Bay, Mullumbimby and Clunes Cemeteries. Council will continue to play a role in participating in coordinated rabbit control activities and promote best practice feral rabbit control.

Control options for European rabbits include baiting using 1080 or Pindone, fumigation of warrens and ground shooting or mechanical methods such as warren destruction through ripping or explosives. Trapping is generally not an effective means of control as it is labour intensive and can inflict a substantial amount of stress on captured animals.

Rabbit Haemorrhagic Disease Virus known as RHDV1 K5 (a type of calicivirus) is a biocontrol that has been released at over 600 sites across Australia. It is a new strain of a virus already widespread across the country that is expected to boost the effects of the existing variant. Council intends to further investigate and consider this biocontrol when developing an operations plan.

7.2 Emerging species

7.2.1 Feral goat

The low density and isolated feral goat (*Capra hircus*) populations in the region make containment and possible eradication feasible. Effort spent over the next five years to achieve this will have long-term economic and environmental benefits for the region. Such actions will require firm community support, and efforts in community engagement should be seen as essential and high-priority.



7.2.2 Feral pig

Feral pig (*Sus scrofa*) was identified as an emerging pest species in the Shire. It should be determined whether eradication is feasible at current population levels. If this is not feasible, all efforts should be made to contain spread. Concurrent asset protection is required for key livestock industries and sensitive areas (e.g. wetlands).

7.2.3 Feral deer

Of the six species of deer that have established feral populations in NSW, five are known to occur in the North Coast Region: Sambar (*Cervus unicolor*), Rusa (*Cervus timorensis*), Red (*Cervus elaphus*), Fallow (*Dama dama*) and Chital (*Axis axis*). Many of these are small, isolated populations to the west and south of Byron Shire, and there are currently no recorded populations of feral deer within Byron Shire. However, during community consultation feral deer sightings were reported (unknown species). As an emerging pest in the Shire, the initial priority should be to identify the population(s) and eradicate feral deer from the Shire while this may still be feasible.

Raising public awareness of the pest status of deer is an important component of a deer management strategy. Containment and eradication should be considered for isolated low density deer populations. Coordination of broad scale control of high density deer populations is considered desirable.

7.3 Alert species

In the North Coast region, the following pest animals are classified as alert species which require immediate reporting to enable action to eradicate any confirmed sightings. Appendix 3 provides an identification guide for these alert species:

- Red-eared slider turtle (*Trachemys scripta elegans*)
- Red imported fire ant (*Solenopsis invicta*)
- Big headed ant (*Pheidole megacephala*)
- Yellow crazy ant (*Anoplolepis gracilipes*)
- Indian ring-necked parrot (*Psittacula krameri*).

***Alert species should be reported to the Invasive Plants and Animals Enquiry Line,
telephone: 1800 680 244.***



Pest Animal Management Plan 2018 - 2023

8 General strategic action plan

General strategic actions are detailed in Table 4, including intent, success measures and responsibilities. These strategic actions are critical to meeting our desired outcomes (Section 1.3) and considered high priority and ongoing for the life of the Plan.

Table 4 Strategic actions (SAs) linked to objectives of the Plan

Action	Intent	Principle	Success measure	Finance & funding source	Responsibility	
					Lead	Partners
Objective 1.1 Increase community understanding of the benefits of pest animal management in Byron Shire						
SA1.1.1 Develop and implement a Pest Management Education and Awareness Plan for target pest species in Byron Shire.	Education and awareness are critical components of increasing the understanding of pest management. Council may deploy resources to respond to negative issues raised by a few in the community or media. Conversely, elements of the community and media can overlook key positive messages. Through communication and engagement activities, willingness of private land managers to manage pests can be increased. In line with the Community Engagement Policy, Council will: - implement a respectful communication and engagement pest management plan partners - identify and incorporate key messages e.g. private land manager General Biosecurity Duty - articulate Council's service in pest management - promote the benefits of effective and collaborative pest management, along with the range of best practise control techniques and training opportunities for council staff and private land managers - promote and encourage responsible pet ownership - report on program activity and outcomes.	Prevention	Plan developed and implemented with identified success measures e.g. reduction in domestic pet impoundment, number of targeted workshops, increased community cohesion, increased skills and capacity to lead community action and relevant Council staff proficient in the identification of alert species.	In house for development \$2,000 for annual implementation Council External funds	Council	NCLLS NPWS Local Aboriginal Land Councils (LALC) LGAs Private land managers Landcare



Pest Animal Management Plan 2018 - 2023

Action	Intent	Principle	Success measure	Finance & funding source	Responsibility	
					Lead	Partners
SA1.1.2 Develop targeted pest species scripts for Council staff responding to public enquiries that relate to target pest species impacts and management.	Consistent information and messaging will help to ensure that Council's commitment to pest animal management and resources and services available for private land managers is clear, and enquiries are appropriately directed or re-directed.	Prevention	Scripts and training provided to key Council staff.	In house	Council	NCLLS LGAs
Objective 1.2 Proactively manage pest animals to reduce their impacts via a prioritised strategy of prevention, eradication, containment or asset based protection of priority pest animal species						
SA 1.2.1 Council will develop simple but comprehensive Operational Plans for target species using the Operational Plan template (Appendix 5).	Planning is essential for effective pest management, as it ensures resources are used in the most productive and efficient manner. The Operational Plan template will be used by Council to prepare a working plan to manage target species for any purpose. Operational Plans for emerging or alert species will be created for Council managed land where required by Council and/or other public or private land managers where applicable.	Asset based protection, containment, eradication	Operational plans for target species developed.	In house	Council	NCLLS NPWS LALCs LGAs Private land managers
SA1.2.2 Council to investigate incentive opportunities with veterinary clinics to encourage private land managers to support pest animal management activities and promote responsible pet ownership.	To encourage private land managers to actively undertake pest animal control Council will investigate opportunities for veterinary clinics to assist with discounting: - de-sexing and vaccination of domestic pets such as domestic dogs, cats and rabbits - humane control of feral cats and Indian myna. Vaccination of domestic pets, especially European rabbits will be important should Council consider the release of a biological control targeting the European rabbit such as the K5 strain of calicivirus (more commonly known as RHDV1 K5). RHDV1K5 is a variant of rabbit haemorrhagic disease virus (RHDV1) that causes a fatal haemorrhagic disease in the European rabbit. It is specific to the European	Prevention	Council has approached three veterinary clinics seeking their capacity to assist private land managers with discounts for de-sexing and vaccination of domestic pets and / or humane control of feral cats and Indian myna by 2023.	In house	Council	Veterinary clinics



Pest Animal Management Plan 2018 - 2023

Action	Intent	Principle	Success measure	Finance & funding source	Responsibility	
					Lead	Partners
	rabbit, and once a rabbit shows symptoms, death is rapid. There is no treatment or cure for rabbit haemorrhagic disease (RHD); however, a vaccine for domestic and production rabbits is available.					
SA1.2.3 Investigate opportunities for strengthening pest animal control to be undertaken in accordance with Development Consent conditions.	Conditions of consent provide an opportunity to play an important role in pest animal management. Under conditions of consent, pest animal management is at times included in association with Biodiversity or Vegetation Management Plan requirements but under the Act such conditions could be strengthened through standardisation for each target pest animal.	Asset based protection	Investigations to strengthen standard Development Applications, for specific pest animal are complete.	In house	Council	-
Objective 1.3 Use safe, effective and humane approaches to pest animal management						
SA1.3.1 Council to ensure its operators and contractors follow best practice approaches for target pest animal control.	Control of targeted pest species can often occur in remote and isolated areas, which presents two key challenges. The first challenge is to ensure a safe work environment for Council operators and contractors. Further, this workforce needs to follow standard operating procedures, collect data and comply with appropriate legislation. The second challenge is to collect information (data) in a manner that is compatible across all levels of government in NSW but especially for NCLLS and that informs strategic management decisions. Council will: - ensure Council operators and contractors have the appropriate training, licenses, tools and technology to ensure work place safety and appropriate data management - provide a safe workplace for operators and contractors.	Asset based protection	Pest animal control is undertaken safely, humanely and in accordance with best practice.	In house	Council	-
SA1.3.2 Investigate the development for a Pest Animal Control Agreement	It is the intent and purpose of Council and private land managers (the Parties) that an Agreement constitutes an implementation of the provisions of	Asset based protection	Investigations to strengthen amicable understanding between	In house	Council	-



Pest Animal Management Plan 2018 - 2023

Action	Intent	Principle	Success measure	Finance & funding source	Responsibility	
					Lead	Partners
	pest animal management on private land consistent with the legislative requirements, standard operating procedures and responsible pet ownership It is imperative that private land managers give permission for Council contractors to undertake pest animal management and with domestic pets on the land upon which pest animal control activities are taking place ensure the safety of their domestic pets. For example, unrestrained domestic dogs can influence the success of a trapping program by affecting 'lures' or be accidentally trapped and harmed. This has a negative impact on the cost and effectiveness of a pest animal control program, as well as cause distress to the domestic dog owners. In the event Council undertakes pest animal control activities on private land, written Agreements will provide Council and private land managers with a document stating the expectations of both parties and how negative situations relating to pest animal management on the land owned or occupied by the private land manager will be resolved.		Council and private land managers regards Council supported pest animal control activities on private land.			
Objective 1.4 Promote the availability of technical advice and resources to private land managers in Byron Shire for pest animal management.						
SA1.4.1 Review Council's existing pest animal trapping resources to ensure it is administratively efficient and complies with WHS standards	Trapping of pest animals may be the preferred or more effective management option for private land managers. Council currently have traps available for targeting Indian mynas and feral cat. A review of Council's current resources and 'on-loan' system will consider Councils liability in loaning such traps, loan effectiveness, when resources are misused by lessee and who is responsible for humane trapping of target pest species.	Asset based protection	Review complete and Council consider the merit of pest animal trapping resources for loan to private land managers	In house	Council	-



BYRON SHIRE COUNCIL

STAFF REPORTS - SUSTAINABLE ENVIRONMENT AND ECONOMY

4.6 - ATTACHMENT 2

Pest Animal Management Plan 2018 - 2023

Action	Intent	Principle	Success measure	Finance & funding source	Responsibility	
					Lead	Partners
SA1.4.2 Council to continue actively promoting the availability of LLS technical advice, support and resources to private land managers.	LLS help private land managers by providing advice and assistance in the control of pest animals. At a local level, through Council's website and customer services Council will promote the LLS services	Asset based protection	Up-to-date information on LLS pest animal management services are promoted via Council's website and available to key Council staff including Customer Services	In house	Council	NCLLS
Objective 2.1 Foster good collaborative and coordinated community relations by acting as a conduit to community led coordinated and integrated pest animal control activities by all land managers throughout Byron Shire						
SA2.1.1 Act as a conduit for NCLLS to promote private land manager participation as a critical factor for pest animal management.	Council will focus on relationship-building, sharing information and re-direct public enquiries to NCLLS to promote private land manager participation in pest animal management. By working together and using the right control tools for the situation effectively, public and private land managers can achieve a sustainable future for agricultural industry that supports biodiversity outcomes. It is intended that NCLLS report an increase in the formation of private land manager groups collaborating in partnership with public land managers to implement pest animal control on land that they own or occupy.	Asset based protection	Private land manager groups in Byron Shire increased to three active groups by 2023	In house	Council	NCLLS

Pest Animal Management Plan 2018 - 2023

Action	Intent	Principle	Success measure	Finance & funding source	Responsibility	
					Lead	Partners
Objective 2.2 Ensure continued input and feedback on Council's pest animal management program from all land managers						
SA2.2.1 Council to continue to liaise with public and private land managers to ensure Council's targeted pest animal program is implemented in a strategic and proactive manner.	Pest animals often require ongoing and enduring control. Management actions need clear, long term objectives. All land managers should focus on preventive, proactive approaches that seek to minimise impact where it is most likely to occur, rather than reacting to impacts after an incident. Council will: - work with all land managers that buffer public land to protect biodiversity and agriculture - liaise with public land managers to aid a coordinated, proactive approach across land tenures. Private land managers are encouraged to: - support proactive approaches to minimise impacts - engage and undertake in cost-effective and integrated approaches to pest control on the land that they own or occupy.	Asset based protection	The impacts of pest animals are being effectively managed through a collaborative and coordinated approach.	In house	Council	NCLLS NPWS DPI LALCs LGAs Private land managers
Objective 3.1 Improve the mechanisms used to carry out, monitor, evaluate and report on pest animal management by Council,						
SA3.1.1 Council to use FeralScan as the preferred method to record and share sightings, damage and control excluding records of feral deer, pig and goats.	Pest animal activity, evidence of pests, pest damage, and control actions are entered into FeralScan and used by all land managers to help coordinate on ground control in a local area. To avoid potential illegal hunting (refer 3.1.1) Council will: report records of feral deer, pig and goats direct to NCLLS.	Prevention	Council enters all available Council records in FeralScan to inform decisions and evaluate the program.	In house	Council	NCLLS



BYRON SHIRE COUNCIL

STAFF REPORTS - SUSTAINABLE ENVIRONMENT AND ECONOMY

4.6 - ATTACHMENT 2

Pest Animal Management Plan 2018 - 2023

Action	Intent	Principle	Success measure	Finance & funding source	Responsibility	
					Lead	Partners
SA3.1.2 Council to encourage private land managers to use FeralScan and report pest animal records direct to LLS.	FeralScan is a free online resource that allows anyone to record pest animal activity, evidence of pests, pest damage, and control actions. The purpose of hosting workshops will be to: - introduce and up skill private land managers in FeralScan - help identify areas for FeralScan improvement. Council will: - seek support and participation from DPI & NCLLS in Council hosted workshops.	Prevention	Council to host two workshops to strengthen efforts in pest animal management by 2023.	\$1,500	Council	NCLLS DPI Private land managers
SA3.1.3 Council to seek direction on what details and how best to report Council target pest animal records to LLS.	Council acknowledges that LLS are considered to be the holder of pest animal data in NSW and therefore may be called upon to verify pest animal issues. However, until a single point of reporting to monitor, evaluate and report to inform and improve pest animal management is established by LLS, Council will require guidance on what details and how best to report to LLS. This is important as pest animal data may assist in attracting funding for pest animal control on a landscape scale in which all land managers would potentially benefit from.	Prevention	Council liaise with LLS on the preferred pathway and resources for reporting pest animal records to LLS in an effective and efficient manner.	In house	NCLLS	Council

BYRON SHIRE COUNCIL

STAFF REPORTS - SUSTAINABLE ENVIRONMENT AND ECONOMY

4.6 - ATTACHMENT 2

Pest Animal Management Plan 2018 - 2023

Action	Intent	Principle	Success measure	Finance & funding source	Responsibility	
					Lead	Partners
SA3.1.4 Council will continually improve its pest animal program and evaluate its impact, effectiveness, value and efficiency.	Council will measure the success of its targeted pest animal program against its stated primary objective: to reduce the negative impacts of pest animals. Council will: - monitor, evaluate and report on program outcomes annually by January each financial year to align with the operational budget process - seek feedback from public and private land managers on the relative success of the program and how to enhance the program - keep abreast of advancements in pest animal management technologies for consideration - use evaluation findings to identify gaps in the program design and inform future design - communicate the program's achievements and challenges to public and private land managers - undertake a full review of the Plan nearing the end of the five (5) year period.	Asset based protection	The Council program efficiently and effectively contributes to reduced pest animal impacts, remains current and aligned with best practice.	In house	Council	-
Objective 3.2 Support pest animal research and development						
SA3.2.1 Investigate opportunities to partner and/or support research and development that identifies more effective and efficient pest animal control methods.	Support opportunities to trial new technologies that seek to eradicate or minimise the impacts of pest animals. For example, under the Cane Toad Challenge program, the University of Queensland is investigating the effectiveness of trapping cane toad tadpoles using the pheromone extracted from adult toads. DPI Vertebrate Pest Research Unit is scoping a major large scale research and management project on free-ranging dogs (wild dogs), fox and feral cat in the North East of NSW.	Eradication, asset based protection	Pest animal management is continually improved by current research and development.	In house	Council	NCLLS NPWS DPI LALCs LGAs Research institutions Universities Private land managers

9 Target strategic action plan

This section outlines the actions that will be undertaken by Council during the life of the Plan. It also outlines roles and responsibilities of various stakeholders, and partners in Council-led actions.

9.1 Stakeholder roles and responsibilities

Stakeholders include government, industry, community groups and individuals. Whether on private or public land, all land managers in NSW must comply with requirements outlined in the NSW *Biosecurity Act 2015* to control pest species on their land.

9.2 Target species action plan

Table 5 provides species specific actions for priority, emerging and alert pest animal species. These actions align with activities identified in the North Coast Regional Strategic Pest Animal Management Plan (North Coast Local Land Services 2018).

Pest Animal Management Plan 2018 - 2023

Table 5 Target Species Action Plan

Desired outcomes	Target action	Success criteria	Partners	Lead	Timeframes	Finance and funding	Priority
Free-ranging dogs (wild dogs), European red fox, feral cat							
1	Implement free-ranging dogs (wild dogs), Fox and Feral Cat Operational Plan (Appendix 4).	Management strategies targeting multiple adopted, where appropriate. No increase in free-ranging dogs (wild dogs), fox or feral cat impacts on subject land. Increase abundance of threatened species on adjoining lands e.g. national parks and reserves	DPI OEH NPWS NCLLS LALCs	Council	Autumn & spring	To be determined	High
1	When resources permit, Council to seek permission from private land managers to undertake free-ranging dogs (wild dogs), fox and feral cat control on their land prior to implementation.	Pest Animal Control Agreement signed by private land managers	-	Council	Ongoing	In house	High
1	Council to engage experienced and qualified trapper to undertake trapping of free-ranging dogs (wild dogs), fox and feral cat.	Through appropriate procurement process an experienced trapper engaged to undertake trapping work.	-	Council	12 month contract	In house	High
1	Provide Council control data to public land managers to help contribute to existing monitoring programs e.g. Saving our Species.	Changes in native and pest species populations recorded. Number of threatened species in control areas maintained or increased.	NCLLS NPWS	Council	November each year	In house	High



BYRON SHIRE COUNCIL

STAFF REPORTS - SUSTAINABLE ENVIRONMENT AND ECONOMY

4.6 - ATTACHMENT 2

Pest Animal Management Plan 2018 - 2023

Desired outcomes	Target action	Success criteria	Partners	Lead	Timeframes	Finance and funding	Priority
2	Act as a conduit for NCLLS to promote private land holder participation as a critical factor for managing free-ranging dogs (wild dogs), fox and feral cat by focusing on relationship-building, sharing information and providing technical advice and support.	Increased community cohesion, skills and capacity to lead community action that leads to the formation of private land manager groups collaborating in partnership with public land managers to implement free-ranging dogs (wild dogs), fox and feral cat control on land that they own or occupy increased to four groups by 2023.	DPI OEH NPWS NCLLS Private land managers	Council	Ongoing	In house	Medium
Indian myna							
1, 3	Review and evaluate existing Indian myna Management Program.	Indian myna Management Program reviewed and evaluated with key recommendations for improvement provided.	NCLLS Brunswick Valley Landcare	Council	June 2019	In house	High
1, 2, 3	Develop and implement Indian myna Operational Plan for Council managed land using Operational Plan template (Appendix 5).	Best practice control methods identified. Operational Plan developed and implemented	NCLLS Brunswick Valley Landcare	Council	June 2020	To be determined	High
1, 3	Investigate financial support options and incentives to ensure volunteer Indian myna trapping services are available for Council managed land and private land managers.	Volunteer Indian myna trapping services to assist Council and private land managers is available.	Brunswick Valley Landcare	Council	Ongoing	To be determined	Medium
Cane toad							



Byron Shire Council

Pest Animal Management Plan 2018 - 2023

Desired outcomes	Target action	Success criteria	Partners	Lead	Timeframes	Finance and funding	Priority
1, 2, 3	Develop and implement Cane Toad Operational Plan for Council managed land using Operational Plan template (Appendix 5).	Best practice control methods identified. Operational Plan developed and implemented.	NCLLS LALCs	Council	June 2019	To be determined	High
3	With support from the University of Queensland, scope opportunity to participate in the Cane Toad Challenge program.	Active participant in the Cane Toad Challenge program with at least one site on Council managed land.	University of Queensland	Council	December 2019	To be determined	Medium
European rabbit							
1, 2, 3	Develop European Rabbit Operational Plan for Council managed land especially in areas of Mullumbimby, Byron Bay and Clunes cemetery using Operational Plan template (Appendix 5).	Best practice control methods identified. Operational Plan developed and implemented.	NCLLS NPWS Private land managers LALCs	Council	June 2021	To be determined	High
1, 2, 3	Implement European Rabbit Operational Plan for Council managed land especially in areas of Mullumbimby and Byron Bay using Operational Plan template (Appendix 5).	Best practice control methods identified. Operational Plan developed and implemented.	NCLLS NPWS Private land managers LALCs	Council	2021-2023	To be determined	High
Emerging species							
2	Raise community awareness of impacts of feral goats, pigs and deer and appropriate mechanisms for reporting.	Number of community education programs. Number of community sightings reported to NCLLS and FeralScan.	Community DPI NCLLS NPWS Private land managers	Council	Ongoing	To be determined	Medium



BYRON SHIRE COUNCIL

STAFF REPORTS - SUSTAINABLE ENVIRONMENT AND ECONOMY

4.6 - ATTACHMENT 2

Pest Animal Management Plan 2018 - 2023

Desired outcomes	Target action	Success criteria	Partners	Lead	Timeframes	Finance and funding	Priority
2	Act as conduit to implement management actions across priority areas in response to feral goats, pigs or deer sightings.	No increase in feral goat, pig or deer impacts.	NCLLS NPWS DPI Private land managers	Council	Ongoing	To be determined	High
1, 2, 3	Develop and implement Emerging Species Operational Plan for Council managed land using Operational Plan template (Appendix 5).	Best practice control methods identified. Operational Plan developed and implemented.	NCLLS DPI	Council	Ongoing	To be determined	High
Alert species							
3	Monitor for and report sightings of all Alert Species through NCLLS, DPI, FeralScan and reports to Council.	Any incursions are promptly identified and managed with in partnership with appropriate public land manager.	NCLLS DPI NPWS Private land managers	Council DPI, NCLLS	Ongoing	In house	High
2	When required, liaise with and assist relevant public land managers to respond to alert species reported on Council managed land.	Eradication	NCLLS DPI	Council	Ongoing	To be determined	High

9.3 Funding sources

9.3.1 Council

On 30 October 2017, Council resolved (Res 17-500):

1. That Council reinstates the Feral Animal Management Program by allocating \$10,000 to assist meeting the costs of a trapper from January to June 2018 and a further \$20,000 be allocated in the 2018-19FY and subsequent financial years.
2. That the program commences after consultation between Council and landholders, Landcare, Local Land Services, NPWS and other relevant agencies to quantify the numbers and areas of feral animals and free-ranging dogs (wild dogs), to develop a targeted approach to controls; and that this consultation be completed prior to March 2018.

Additionally, Infrastructure Services – Utilities provide additional funding to engage a trapper to control pest animals on Council managed land at Byron Bay, Bangalow, Brunswick Valley (Mullumbimby) and Ocean Shores Treatment Plants. These funds were already allocated for a trapper but will consolidate and streamline the Pest Animal Program targeting free-ranging dogs (wild dogs), foxes and feral cats on Council managed land.

Funding for subsequent financial years will be considered annually as part of Councils budget process.

Funding will enable Council to meet its statutory requirements for managing free-ranging dogs (wild dogs), foxes, feral cats, European rabbit, Indian myna and cane toads on Council managed land but may limit Council's capacity to continue undertaking free-ranging dogs (wild dogs), foxes and feral cats on private land.

9.3.2 State

Alternative, sources of external funding and / or support and assistance are outlined below.

Environmental Trust

Environmental Restoration and Rehabilitation Grants – Pest animal management is an eligible activity under the program which includes the strategic long-term control of pest species through physical intervention to facilitate the recovery of native animal and plant species.

Individual grants of up to \$100,000 (1:1) with a total of \$2,000,000 for community organisations and \$2,000,000 for government entities are available.

Council and/or private land managers should be interested in making an application to better understand how predators interact with the landscape and reduce the impacts of pest animals, especially where there is community-led action by the formation of community-based pest animal groups which has been identified as a key strategy for industry and government efforts to implement coordinated pest animal control in Australia (Howard et al., 2017).



Department of Primary Industries Vertebrate Pest Research Unit

The research unit is currently planning to undertake a major landscape scale research and management project on free-ranging dogs (wild dogs), fox and feral cat in the North East of NSW. Partners include NCLLS, National Parks and Wildlife Service, NSW Forestry Corporation, University of New England and University of Southern Queensland.

Council and private land managers should be interested in participating in this research program to better understand how predators interact with the landscape and reduce the impacts of pest animals. It is understood that the program is well funded and extends over a long time frame.

North Coast Local Land Services

LLS assist public and private land managers by

- providing technical advice with eradicating declared pest species
- coordinating management plans to control vertebrate pests
- inspecting properties for declared pests and helping develop a plan to control pest populations
- providing advice on controlling nuisance animals – either through group baiting programs or individual control methods
- short training courses on the use of 1080 and Pindone baits
- advising on purchasing baits such as meat, carrots, grain, pellets, depending on individual needs.

9.3.3 Commonwealth**Centre for Invasive Species Solutions**

A national collaborative research, development and extension organization that brings together government, industry and research partners to create a coordinated, collaborative and innovative set of research and extension projects.

There may be opportunities to collaborate with the Centre on more research based projects in the LGA.



References

Arakwal of Byron Bay 2018, *Our Totems and Messengers*. Available at: <http://arakwal.com.au/totems-messengers>. Accessed 2 May 2018.

Aslin, H. J. & Bennet, D. H. 2000, Wildlife and world views: Australian attitudes toward wildlife. *Human Dimensions of Wildlife* 5(2): 15-35.

Allen, B. L., Engeman, R.M., & Allen, L.R. 2011, Wild dogma II: The role and implications of wild dogma for wild dog management in Australia. *Current Zoology*, 57(6), 737-740.

Allen, B. L., Carmelito, E., Amos, M., Goullet, M. S., Allen, L. R., Speed, J. & Leung, L. K. P. 2016, *Diet of dingoes and other wild dogs in peri-urban areas of north-eastern Australia*. Scientific Reports, 6, 23028.

Bomford, M. & Caughley, J. 1996, Ecologically Sustainable Harvesting of Wildlife by Aboriginal Peoples. In Bomford, M. and Caughley, J. (eds.). *Sustainable Use of Wildlife by Aboriginal Peoples and Torres Strait Islanders*. Canberra: Australian Government Publishing Service.

Bomford, M., & Hart, Q. 2002, *Non-indigenous vertebrates in Australia*. CRC Press, London.

Braysher, M. (2017). Managing Australia's Pest Animals: A Guide to Strategic Planning and Effective Management.' (CSIRO Publishing: Melbourne.)

Byron Shire Council 2013, *Feral Animal (wild dog, fox and cat) Management Plan 2013-2015*. Byron Shire Council, Mullumbimby NSW.

Byron Shire Council 2017, *Byron Shire Integrated Pest Management Directions Document: A Case for Continuous Improvement*. Byron Shire Council, Mullumbimby NSW.

Byron Shire Council 2018, *Byron Shire Rural Land Use Strategy 2017*. Byron Shire Council, Mullumbimby NSW.

Catling, P.C., Corbett, L.K. & Newsome, A.E. (1992) Reproduction in captive and wild dingoes (*Canis familiaris dingo*). *Wildlife Research*, 19 (2), 195–205

Department of Environment and Heritage Protection (DEHP) 2016, *Dingoes*, Queensland Government. Available at https://www.ehp.qld.gov.au/wildlife/livingwith/dingoes/#what_are_a_dingos_threats. Accessed 13 May 2018.

Department of the Environment, Water, Heritage and the Arts (DEWHA) 2008, *Threat abatement plan for predation by feral cats*. Commonwealth of Australia, Canberra.

Department of the Environment (DoE) 2015, *Threat abatement plan for predation by feral cats*. Commonwealth of Australia, Canberra.



Pest Animal Management Plan 2018 - 2023

Department of Transport and Main Roads (TMR) 2017, *Moreton Bay Rail - Koala Action Plan*. Queensland Government, Brisbane.

Department of Primary Industries 2013, *NSW Biosecurity Strategy 2013 – 2021*. Department of Primary Industries, division of NSW Department of Trade and Investment, Regional Infrastructure and Services, NSW Government.

Fancourt, B., Nicol, S., Hawkins, C., Jones, M. & Johnson, C. 2014, *Beyond the disease: is Toxoplasma gondii infection causing population declines in the eastern quoll (Dasyurus viverrinus)?* International Journal of Parasitology: Parasites and Wildlife 3, 102-112.

Fleming, P., Ballard, G., Redi, N., and Tracey, J. (2017) Invasive species and their impacts on agri-ecosystems: issues and solution for restoring ecosystem process. *The Rangeland Journal*, 39, 523-535.

Gentle, M., Oakey, J., Speed, J., Allen, B. & Allen, L. 2016, *Dingoes, Domestic Dogs or Hybrids? Genetics of Peri-urban Wild Dogs in NE Australia*. 5th Pest Animal Symposium, November 2016. Townsville, Australia.

Howard, T., Thompson, L., Frumento, P., and Alter, T. (2017) Wild dog management in Australia: An interactional approach to case studies of community-led action. *Human Dimensions of Wildlife*. Volume 23, 2018 - Issue 3

Invasive Animals CRC 2014a, *Wild dogs and transmission of Neospora caninum in Australia*. Available at: <https://www.pestsmart.org.au/wild-dogs-transmission-of-neospora-caninum/>. Accessed 9 May 2018.

Invasive Animals CRC 2014b, *Common (Indian) Myna (Acridotheres tristis or Sturnus tristis) Fact Sheet*. Available at https://www.pestsmart.org.au/wp-content/uploads/2017/10/IMFS1_myna_web.pdf Accessed 12 May 2018.

Invasive Plants and Animals Committee 2016, *Australian Pest Animal Strategy 2017 to 2027*, Australian Government Department of Agriculture and Water Resources, Canberra.

Jackson, S., Groves, C., Fleming, P., Alpin, K., Eldridge, M., Gonzalez, A., Helgen, K., (2017) The Wayward Dog: Is the Australian native dog or Dingo a distinct species?. *Zootaxa* 4317 (2): 201–224.

Johnson, C. N., and Letnic, M. (2014). Introducing a new top predator, the dingo. In: 'Invasion Biology and Ecological Theory: Insights from a Continent in Transformation'. (Eds H. H. T. Prins and I. J. Gordon.) pp. 414–428. (Cambridge University Press: Cambridge, UK.).

McLeod, R. 2004, *Counting the Cost: Impact of Invasive Animals in Australia 2004*. Cooperative Research Centre for Pest Animal Control. Canberra.

McLeod, R. 2016, *Cost of Pest Animals in NSW and Australia, 2013-14*. eSYS Development Pty Ltd, 2016. Report prepared for the NSW Natural Resources Commission.



Pest Animal Management Plan 2018 - 2023

McNeely, J. A. (2001). *The great reshuffling: human dimensions of invasive alien species*. (IUCN, Biodiversity Policy Coordination Division: Gland, Switzerland.) Available at: <https://portals.iucn.org/library/node/7850> Accessed 18 July 2017.

North Coast Local Land Services 2018, *Draft North Coast Regional Strategic Pest Animal Management Plan 2018 – 2023*. North Coast Local Land Services, NSW.

NSW DPI primefacts 2007 – Hydatids – you too can be affected. https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0006/109986/hydatids-you-too-can-be-affected.pdf

NSW DPI primefact 2018 – 1080 in Australia: why and how it is used. https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0006/816360/1080-in-Australia-why-and-how-it-is-used.pdf

NSW OEH 2018 – New South Wales Office of Environment and Heritage. Wild Dogs. <https://www.environment.nsw.gov.au/topics/animals-and-plants/pest-animals-and-weeds/pest-animals/wild-dogs>

O'Neill, A., Cairns, K., Kaplan, G. & Healy, E. 2016, *Managing dingoes on Fraser Island: Culling, conflict, and an alternative*. Pacific Conservation Biology. 23, 4-14.

Storm, M. (2016). Professor Rick Shine wins Prime Minister's Prize for Science for work on cane toads, Sydney Morning Herald, 19 October 2016, <https://www.smh.com.au/technology/professor-rick-shine-wins-prime-ministers-prize-for-science-for-work-on-cane-toads-20161018-gs4jqj.html> Accessed 13 May 2018.

Parkes J., Henzell R., & Pickles G. 1996, *Managing vertebrate pests: Feral Goats*. Australian Government Publishing Service: Canberra.

Pesticides Act 1999 – Pesticide Control Order Under Section 38. NSW Govt.

PestSmart, Invasive Animal Cooperative Research Council 2011, Feral Cat Factsheet. Available at <https://www.pestsmart.org.au/wp-content/uploads/2018/05/FCFS1-web.pdf>. Accessed 11 May 2018.

PestSmart Invasive Animal Cooperative Research Council 2012, Rabbit Factsheet. *Economic and environmental impacts of rabbits in Australia*. Available at https://www.pestsmart.org.au/wp-content/uploads/2012/02/RABFS3_impacts.pdf. Accessed 13 May 2018.

Rose, B. 2007, *Rose Report Two: Aboriginal Perceptions of Land Management Issues*. Central Land Council, Alice Springs.

Smith, B. P., & Litchfield, C. A. 2009, *A review of the relationship between Indigenous Australians, dingoes (Canis dingo) and domestic dogs (Canis familiaris)*. Anthrozoös, 22, 111– 128.

Taylor, R., & Edwards, GG. 2005, *A Review of the Impact and Control of Cane Toads in*



Pest Animal Management Plan 2018 - 2023

Australia with Recommendations for Future Research and Management Approaches.

Available at: <https://www.pestsmart.org.au/wp-content/uploads/2010/03/CaneToadReport2.pdf>. Accessed 29 May 2018.

Thompson, L.-J., Aslin, H., Ecker, S., Please, P., & Trestrail, C. 2013, *Social impacts of wild dogs - a review of the literature*. An ABARES report prepared for AWI Ltd., Canberra, Australia.

Victorian Government 2010, *Invasive Plants and Animals Policy Framework*. Available at: <http://agriculture.vic.gov.au/agriculture/pests-diseases-and-weeds/protecting-victoria-from-pest-animals-and-weeds/invasive-plants-and-animals/invasive-plants-and-animals-policy-framework>. Accessed 10 May 2018.

Wilson, G., McNee, A. & Platts, P. 1992, *Wild animal resources: their use by Aboriginal communities*. Canberra: Australian Government Publishing Service.

Woinarski, J., Murphy, J., Palmer, R., Legge, S., Dickman, C., Doherty, T., Glenn Edwards, Alex Nankivell, John Read, Stokeld, D 2018. How many reptiles are killed by cats in Australia? Wildlife Research (in prep).



Pest Animal Management Plan 2018 - 2023

Appendix 1 Overview of relevant legislation, policies and plans

Jurisdiction	Category	Instrument	Pest animal context
Commonwealth	Legislation and policy	<i>Environment Protection and Biodiversity Conservation Act 1999</i>	Lists key threatening processes and identifies threatened species at risk from the impacts of pest animals in Australia, and guides the development of Threat Abatement Plans. Pest animal Threat Abatement Plans relevant to this Plan include those for: • Predation by European red fox • Predation by feral cats • Predation, habitat degradation, competition and disease transmission by feral pigs • Competition and land degradation by unmanaged goats • Competition and land degradation by rabbits.
		<i>Biosecurity Act 2015</i>	The Australian <i>Biosecurity Act 2015</i> governs the shared responsibility in managing the biosecurity system between the Commonwealth government, stakeholders, clients, state and territory governments and the public.
		Model Codes of Practice and Standard Operating Procedures	Codes of Practice and Standard Operating Procedures have been developed by the Federal government for each priority pest animal species to provide information on best practice management, control strategies, biology, impacts, and humaneness of control and safety aspects.
	Strategies and plans	Australia's Biodiversity Strategy 2010-2030	A guiding framework for conserving Australia's biodiversity for government, business and the community. It provides an overarching policy framework for the more detailed Australian Pest Animal Strategy.
		Australian Pest Animal Strategy 2017-2027	Provides national guidance on best practice and humane vertebrate pest animal management to protect Australia's biodiversity, agricultural assets and social values. It details agreed national pest animal management principles, sets national goals and priorities. A key aim is to encourage coordination and leaderships from landholders, industry, community groups, and the community reaffirming that effective pest animal prevention and management needs to be a shared responsibility.
		National Wild Dog Action Plan	Promotes and supports community drive action for landscape-scale wild dog management.
State	Legislation and policy	<i>Biosecurity Act 2015 and Regulation 2017</i>	The <i>NSW Biosecurity Act 2015</i> is a new piece of legislation that allows improved management of biosecurity risks in NSW to enable landholders, community, industry and Government effectively manage and respond to biosecurity incursions and risks. A fundamental principle of the <i>NSW Biosecurity Act 2015</i> is that biosecurity is everyone's responsibility. All land managers, regardless of whether on private or public land, have the same responsibilities to manage pest animals.



BYRON SHIRE COUNCIL

STAFF REPORTS - SUSTAINABLE ENVIRONMENT AND ECONOMY

4.6 - ATTACHMENT 2

Pest Animal Management Plan 2018 - 2023

Jurisdiction	Category	Instrument	Pest animal context
		<i>Local Land Services Act 2013</i>	Under the Act all land managers in NSW, whether on public or private land, have an obligation to control declared pest species on their land. The Act established Local Land Services, a publicly-funded organisation which provides biosecurity, natural resources management and agricultural advisor services including advice and assistance in managing pest animals. LLS lead regional plan delivery and provide on ground support.
		<i>National Parks and Wildlife Act 1974</i>	Guides pest species management programs on state land reserved under the Act, and facilitates coordination across different tenures.
		<i>Biodiversity Conservation Act 2016</i>	Lists key threatening process and identifies threatened species at risk from predation in NSW. Key threatening processes are managed under the Biodiversity Conservation Program or with threat abatement plans under the Saving Our Species program.
		<i>Game and Feral Animal Control Act 2002 and Game and Feral Animal Control Regulation 2012</i>	Provides for the effective management of introduced species of game animals, and to promote the responsible and orderly hunting of game animals on public and private land and of certain pest animals on public land.
		<i>Pesticides Act 1999</i>	Regulates the use of pesticides in NSW. Use of sodium monofluoroacetate (1080) is controlled by a pesticide control order under this Act.
		<i>Prevention of Cruelty to Animals Act 1979</i>	Regulates the humane handling and destruction of pest animals.
		<i>Firearms Act 1996 and Regulation 1997</i>	Regulates the ownership and use of firearms in NSW.
		<i>Workplace Health and Safety Act 2011</i>	Governs the requirements to ensure a safe and healthy workplace.
		<i>Companion Animals Act 1998</i>	Councils have the responsibility under this Act to provide for effective and responsible care and management of companion animals.
		<i>Local Government Act 1993</i>	Defines a Council's charter to include: properly manage, develop, protect, restore, enhance and conserve the environment of the area for which it is responsible, in a manner that is consistent with and promotes the principles of ecologically sustainable development.
	Strategies	NSW Biosecurity	The strategy establishes a clear vision for how biosecurity threats, including pest animals, are managed, with the most



Byron Shire Council

54

Pest Animal Management Plan 2018 - 2023

Jurisdiction	Category	Instrument	Pest animal context
	and plans	Strategy 2013-2021	important goal of the strategy that biosecurity is recognised as a shared responsibility.
		NSW Invasive Species Plan 2008-2015	The Plan aims to prevent new pest incursions, contain existing populations and adaptively manage widespread species through a cooperative culture where all relevant parties contribute to minimise the impacts of invasive species in NSW.
		NSW Wild Dog Management Strategy 2017-2021	The Strategy guides specific actions to more effectively reduce the negative impacts of wild dogs, and clearly defines roles and responsibility of government, public and private land managers, and other community members.
Regional	Strategies and plans	Draft North Coast Regional Strategic Pest Animal Management Plan 2018-2023	Identifies 10 priority pest animals for the region, prioritises and ranks pest animal management programs, and aims to maximise land manager participation.
		North Coast Region Wild Dog Management Plan 2015-2020	Provides a framework for cooperative management of wild dogs between key stakeholder groups (private land managers, the community and government) within the North Coast Local Land Services area.
		North Coast Regional Plan 2036	A 20-year blueprint for the future of the North Coast guiding state and local government in land use planning priorities. Direction 11 identifies the need to protect and enhance productive agricultural land.
Local	Strategies and plans	Biodiversity Conservation Strategy (in prep)	It is envisioned that the revised Strategy, with a 10-year time frame, will be a revision of the benchmark 2004 Strategy. It will aim to build on current national, state, regional and local government and local community efforts and aim to protect and restore Byron's biodiversity that is being shaped by population growth, consumption patterns and climate change.
		Rural Land Use Strategy	Provides a 20 year strategic framework to guide future land zoning and use, protection and or development of Byron's rural environment, economy, community and infrastructure. It is informed by the current planning framework (Commonwealth, state and regional), Council's adopted 'Site Suitability Criteria and Mapping Methodology' and 'Policy Directions Paper' and early community feedback. The strategy identifies the need to provide information and advice on pest management to community.
		Byron Pest Animal Management Plan 2018 (this Plan)	This Plan, developed within the above national, state and regional framework above and in consultation with key stakeholders, provides a strategic approach to pest animal management within the Byron Shire.



Appendix 2 Engagement methods

Extensive effort was made to engage with other public land managers, Traditional Owners and private land managers regarding the pest animals within Byron Shire to:

- understand the issues directly and indirectly affecting all land managers regardless of whether on private or public land
- learn more about pest animal concerns and impacts
- identify any misinformation about pest animal management
- share information and invite feedback about management responses to date
- seek ideas and feedback about priority pest animals and possible future management options.

The types of engagement that have been undertaken include:

- promotion of contact details of responsible officers (through social media, media releases, workshops and Council's website)
- telephone conversations to record concerns, issues and complaints. Since 2016, a record of each telephone conversation is kept and followed up until the matter is resolved
- informal face-to-face meetings, emails and telephone calls with private land managers
- media (radio, print, social media)
- website pages and links (www.byron.nsw.gov.au/Services/Environment) regularly reviewed on a monthly basis and updated accordingly (if required)
- online survey: an online stakeholder engagement survey was used as a mechanism for stakeholders to report pest animals and rank how they were affected by pest animals, identify what control options land managers were undertaking, and who should be responsible for control programs. The results were then analysed which allows land managers to make informed decisions with consideration of stakeholder concerns and preferences. This online survey was open from 5 March until 9 April 2018.
- public land managers and Traditional Owner workshop: one (1) public land managers and Traditional Owner workshops were presented by Byron Shire Council staff and Ecosure ecologist and wildlife biologists on Tuesday 27 March 2018:
- private land manager workshops: two (2) private land manager workshops were presented by Byron Shire Council staff and Ecosure ecologist and wildlife biologists on Wednesday 28 March 2018.
- attend meetings with Council's Biodiversity Advisory Committee 12 March 2018 and 14 June 2018 (yet to take place) and Arakwal MOU Advisory Committee on 31 May 2018 (yet to take place)



Pest Animal Management Plan 2018 - 2023

- attend meeting with Councillors on 7 June 2018.

Methods of engaging with all land managers regardless of whether on private or public land during Plan implementation will be similar to those for Plan preparation and will include:

- promotion of contact details of responsible officers (through social media, media releases, public meetings and Council's website)
- telephone conversations to record issues and complaints.
- informal face-to-face meetings, emails and telephone calls
- media (radio, print, social media)
- website pages and links (www.byron.nsw.gov.au/Services/Environment) reviewed monthly and updated accordingly (if required)
- land manager meetings (if required).

The process used was consultative, with representatives for key stakeholders involved at all stages of the development of the Plan. Prior to adoption, the Plan was placed on public exhibition for a period of six weeks to gain maximum feedback.



Appendix 3 Identifying pest animals

The introduced Indian myna is commonly confused with the native noisy miner, and so identification is detailed below.

A guide to identifying alert species is also provided to ensure the community is able to rapidly report sightings of these high priority pest species to the NSW Department of Primary Industries.

Indian myna and noisy miner

The introduced Indian (common) myna (*Sturnus tristis*) can be confused with the native noisy miner (*Manorina melanocephala*). Provided below is information to assist in the correct identification of these species.

Indian (common) myna are native to southern Asia and India and have¹:

- a glossy black head, upper breast and neck
- a brown body
- bright yellow bill, legs, feet and eye skin
- whilst in flight, distinctive white patches are visible on their wings.

Noisy miners are native to Australia and have:

- a pale grey body with a white belly
- a yellow eye patch and beak
- yellow/orange to flesh coloured legs and feet.



Figure 1 Introduced Indian (common) myna



Figure 2 Native noisy miner

¹ PestSmart Centre for Invasive Species Solutions 2014, *Common (Indian) Myna (Acridotheres tristis or Sturnus tristis)* Factsheet. Centre for Invasive Species Solutions.



Alert species

If any of the follow species are observed, please call the NSW Department of Primary Industries Invasive plants and Animals Enquiry Line on 1800 680 244.

Red-eared slider turtle

The red-eared slider turtle (*Trachemys scripta elegans*) originates from the USA and Mexico. This species has a distinctive red or orange stripe behind the eyes and a carapace length for an adult of 12.5 to 28 cm².



Figure 3 Red-eared slider turtle



Red imported fire ant

The red imported fire ant (*Solenopsis invicta*) are native to South America and are 2-6 mm in length with a coppery-brown head and body with a darker abdomen³.



Figure 4 Introduced red imported fire ant

² NSW Department of Primary Industries undated, Red-eared slider turtle. Available at: <https://www.dpi.nsw.gov.au>

³ Qld Department of Agriculture and Fisheries 2017, Fire ant identification. Available at: <https://www.daf.qld.gov.au>



Big-headed ant

The big-headed ant or coastal brown ant (*Pheidole megacephala*) is of African origin and is ginger or light yellow to a dark reddish brown in colour. They generally come in two sizes depending on their function as worker ants, being 2 – 3 mm or 3 – 4 mm in length⁴.



Figure 5 Big-headed ant or coastal brown ant

Yellow crazy ant

Yellow crazy ant (*Anoplolepis gracilipes*) is recognised by their pale yellow body colour, unusually long legs and antennae. The name 'crazy ant' is derived from their frantic movements and frequent changes in direction, especially when disturbed.

The abdomen is dark brown with length of body typically around 5mm.

Yellow crazy ants form super colonies with several queens and once a super colony is established, it can expand rapidly, in some cases doubling in size in 12 months⁵.



Figure 6 Yellow crazy ant

⁴ WA Department of Primary Industries and Regional Development 2018, Coastal brown ants, big-headed ants. Available at: <https://www.agric.wa.gov.au/pest-insects/coastal-brown-ants-big-headed-ants>.

⁵ NSW DPI Department of Primary Industries 2018, Yellow crazy ant. Available at: <http://www.dpi.nsw.gov.au/biosecurity/insect-pests/yellow-crazy-ant>



Indian ring-necked parrot

The exotic Indian ring-necked parrot (*Psittacula krameri*) is long-tailed, usually grass-green in colour with a red beak. The males have a narrow pink and black collar which is lacking in immature and female birds⁶.



Figure 7 Indian ring-necked parrot

⁶ WA Department of Primary Industries and Regional Development 2018, Indian ringneck parakeet: animal pest alert. Available at: <https://www.agric.wa.gov.au/birds/indian-ringneck-parakeet-animal-pest-alert?page=0%2C0>.



Appendix 4 Draft Wild Dog, Fox and Feral Cat Operational Plan

Target Species	Wild Dog, Fox and Feral Cat 18-19FY	Date for review	January each year
Objective	1. Minimise wild dogs, foxes and feral cats to strengthen key asset based protection in autumn and spring, the period of time most critical for the survival of offspring of livestock or threatened species. 2. Reduce the impacts of wild dogs, foxes and feral cats on adjoining land owned or occupied by public and private managers.		
Justification	On Council managed land • Biosecurity Act 2015 General Biosecurity Duty • Local Land Services Act 2013 • North Coast Regional Strategic Pest Animal Management Plan On private land and/or Jali Aboriginal land • An overlay of high biodiversity including threatened species e.g. koala (<i>Phascolarctos cinereus</i>), threatened shorebirds, long nosed potoroo (<i>Potorous tridactylus</i>), economic (Significant Farmland) and/or cultural values. • Adjacent to existing programs (e.g. Fox TAP priority sites and site specific wild dog management within national parks and reserves)		
Constraints	1. Financial resources. 2. Availability and level of experience of private operators. 3. Site access maybe limited by slippery, rough and steep road conditions and tree fall 4. Adjoin highly-populated and visited areas with Brunswick Heads to the north and Byron Bay to the south of Tyagarah Nature Reserve. Adjoin highly-populated and visited areas of Suffolk Park. 5. Presence of neighbouring domestic pets from adjoining properties may affect program operations.		
Target Location (s)	First Priority 1. Council managed land targeting Byron Bay, Bangalow, Brunswick Valley (Mullumbimby) and Ocean Shores Treatment Plants (Figure 1). Secondary Priority and resources pending 1. Private land managers in areas of Upper Wilsons Creek, Huonbrock, Wanganui and Goonengerry adjoined by Mount Jerusalem National Park, Nightcap National Park, Whian Whian State Conservation Area, Snows Gully Nature Reserve and Goonengerry National Park (Figure 1). 2. Private land managers between Tyagarah and Brunswick Heads Nature Reserve and Pacific Highway (Figure 1). 3. Private land managers and Jali Aboriginal land between Broken Head Nature Reserve, Ti Tree Lake Aboriginal Area and Ti Tree (Taylors) Lake Aboriginal Place) and Suffolk Park (Figure 1).		
Council Preferred Control			
Trapping	Trapping is best conducted by experienced or trained operators. Only soft-jawed or padded jawed spring traps may be used for the control of wild dogs in NSW.		
Shooting	Shooting is only to be conducted by experienced and trained operators in rural areas. Shooting may be in conjunction with trapping or may provide a viable alternative in areas where baiting is not feasible or not a preferred option. A shooter may "howl up" wild dogs for example or dispatch an animal that has established a regular pattern of visiting a particular location. Most shooting however is opportunistic. Shooting can play an important role in controlling wild dogs, but usually does not have as significant an impact on a regional basis as poisoning. Shooting will not occur to adjoined highly-populated and visited areas.		
Ground & aerial baiting	In support of Council's IPM Policy, ground or aerial baiting with 1080 <u>will not be undertaken</u> by Council staff or Council engaged operators.		
Barrier fencing	Barrier fencing for the purpose of wild dog or fox control <u>will not be undertaken</u> by Council staff or Council engaged operators.		
Den fumigation	In support of Council's IPM Policy, den fumigation for the purpose of fox control <u>will not be undertaken</u> by Council staff or Council engaged operators.		
Other relevant management considerations			



Pest Animal Management Plan 2018 - 2023

Domestic dog	Areas of high to medium registered dog densities are known across the Shire including areas adjoining Council managed land. Potential domestic dog interactions will be mitigated by: - Trapping signs will be placed at the entrance to all Council managed land and, when resources allow, at the entrance of all participating private land managers, indicating the dates of trapping and contact information - Information will be provided at least 1-week prior to commencement to the community via media release, updates on Council website and Facebook and through various community group newsletters.		
Domestic cat	While the density of domestic cats is unknown across the Shire, the above management actions will be taken into consideration.		
Monitoring			
Camera	The use of motion-triggered cameras to detect target species may be trialled subject to camera availability. Funds would be available for one-off purchase upon commencement.		
Data			
Recording format	Control data are recorded manually using Council's Trapping Datasheet each fortnight of the trapping program by the operator.		
Collation and storage	Council staff will coordinate data collation from the operator under Council's pest animal program. Data will be transferred into FeralScan and ArcGIS. Electronic data will be provided to NCLLS and NPWS to help inform their respective pest management objectives as identified under the North Coast Strategic Pest Animal Management Plan, FOX TAP Site Plan and/or Site Specific Wild Dog Management Plan.		
Analysis	Council staff will compile a report and summary of outcomes and costs to Council and partners. This report will be made publicly available via Council minutes. Council will also provide electronic data to NCLLS and NPWS to be used at their discretion in their analysis of their own programs.		
Internal Liaison			
	Council staff will liaise with relevant partners to discuss the progress of the program and discuss any issues that may arise.		
Public Liaison			
	- Trapping signs will be placed at the entrance to all Council managed land and participating private land managers indicating the dates of trapping and contact information - Information on the program will be provided at least 1-week prior to commencement to the community via media release, updates on Council website and Facebook and through community group newsletters.		
Responsible Parties			
Lead	Role	Partner	Role
Council	- Liaise with public and private land managers as required to progress plan implementation - Coordinate operational plan implementation with public and private land managers, as required - Domestic dog compliance - Coordinate public notification (advertisement) - Site plan reporting - Prepare and issue media campaign - Initial data storage and handling - Provide data to relevant public land managers to contribute to analysis of data	NCLLS	- Liaise with Council staff to guide program planning - Opt to analyse data from private land tenure - Share key outcomes of existing program in relation to Areas 1-3
		NPWS	- Liaise with Council staff to guide program planning - Opt to analyse data from the program adjacent to NPWS tenure - Share key outcomes of existing program in relation to Areas 1-3
		DPI	Liaise with Council staff on future large scale and collaborative programs as required
		Jali Aboriginal Land Council	- Liaise with Council staff to guide program planning - Provide safe access to private land



Pest Animal Management Plan 2018 - 2023

		Operator	• Liaise with Council staff to guide program planning • Carry out wild dogs, foxes and feral cats trapping program, collect data and report to Council staff
		Private land managers	• Signed Pest Animal Control Agreement • Provide safe access to private land • Secure all domestic pets safely

Timetable (based on FY)												
Task	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Program & budget planning	✓							✓	✓			
Contractual management									✓	✓		
Engage trapper	✓	✓		✓	✓					✓	✓	✓
Public liaison – private land managers						✓	✓	✓	✓			
Public liaison – community wide									✓			✓
Monitoring (pre-trapping)	✓								✓	✓		
Trapping	✓	✓		✓	✓					✓	✓	✓
Collate data and regular FeralScan data upload			✓			✓				✓		✓
Provide data to other public land managers										✓		
Council report (based on previous year)							✓			✓		

Estimated Resources Required (Commercial in Confidence)				
Activity	Description	Sub-total	Total	Funding Source
Program & budget planning	Review ops plan and budget		\$	
Contractual management	Process of managing contract creation, execution and analysis to maximize operational and financial performance		\$	
Public liaison – private land managers	Liaise with private landholder prior to commencement of program on private land to encourage participation and allow preparations for supported control to occur on private land to complement Council, NPWS and LLS programs		\$	



Pest Animal Management Plan 2018 - 2023

Public liaison – community wide	1 x advert for all of program placed in Byron News - 4 x 3 Facebook Advert Media release and Council web update		\$	
Monitoring (pre-trapping)	Fast trigger speed camera for wildlife monitoring (e.g. Reconyx HC500)		\$	
Trapping	Soft jaw trapping		\$	
Collate data and regular FeralScan data upload	Enter Council data onto the free online resource that allows anyone to record pest animal activity, evidence of pests, pest damage, and control actions		\$	
Provide data to other public land managers	Provide raw data direct to NCLLS & NPWS		\$	
Council report	Annual report to Council of program progresses, challenges and recommendations		\$	
Contingency	Provision for a possible event or circumstance		\$	
In-Kind Sub Total			\$	
Cash Sub Total			\$	
TOTAL			\$	

Disclaimer	The actions above describe the works that may be necessary to achieve the objective. Implementation of this site plan is subject to resource availability.		
Signature			
	Council Manager Environmental and Economic Planning	OEH (NPWS) Byron Coast Area Manager	NC LLS Senior Biosecurity Officer

1. Staff costs calculated @ \$300 /day



Pest Animal Management Plan 2018 - 2023



Appendix 5 Operational Plan template

Target Species	Identify the target species this plan relates too	Date for review	January each year
Objective	Identify the aims or goal		
Constraints	Identify the limitation or restrictions place on implementing this plan		
Target Location (s)	Identify where the plans apply to		
Council Preferred Control			
	Identify the desired control method(s)		
	If required, identify methods that will not be adopted.		
Other relevant management considerations			
	Consider and identify other issues that need to be considered in order for the plan to be successfully implemented e.g. land tenure, domestic pets, high population		
Monitoring			
	Identify what methods will be used to confirm present / absence of target species at the target location		
Data			
Recording format	How will data be recorded		
Collation and storage	How will data be collated and captured		
Analysis	How will the data be analysed		
Internal Liaison			
Public Notification/Liaison			
Responsible Parties			
Lead	Role	Partner	Role
Identify who is the lead agency responsible for ensuring implementation	Identify the key responsibilities of the lead agency responsible for ensuring implementation		
		Identify who is the supporting agencies are responsible for assisting with ensuring implementation	Identify the key responsibilities of the supporting agency responsible for assisting with ensuring implementation



BYRON SHIRE COUNCIL

STAFF REPORTS - SUSTAINABLE ENVIRONMENT AND ECONOMY

4.6 - ATTACHMENT 2

Pest Animal Management Plan 2018 - 2023

Timetable												
Task	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May

Estimated Resources Required per annum (Commercial in Confidence)			

Disclaimer	The actions above describe the works that may be necessary to achieve the objective. Implementation of this site plan is subject to resource availability.		
Signature			
	Council Manager Environmental and Economic Planning	OEH (NPWS) Byron Coast Area Manager	NC LLS Senior Biosecurity Officer



Pest Animal Management Plan 2018 - 2023

Revision History

Revision No.	Revision date	Details	Prepared by	Reviewed and Approved by
0	21/05/2018	Pest Animal Management Plan 2018 – 2023 Draft report	Julie Whelan, Senior Environmental Scientist, Ecosure Jess Bracks, Principal Wildlife Biologist, Ecosure Clare Manning, Biodiversity Officer, Byron Shire Council Peter Cremasco, Ph3 Consulting	Nigel Cotsell, Manager – Coffs Harbour, Ecosure
1	15/06/2018	Pest Animal Management Plan 2018 – 2023 Revised Draft report	Julie Whelan, Senior Environmental Scientist, Ecosure Clare Manning, Biodiversity Officer, Byron Shire Council	Nigel Cotsell, Manager – Coffs Harbour, Ecosure
Final	09/11/2018	Final Pest Animal Management Plan 2018 – 2023	Vanessa Cain, Scientist Clare Manning, Biodiversity Officer, Byron Shire Council	Nigel Cotsell, Manager – Coffs Harbour, Ecosure

Distribution List

Copy #	Date	Type	Issued to	Name
1	09/11/2018	Electronic	Byron Shire Council	Peter Boyd
2	09/11/2018	Electronic	Ecosure	Administration



Report compiled by Ecosure Pty Ltd in collaboration with Byron Shire Council

ABN: 63 106 067 976

admin@ecosure.com.au www.ecosure.com.au

PR3136-RE. Final Pest Animal Management Plan

Adelaide

PO Box 145
Pooraka SA 5095
P 1300 112 021
M 0407 295 766

Brisbane

PO Box 675
Fortitude Valley QLD 4006
P 07 3606 1030

Coffs Harbour

PO Box 4370
Coffs Harbour Jetty NSW 2450
P 02 5621 8103

Gladstone

PO Box 5420
Gladstone QLD 4720
P 07 4994 1000

Gold Coast

PO Box 404
West Burleigh QLD 4219
P 07 5508 2046
F 07 5508 2544

Rockhampton

PO Box 235
Rockhampton QLD 4700
P 07 4994 1000

Sunshine Coast

PO Box 1457
Noosaville QLD 4566
P 07 5357 6019

Sydney

PO Box 880
Surry Hills NSW 2010
P 1300 112 021



Ecosure gratefully acknowledges contribution to the plan by Peter Cremasco (Ph3 Consulting).

© Ecosure Proprietary Limited 2018

Commercial in confidence. The information contained in this document produced by Ecosure Pty Ltd is solely for the use of the Client identified on the cover sheet for the purpose for which it has been prepared and Ecosure Pty Ltd undertakes no duty to or accepts any responsibility to any third party who may rely upon this document. All rights reserved. No section or element of this document may be removed from this document, reproduced, electronically stored or transmitted in any form without the written permission of Ecosure Pty Ltd.

Pest Animal Management Plan 2018 - 2023

© Ecosure Proprietary Limited 2018

Commercial in confidence. The information contained in this document produced by Ecosure Pty Ltd is solely for the use of the Client identified on the cover sheet for the purpose for which it has been prepared and Ecosure Pty Ltd undertakes no duty to or accepts any responsibility to any third party who may rely upon this document. All rights reserved. No section or element of this document may be removed from this document, reproduced, electronically stored or transmitted in any form without the written permission of Ecosure Pty Ltd.