

Notice of Meeting

Biodiversity Advisory Committee Meeting

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

Venue	Cavanbah Centre, Ewingsdale Road, Byron Bay
Date	Thursday, 17 November 2022
Time	9.00am

Shannon Burt
Director Sustainable Environment and Economy

*I2022/1662
Distributed 10/11/22*



BYRON
SHIRE
COUNCIL

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 Code of Conduct for Councillors (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 the Code of Conduct for Councillors.

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.

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 of the provisions in the Code of Conduct (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 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.

OATH AND AFFIRMATION FOR COUNCILLORS

Councillors are reminded of the oath of office or affirmation of office made at or before their first meeting of the council in accordance with Clause 233A of the Local Government Act 1993. This includes undertaking the duties of the office of councillor in the best interests of the people of Byron Shire and the Byron Shire Council and faithfully and impartially carrying out the functions, powers, authorities and discretions vested under the Act or any other Act to the best of one's ability and judgment.

CONFLICT OF INTERESTS

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- 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 of the provisions in the Code of Conduct (particularly if you have a significant non-pecuniary interest)

Committee members are reminded that they should declare and manage all conflicts of interest in respect of any matter on this Agenda, in accordance with the [Code of Conduct](#).

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BYRON SHIRE COUNCIL

BUSINESS OF MEETING

1. APOLOGIES

2. DECLARATIONS OF INTEREST – PECUNIARY AND NON-PECUNIARY

3. ADOPTION OF MINUTES FROM PREVIOUS MEETINGS

- 3.1 Adoption of minutes of Biodiversity Advisory Committee meeting held 15
September 2022 9

4. STAFF REPORTS

Sustainable Environment and Economy

- 4.1 Update of constitution following new members..... 16
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ADOPTION OF MINUTES FROM PREVIOUS MEETINGS

**Report No. 3.1 Adoption of minutes of Biodiversity
Advisory Committee meeting held 15
September 2022**

5

Directorate: Corporate and Community Services
Report Author: Heather Sills, Manager Corporate Services
File No: I2022/1660

10

RECOMMENDATION:

**That the minutes of the Biodiversity Advisory Committee Meeting held on 15
September 2022 be confirmed.**

15

Attachments:

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1 Minutes 15/09/2022 Biodiversity Advisory Committee, I2022/1247 , page 11 [↓](#) 

Report

The attachment to this report provides the minutes of the Biodiversity Advisory Committee Meeting of 15 September 2022 .

Minutes of Meeting

Biodiversity Advisory Committee Meeting

Venue	Conference Room, Station Street, Mullumbimby
Date	Thursday, 15 September 2022
Time	9.00am



BYRON SHIRE COUNCIL

ADOPTION OF MINUTES FROM PREVIOUS MEETINGS

3.1 - ATTACHMENT 1

BYRON SHIRE COUNCIL

BIODIVERSITY ADVISORY COMMITTEE MEETING MINUTES 15 SEPTEMBER 2022

Minutes of the Biodiversity Advisory Committee Meeting held on Thursday, 15 September 2022

File No: I2022/1247

PRESENT: Cr S Balson, Cr P Westheimer

Staff: Chloe Dowsett (Coast & Biodiversity Coordinator), from 9:30am

Liz Caddick (Biodiversity Team Leader)

Caitlin Weatherstone (Project Officer-Koala)

Claudia Caliarì (Biodiversity Projects Officer)

Esmeralda Davis (Acting Director Corporate & Community Services)

Shannon McKelvey (Executive Officer), 10:00am – 10:15am

Michelle Wilde (Minute Taker)

Community: Dave Rawlins (Brunswick Valley Landcare)

Liana Joseph

Stephen Millard

Cr P Westheimer (Chair) opened the meeting at 9:07am and acknowledged that the meeting was being held on Bundjalung Country.

APOLOGIES:

Shannon Burt (Director Sustainable Environment and Economy), Sharyn French (Manager Environmental and Economic Planning), Cr S Ndiaye, James Jackson, Lindsay Murray

DECLARATIONS OF INTEREST – PECUNIARY AND NON-PECUNIARY

Dave Rawlins declared a pecuniary interest in Report 4.2. The nature of the interest being that Dave has employment with EarthScapes Consulting Pty Ltd who are contracted by Council for various projects. Dave is also contracted by Council for bush regeneration work. Dave Rawlins to submit a Conflict of Declaration Form / Pecuniary Interest Form.

BYRON SHIRE COUNCIL

BIODIVERSITY ADVISORY COMMITTEE MEETING MINUTES 15 SEPTEMBER 2022

ADOPTION OF MINUTES FROM PREVIOUS MEETINGS

Report No. 3.1 **Confirmation of minutes of the Biodiversity Advisory Committee Meeting held on 19 May 2022**

File No: I2022/1176

Committee Recommendation:

That the minutes of the Biodiversity Advisory Committee Meeting held on 19 May 2022 be confirmed.

(Balson/Westheimer)

The recommendation was put to the vote and declared carried

BUSINESS ARISING FROM PREVIOUS MINUTES

There was no business arising from previous minutes.

STAFF REPORTS - SUSTAINABLE ENVIRONMENT AND ECONOMY

Report No. 4.1 **Brunswick Valley Landcare Support Officer quarterly reports January to June 2022**

File No: I2022/950

Committee Recommendation:

That the Brunswick Valley Landcare Support Officer quarterly report June 2022, is brought to next meeting.

(Balson/Westheimer)

The recommendation was put to the vote and declared carried

Report No. 4.2 **Biodiversity and Agriculture Projects and Operations Update**

File No: I2022/1112

Committee Recommendation:

That the Biodiversity Advisory Committee notes the report and requests a report for further information regarding the wild dog DNA results.

(Balson/Millard)

The recommendation was put to the vote and declared carried.

BYRON SHIRE COUNCIL

BIODIVERSITY ADVISORY COMMITTEE MEETING MINUTES 15 SEPTEMBER 2022

Report No. 4.3 2021 Byron Coast Koala Activity Monitoring
File No: I2022/1118

Committee Recommendation:

That the Biodiversity Advisory Committee notes the 2021 Byron Coast Koala Activity Monitoring Report

(Westheimer/Balson)

The recommendation was put to the vote and declared carried.

Report No. 4.4 Byron Wetlands and Vallances Road Avifauna Survey 2021
File No: I2022/1178

Committee Recommendation:

That the Biodiversity Advisory Committee notes the Byron Bird Buddies Avifauna report at Attachment 1 (E2022/36650).

(Westheimer/Balson)

The recommendation was put to the vote and declared carried

There being no further business the meeting concluded at 10:50am

Report

At the 22 September 2022 Council meeting, two new members were appointed to the Biodiversity Advisory Committee bringing the number of community members to six.

Welcome to new members:

- 5 • David Milledge
- Leonard Cronin

The previously adopted constitution (23 June 2022, Res 22-280) listed ‘up to five’ community members and has been updated to reflect six members.

Membership includes:

- 10 • 3 Councillors
- 6 Community representatives
- 1 Brunswick Valley Landcare representative

15 For your information, quorum is to constitute at least half the number of members plus one, one of which is to be a Councillor i.e. 6 members.

The updated constitution is attached and can also be found at [Advisory Committees - Byron Shire Council \(nsw.gov.au\)](https://www.byrongov.au/Advisory-Committees), under the Biodiversity Advisory Committee dropdown.

Strategic Considerations

Community Strategic Plan and Operational Plan

CSP Objective	CSP Strategy	DP Action	Code	OP Activity
1: Effective Leadership We have effective decision making and community leadership that is open and informed	1.2: Engage and involve community in decision making	1.2.4: Advisory Committees - Coordinate advisory committees to inform decision making on their areas of expertise	1.2.4.1	Coordinate and support Advisory Committees to assist with effective Council decision making

20

Recent Resolutions

- 22-280
- 22-518

Legal/Statutory/Policy Considerations

5 n/a

Financial Considerations

n/a

Consultation and Engagement

n/a

10



BYRON SHIRE COUNCIL

BIODIVERSITY ADVISORY COMMITTEE

CONSTITUTION

INFORMATION ABOUT THIS DOCUMENT

(INTERNAL USE ONLY)

Date Adopted by Council	23 June 2022	Resolution No.	22-280
Responsibility	Director Sustainable Environment and Economy		
Review Timeframe	Each Term of Council		
Last Review Date:	December 2021	Next Scheduled Review Date	December 2024

Document History

Doc No.	Date Amended	Details Comments eg Resolution No.
E2018/2233	30 January 2018	Draft to be reported to 22 Feb 2018 meeting (see Res 17-611)
E2018/36203	19 April 2018	Adopted Res 18-224 & Res 18-226
E2018/66646	2 August 2018	Res 18-486 – community members confirmed
E2021/147945	February 2022	Draft to Biodiversity Advisory Committee for adoption.
E2022/98755	June and September 2022	Res 22-280 Adopted 23/6/2022 and new members appointed 29/9/2022 Res 22-518

Further Document Information and Relationships

Related Legislation	Section 355, Local Government Act (1993)
Related Policies	Code of Conduct 2016 Work Health Safety Policy Code of Meeting Practice Guide to Operations – Advisory Committee and Panels (E2016/85075)
Related Procedures/ Protocols, Statements, documents	

Constitution: Biodiversity Advisory Committee

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Constitution: Biodiversity Advisory Committee

1. Preamble

The Biodiversity Advisory Committee is an advisory Committee of the Council and does not have executive power or authority to implement actions.

The role of the Committee is to report to Council and provide appropriate advice and recommendations on matters relevant to this Constitution.

2. Purpose

The purpose of the Biodiversity Advisory Committee is:

1. To assist Council in the development, implementation and review of relevant biodiversity plans and policies such as: Biodiversity Conservation Strategy, Integrated Pest Management Plan, Flying Fox Camp Management Plan, Coastal Koala Plan of Management, Pest Animal Management Plan.
2. To support our Agricultural Action Plan's goal to improve productivity and sustainable land use practices on rural lands in Byron Shire
3. To identify and report biodiversity (terrestrial and coastal) and sustainable/regenerative agriculture matters to Council including, but not limited to: issues and concerns; community or collaborative opportunities; grant funding opportunities; special events; consultation and community engagement ideas; government policy; best practice or improved guidelines/guidance.

It is proposed that meetings can target specific issues related to biodiversity (terrestrial and coastal) and sustainable agriculture and that in order for the Committee to understand the issue and identify opportunities, experts on the subject can be invited to contribute.

It is also proposed that meetings can be held outside the Council building within environments that are relevant to that meeting's theme. For example, different formats could be used such as field days and workshops.

**Note: Strategic coastal planning and preparation of Coastal Management Programs will be reported directly to Council*

3. Timeframe for Committee

The lifespan of the Biodiversity Advisory Committee is for the term of Council 2022-2024.

4. Responsible Directorate

This Committee is administered by the Sustainable Environment and Economy Directorate. The Director or their delegate will attend these meetings and minutes will be taken by a member of their staff.

5. Membership

Council must appoint all advisory Committee members. Appointment must take place prior to a member being conferred the responsibilities and rights as set out in this document.

Constitution: Biodiversity Advisory Committee

Council may release individual members from the advisory Committee at any time by a resolution of council. Council may also appoint any new members to a Committee at any time by a resolution of council.

Membership is to include:

- 3 Councillors
- 6 relevantly qualified community representatives (including 1 farmer/rural landholder)
- 1 Brunswick Valley Landcare representative
- Byron Shire Council General Manager (or staff member delegate)

Note: Staff members participating on the Committee do not have any voting entitlements.

6. Induction

All members will be required to participate in an induction process at the establishment of a new Committee, and at any time a replacement voting member joins a Committee. The induction will be scheduled prior to the first meeting of the Committee and will cover topics such as this Constitution, the Code of Meeting Practice, Conflicts of Interest and Code of Conduct.

Replacement voting members will be inducted by experienced Committee members at, or prior to, their first meeting.

7. Quorum

A quorum is to constitute at least half the number of members plus one (resulting half numbers go down), one of which is to be a Councillor. The General Manager or delegate, who must be a member of staff, is to attend the Advisory Committee meeting and is not counted in the quorum for the meeting.

8. Confidentiality

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

9. Election of Chairperson

The position of Chairperson is to be elected from Councillors comprising the Committee but only in circumstances where the Mayor elects not to assume the position of Chairperson.

10. Voting

- a) Each member of the Committee (with the exception of staff members) is to have one vote, with the Chairperson to have a casting vote in addition to a deliberative vote.

Constitution: Biodiversity Advisory Committee

- b) Members of the Committee who are not Councillors may abstain from voting in any circumstances without such abstention being recorded in the negative.

11. Majority Decision

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

12. Convening Meetings

Meetings will be held quarterly. An annual timetable of meetings will be prepared in advance and adopted by Council 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.

13. Agenda Preparation

It is the responsibility of the chairperson to prepare the agenda in consultation with the relevant Director, setting out the terms of business to be considered.

The agenda is an organised list of the business, in order, that will be transacted at the meeting. An agenda for each meeting, containing a brief report on each item, is to be provided to Committee members and available on Council's website at least 7 days prior to the meeting being held.

Each item of business to discuss at the meeting is required to be listed on the agenda and in written form. Verbal reports at the meeting are not an acceptable practice.

For some matters, it will be necessary to attach other relevant information to the agenda to inform and direct discussion. Such information is to be circulated with the agenda.

Committee members may request items for inclusion in future agendas, through the Chair.

14. Conduct of Business

Each item of business is discussed in the order in which it appears on the agenda. No new matters will be introduced at the meeting. New items of business may be included in a future agenda as noted in clause 13 above.

15. Records of meetings

- a) The minutes of meetings are to be circulated to members of the group within 7 days of the meeting so that members can provide feedback through the Chair on the draft unconfirmed minutes.
- b) Minutes of Committee meetings will be kept and presented to Council at its next meeting via a report of the Committee meeting.

16. Absence from Committee Meetings

All Committee members are required to advise the chair when they are unable to attend Committee meetings. The absence of Committee members from the meeting is to be recorded in the minutes. A Committee member (other than the Mayor) ceases to be a member of a Committee if the member:

- a) has been absent from three consecutive meetings of the Committee without having given reasons acceptable to the Committee for the member's absence, or
- b) has been absent from at least half of the meetings of the Committee held during the immediately preceding year without having given to the Committee acceptable reasons for the member's absences.

17. Project Reference Groups

Project Reference Groups may be established by Council at the recommendation of the Committee to address issues clearly identified by the Committee.

Project Reference Groups operate in accordance with Council's adopted Constitution template for Project Reference Groups.

18. Section 377 Delegation

The Committee 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.

19. Meeting Practice

Meetings are to be conducted in accordance with this Constitution and, where required, reference to Council's Code of Meeting Practice.

20. Miscellaneous

- a) **Insurance:** All group members are covered by the public liability policy of Council. This insurance does not preclude the Advisory Committee from due diligence and all Council policies must be adhered to.
- b) **Code of Conduct:** All group members to abide by Council's adopted Code of Conduct at all times.
- c) **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..."

Constitution: Biodiversity Advisory Committee

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.

- d) **Work Health Safety:** All group members are required to comply with the "Worker Responsibilities" as prescribed in the Work Health Safety Policy.

Report No. 4.2 Brunswick Valley Landcare Support Officer quarterly report April to June 2022

Directorate: Sustainable Environment and Economy

Report Author: Michelle Wilde, Project Support Officer

5 **File No:** I2022/1293

Summary:

This report tables the activities of the Landcare Support Officer quarterly report, from April to June 2022.

10 The Committee requested this June report be brought to this meeting as there were technical issues in viewing it in the 15 September meeting agenda.

RECOMMENDATION:

15 **That the Biodiversity Advisory Committee note the report.**

Attachments:

1 Brunswick Valley Landcare Support Officer report June 2022, E2022/72911 , page 30  

20

Report

5 Council provided an allocation of funds in the 2022/23 budget to continue to support the Brunswick Valley Landcare, Landcare Support Officer position for 1 day per week to deliver the Land for Wildlife Program and respond to customer enquiries.

Attached are the quarterly reports, April to June 2022, from the Brunswick Valley Landcare Support Officer, for the Committee’s reference.

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	3.2: Strive to become a sustainable community	3.2.2: Support community environmental and sustainability projects	3.2.2.5	Support Brunswick Valley Landcare to deliver the Land for Wildlife Program and biodiversity enquiries	Community Objective 3: We protect and enhance our natural environment	3.2: Strive to become a sustainable community

10 **Recent Resolutions**

N/A

Legal/Statutory/Policy Considerations

N/A

Financial Considerations

15 Funding allocated in 2021/22 budget.

Consultation and Engagement

N/A

BYRON SHIRE COUNCIL

STAFF REPORTS - SUSTAINABLE ENVIRONMENT AND ECONOMY

4.2



Landcare Support Officer Report for Byron Shire Council

1st April – 30th June 2022

LFW

Total of 148 properties registered in Byron Shire

84 registered by BVL, 64 registered by BSC

- Paperwork submitted for
 - 60 Tickles Road, Upper Coopers Creek
 - 59 Tickles Road, Upper Coopers Creek
 - 62 Tickles Road, Upper Coopers Creek

Site visits were postponed due to local covid outbreaks and lockdowns. There are a number of applications waiting for site visits:

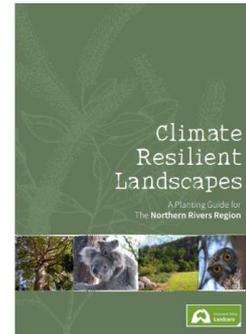
- 90 Lizray Road, Federal
- 107 Risleys Hill Road, Federal
- 1156 Main Arm Rd, Upper Main Arm

LANDCARE GROUPS

- 23 BVL locality groups – 16 working on council owned land (one has become inactive due to illness of coordinator, council regen team now manage this site)
- 3 BVL special interest groups
- 10 Incorporated Landcare groups working in Byron Shire (not under BVL’s umbrella)

PROJECTS

- **BVL Landcare Led Bushfire Recovery Funding – Glider project** \$50K community grant for glider habitat solutions. Project completed.
- **Landcare Led Bushfire Recovery Funding - NCRLN North Coast Regional Landcare Network regional nest box project.** Project completed.
- **IRCC grant** \$29,894 “Adapting to climate variability—a planting guide for the Northern Rivers region, NSW”. Project completed. Held a very successful Landslide workshop on 27th May with 60 attendees – videos and presentation from the day are available here <https://brunswickvalleylandcare.org.au/landslides-and-creek-erosion/>. The books are now printed and available through the front desk at Council’s Mullumbimby offices, local libraries, Landcare Coordinators and online here <https://brunswickvalleylandcare.org.au/native-plants/>. The demonstration garden in Maslen Arbortum, Heritage Park is about to get some interpretive signage. This will be the completion of this project.



- **Fish Habitat Planting** – funded through Ozfish and ZEB and 1 landholder, 464 & 466 Main Arm Road. 375 plants over 0.2 ha plus regen along the main arm of the Bruns River. Planting completed on 25th November 2020. Maintenance for 3 years included in project.

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- **Main Arm Fish Habitat** – DPI Fisheries grant \$17,519 complementing Bringing Back the Bruns projects. Rochelle has met with landholders and contractors onsite and discussed how to proceed.
- **ET Ridge to River: Mooibal Spur Corridor Restoration Stage 1** \$99,873 working on council road reserve and private properties between Tallow wood Ridge Estate and Tristran Drive, Mullumbimby Creek. This project will finish in September this year. The nest boxes have been a great success with most of them inhabited. The plantings and engagement of the local group has had ups and downs due to Covid and the weather!

COUNCIL

- **Smart Farms workshops** – workshops were delayed. Integrated Pest Management workshop held on Friday 8th April. Trees for you land after the Mother’s Day tree planting on 8th May.
- Wrote a letter of support for Orla Seccull for the Chris Mills erosion project. Also helped to develop a species list for the planting that Chris is responsible for doing with volunteers.
- **Wildlife Safe Havens initiative** \$1000 allocated by the Biodiversity Advisory Committee for a schools nest box project. The project has been on hold due to COVID and school access restrictions and then again because of the floods – we plan to engage with Wilsons Creek School, a day is planned for term 3.
- Wrote a letter of support for Orla Seccull for the Chris Mills erosion project. Also helped with a species list for the planting that Chris is responsible for doing.
- Promoted council’s Good Fire Webpage.
- Promoted DPIE’s free koala trees and responded to enquiries from interested landholders.
- Invited new councillors to subscribe to BVL’s monthly newsletter.
- Alison will work with Liz to re-new the revegetating streams on the Brunswick catchment leaflet.

Thank you to council for providing us with new storage space in the council depot on Coolamon Scenic Drive in Mullumbimby. This flood free storage area is very much appreciated by everyone at BVL.

BVL PROJECT OFFICER

- Rochelle is now working mainly working from home 1 day per week on a flexible basis. In addition to this Rochelle has also been working with council on pest animal projects.

ENQUIRY TOPICS/ ISSUES

Phone	Email	Website	Social Media	Walk in	In Person
Landslips x 1	Landslips x 3	Drilling camphors	Sourcing lomandras		
Contact for heritage park	Smart weed poisonous to cattle	Butterfly plants			
Planting in south beach park	Recommendation for workshop speaker	Camping in dunes			
training	LfW				
Support for grant application x 2	Koola Trees from DPE x 17				
5	23	3	1		
TOTAL					32

1st August 2022 Report by Alison Ratcliffe

Report No. 4.3 Biodiversity and Agriculture Projects Update

Directorate: Sustainable Environment and Economy

Report Author: Lizabeth Caddick, Biodiversity Officer

5 **File No:** I2022/1472

Summary:

This report provides the Biodiversity Advisory Committee with an update on current projects and programs being undertaken by the Biodiversity team, including:

- 10 • Wildlife corridor mapping
 - Mapping restoration sites
 - Updates to vegetation and HEV mapping
 - Mapping fire-adapted ecosystems
 - Koala vehicle strike
 - Koala habitat restoration
 - 15 • Pest animal management (wild dogs, feral deer)
 - Bringing Back the Bruns
 - Keeping Cats Safe at Home project
 - 20 • Sustainable Agriculture Program
-

RECOMMENDATION:

That the Biodiversity Advisory Committee notes the update on current projects and programmes being undertaken by Council staff.

25

Attachments:

- 1 Assessment of Plant Community Type (PCT) Mapping in Byron Shire, October 2022, E2022/102992 , page 49 [↓](#) 
- 30 2 Keeping Cats Safe at Home - NSW RSPCA_BehaviourChangeStrategyReport_Final, E2022/105465 , page 58 [↓](#) 

Report

Wildlife Corridor Mapping

5 A Strategic Planning Workshop was held with Councillors on 6 October to discuss the implications of the Local Government Act management requirements for Community and Crown Land on wildlife corridor mapping.

The draft Wildlife Corridor System (Landmark 2022) will go on public exhibition from 31 October to 28 November, as per Council Resolution 22-366).

10 Public exhibition will run for 4 weeks and proposed housekeeping amendments to Council's Biodiversity DCP will be exhibited at the same time. The intent of these changes is to:

- Ensure that the definition of a wildlife corridor in the DCP reflects the new mapping,
- Ensure that management intent is clear for both corridors in rural and built-up areas.
- Ensure that management intent is clear for both vegetated and cleared parts of corridors.

15 Other Mapping Projects

Updates to Vegetation and HEV mapping

20 *Biodiversity Conservation Strategy Actions: 1.14: Update and maintain Council's vegetation and HEV mapping with revised Plant Community Types (PCTs) and current aerial photography; 1.19 Update vegetation mapping to clearly identify recently listed threatened ecological communities.*

25 Council's 2017 High Environmental Value (HEV) and Vegetation mapping were updated in May 2022 to reflect ground truthing of approximately 250 sites carried out as part of the C-Zone review. Earthscapes Consulting are now undertaking further updates to vegetation mapping, funded by a \$24,000 grant from NSW DPE Biodiversity Conservation Division. Updates include: updating the mapping with revised Plant Community Types (NSW State Vegetation Type Mapping), and clearly identifying recently listed threatened ecological communities (Coastal Swamp Oak and Coastal Swamp Sclerophyll Forest).

30 Progress to date includes a review of the recently released Plant Community Types (NSW State Vegetation Type Mapping) against Byron Shire Council 2021 Vegetation Mapping (Attachment 1) Findings of this review include:

- Ground truthing of 238 random points was used to assess the accuracy of the latest PCT mapping and to compare it to BSC 2021 Vegetation Mapping.
- Areas targeted included the high development area around Skinners Shoot and Byron Bay), fragmented landscapes (Myocum, Mullumbimby, Yelgun, The Pocket, Billinudgel); Hinterland areas with large extents of remnant vegetation landscape (Huonbrook and Wilsons Creek) and Big Scrub remnants.

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- Ground truthing indicated that in 63% of sites (150 sites) the PCT mapping was correct, and in 25% of sites (59 sites) PCT mapping was not correct or partially correct. The remaining 29 sites were inaccessible for ground truthing.
- 5 • While the majority of the PCT mapping is accurate, the review indicates that the BSC 2021 Vegetation Mapping has a far higher level of accuracy. This is unsurprising given that this mapping was undertaken by local experts with extensive local experience and expertise.
- 10 • A key difference is that most camphor laurel dominated areas have not been mapped in the PCT mapping. While camphor is exotic, it is still considered to provide important habitat and connectivity for some fauna, it has good restoration potential, and can include up to 50% native rainforest species in the understory. Water and plantations are also not included in the PCT mapping although these too have important wildlife habitat benefits.
- 15 • Floristic composition of PCTs are generally broader than the BSC 2021 mapping, which is again unsurprising given that the BSC mapping was assessed at site level in most areas whereas PCTs are defined and mapped across NSW.
- 20 • BSC mapping also includes data on vegetation condition (e.g. regrowth, old growth) and canopy cover, which provides information on the status of the community under threatened species legislation, and helps guide restoration priorities.
- 25 • The report also notes that the PCT mapping isn't always accurate for highly complex vegetation communities, particularly the Big Scrub remnants. On-ground assessment is required to confidently validate all the Big Scrub remnants in Byron Shire.
- 30 • However, while the PCT mapping is not as accurate as the BSC 2021 mapping, it remains a useful resource. For many shires in Northern NSW it is an improvement on existing vegetation mapping and it represents uniform mapping of vegetation across LGAs, which is extremely helpful for other regional habitat mapping projects. The PCT mapping also provides a very comprehensive list of canopy, midstorey and understorey species that may be present in each vegetation type, which is a useful resource for bush restoration. The PCT mapping also includes a pre 1770 vegetation formations layer, which is also a useful guide for restoration in heavily cleared landscapes.
- 35 • The next stage of this project is to review and update Council's HEV (High Environmental Value) mapping, based on changes to vegetation mapping and a review of current HEV criteria. Earthscapes are working closely with DPE Biodiversity Conservation Division to progress this.

40

Updates to Byron Shire Threatened Species Lists

Biodiversity Conservation Strategy Action **1.11**: Conduct a review of Byron Shire's biodiversity values as a baseline for ongoing biodiversity monitoring. Including updated Byron Shire flora and fauna lists and Status of threatened flora and fauna.

- 5 Landmark Ecological Services have developed threatened species lists, to update those that were included in the 2004 Byron Shire Biodiversity Conservation Strategy. These lists are being added to Council's website and will provide a useful resource to anyone wanting to find out more about the Shire's threatened flora and fauna. Because they are in digital format, it will be easy to update them where status changes occur.

10 Identifying open forest ecosystems for ecological restoration

Biodiversity Conservation Strategy Action **4.4** Identify priority open forest ecosystems requiring restoration through the reintroduction of fire.

- 15 This project, funded by a \$11,000 grant from NSW DPE Biodiversity Conservation Division, is using GIS, expert elicitation and ground truthing to identify and mapping open forest ecosystems in Byron Shire that would benefit from the reintroduction of ecological fire management. In fire-dependent ecosystems (including Eucalypt, Brush Box and Paperbark forests and also heathlands), regular fire is needed to maintain shade-intolerant plant communities and fauna habitat, promote germination of open forest species and maintain canopy tree health, through maintaining appropriate soil chemistry and reducing the risk of Bell Miner Associated Dieback.

To date GIS assessments and fire interval mapping have been completed and a draft restoration potential map produced. Next steps are to confirm participants in expert elicitation and conduct ground truthing to validate draft map.

- 25 The map will assist Council and Landcare Groups to identify future priority ecological restoration sites. It will also support the current Good Fire project (funded by InGrained foundation), which aims to build capacity for community to carry out eco-cultural burns in open forest types.

Koalas

Koala Vehicle Strike

- 30 Unfortunately 2022 has continued to be a bad season for koala vehicle strike, with 13 koalas hit and 10 killed in Byron Shire this Spring, including multiple females carrying joeys. Council and Bangalow Koalas are continuing to work together to spread the message to encourage people to slow down on the roads. A variable message sign was installed temporarily on Broken Head Rd, from August to end October, and we received
- 35 NSW State Government for a grant of \$15,440 to trial the use of relocatable variable message signs at black spots in the shire over this breeding season. Two trailer-mounted VMS are being deployed for 4 weeks at each of 4 sites to alert drivers about wildlife. Traffic data loggers will also be installed to monitor the effectiveness of the signs, using traffic speeds as a surrogate. To date signs have been deployed at Coolamon Scenic Drive and Granuaille Rd. They will be moved to Lismore Rd and Broken Head Rd in
- 40

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November/December. We are using traffic data loggers to monitor impact of the VMS on vehicle speeds.

5 Geolink have been engaged by DPE to develop a Feasibility Assessment for koala vehicle strike mitigation measures in the key road-strike black spot that extends from Granuaille Rd to Lismore Rd, coming into and out of Bangalow. Biodiversity and Infrastructure Services staff will be meeting with Geolink and Transport for NSW representatives to discuss options over the next months.

Staff are also investigating costs and feasibility for use of relocatable solar-powered LED radar speed signs at key wildlife black spots in the shire.

10 Koala Habitat Restoration

The 2022 Koala Habitat Restoration project is progressing with a NSW Koala Strategy grant of \$101,211. Six restoration / planting sites confirmed, landholder and contractor agreements have been finalised and planting is in progress.

15 Also currently negotiating additional funding from NSW Koala Strategy to support maintenance and ongoing restoration at several existing koala habitat restoration sites in the shire.

Barbed Wire

RESOLUTION NUMBER: 21-342

- 20
1. That Council reviews its use of barbed wire on Council properties with a view to improving the conservation and protection of animals.
 2. That Council works with key stakeholders to develop an information and education program for the community and landowners in order to:
 - a) review the impacts of barbed wire on native fauna and
 - 25 b) provide ideas for alternatives to barbed wire or measures to mitigate the impacts.
 3. That this issue be referred to the Biodiversity Advisory Committee for further consideration.

30 The use of, and need for, barbed wire fencing, has been discussed with Council Open Space staff and with local farming representatives via the Agriculture Cluster Group (meeting 9/10/2021). Barbed wire is generally not used on Council land and Open Space managers are replacing barbed with smooth wire as and when fencing replacements are needed.

35 Standard farm fencing, for cattle is 5-strand barbed wire. Local farmers advise that barbed wire fencing is often the only effective way of keeping cattle within a property and off of roads, particularly in situations where cattle are frightened, e.g. when chased by dogs.

5 However, there are opportunities to use smooth, rather than barbed, fencing, or electric fencing, on internal fences, and to use smooth wire for the top strand of perimeter fences. The top strand is generally where the most wildlife impacts occur. Using smooth wire for the bottom strand can also benefit wildlife, but is not practical in fields with young calves as they can get through this. There are likely many properties in the shire that have old barbed wire fences in situ that aren't really necessary as cattle are no longer on these properties.

Recommended actions include:

- 10 - Encouraging landholders who aren't keeping livestock to remove old, unnecessary barbed wire fences.
- Encouraging farmers to replace top and (where possible) bottom wire strand with smooth wire when the next repair their fences.
- Working with local fencing contractors to encourage them to provide smooth strand wire as a fencing option.

15 The biodiversity team is fortunate to be having a university intern join our team in December-March, who is an environmental science student with a communications background. Among other things, she will be looking at developing some communications materials that Council can use to promote use of smooth strand wire.

Pest Animal Management Program

20 Following the February-March floods there have been an increased number of requests for help with pest animal management on private land. Council is engaging with neighbouring local councils to develop a strategy for more collaboration and alignment with pest management issues. Lead by Byron Shire Council, the first meeting was on 19th October with representants from Tweed, Kyogle, Ballina, Lismore with apologies from Clarence and Richmond.

Wild Dogs, Cats and Foxes

30 As consequence from the floods in the landscape, the number of invasive species is expected to increase. To be able to provide to our community more resources to tackle the issue, Council is investigating grants to provide support private landholders with feral animal control.

Indian Myna

35 In collaboration with BVL we wrote a media release for BVL newsletter (end of September) explaining how community members can engage with Council for Indian Myna trapping on private property and how to report through FeralScan. In a month we had 6 enquiries from community members interested in trapping Myna's in their property.

Feral Deer

5 The Regional Feral Deer Officer (hosted by Tweed Shire Council) is organising a meeting between local government representatives, and is preparing a series of materials to be released as a landholder awareness campaign to be launched soon. The key objective is to provide the region with a simple and consistent message.

Keeping Cats Safe at Home' Project - RSPCA NSW

10 Byron Shire Council are one of 11 Councils taking part in the [RSPCA NSW Keeping Cats Safe at Home project](#). The Keeping Cats Safe at Home project aims to promote [responsible cat ownership](#). It will do this by educating and encouraging cat owners to keep their cats safely contained at home to enhance their welfare and reduce the impacts that cats have on wildlife. We will be sharing insights and inspiration, advice and answers about cat safety and cat enrichment to effectively extend and enhance the lives of cats across New South Wales. This campaign is all about loving cats as indoor pets, celebrating the people who love their cats and motivating cat lovers to keep their feline companions safe and fulfilled. It will include a tailored behaviour change strategy, which will be developed based on extensive consultation with stakeholders, especially cat owners.

15 The project will be delivered by RSPCA NSW with support from Council, and will provide up to \$90,000 in incentives for cat owners over the period of the project. Project activities and incentives will be informed by [community consultation](#) and might include:

- A [social marketing campaign](#) using traditional and social media.
- Education visits for local schools.
- Community engagement events for cat owners such as Safe, Happy Cat Days.
- Up to \$90,000 in incentives for cat owners such as [free or subsidised de-sexing](#), [cat enclosures](#) or modified fencing, and behaviour and enrichment advice for keeping cats happy at home.
- Other engagement initiatives such as [GPS cat-tracker collars](#) to allow local cat owners to understand the movement of their cat.

25 The project will run from 2021-2025 and has been assisted by the NSW Government through its Environmental Trust.

30 Surveys and data collection to date:

- RSPCA has consulted with Council partners and other stakeholders including animal welfare organisations, wildlife rescue groups and veterinarians, to understand priorities, interests, conflicts and behaviours in each project area.
- RSPCA have collected data from the community via phone and online surveys (refer Attachment 2).
- RSPCA NSW has used the data collected during the initial stage of the project to develop specific strategies for each of the 11 councils.
- Council has engaged with a researcher to help with the data collection to evaluate the efficiency of a new phase of the campaign Keep Cats Safe. As part of the research cameras have also been set up across the shire to monitor for roaming

cats and roaming cat transect surveys were carried out with support from Council staff in October.

Byron Shire Council and RSPCA NSW are now undertaking the following as part of our specific strategy –

- 5 • Partnering with Catnets (they sell nets and cat enclosures) and to offer a 15% discount code to cat owners – being promoted via Council’s media unit and customer service area and in vet waiting rooms. To date there has been low interest in this program.
- 10 • Partnering with Vetlove Billinudgel to offer funding free desexing and microchipping (funded by the project). The aim is to target stray cats and kittens that people have taken on, or multiple cat households. However, any cat owner living in Byron Council area is eligible. In the first instances, approval has been given for Pets for Life and Animal Welfare League to use the first 30 spaces.

15 In addition to the above, Council are participating in the ‘Adopt a Stray’ program with the Cat Society of NSW. This program targets residents who have adopted a stray cat or are considering adopting one and allows them to desex, vaccinate, microchip and obtain lifetime rego for a cat for \$50.

Bringing Back the Bruns

20 The Federally funded *Fish Habitat Restoration Project* on the Brunswick River has been delayed this year due to complexity of permitting and. Pending suitable weather, erosion control works by Soil Conservation Service will commence once all approvals have been obtained. Due to constraints within the planning framework, development assessment and approval was required which has delayed the timeframe for implementation of the works.

25 Subsequent to the river stabilisation works, riparian revegetation will be carried out with the help of Ozfish and the Brunswick Heads Angling and Deep-Sea Fishing Club.

30 The project is being developed in partnership with North Coast Local Land Services (NCLLS). NCLLS are managing the design, supply and construction. Council will manage the landholder and community engagement components. The property is just downstream from Mullumbimby, behind ‘The Paddock’. The landowner will be contributing a considerable amount to the project in fencing and re-vegetation, with Council providing in-kind contribution.

35 A new opportunity has arisen with Local Land Services to bring Council into the State-wide River Rehabilitation Project. \$200,000 have been allocated to Byron Shire Council this year, to rehabilitate priority river erosion sites impacted by the recent floods. Part of this money is going to riparian restoration (sites are yet to be determined). A project working group has been established to prioritise sites for works this year.

40 Council’s bush regeneration team is currently working on 57 bushland sites (238 Hectares) across the shire. The total area being worked by Council’s bush regeneration team along the Brunswick River is 14 sites, 57 Hectares and 6,260m of river bank. The work conducted on these sites included tree planting, installation of nest boxes, weed control

and fencing to exclude stock from riparian areas. This is set to increase in the near future with recent funding provided by Local Land Services to address priority erosion sites.

Researching the Impacts of Recreational and Tourism Uses on Coastal Biodiversity, Wildlife and Habitats

5 Council has engaged consultant BMT WBM to carry out this study as a component of developing Council's Coastal Management Programs. Targeted stakeholder consultation has been undertaken including with members of the Biodiversity Advisory Committee and the Coast and ICOLL Advisory Committee.

10 The results of the desktop research and stakeholder consultation are currently being used to map 'Key Recreational Use Impact Sites' categorised by biodiversity value and known/potential recreation and tourism impacts.

The next steps of the project will be to:

- 15 • Undertake a risk assessment to determine the vulnerability of local biodiversity values and identify local biodiversity values most vulnerable to recreation and tourism.
- Prioritisation of 'Key Recreational Use Impact Sites' in the study area.
- Develop a monitoring program for priority 'Key Recreational Use Impact Sites' and explore potential opportunities to involve citizen science in future monitoring efforts.
- Undertake a baseline survey focusing on poorly documented sites.
- 20 • Develop strategic management recommendations to support sustainable coastal use planning.
- Prepare report and present to Council's Coastal and ICOLL Advisory Committee. BAC members will be invited to attend this presentation online.

Opportunity will be provided to Committee members to comment on the draft report.

25 **Sustainable Agriculture**

The Byron Farmers Network database now has 330 members and is an excellent resource to share information and advice with the growers community, for both Council and other agencies that work to support farmers in the region.

30 The farm extension program is ongoing, with visits, emails and phone conversations with local producers to provide support, advice and information. Council is currently working with 'The Farm' to develop a pilot farmer incubator program, aimed at supporting local people who would like to break into the sustainable farming industry. We are also working closely with Santos Organics to assist development of their local food program, and investigating other options to create and encourage local food security in the shire.

SmartFarms

The Smart Farms project is now complete and the final report has been submitted.

Outputs of the project include:

Starting Out! *An introductory guide to farming in the Byron Shire.*

- 5 The 75 page full colour handbook provides an overview of some of the key areas in rural land management for small farms and who to contact for assistance and advice when making their farming decisions. It includes 10 Local Stories that describe a number of different successful farming enterprises in the Shire and includes tips on starting up, who to contact and how to do it. 500 copies of the handbook were printed and it is available on-
- 10 line. It has been distributed to rural stores and producer groups for further distribution. Feedback from people in the industry and rural landholders that have seen the book has been very positive.

https://www.byron.nsw.gov.au/files/assets/public/hptrim/grants-and-subsidies-applications-successful-applications-smartfarms-2019/digital_bsc-handbook_final_rev01.pdf

- 15 SmartFarms farmer workshops were a great success. A series of 6 farm workshops has been held. Topics include:

- Soil our National Capital (21+23 June 2021) 40 attendees, 5 presenters
- Integrated Pest Management (8 April 2022) 11 attendees, 2 presenters
- Trees for land (8 May 2022) COVID limited-10 attendees, 1 presenter
- 20 • You and your land (10 June 2022) 20 attendees, 4 presenters
- How to monitor your soils (20 August 2022) 22 attendees, 2 presenters
- Rehydrating your landscapes (2 September 2022) 20 attendees, 1 presenter

The workshops promoted productivity and sustainability via biodiversity/soil health. A total of 123 people attended, learning from experts how to plan and sustainably manage their farms.

25

The Smart Farms Mentoring Program – The program was delivered in two parts.

- 1) 4 farming leaders that are innovative and successful in their field of farming were identified to lead field days on their properties and maintained an open door/phone policy for the participants of the day. Farming topics included:
- 30
- Regenerative Grazing
 - Organic horticulture/vegetables
 - Agroforestry and chickens
 - Biological macadamia farming

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5 mentees participated in the Southern Cross University Regenerative Agriculture Mentoring Program (RAMP). RAMP aims to facilitate and support farmers to make the transformational change from traditional to regenerative agricultural principles and practices. Glen Chapman, a regenerative farming planner and expert, maintains regular contact in person and by Zoom with the 5 mentees to assist with their individual requirements.

Combating Pests and Weeds Grant (Commonwealth) 2020 - Agricultural advice, weed and pest animal control in Byron Shire

This project finished in April 2022. The film clip: Regenerative Farming A resilient future for Byron Shire cc - YouTube is now on Council's website and has also been distributed through Regenerative Agriculture Group, Young Farmers Connect, Northern Rivers Food, Local Land Services, Regrarians Network and The Greens - Sue Higgins, <https://www.cv-4h.org/sustainable-agriculture.html#/>. With over 1000 views via 2 you tube listings.

15 Strategic Considerations

Community Strategic Plan and Operational Plan

CSP Objective	CSP Strategy	DP Action	Code	OP Activity
2: Inclusive Community We have an inclusive and active community where diversity is embraced and everyone is valued	2.2: Enhance safety and contribute to the physical, mental, and spiritual health and well being of our people	2.2.4: Companion animals - Promote awareness of the requirements of the Companion Animals Act with respect to the ownership of companion animals	2.2.4.3	Facilitate companion animals education
3: Nurtured Environment We nurture and enhance the natural environment	3.1: Partner to nurture and enhance our biodiversity, ecosystems, and ecology	3.1.1: Native species - Use best practice land management to improve ecological resilience and reduce	3.1.1.1	Partner with DPE to implement koala vehicle strike mitigation in Byron Shire as part of the NSW Koala Strategy 2022-2026.

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CSP Objective	CSP Strategy	DP Action	Code	OP Activity
		threats to biodiversity		
3: Nurtured Environment We nurture and enhance the natural environment	3.1: Partner to nurture and enhance our biodiversity, ecosystems, and ecology	3.1.1: Native species - Use best practice land management to improve ecological resilience and reduce threats to biodiversity	3.1.1.2	Engage with the community regarding mitigating threats to koalas.
3: Nurtured Environment We nurture and enhance the natural environment	3.1: Partner to nurture and enhance our biodiversity, ecosystems, and ecology	3.1.1: Native species - Use best practice land management to improve ecological resilience and reduce threats to biodiversity	3.1.1.3	Partner with Regional Koala Group to progress koala conservation in Northern Rivers region.
3: Nurtured Environment We nurture and enhance the natural environment	3.1: Partner to nurture and enhance our biodiversity, ecosystems, and ecology	3.1.1: Native species - Use best practice land management to improve ecological resilience and reduce threats to biodiversity	3.1.1.9	Seek funding to implement the Biodiversity Conservation Strategy, Coastal Koala Plan of Management and Flying Fox Camp Management Plan.
3: Nurtured Environment We nurture and enhance the natural environment	3.1: Partner to nurture and enhance our biodiversity, ecosystems, and ecology	3.1.2: Pest and weed management - Use best practice land management to improve ecological	3.1.2.1	Implement Dog, fox and cat trapping program.

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CSP Objective	CSP Strategy	DP Action	Code	OP Activity
		resilience and reduce threats to biodiversity		
3: Nurtured Environment We nurture and enhance the natural environment	3.1: Partner to nurture and enhance our biodiversity, ecosystems, and ecology	3.1.2: Pest and weed management - Use best practice land management to improve ecological resilience and reduce threats to biodiversity	3.1.2.3	Participate in Northern Rivers Feral Deer Management group.
3: Nurtured Environment We nurture and enhance the natural environment	3.1: Partner to nurture and enhance our biodiversity, ecosystems, and ecology	3.1.3: Habitat restoration - Restore degraded areas that provide high environmental or community value	3.1.3.1	Update Byron Shire habitat restoration database and DPE Koala Habitat Restoration Archive.
3: Nurtured Environment We nurture and enhance the natural environment	3.1: Partner to nurture and enhance our biodiversity, ecosystems, and ecology	3.1.3: Habitat restoration - Restore degraded areas that provide high environmental or community value	3.1.3.3	Implement 2022 Koala Habitat Restoration Project.
3: Nurtured Environment We nurture and enhance the natural environment	3.1: Partner to nurture and enhance our biodiversity, ecosystems, and ecology	3.1.3: Habitat restoration - Restore degraded areas that provide high environmental or community value	3.1.3.4	Investigate grant opportunities for improving the Brunswick Estuary ecosystems and river health.

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CSP Objective	CSP Strategy	DP Action	Code	OP Activity
		I or community value		
3: Nurtured Environment We nurture and enhance the natural environment	3.1: Partner to nurture and enhance our biodiversity, ecosystems, and ecology	3.1.3: Habitat restoration - Restore degraded areas that provide high environmental I or community value	3.1.3.5	Deliver Federal Fish Habitat Restoration Project
3: Nurtured Environment We nurture and enhance the natural environment	3.2: Deliver initiatives and education programs to encourage protection of our environment	3.2.3: Planning - Plan to improve the quality of the natural environment	3.2.3.1	Update flora and fauna lists for the shire, including status of threatened flora and fauna.
3: Nurtured Environment We nurture and enhance the natural environment	3.2: Deliver initiatives and education programs to encourage protection of our environment	3.2.3: Planning - Plan to improve the quality of the natural environment	3.2.3.2	Update Byron Shire Vegetation and HEV mapping
3: Nurtured Environment We nurture and enhance the natural environment	3.2: Deliver initiatives and education programs to encourage protection of our environment	3.2.3: Planning - Plan to improve the quality of the natural environment	3.2.3.3	Participate in regional coastal and environmental working groups and initiatives
3: Nurtured Environment We nurture and enhance the natural	3.2: Deliver initiatives and education programs to encourage	3.2.3: Planning - Plan to improve the quality of the	3.2.3.4	Identify priority open forest ecosystems requiring restoration through the reintroduction of fire.

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CSP Objective	CSP Strategy	DP Action	Code	OP Activity
environment	protection of our environment	natural environment		
3: Nurtured Environment We nurture and enhance the natural environment	3.3: Protect the health of our coastline, estuaries, waterways, and catchments	3.3.1: Coastal Management Program planning and implementation - Undertake Coastal Management Program planning and implementation	3.3.1.5	Research the effects of recreational uses on coastal biodiversity and habitats
4: Ethical Growth We manage growth and change responsibly	4.3: Promote and support our local economy	4.3.5: Regenerative agriculture - Develop and implement strategies to support regenerative agriculture, agri-business and farmers	4.3.5.1	Maintain and update Byron Shire Farmer database.
4: Ethical Growth We manage growth and change responsibly	4.3: Promote and support our local economy	4.3.5: Regenerative agriculture - Develop and implement strategies to support regenerative agriculture, agri-business and farmers	4.3.5.2	Provide extension services to farmers to support and promote sustainable agriculture.
4: Ethical Growth We manage growth and change	4.3: Promote and support our local economy	4.3.5: Regenerative agriculture - Develop and implement	4.3.5.3	Deliver farmer mentoring and farmer education activities.

BYRON SHIRE COUNCIL

STAFF REPORTS - SUSTAINABLE ENVIRONMENT AND ECONOMY

4.3

CSP Objective	CSP Strategy	DP Action	Code	OP Activity
responsibly		strategies to support regenerative agriculture, agri-business and farmers		

Recent Resolutions

RESOLUTION NUMBER: 22-366

- 5 1. That Council endorses the Byron Shire Wildlife Corridor System for public exhibition, with proposed updates to Council's Biodiversity DCP (as set out in this report) included as supporting information.
2. That following exhibition, Council receives a submissions report to consider key issues raised and formally adopt the new Wildlife Corridor System.
3. Following completion of '2' above, that Council:
 - 10 a) update DCP Chapter 'B1 – Biodiversity' to reflect the adopted Wildlife Corridor Map and any additional supporting amendments; and
 - b) exhibit the DCP chapter updates in accordance with relevant legislative requirements.

RESOLUTION NUMBER: 21-342

- 15 1. That Council reviews its use of barbed wire on Council properties with a view to improving the conservation and protection of animals.
2. That Council works with key stakeholders to develop an information and education program for the community and landowners in order to:
 - 20 a) review the impacts of barbed wire on native fauna and
 - b) provide ideas for alternatives to barbed wire or measures to mitigate the impacts.
3. That this issue be referred to the Biodiversity Advisory Committee for further consideration.

25 Legal/Statutory/Policy Considerations

N/A

Financial Considerations

Where relevant, budgets for specific projects noted above.

Consultation and Engagement

N/A

5

	<p>Assessment of Plant Community Type (PCT) Mapping in Byron Shire October 2022</p>
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Authors: Jane Wickers and Joanne Green, EarthScapes Consulting

Objective

Assess accuracy of latest PCT mapping. Assessment to be primarily based on desk top analysis and local knowledge, with targeted ground truthing to validate site boundaries where required.

Methodology

Datasets Used:

Byron Shire Council Vegetation 2021 mapping.

Eastern NSW State Vegetation Type Map v1.1 (sourced from DPIE).

Steps:

- Target areas identified:
 - High development area (Skinners Shoot and Byron Bay).
 - Fragmented landscape (Myocum and Mullumbimby)
 - Hinterland landscape (Huonbrook and Wilsons Creek)
 - Northern area (Yelgun, The Pocket, Billinudgel)
 - Big scrub remnants
- Random Points generated to validate the mapping using QGIS tools.
- Random Points that were not mapped in the PCT mapping but were in the BSC 2021 Vegetation mapping were assessed using NearMaps aerial photography.
- Random Points within the PCT mapping were assessed through ground truthing. The following data was collected:
 - Spatial Location
 - PCT Validation - Correct, Partially Correct, Not Correct, Inaccessible.
 - Validation Type - Random Point, Opportunistic
 - Validation Form - Groundtruthed (date), Site visit by Ecologist < 3 years, Aerial photography (SIX maps) and BSC 2017 Veg Mapping, Distance Assessment (date).
 - Comments
- Additional Opportunistic Points were collected during ground truthing.

Results:

238 sites were assessed and mapped in an ESRI shapefile. Table 1 shows the validation results by PCT validation type.

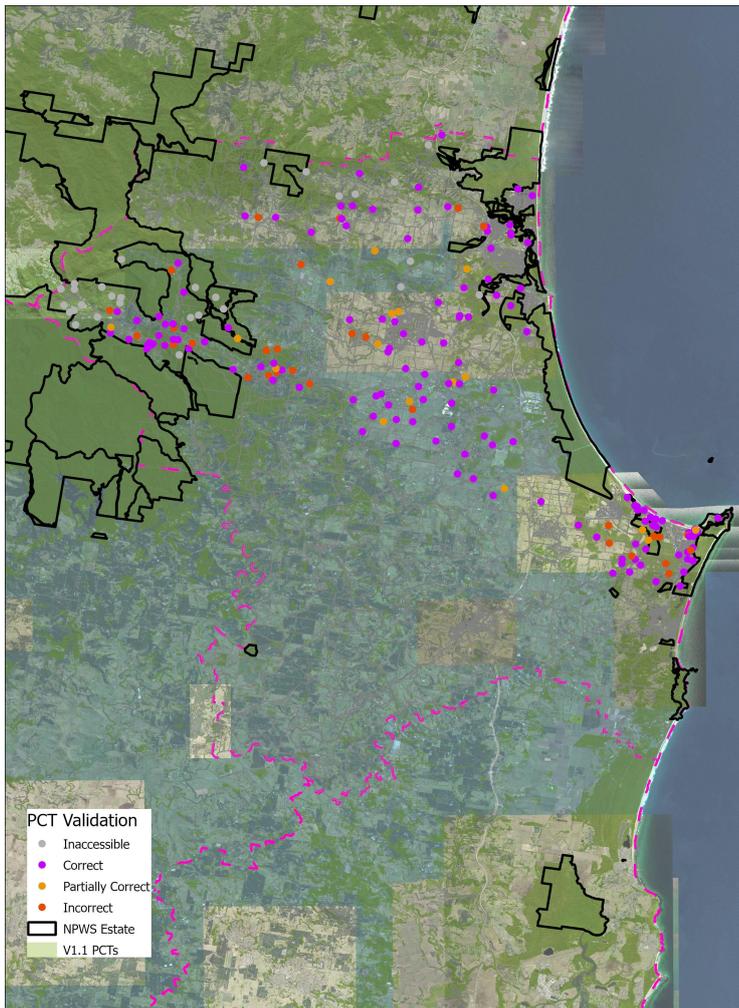
PCT Validation	Count	Percentage
Correct	150	63.0
Partially Correct	21	8.8
Not Correct	38	16.1
Inaccessible	29	12.1

Table 1 - PCT Validation Results

Correct - Vegetation species composition agrees with PCT description.
 Partially Correct - Either the boundary is only partially correct or the vegetation only partially agrees with PCT description.
 Not Correct - Vegetation species composition does not agree with PCT description.
 Inaccessible - Unable to verify the PCT because of road closures or private land where access has not been agreed to.

Figure 1 shows the distribution of sites in Byron Shire.

Note, areas with a high density of Flora Plots (eg. Broken Head) were not assessed. National Parks were also not included as they were outside of the scope of the BSC project. The south-west of the Shire was not assessed as this area is largely cleared with very little PCT mapping.



Validation of PCT (V1.1) Mapping in Byron Shire

Figure 1 - Distribution of assessment sites in Byron Shire.

Discussion

1. Summary of mapping accuracy

As Table 1 and Figure 1 indicate, the PCT mapping is generally accurate. There are some exceptions, such as the Scribbly Gum Forest on Koonyum Range which is mapped as PCT 3924 Sydney Coastal Upland Swamp Heath (see Figure 2).

The existing vegetation mapping of Byron Shire is both accurate and current. It was undertaken by local experts with extensive local experience and expertise and is of a very high quality.

Whilst the PCT mapping is a useful resource it's boundaries and attributes are not as accurate as the BSC vegetation mapping. For many Shires in northern NSW this mapping will be an improvement in vegetation mapping and represent a uniform mapping of vegetation across LGAs.



Figure 2 - Example of incorrect PCT community on Koonyum Range. Byron Vegetation mapping is shown in yellow.

2. Data that has not been mapped

A key difference between the PCT mapping and the 2021 BSC vegetation mapping is that Camphor laurel has not been mapped (see example in Figure 3). Whilst this is non native vegetation it is still considered important habitat for some fauna species and can include > 50% native vegetation species or be part of a regeneration project for subtropical rainforest.

In addition, water and plantations have not been mapped in the PCT mapping.

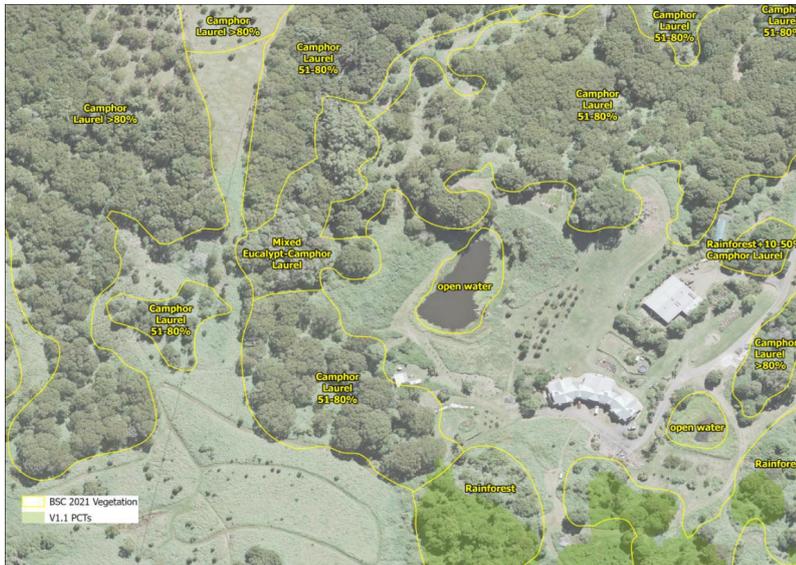


Figure 3 - Example of Camphor Laurel not mapped by PCT mapping. PCT mapping is shaded green.

Some areas that are a mix of Rainforest and Camphor Laurel have been mapped in the PCT mapping but the extents are much smaller than the BSC vegetation mapping (see example in Figure 4).



Figure 4 - Example of Camphor Laurel / Rainforest mapping. PCT mapping is shaded green.

3. Recent Events

It should be noted that neither the PCT or BSC vegetation mapping include the impacts on vegetation from the 2022 flood event and the 2019 bushfires.

4. Accuracy of Boundaries

Whilst the vegetation boundaries are generally accurate there are some exceptions as shown in Figure 5 below.



Figure 5 - Example of PCT mapping over infrastructure (Koonyum Range).

5. PCT Definitions

The Plant Community Types (PCTs) are determined by floristic composition, and by frequently co-occurring species, including combinations of trees, shrubs and/or ground cover plants. In some cases, species may vary or not be present at a local level due to the fact that PCTs are defined and mapped across NSW (<https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet/nsw-plant-community-type-classification>)

Investigation and Ground truthing of the PCT types indicated that the PCTs are generally broader than the current BSC vegetation mapping. Ground truthing of the PCTs showed that in some cases the PCTs descriptions were more general in description and include a broad list of species. The community description can be applied from species present, but species abundances may vary considerably at a site level and in some cases some of the dominants may not be present. This could be due to disturbance factors such as logging for timber production or removal of species such as Tallowwood (*Eucalyptus microcorys*) for fenceposts. The Byron Vegetation mapping is very detailed in description due to assessment at a site level in most areas. Table 2 provides a comparison of the additional detail in the BSC vegetation mapping.

Table 2 - Example of greater breakdown of community types in BSC vegetation mapping.



PCT Mapping.



BSC Vegetation Mapping.

6. Landscape Condition, Canopy and Vegetation Species.

The PCT mapping is based on survey plots done in the remnant and good condition native vegetation with mid and understorey present. Factors such as levels of disturbance from grazing and clearing for other landuse practices i.e. development, affect the accuracy of the mapping.

The BSC vegetation mapping includes categories and information on the Condition and Canopy of the vegetation at a local level, which isn't included in the PCT mapping (Landmark 2016). The Byron vegetation mapping categories for the landscape condition are from 1 Old Growth/ Excellent condition to 4 Regrowth, which provides information on the status of the community under threatened species legislation. The canopy is graded from A 81-100% to D 10-30%, which also provides information for the threatened plant community status, especially subtropical rainforest, under threatened species legislation. Regrowth vegetation and areas and percentages of Camphor Laurel, (50-80%, 80%) are included in the mapping which is important for identifying restoration sites, such as the example in Figure 6).

In contrast, the PCT mapping spreadsheet provides an extensive list of canopy, midstorey and understorey species that are present or may be present in each type, which is useful in restoration practice.



Figure 6 - Example of regrowth mapped in BSC Vegetation Mapping.

7. Big Scrub

There are only 31 Big Scrub remnants remaining in Byron Shire (DPE mapping). The main PCT describing Big Scrub remnant is 3001 called “Lismore Basalt Subtropical Rainforest”. Due to the immense value and so little remaining it is recommended that each Big Scrub remnant be considered on a site by site basis. The descriptions and difficulties of classifying Big Scrub under the PCTs are discussed below.

Further investigation is required of the allocation of PCT 3001 to Hayters Hill. The PCT notes in the spreadsheet discuss that PCT 3064 is floristically intermediate between PCT 3003 in mainly cooler or drier sites and PCTs 3001 and 3002 in warmer or wetter sites and it may grade into one of these PCTs where they occur in proximity. It includes areas within intact forests, remnants in cleared areas, and vegetation on the fringes of extensively cleared valleys. In the latter two cases, sites may be difficult to assign with confidence and relationships with other PCTs may be obscured by disturbance effects.

Description from PCT spreadsheet-

“PCT 3001 is very tall to extremely tall dense rainforest which occurs on fertile soils derived from basalt in the Lismore district, North Coast. Tree species richness is very high and the tree canopy is of variable composition, however *Heritiera trifoliolata* is almost always present and is often among the tree species with the highest foliage cover. Other very frequent canopy trees include *Castanospermum australe*, which commonly has high foliage cover, *Dysoxylum mollissimum* which occasionally has high cover and *Cryptocarya obovata*, *Diploglottis australis* and *Diospyros pentamera*, each rarely with high cover. A wide range of other rainforest tree species occur with lower frequency, and very rarely *Eucalyptus grandis* may occur in the canopy. The mid-stratum is commonly of very mixed composition with no single species dominant, however it almost always includes *Wilkiea huegeliana*, very frequently with *Arytera distylis* and *Cordyline rubra*. Vines are abundant and almost always include *Calamus muelleri*, very frequently *Ripogonum album*, *Trophis scandens*, *Flagellaria indica* and *Carronia multiseptata*. The climbing epiphyte *Pothos longipes* is almost always present and may be abundant. This PCT occurs mainly in very wet, very warm locations receiving over 1500 mm mean annual rainfall, at low to moderate elevations of less than 200 metres asl. It occurs only on soils derived from Lismore basalt, and on such soils, the vegetation has been very extensively cleared. It is by far the predominant native vegetation of the rainforest remnants on

Lismore basalt, however now exists only as scattered, often very small, remnants. PCT 3002 (Lower Richmond Hills Dry-Subtropical Rainforest) also occurs in some remnants on Lismore basalt, however to a much more limited extent and usually on more exposed or sometimes previously cleared site”

Description of PCT 3002

Tall to very tall, rarely extremely tall, dense rainforest which occurs mostly on fertile soils derived from basalt, in the coastal hills and valleys of the Brunswick-Ballina district, North Coast. Native tree species richness is moderate to high, however there is also usually a high to very high proportion of exotic species. The canopy almost always includes Guioa semiglaucula and very frequently Mallotus philippinensis, both of which often have the highest cover. Other tree species, some of which may have a high cover, very frequently include Jagera pseudorhus, Pittosporum undulatum and Cryptocarya obovata, commonly Diploglottis australis and Flindersia schottiana, occasionally Alphitonia excelsa, rarely with Elaeocarpus grandis and Eucalyptus grandis, the latter as an extremely tall emergent. Scramblers and vines, Maclura cochinchinensis and Cissus antarctica, are almost always present and may be locally abundant, especially in disturbed sites. The ground layer is variable, however commonly includes ferns such as Adiantum hispidulum and forbs such as Alpinia caerulea. PCT 3002 occurs mainly in very wet, very warm locations typically receiving over 1600 mm mean annual rainfall, at low to moderate elevations of less than 150 metres asl, however up to 250 metres for isolated western occurrences. It often occurs at the fringes of basalt, close to lithological boundaries with metasediments, or on more exposed sites on basalt or, rarely on or close to alluvium on soils derived from metasediments. Most occurrences are at low elevations north-east of Lismore and associated with Lismore basalt, however there are also limited isolated occurrences north-east of Kyogle at higher elevation, on Kyogle basalt. These latter areas are poorly sampled and further data may prove that they represent a separate PCT. This community grades into PCT 3001 in more sheltered sites on basalt or into PCT 3011 on adjacent metasediments. It occurs in a very extensively cleared area in which Camphor Laurel and other weeds are prolific. Many areas are highly disturbed or are regrowth following past clearing. At least some of the disturbed areas may have formerly been PCT 3001 and disturbed sites may be difficult to assign with confidence to one or other of these PCTs. Sites at lithological boundaries may be transitional with either PCT 3001 or PCT 3011 and may also be difficult to assign with confidence.

Table 3 - PCT Assessment of some Big Scrub Remnants in Byron Shire

Big Scrub Remnant	PCT	Assessment
Hayter's Hill	3001	Possible more like PCT 3002 or 3064, as previously considered dry rainforest in the Drypetes-Araucaria alliance
Cedarvale	3001 and Areas Not Mapped (Figure 7)	Correct
Eureka Soccer Ground	3001	Correct
Johnston's Scrub	3001	Correct
Booyong	3001	Correct
Snows Gully	3011,3148, 3035, 3021	Needs additional assessment



Figure 7 Parts of Cedarvale are not mapped in the PCT mapping.

On the ground assessment is required to confidently validate all the Big Scrub remnants in Byron Shire.

Outputs:

This mapping review includes a shapefile of points where the PCT data has been assessed.

Keeping Cats Safe at Home

Behaviour Change Strategy Report



Final Report to NSW RSPCA

McLeod Research

December 2021

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Background

Predation and competition by domestic cats, *Felis catus*, threatens the survival of many native animal species (Legge et al., 2020). Hunting and killing is instinctive, and even well-fed, owned pet cats hunt when given the opportunity. There are more than 500,000 registered cats in NSW, and thanks to their high reproductive rate (on average one female cat will produce two litters of four kittens each year), cat populations can grow rapidly (Woinarski, Legge, & Dickman, 2019). The NSW RSPCA project 'Keeping cats safe at home', funded by the Environmental Trust, aims to work with ten local government areas (LGAs) to develop and implement targeted behaviour change strategies to reduce domestic cat predation on wildlife and improve their safety by encouraging responsible cat ownership. This includes de-sexing, microchipping, registration and containment of owned pet cats.

Changing behaviour, and sustaining these changes over time, is a difficult process. Educating the public about the adverse impacts, and providing information about management strategies, is rarely enough. Effective behaviour change strategies require a more sophisticated, systematic approach underpinned by behavioural science theory. There is an array of behaviour change strategies designed to increase audience understanding, engagement and, ultimately, adoption of desired behaviours, however most are based on the four guiding principles (McLeod, Hine, & Driver, 2019):

1. Focus on human behaviour.
2. Know your audience.
3. Match your interventions to the primary causes of behaviour.
4. Apply science-based evaluation.

Stakeholder and community consultation is an important component of the 'Keeping cats safe at home' to understand the human behaviours required to address cat management issues within the selected LGAs, as well as getting to know the target audience within these communities. A mixed methods approach was used to collect information during the consultation process, incorporating partner council and stakeholder interviews, and a survey of residents and cat owners within the selected LGAs. This target audience survey was conducted both by phone, and available online. Human ethics approval was obtained from the University of Sydney's Human Research Ethics Committee (Project Number 2021/473).

This report will:

- Present preliminary analysis of the results from both the stakeholder and community consultation that has been undertaken in each of the selected LGAs.
- Outline the most effective behaviour change strategies to encourage cat owners to contain their pet cats to their properties in each of these LGAs, including
 - What activities should be undertaken to best achieve outcomes
 - How various activities should be targeted towards different cat-owning subgroups within each LGA

Methods

Key Stakeholder Interviews

Council partners and other identified stakeholders were consulted either individually or in small groups. The ongoing COVID situation and lockdown orders meant that these interviews were mainly conducted virtually. Interviewees were also asked to complete a short online survey (Appendix 2 & 3) to collect baseline information and quantitative data about their organisation's current involvement with cat management, thus allowing more time in the interviews to clarify these responses and explore the raised issues in depth.

Partner Councils

Eleven LGA's were chosen to be part of this project:

- Blue Mountains City Council (Population 76,904)
- Byron Shire Council (Population 31,556)
- Campbelltown City Council (Population 157,006)
- Hornsby Shire Council (Population 142,667)
- Kyogle Shire Council (Population 8,940)
- Northern Beaches Council (Population 252,878)
- City of Parramatta Council (Population 226,149)
- Shoalhaven City Council (Population 99,650)
- Tweed Shire Council (Population 91,371)
- Walgett Shire Council (Population 6,107)
- Weddin Shire Council (Population 3,664)

The priorities for the interviews with the Partner Councils were to:

- Establish a working relationship and appoint a representative to the project team
- Collect baseline data on domestic cat registration and current cat complaints
- Investigate current cat management initiatives, as well as their future intentions
- Identify the driver and barrier factors associated with their current initiatives.

Other Stakeholders

A range of stakeholder groups and individuals were interviewed from across the selected LGAs. These included:

- Cat protection groups
- Animal Welfare organisations
- Wildlife conservation & rescue groups
- Veterinarians
- Land management and Natural Heritage groups
- Indigenous Elders group

In addition, several organisations that were not specifically based in the selected LGAs but have an interest or conduct cat management related activities were interviewed. These were:

- Cat Protection Society
- Inner City Strays
- Sydney Wildlife
- NSW National Parks & Wildlife Services
- Landcare NSW
- Cat Harness Australia
- CatNets
- Threatened Species Hub
- RSPCA Victoria
- Canberra Street Cat Alliance

These interviews with other stakeholders were to:

- Collect information on their perspectives and involvement with domestic cat management
- Gain an understanding how they are affected, their priorities and interests
- Identify behaviours that are either being performed, or that are required to be performed, and possible barriers and drivers of behaviour performance
- Identify potential conflicts between personal interests and what is collectively desirable.

Target Audience Survey

Phone Survey

A random digit phone survey of cat owners within five of partner LGAs was conducted to assess a representative sample cat owners (Hine, Kormos, & Marks, 2016). The phone survey targeted five of the selected LGAs, resulting in 507 completed surveys – Blue Mountains (n=209), Campbelltown City (n=159), Tweed Shire (n=71), Byron Shire (n=38) and Kyogle Shire (n=30). The survey collected information on:

- Cat owners' current adoption or performance of the responsible cat ownership behaviours, and their likelihood of future adoption / performance
- Background information about the cat owner and their property that may influence their behaviour - how big is their home, do they have access to an outside space.
- Any specific factors that have prevented them adopting cat containment behaviours
- Agreement (on a 5-point Likert scale) to a sample of pre-identified drivers and barriers to cat containment, which had been selected from a review of previous research.

Online Survey

The survey was also be made available online, and advertised throughout NSW, enabling people across all NSW communities who are interested in this issue to also have their say. As of the 13/11/2021, 8204 responses had been received for the online survey. Unfortunately, 335 were not able to be used (39 contained little data, the LGA of 40 could not be determined, 140 were from other States and Territories, 116 did not indicate if they had a cat or not and nine were obvious repeated entries) – leaving a total of 7863 for analysis. Responses were received from 4221 cat owners and 3642 people who do not own cats, across 105 of the 128 NSW LGAs (Table 1). Most responses (5582, 71%) were from the selected LGAs - 2773 cat owners and 2809 people who do not own cats.

BYRON SHIRE COUNCIL

Table 1: LGA and cat ownership status of online survey respondents.

LGA	Owners	Don't own	Total	LGA	Owners	Don't own	Total
Albury	9	3	12	Liverpool	49	18	67
Armidale	14	8	22	Lockhart	0	1	1
Ballina	8	12	20	Maitland	14	8	22
Bathurst	8	4	12	Mid Coast	6	8	14
Bayside	21	9	30	Mid-Western	3	2	5
Bega Valley	2	4	6	Monaro	4	2	6
Bellingen	7	5	12	Moree Plains	1	1	2
Blacktown	44	13	57	Mosman	14	17	31
Bland	1	0	1	Murray	1	0	1
Blayney	0	1	1	Muswellbrook	2	0	2
Blue Mountains	376	307	683	Nambucca	1	1	2
Broken Hill	1	0	1	Narrabri	3	1	4
Burwood	1	2	3	Narrandera	1	1	2
Byron	69	212	281	Narromine	1	0	1
Cabonne	6	2	8	Newcastle	23	6	29
Camden	88	46	134	North Sydney	34	18	52
Campbelltown	291	224	515	Northern Beaches	626	846	1472
Canada Bay	28	8	36	Oberon	0	1	1
Canterbury	49	55	104	Orange	11	3	14
Central Coast	67	44	111	Parkes	4	3	7
Cessnock	9	8	17	Parramatta	364	116	480
City of Sydney	76	32	108	Penrith	38	13	51
Clarence Valley	8	7	15	Port Macquarie	7	7	14
Cobar	1	0	1	Port Stephens	19	14	33
Coffs Harbour	7	12	19	Queanbeyan	9	3	12
Cootamundra	4	0	4	Randwick	24	10	34
Cowra	0	1	1	Richmond Valley	4	7	11
Cumberland	46	13	59	Ryde	24	13	37
Dubbo	14	3	17	Shellharbour	12	6	18
Dungog	2	2	4	Shoalhaven	271	324	595
Eurobodalla	7	13	20	Singleton	3	0	3
Fairfield	15	4	19	Snowy Valleys	1	0	1
Forbes	3	4	7	Strathfield	7	5	12
Georges River	15	3	18	Sutherland	45	19	64
Glen Innes	6	2	8	Tamworth	10	7	17
Goulburn	5	5	10	Tenterfield	1	3	4
Griffith	1	1	2	Tweed	296	375	671
Gunnedah	4	3	7	Upper Hunter	1	2	3
Hawkesbury	20	11	31	Upper Lachlan	4	2	6
Hills	65	22	87	Uralla	1	0	1
Hornsby	391	248	639	Wagga Wagga	2	3	5
Inner West	122	104	226	Walgett	9	4	13
Inverell	4	1	5	Warrumbungle	3	1	4
Junee	1	0	1	Waverley	15	2	17
Kempsey	3	0	3	Weddin	56	87	143
Kiama	5	4	9	Wentworth	1	0	1
Ku-ring-gai	50	30	80	Willoughby	28	15	43
Kyogle	24	66	90	Wingecarribee	14	10	24
Lake Macquarie	29	7	36	Wollondilly	34	21	55
Lane Cove	12	6	18	Wollongong	42	31	73
Leeton	1	1	2	Woollahra	6	6	12
Lismore	21	21	42	Yass	2	0	2
Lithgow	9	6	15				
				Grand total			7863

Consultation Results

The results of the stakeholder and community consultation process for each LGA are detailed below. This consultation process has increased our understanding of the selected LGAs' communities. As a result, a range of driver and barrier factors to participation in cat management activities within each LGA was able to be identified, along with the main leverage points and the specific behaviour change techniques that will need to be targeted to improve the outcomes of future cat management activities.

The COM-B (Capability, Opportunity, Motivation – Behaviour) is an excellent framework for identifying and organising potential causes of behaviour and assisting with selecting the most appropriate behaviour change tools (Michie, Atkins, & West, 2014). Categorising the drivers and barriers using the COM framework allows for easier selection of the best behaviour change tool for the job:

- **Capability factors** - Interventions should aim to educate, train and support.
- **Opportunity factors** - Interventions should aim enable, provide, facilitate, offer, prompt or constrain.
- **Motivation factors** - Interventions should inform, persuade, discuss, demonstrate, incentivise or coerce.

Suggestions for each of the identified leverage points are provided in Appendix 1. Note that the LGAs will not be able to tackle all identified leverage points at once and will need to prioritise. It not wise to try and change too many behaviours at once – people may be overwhelmed and disengage completely.

Blue Mountains City Council

Council Interview Results

Baseline cat data

The Blue Mountains City Council reported they had:

- 16,709 registered cats
- 9191 microchipped cats

The number of de-sexed cats was unknown.

Current cat management initiatives

Blue Mountains City Council undertakes a range of cat management initiatives. In partnership with the RSPCA and vets from the Blue Mountains Veterinarian Association, they offer the Community Animal Welfare Scheme (CAWS) – a program that provides subsidised de-sexing, vaccination and registration of cats and dogs to owners in low-income households. They strongly recommend cat containment as part of ‘responsible cat ownership’

The NSW Companion Animals Act 1998 allows Councils to declare Wildlife Protection Areas (WPAs). Blue Mountains City Council have declared two WPAs which contain public areas where cats (controlled or not) are prohibited.

Compliance monitoring

As part of compliance monitoring this LGA cross-checks entries in the Companion Animal Register to access information regarding those cats not registered and / or de-sexed. Owners are contacted, advising them of the Council’s requirements. If ignored penalty infringement notices are then issued. Compliance is also monitored when individual cats are either brought to their attention and / or impounded. They did not specify if the WPAs were monitored.

Information

The Blue Mountains City Council provides information on responsible cat ownership on their website. They also conduct a school education program ‘Connect to Nature’.

Nuisance cats

Nuisance cat complaints are assessed by the Council Officers, who approach the owner of the cats to discuss the issue and seek a positive response or provide education material to address the nature of the complaint.

Stray and feral cats

Stray and feral cats pose a problem within the LGA although extent is not quantified. The Council does not have a targeted program, but cats often trapped during fox trapping activities. Any domestic and microchipped cats trapped are returned to their owners via the pound, while the rest are euthanised.

What the Council thought was working well

When asked what is working well with their current cat management initiatives Council were very positive about the CAWS program. They thought this program provided a positive way to connect cat owners with local vets and improve their care and welfare.

Challenges to effective cat management

The main challenges of cat management identified by this LGA:

- The limitations of the current legislation to regulate roaming cats and enforce cat containment
- Reliance on behaviour change programs which are costly and resource intensive and beyond the current resources of council to implement
- Current CAWS program massively oversubscribed every year, so unwanted breeding still occurring
- Proportion of cat owners will not take responsibility for their cat's behaviour.

Future intentions

Identified future cat management intentions:

- Gaining an understanding of cat owners' attitudes and knowledge to develop targeted behavioural change strategies (e.g., use of local champions and passionate experts to deliver messages)
- Inter-agency coordination with cat management programs
- Strengthening current legislation
- Increasing awareness of roaming cat impacts
- Increasing practical knowledge of planning approval and costs of cat containment
- Increasing microchipping and de-sexing.

Stakeholder Interview Results

Involvement in cat management

A range of stakeholders from the Blue Mountains LGA were interviewed. Their roles and activities related to cat management:

- **RSPCA:** rehome cats and currently runs the pound for Blue Mountains Council
- **Blue Mountains World Heritage Institute:** monitors the presence and movement of fauna (including cats) along the urban-bushland interface.
- **Katoomba Vet Hospital:** 30% of practice is cats. Works with rescue organisations and has the council contract, via RSPCA shelter.
- **Blue Mountains Conservation Society:** Concerned about the impact of cats on wildlife.
- **Blue Mountains Bird Observers Inc.:** Not specifically involved in management of domestic cats. Some members care for injured birds.
- **Greater Sydney Local Land Services:** Not directly involved in the domestic cat management but support a fox trapping program which can trap cats.
- **Cat owning member of the public:** Feels all cat owners should take responsibility for their own animals and their behaviour.

What stakeholders' thought was working well

Stakeholders were asked what was working well for cat management in their local LGA. The main factors identified by the stakeholders:

- Shift in social norms / pressure around cat management over the last several years
- Good understanding by most owners that cats should be kept at home
- Having the RSPCA shelter
- Most cats arriving at the pound now are microchipped.

Challenges to effective cat management

The main challenges to effective cat management identified by the stakeholders:

- The population of cat owners that are used to allowing their cats to roam
- Proximity of residential areas to large tracts of bushland, so high risk of impact on a range of native wildlife
- Education of cat owners on what to do if cat brings home wildlife
- Many people live close to the bush and away from busy roads so perceive few risks for the cats
- Separation of domestic cats and feral / unowned cats – is some overlap but there are distinctly different problems and solutions for each category
- Different and strong vocal opinions, not always factual.

Cat management vision

Aim of cat management

Stakeholders were asked what the aim of cat management should be in their LGA. There was consensus among the stakeholders that the main aims should be to make sure as many cat owners as possible are being more responsible and increase adoption of cat containment.

Required information and actions

Stakeholders were asked what information and actions are required to manage cats more effectively in their local LGA. Their responses:

- Information to hand out to adopters when they take their cats home, with tips and options for containment that don't cost a lot of money
- Education material about responsible cat ownership and reduction of cat impacts on wildlife specifically targeting Blue Mountains context which can be distributed through social media and local vets and pet shops
- Businesses could be acknowledged if they support responsible pet ownership practices i.e., sticker/label on doorway
- Demonstration of cat enclosures
- Doling out consequences for negligent cat owners
- A liaison person in council who specifically handles cat management issues
- Subsidising cat runs for a determined period of time
- Cat tracker program would be able to identify local ,movements of cats and be good media opportunity.

How to deal with conflict

Stakeholders were asked about the best ways to deal with conflicts that arise around cat management in their communities. Their suggestions:

- Council liaison who can help mediate with cat concerns between neighbours
- Increase in education and significant consultation to provide consensus solutions
- Evidence of cat impacts - camera trap photos, honest owner reports / survey
- Consequences for cat owners who allow do not follow the rules.

Key Findings (Interviews)

How domestic cat management is being handled is influenced by the capacity and motivation of both the Council and the community. The main benefits of current programs and challenges for the Blue Mountains LGA are summarised below.

- This LGA has seen shift in cat owners' understanding and adoption of responsible domestic cat management, however there is still a small proportion who still do take responsibility for their cat's behaviour. Current resources of Council do not allow for the development of more targeted behavioural change strategies which are required.
- The subsidised de-sexing program provides a positive connection between cat owners and local vets, but it needs to increase its coverage to increase its effectiveness.
- Current legislation limits ability to regulate roaming cats and enforce cat containment. They would like to see the strengthening of current legislation, as well as an increase in inter-agency coordination with free-roaming cat management programs.

Phone survey

Respondent demographics

Blue Mountains City Council was one of the LGAs to be targeted with the phone survey. Two hundred and nine responses were collected. Most of respondents (69%) were female the remaining 31% were male. The average age of respondents was 57.7 years.

When asked to describe their locality, 154 (74%) indicated they lived in a town or suburb, 50 (24%) as semi-rural, three (1%) as rural and one in a city. Most of the respondents (n=198, 95%) lived in a house with a medium to large outdoor space (yard). Four (2%) lived in a house with only a small outside space (courtyard or small garden). Four (2%) lived in a semi-detached house or townhouse with a garden and two (1%) lived in a semi-detached house or townhouse with only a small outside space (courtyard or small garden). Most of the respondents indicated they owned their dwelling (n=194, 93%), 13 were renting (6%) and two (1%) had 'other' arrangements. One respondent declined to answer any of these questions.

Adoption of responsible cat ownership behaviours

Just over half of respondents (n=114, 55%) had one cat in their household, 74 (35%) owned two cats, twelve (6%) owned three cats, four (2%) owned four cats and the remaining four (2%) indicated they owned more than four cats. One of these respondents reported having eleven cats in their household.

De-sexing rates were high with 206 (99%) respondents reporting their cats were de-sexed. Microchipping rates were a little lower at 91% (n=190), with four respondents unsure. Registration with the local council was lower again at 74% (n=154), although 21 (10%) of owners were unsure if their cats were registered.

Keeping cats indoors at night but letting them roam freely during the day was the most common cat living arrangement (n=79, 38%). The next most popular arrangement was keeping cats indoors all the time (n=64, 31%). Forty-four respondents (21%) allowed their cat indoors and restricted their outdoor access (e.g. in an escape-proof yard / run, or on a lead), and twenty (10%) let their cat indoors and allowed them to roam free when outside. Only one respondent had a cat that lived outside all the time.

Of the respondents who allowed their cats to roam freely outside (n=100), 93 (93%) indicated that their cat would be likely to some extent be roaming freely in the morning (6am-noon), 97 (97%) indicated that their cat would be likely to some extent be roaming freely in the afternoon (noon-6pm), 38 (38%) indicated that their cat would be likely to some extent be roaming freely in the evening (6pm-midnight), while 21 (21%) indicated that their cat would be likely to some extent be roaming freely from midnight to dawn.

The respondents who allowed their cats to roam freely outside were asked about their future intentions of preventing their cats from roaming freely. Results are presented in Figure BM1. In the future respondents were more likely to prevent their cat from roaming more often than they do currently (mean 1.3 where 1= extremely unlikely and 5= extremely likely) than to prevent it roaming freely all the time (mean 1.2) or install a fence or enclosure (mean 1.1).

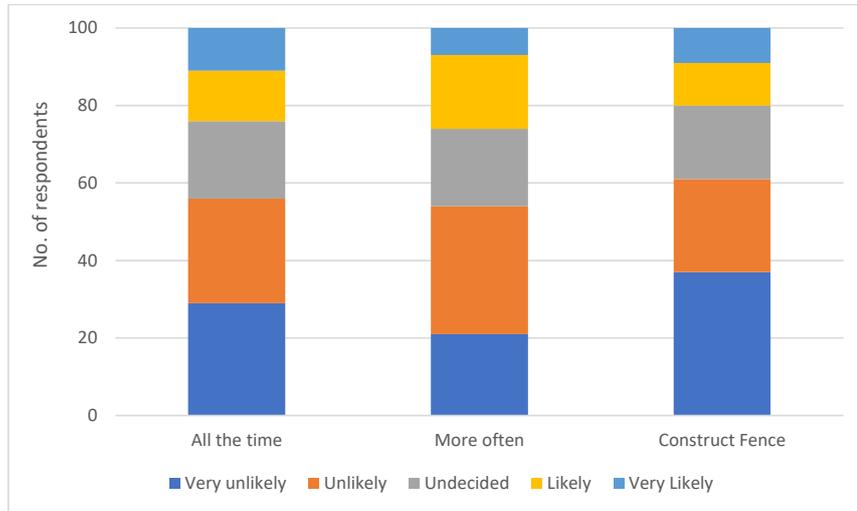


Figure BM1. Likelihood of preventing free roaming of cats in the future across Blue Mountains LGA.

Drivers and barriers to cat containment

Respondents were given the opportunity in an open-ended format to list at least three factors they have considered when deciding whether to allow their cat to roam freely or not. At least one factor was listed by 207 (99%) of respondents. The main factors listed by the respondents when preventing their cat from roaming freely are shown in Figure BM2. Protecting wildlife, including small mammals, birds, and reptiles, was the most popular response. General safety, avoiding fighting with other cats and preventing traffic accidents were the next popular.

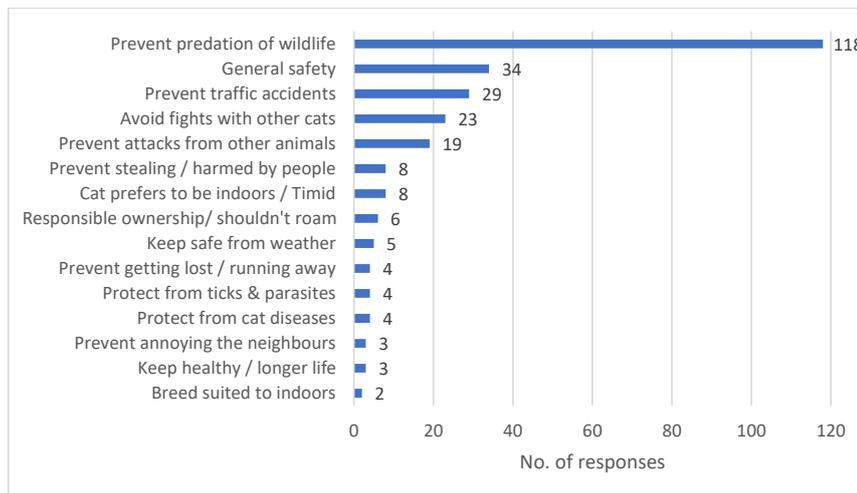


Figure BM2. Main factors considered by respondents when preventing their cat from roaming freely.

The listed factors considered by respondents when deciding to allow their cat to roam freely are shown in Figure BM3. The perception that their cat doesn't roam very far from their property was the top consideration.

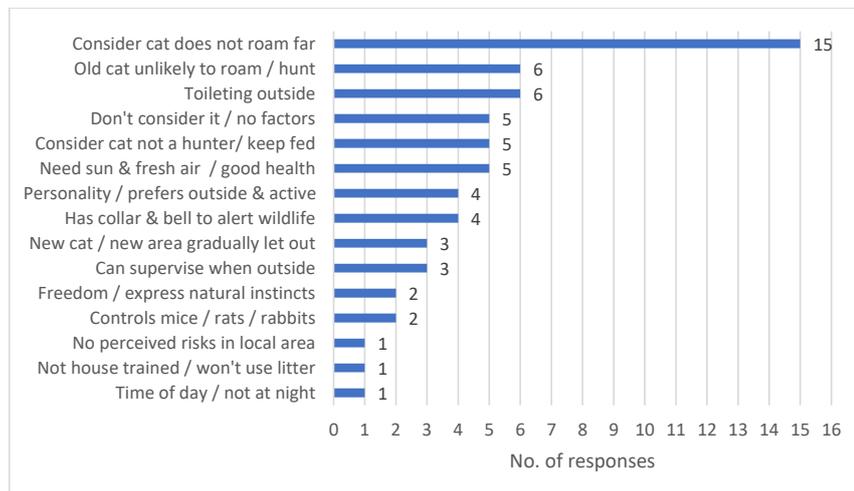


Figure BM3. Main factors considered by respondents when deciding to allow their cat to roam freely.

After listing their own considerations, respondents were then asked to rate their agreement with 14 statements pertaining to previously identified drivers of and barriers to preventing cats from roaming freely (See Q5 in Appendix 4). The average ratings are summarised in Figure BM4.

Most respondents were confident they could prevent their cat from roaming if they wished to, and they could provide everything to ensure their cat was happy. Most respondents disagreed that their current living circumstances made it difficult to prevent their cat from roaming. There were no statistical differences in this agreement rating and respondent's type of dwelling ($F=2.06, p=0.09$), locality ($F=0.39, p=0.82$) or own / rent situation ($F=0.01, p=0.99$).

Wildlife protection and keeping cats safe were strongest drivers of cat containment. This corresponds with the results from the open-ended question (Figure BM2). On average respondents disagreed that cats should be free to roam, however there were statistical differences ($F=11.46, p<0.001$) between those owners who currently restrict their cat's movements (Inside all the time 1.48, Inside & restricted outside 1.55), practice a night curfew (2.19) or let their cats roam freely (Free outside all the time 3.00, Inside & free outside 3.00).

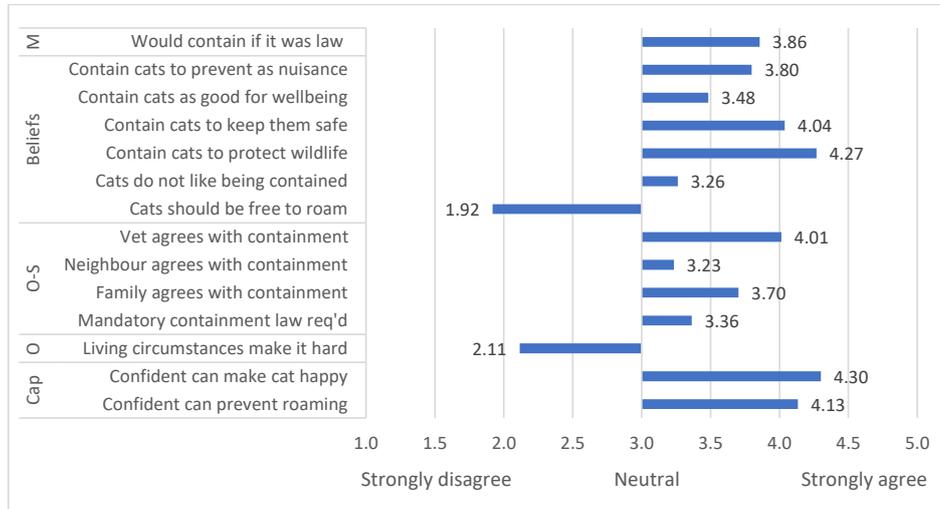


Figure BM4. Mean agreement scores to the 14 driver and barrier statements (Cap=Individual capability factors, O=Physical opportunity factor, O-S=Social opportunity factors, Beliefs=Internal motivational factors, M=External motivational factor).

Online survey

Respondent demographics

- 683 respondents completed the online survey – 376 (55%) were cat owners and 307 (45%) did not own a cat.
- Most cat owners were female (300, 80%), with 50 males (13%). Four cat owners identified as non-binary, and 22 did not answer this question.
- Most non-cat owners were also female (213, 69%), with 81 males (26%), two non-binary and 11 non-responses.
- The overall average age was 50.4 years (±13.6). The average age for cat owners was younger – 48.3 years (±12.8), and non-cat owners was older – 52.9 years (±14.1).

Cat ownership behaviours

The majority of respondents (n=174, 47%) had one cat in their household, 132 (35%) owned two cats, 42 (11%) owned three cats and eight (2%) owned four cats. The remaining 4% owned five cats or more, with the largest number reported eleven.

Keeping cats indoors all the time was the most common cat living arrangement (n=141, 38%). The next most popular arrangement was keeping cats indoors at night but letting them roam freely during the day (n=104, 28%). One hundred and two respondents (27%) allowed their cat indoors and restricted their outdoor access (e.g. in an escape-proof yard / run, or on a lead), and twenty-nine (8%) let their cat indoors and allowed them to roam free when outside. No respondents reported that their cat lived outside all the time.

Feeding of free roaming cats

Sixteen cat owners (4%) and fifteen non-cat owners (5%) indicated they had cared for unowned free-roaming cats.

Drivers and barriers to cat containment

Cat owners were given the opportunity in an open-ended format to list the factors they have considered when deciding whether to allow their cat to roam freely or not. At least one factor was listed by 346 (92%) of cat owners. The main factors listed by the respondents when preventing their cat from roaming freely are shown in Figure BM5. Protecting wildlife, including small mammals, birds, and reptiles, was the most popular response. General safety, preventing traffic accidents, and preventing attacks from other animals, mainly dogs, foxes, snakes, and possums were the next popular.

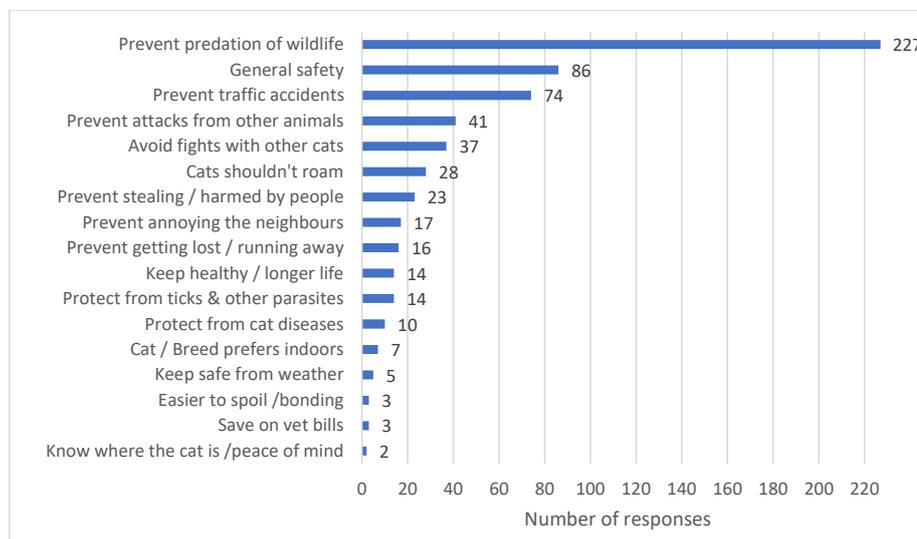


Figure BM5. Main factors considered by cat owners when preventing their cat from roaming freely.

The listed factors considered by cat owners when deciding to allow their cat to roam freely are shown in Figure BM6. The top response was the time of day – cats should be prevented from roaming at night, but it was OK during the day. The next popular responses were the perception that their cat doesn't roam very far from their property and that cats needed to roam to be happy.

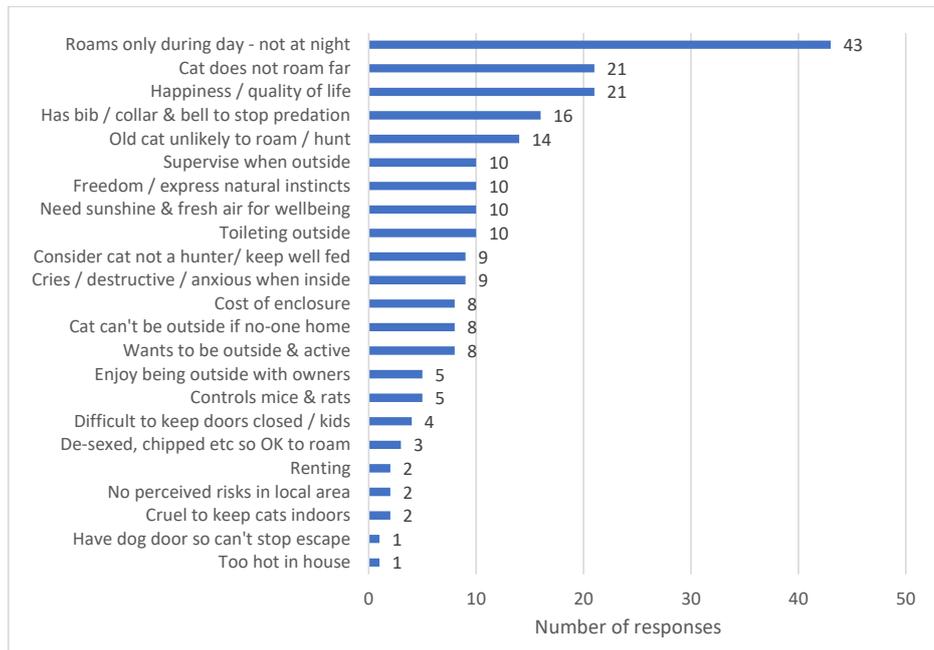


Figure BM6. Main factors considered by cat owners when deciding to allow their cat to roam freely.

After listing their own considerations, cat owners were then asked to rate their agreement with 15 statements pertaining to previously identified drivers of and barriers to preventing cats from roaming freely (See Q7 in Appendix 5). The average ratings are summarised in Figure BM7.

Online respondents were not as confident they could prevent their cat from roaming if they wished to, and they could provide everything to ensure their cat was happy as the telephone survey respondents. Most respondents disagreed that their current living circumstances made it difficult to prevent their cat from roaming. There were no statistical differences in this agreement rating and respondent's type of dwelling ($F=0.63, p=0.64$), however there was with the own / rent situation ($F=9.91, p=0.003$). Respondents who owned their dwelling disagreed with this statement more strongly (2.14) than those respondents who rented (2.78).

Protecting wildlife was the strongest driver of cat containment. This corresponds with the results from the open-ended question (Figure BM5). On average respondents disagreed that cats should be free to roam, however there were statistical differences ($F=50.82, p<0.001$) between those owners who currently restrict their cat's movements (Inside all the time 1.41, Inside & restricted outside 1.44), practice a night curfew (2.62) or let their cats roam freely (Inside & free outside 3.10).

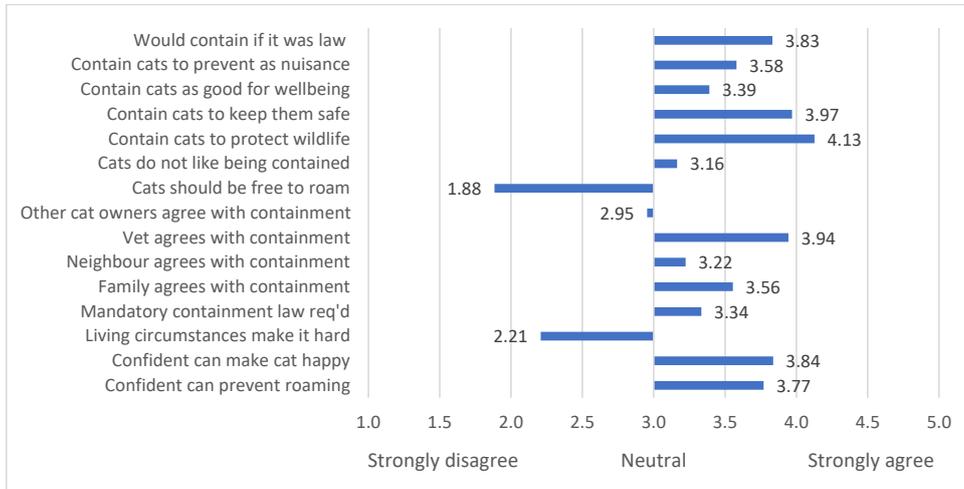


Figure BM7. Mean cat owner agreement scores to the 15 driver and barrier statements.

Those respondents who did not own cats were also to rate their agreement with 10 statements pertaining to previously identified drivers of and barriers to preventing cats from roaming freely. The average ratings are shown in Figure BM8. There were statistical differences between the ratings of cat owners and non-owners for eight of the ten shared statements. Those respondents who do not own cats were more likely to agree that cats should be prevented from roaming to protect wildlife ($F=38.13, p < 0.001$), prevent them being a nuisance ($F=64.16, p < 0.001$) and to improve the cat's well-being ($F=3.84, p=0.05$). They were less likely to agree that cats should be free to roam ($F=65.07, p < 0.001$) and cats did not like to be contained ($F=11.65, p < 0.001$). These respondents also were more likely to agree that their family ($F=64.87, p < 0.001$) and vets ($F=13.80, p < 0.001$) agreed with cat containment, and that the laws should be changed ($F=140.55, p < 0.001$).

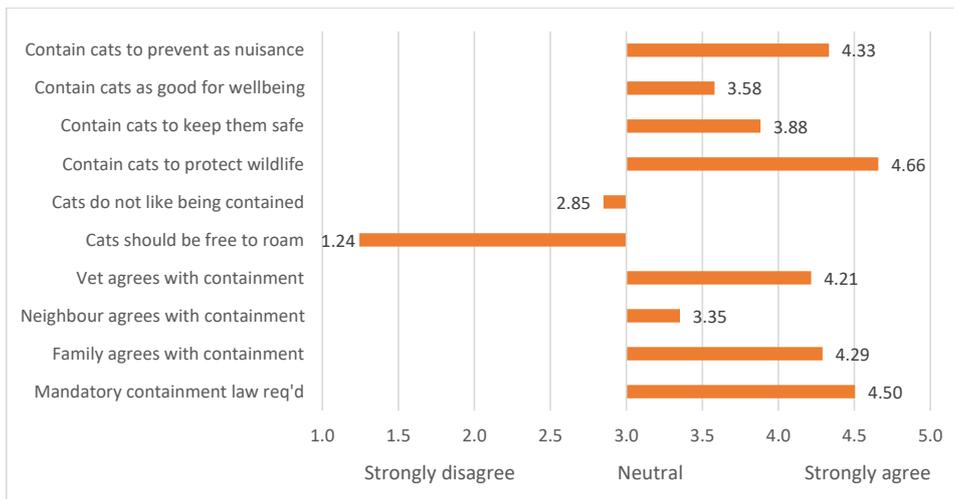


Figure BM8. Mean non-cat owner agreement scores to ten driver and barrier statements.

Key Findings (Surveys)

The adoption of responsible cat ownership behaviours across the Blue Mountains LGA is influenced by the capacity and motivation of the cat owners. Current cat owner management behaviours and identified driver and barrier factors from the public consultation are summarised below.

- Reported de-sexing rates were high but microchipping and particularly registration of cats could be improved.
- There is some support for full containment (between 31-37% adoption of indoors all the time and 21-27% restricted outdoor access). Also support for night curfews (between 28-38% adoption) with approximately 8-10% of cat owners currently allowing their cats to roam freely most of the time.
- A small number of cat owners had more than three cats in their household.
- There is a small number of residents who care for stray and unowned cats.
- Main drivers for containment were to reduce wildlife predation and keep the cat safe.
- Strong barriers to full containment were owners' perceptions of wildlife predation risks at night versus those at day and beliefs about the needs and behaviours of their cats.
- Vets were seen as important influencers for containment adoption.
- There was only weak agreement by cat owners that the introduction of cat containment legislation would motivate their compliance. Those residents that do not own cats strongly agreed with this legislation change.

Byron Shire Council Council Interview Results

Baseline cat data

The Byron Shire Council reported they had:

- 29770 registered cats
- 31030 microchipped cats
- 12826 de-sexed cats.

Current cat management initiatives

Byron Shire Council undertakes a range of cat management initiatives. They currently limit the number of cats that could be kept per household – the Council's Local Order for the Keeping of Animals Policy states that more than two cats will not be appropriate in many situations.

This LGA also reported a night curfew policy. The Local Order for the Keeping of Animals Policy states that owners should keep their cats inside the dwelling and/or an enclosure from dusk until dawn.

The NSW Companion Animals Act 1998 allows Councils to declare Wildlife Protection Areas (WPAs). Byron Shire Council have declared three WPAs which contain public areas where cats (controlled or not) are prohibited. In addition, some estates, and new developments within this LGA have restrictive covenants, where the keeping of cats on private properties is prohibited.

The Council in partnership with Animal Farewell League, offer a subsidised de-sexing program.

Currently Byron Shire Council is an active partner in their Regional Cat Management Plan, working with the North Coast Local Land Services and other stakeholders in a range of feral cat management programs.

Compliance monitoring

As part of compliance monitoring this LGA cross-checks entries in the Companion Animal Register to access information regarding those cats not registered and / or de-sexed. Owners are contacted, advising them of the Council's requirements. If ignored penalty infringement notices are then issued. Compliance is also monitored when individual cats are either brought to their attention and / or impounded. The curfew / containment requirements are not monitored or enforced. Byron Shire does not directly monitor the WPA's however they do respond to complaints of cats within these areas when received from the public.

Information

The Byron Shire Council provides information on responsible cat ownership on their webpage and through media releases. They also conduct local school education program.

Nuisance cats

Nuisance cat complaints are investigated by the Animal Enforcement Officer, and identified owners are approached in a positive manner, providing education and encouragement to act in a more responsible manner. If the owner is unwilling, Nuisance Cat & penalty infringement notices may be issued.

Stray and feral cats

Byron LGA is currently working with the North Coast Local Land Services (the NSW Government agency in charge of implementing the regional Pest Animal Management Plan – developed under the NSW *Biosecurity Act 2015*). Stray and feral cat populations are targeted by trapping programs conducted by an outside company, Biodiversity Australia. Trapped cats taken to the animal pound and if identified as feral, transported to local vets to be euthanised.

What the Council thought was working well

When asked what is working well with their current cat management initiatives Byron replied that “nothing was working exceptionally well”. This lack in a positive response highlights the problems this LGA is currently facing with cat management, and how this project - Keeping Cats Safe at Home - will be able to assist by increasing their capacity to improve their cat management outcomes.

Challenges to effective cat management

The main challenges of cat management identified by this LGA:

- Lack of effective powers of the current NSW legislation particularly around containment
- The Council’s lack of enforcement staff.

Future intentions

Identified future cat management intentions:

- Monitoring movements of cats at night
- Restriction of cats in some areas
- Owner education and behaviour change.

Stakeholder Interview Results

Involvement in cat management

A range of stakeholders from the Byron LGA were interviewed. Their roles and activities related to cat management:

- **Mullumbimby Vet Clinic:** vaccinate, microchip, de-sex and look after unwell cats. Offer local cat welfare groups an Animal Welfare League shelter discounted de-sexing & vaccinations for their surrendered felines.
- **Lennox Head Vet, Byron Bay Wildlife Hospital:** Small animal GP, advise RPO practices to clients, wildlife vet at Byron Bay Wildlife Hospital.
- **Bangalow Vets:** Provide care for illnesses/injury and preventative treatment.
- **North Coast Branch of Animal Welfare League:** Cat and kitten adoption. Run a de-sexing assistance scheme, discounted microchipping days and operate a Cat Adoption Centre in Mullumbimby.
- **Pets for Life:** Provide cats for adoption.
- **Friends of the Koala:** Not directly involved with cat management.
- **Brunswick Valley Landcare:** Not directly involved with cat management but work around conservation and habitat for wildlife.

What stakeholders' thought was working well

Stakeholders were asked what was working well for cat management in their local LGA. The main factors identified by the stakeholders:

- The current subsidised de-sexing program (with Animal Farewell League) and free pet registration
- Provision of better information about responsible cat management to adopters of cats and kittens
- Although not best solution, Council giving free cat bibs to cat owners raises awareness.

Challenges to effective cat management

The main challenges to effective cat management identified by the stakeholders:

- The perception that cats are a low-cost pet
- People can't afford to de-sex cats resulting in unwanted kittens being dumped or surrendered
- Hoarders and abundance of stray / feral cats
- Reluctance / disagreement with cat containment practices
- Large number of older houses lacking in insect screens or other barriers to prevent cats getting outside
- Most owners believe their cat doesn't kill wildlife.

Cat management vision

Aim of cat management

Stakeholders were asked what the aim of cat management should be in their LGA. There was consensus among the stakeholders that the main aim should be to encourage cat owners to be responsible – that is to de-sex and keep cats contained in house and enclosures at least at night but preferably during day as well.

Required information and actions

Stakeholders were asked what information and actions are required to manage cats more effectively in their local LGA. Their responses:

- Positive message framing outlining the benefits to cats and cat owners of keeping cats at home and assistance with strategies and options for renters to be able to attach temporary structures without damaging the property.
- Show the public examples of how containment (cat enclosures) can work.
- Advice from cat specialists
- GPS tracking of pet cats to demonstrate where they go.
- More de-sexing and education campaigns.
- Subsidised de-sexing for people of modest means/ pensioners.
- Enforcement of Companion Animal Regulations to do with microchipping and registration.
- New legislation to enforce cat containment.

How to deal with conflict

Stakeholders were asked about the best ways to deal with conflicts that arise around cat management in their communities. Their suggestions:

- Have an honest and informed discussion about why it is necessary to reduce cat impacts on native animal populations.
- Don't just tell people what they should do.
- Frame messaging around keeping cats safe.
- Council and organisations working together, hopefully having new legislation to support them.

Key Findings (Interviews)

How domestic cat management is being handled is influenced by the capacity and motivation of both the Council and the community. The main benefits of current programs and challenges for the Byron Shire LGA are summarised below.

- Subsidised de-sexing program run in conjunction with the Animal Farewell League and free pet registration have been beneficial. This needs to be boosted as still many owners can't afford to de-sex cats.
- There is a need to provide better information about responsible cat management, along with effective behaviour change strategies.
- Hoarders and effective rehoming of surrendered animals need addressing.
- Continued cooperation with other agencies on addressing the populations of stray and feral cats.
- There is a reluctance and disagreement about cat containment practices. Strengthening the current legislation would add clarity.
- Staffing issues within Councils needs to be addressed.

Phone survey

Respondent demographics

Byron Shire was one of the LGAs to be targeted with the phone survey. Thirty-eight responses were collected. Nearly three-quarters of respondents (71%) were female the remaining 29% were male. The average age of respondents was 58 years.

When asked to describe their locality, 25 (66%) indicated they lived in a town, four (11%) as semi-rural, and nine (24%) as rural. Most of the respondents (n=34, 89%) lived in a house with a medium to large outdoor space (yard). Two (5%) lived in a house with only a small outside space (courtyard or small garden). One (3%) lived in a semi-detached house or townhouse with only a small outside space (courtyard or small garden), and one (3%) lived in a flat or unit with some outside space (patio or balcony). Most of the respondents indicated they owned their dwelling (n=35, 92%) and three were renting (8%).

Adoption of responsible cat ownership behaviours

The majority of respondents (n=32, 84%) had one cat in their household, five (13%) owned two cats, and one owned three cats.

De-sexing rates were high with all respondents reporting their cats were de-sexed. Microchipping rates were lower at 87%, with one respondent unsure. Registration with the local council was lower again at 61%, although seven (18%) of owners were unsure if their cats were registered.

Keeping cats indoors at night but letting them roam freely during the day was the most common cat living arrangement (n=13, 34%). The next most popular arrangement was keeping cats indoors all the time (n=10, 26%). Seven respondents (18%) allowed their cat indoors and restricted their outdoor access (e.g. in an escape-proof yard / run, or on a lead), and seven (18%) let their cat indoors and allowed them to roam free when outside. Only one respondent had a cat that lived outside all the time.

Of the respondents who allowed their cats to roam freely outside (n=21), 19 (90%) indicated that their cat would be likely to some extent be roaming freely in the morning (6am-noon), 18 (86%) indicated that their cat would be likely to some extent be roaming freely in the afternoon (noon-6pm), 12 (57%) indicated that their cat would be likely to some extent be roaming freely in the evening (6pm-midnight), while nine (43%) indicated that their cat would be likely to some extent be roaming freely from midnight to dawn.

The respondents who allowed their cats to roam freely outside were asked about their future intentions of preventing their cats from roaming freely. Results are presented in Figure B1. In the future respondents were more likely to prevent their cat from roaming more often than they do currently (mean 1.4 where 1= extremely unlikely and 5= extremely likely) than to prevent it roaming freely all the time (mean 1.3) or install a fence or enclosure (mean 1.0).

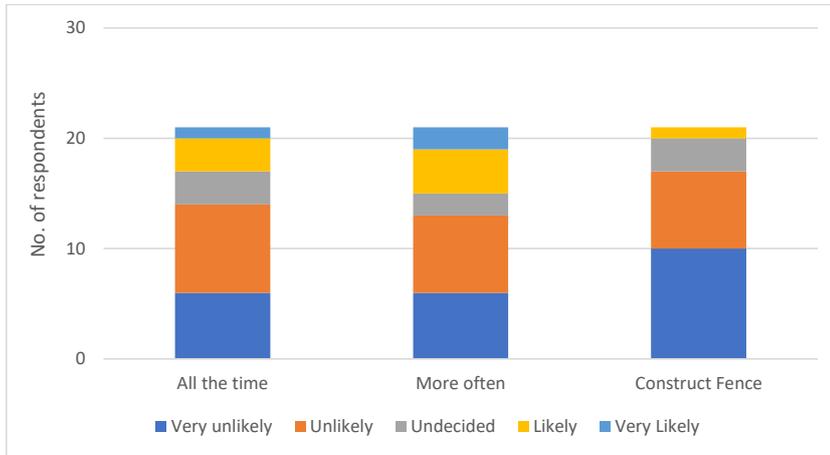


Figure B1. Likelihood of preventing free roaming of cats in the future across Byron LGA.

Drivers and barriers to cat containment

Respondents were given the opportunity in an open-ended format to list at least three factors they have considered when deciding whether to allow their cat to roam freely or not. All respondents listed at least one factor. The main factors listed by the respondents when preventing their cat from roaming freely are shown in Figure B2. Protecting wildlife, including small mammals, birds, and reptiles, was the most popular response. Avoiding fighting with other cats and preventing traffic accidents were the next common responses.

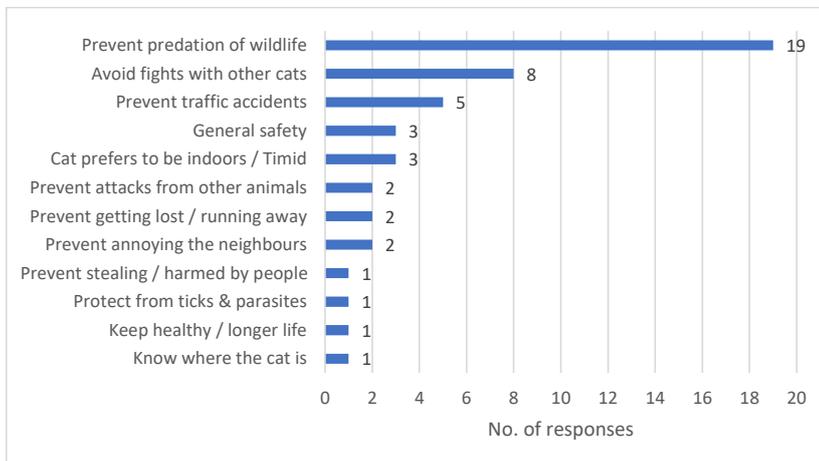


Figure B2. Main factors considered by respondents when preventing their cat from roaming freely.

The listed factors considered by respondents when deciding to allow their cat to roam freely are shown in Figure B3. The consideration that their cat doesn't roam very far from their property and whether the cat was new the area were the top two responses.

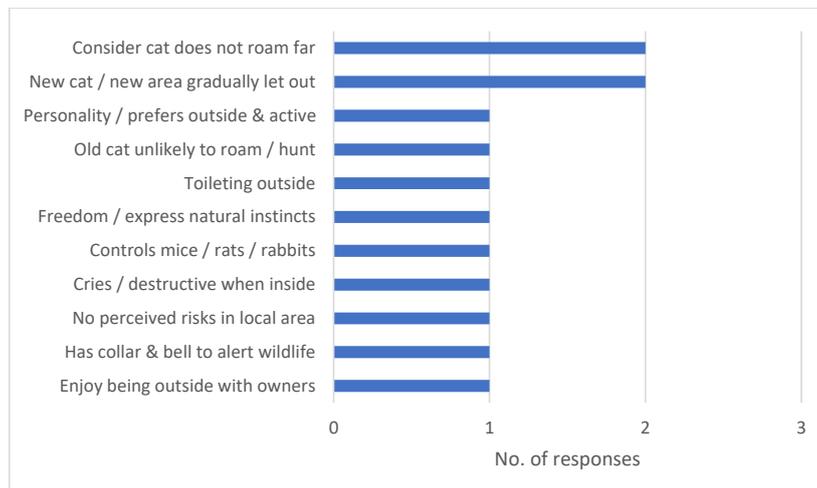


Figure B3. Main factors considered by respondents when deciding to allow their cat to roam freely.

After listing their own considerations, respondents were then asked to rate their agreement with 14 statements pertaining to previously identified drivers of and barriers to preventing cats from roaming freely (See Q5 in Appendix 4). The average ratings are summarised in Figure B4.

Most respondents were confident they could prevent their cat from roaming if they wished to, and they could provide everything to ensure their cat was happy. Most respondents disagreed that their current living circumstances made it difficult to prevent their cat from roaming. There were no statistical differences in this agreement rating and respondent's type of dwelling ($F=1.28, p=0.30$), locality ($F=0.46, p=0.64$) or own / rent situation ($F=0.23, p=0.64$).

Wildlife protection and keeping cats safe were strongest drivers of cat containment. This corresponds with the results from the open-ended question (Figure B2). On average respondents disagreed that cats should be free to roam, however there were differences between those owners who currently restrict their cat's movements (Inside all the time 1.50, Inside & restricted outside 1.57), practice a night curfew (1.87) or let their cats roam freely (Free outside all the time 4.00, Inside & free outside 2.71). Owing to the small, unequal sample sizes these differences could not be statistically compared.

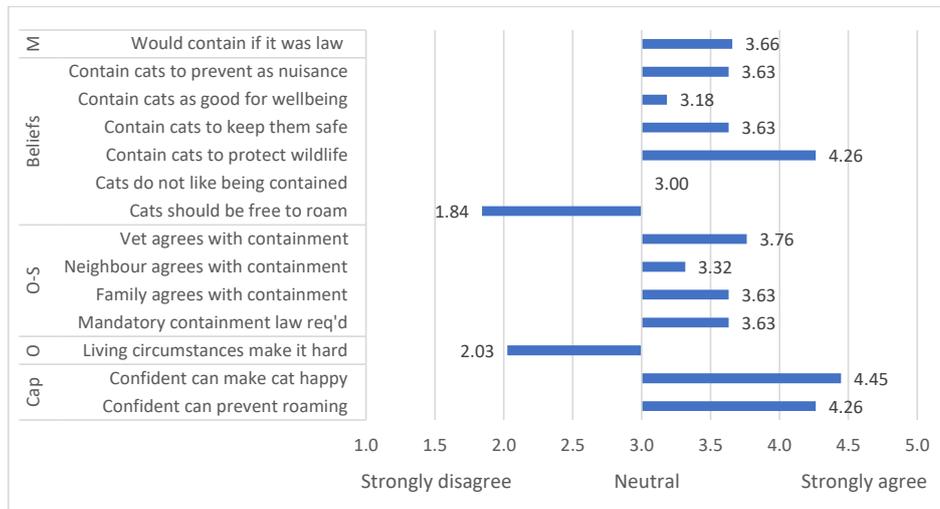


Figure B4. Mean agreement scores to the 14 driver and barrier statements (Cap=Individual capability factors, O=Physical opportunity factor, O-S=Social opportunity factors, Beliefs=Internal motivational factors, M=External motivational factor).

Online survey

Respondent demographics

- 281 respondents completed the online survey – 69 (25%) were cat owners and 212 (75%) did not own a cat.
- Most cat owners were female (60, 87%), with six males (9%). One cat owner identified as non-binary, and two did not answer this question.
- Most non-cat owners were also female (124, 58%), with 75 males (35%) and 13 non-responses.
- The overall average age was 58.5 years (± 12.7). The average age for cat owners was younger – 51.7 years (± 12.9), and non-cat owners was slightly older – 60.9 years (± 11.7).

Cat ownership behaviours

The majority of respondents (n=42, 62%) had one cat in their household, 23 (34%) owned two cats, and one each owned three, four and five cats respectively.

Keeping cats indoors at night but letting them roam freely during the day was the most common cat living arrangement (n=32, 47%). The next most popular arrangements were allowing cats indoors and restricting their outdoor access (n=16, 24%) and keeping cats indoors all the time (n=14, 21%). Six respondents (9%) let their cat indoors and allowed them to roam free when outside. No respondents had a cat that lived outside all the time.

Feeding of free roaming cats

Respondents were asked if they cared for any free-roaming cats that were not their own. Six respondents indicated they did care for unowned free-roaming cats - three cat owners (4%) and three non-cat owners (1%).

Drivers and barriers to cat containment

Cat owners were given the opportunity in an open-ended format to list the factors they have considered when deciding whether to allow their cat to roam freely or not. At least one factor was listed by 61 (88%) of cat owners. The main factors listed by the respondents when preventing their cat from roaming freely are shown in Figure B5. Protecting wildlife, including small mammals, birds, and reptiles, was the most popular response. General cat safety, preventing attacks from other animals, mainly dogs and snakes, were the next popular.

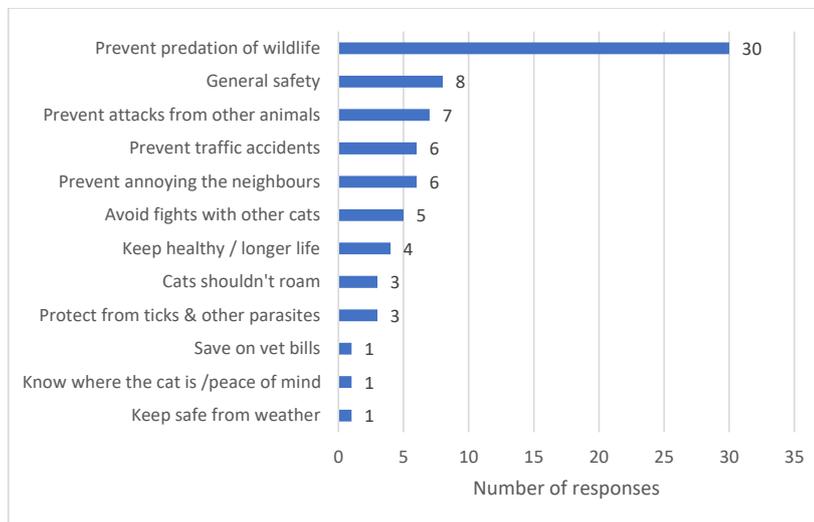


Figure B5. Main factors considered by cat owners when preventing their cat from roaming freely.

The listed factors considered by cat owners when deciding to allow their cat to roam freely are shown in Figure B6. The top response was the time of day – cats should be prevented from roaming at night it was OK during the day. The next popular response was the owners’ perception that their cat doesn’t roam very far from their property.

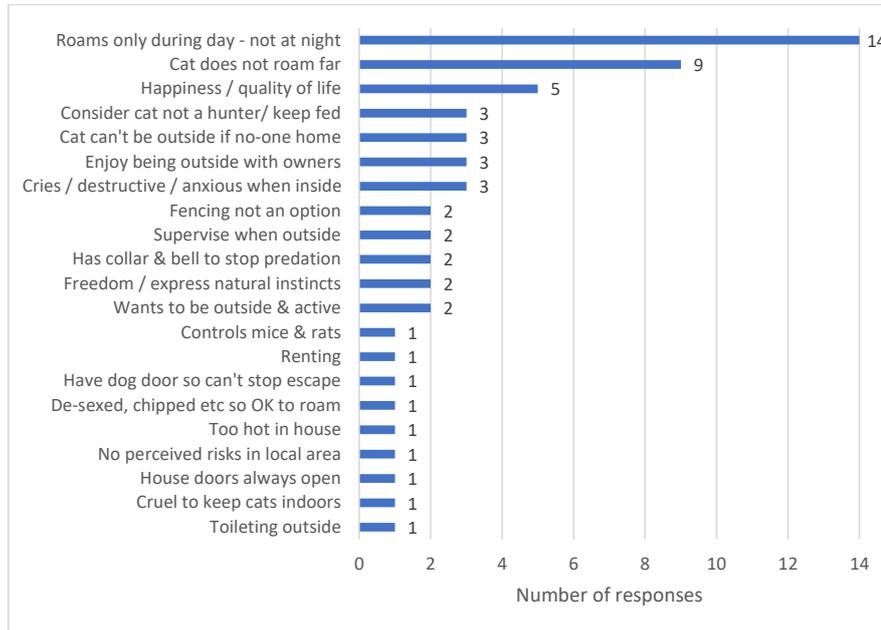


Figure B6. Main factors considered by cat owners when deciding to allow their cat to roam freely.

After listing their own considerations, cat owners were then asked to rate their agreement with 15 statements pertaining to previously identified drivers of and barriers to preventing cats from roaming freely (See Q7 in Appendix 5). The average ratings are summarised in Figure B7.

Online respondents were not as confident they could prevent their cat from roaming if they wished to, or they could provide everything to ensure their cat was happy as the phone survey respondents. Most respondents disagreed that their current living circumstances made it difficult to prevent their cat from roaming. There were no statistical differences in this agreement rating and respondent's type of dwelling ($F=1.24, p=0.30$) or own / rent situation ($F=0.78, p=0.46$).

Protecting wildlife was the strongest driver of cat containment. This corresponds with the results from the open-ended question (Figure B5). On average respondents disagreed that cats should be free to roam, however there were statistical differences ($F=6.37, p<0.001$) between those owners who currently restrict their cat's movements (Inside all the time 1.36, Inside & restricted outside 1.56), practice a night curfew (2.06) or let their cats roam freely (Inside & free outside 3.00).

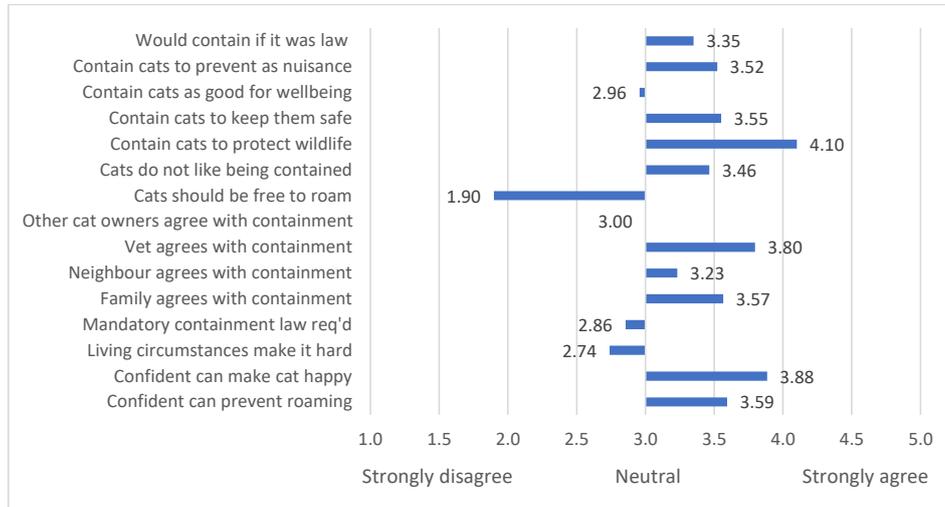


Figure B7. Mean agreement scores to the 15 driver and barrier statements.

Those respondents who did not own cats were also to rate their agreement with 10 statements pertaining to previously identified drivers of and barriers to preventing cats from roaming freely. The average ratings are shown in Figure B8. There were statistical differences between the ratings of cat owners and non-owners for seven of the ten shared statements. Those respondents who do not own cats were more likely to agree that cats should be prevented from roaming to prevent them being a nuisance ($F=14.48, p < 0.001$) and to improve the cat's well-being ($F=5.00, p=0.03$). They were less likely to agree that cats should be free to roam ($F=38.09, p < 0.001$) and that cats do not like to be contained ($F=4.88, p=0.03$). These respondents were more likely to agree that their family ($F=26.59, p < 0.001$) and neighbours ($F=6.08, p=0.01$) supported cat containment, and laws should be changed ($F=98.49, p < 0.001$).

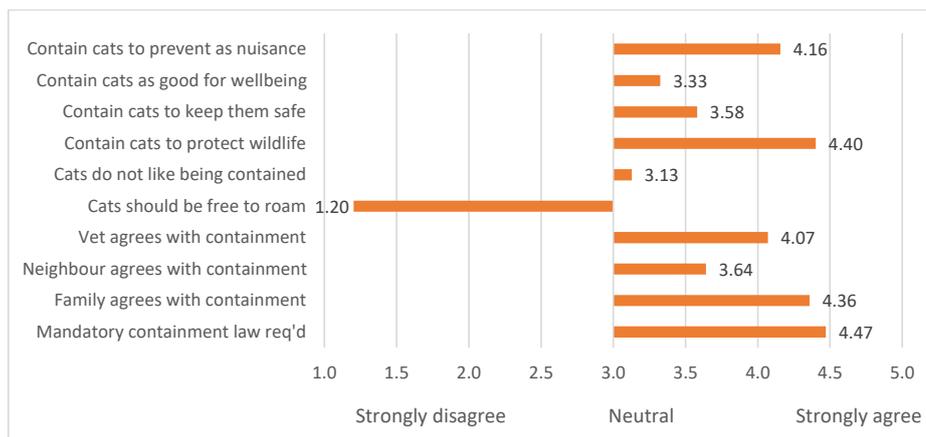


Figure B8. Mean non-cat owner agreement scores to ten driver and barrier statements

Key Findings (Surveys)

The adoption of responsible cat ownership behaviours across the Byron LGA is influenced by the capacity and motivation of the cat owners. Current cat owner management behaviours and identified driver and barrier factors from the public consultation are summarised below.

- Reported de-sexing rates were relatively high but microchipping and registration of cats need to be improved.
- There is some support for night curfews (between 34-47% adoption), however support for full containment is lower (between 21-26% adoption of indoors all the time and 18-24% restricted outdoor access) and needs to be encouraged. Around 9-18% of cat owners pose no restrictions on their cats' movements.
- There is a small number of residents who care for stray and unowned cats.
- Main drivers for containment were to reduce wildlife predation and keep the cat safe.
- Strong barriers to full containment were owners' perceptions of the wildlife predation risks at night versus those at day and beliefs about the behaviour and needs of their cats.
- Family members and vets were seen as potential important influencers for containment adoption.
- There was weak agreement by cat owners that cat containment legislation was needed. If introduced cat owners only moderately agreed that it would motivate their compliance. Those residents that do not own cats strongly agreed with the legislation change.

Campbelltown City Council

Council Interview Results

Baseline cat data

The Campbelltown City Council reported they had:

- 990 microchipped cats from July 2020 to June 2021

The number of registered cats and de-sexed cats were unknown.

Current cat management initiatives

Campbelltown City Council undertakes a range of cat management initiatives. They offer subsidised de-sexing and microchipping programs, and strongly recommend cat containment as part of 'responsible cat ownership'. This LGA currently has no declared Wildlife Protection Areas (WPAs).

Compliance monitoring

Campbelltown does not cross-check entries in the Companion Animal Register to access information regarding those cats not registered and / or de-sexed within their LGA.

Information

This Council hands out the Cat Protection Society 'good neighbour project' brochure and provides responsible cat ownership information on their website.

Nuisance cats

The Council's compliance section notes the nuisance cat complaints and depending on the severity, sends a ranger to ascertain the issue. If owners of nuisance cats cannot be found, they are accepted at the Animal Care Facility.

Stray and feral cats

Stray and feral cats pose issues in all parts of the LGA, around schools, playgrounds, food services and out in our rural suburbs. No current management programs are conducted.

What the Council thought was working well

The Council could not name anything that was currently working well with their cat management initiatives, highlighting how this project - Keeping Cats Safe at Home - will be of great assistance in improving their cat management outcomes.

Challenges to effective cat management

The main challenges of cat management identified by this LGA:

- Large populations of unowned, stray and feral cats
- People who do not de-sex cats
- Cats left behind by owners when they move
- Public appear to want everything for free
- The difficulty in changing the culture of cat owners.

Future intentions

Identified future cat management intentions:

- More funding for de-sexing and microchipping programs along with access to a mobile service
- More action by Council to create WPAs and curfew / containment policy
- TNR programs for cat colonies.

Stakeholder Interview Results

Involvement in cat management

Only one stakeholder from the Campbelltown LGA was interviewed. This was a community member whose activities related to cat management was to help save the wildlife and bushlands.

What stakeholders' thought was working well

The stakeholder thought the de-sexing programs were working well for cat management in the Campbelltown LGA.

Challenges to effective cat management

The main challenges to effective cat management identified by the stakeholder:

- Cat owners who believe containing cats inside the house is detrimental to the cat
- Cat feeders who maintain wild cat colonies
- Too many stray / feral cats breeding and people dumping kittens
- Legislation needs to be tougher.

Cat management vision

Aim of cat management

The stakeholder believed the aims of cat management should be to educate cat owners to be more responsible, and that cats should be de-sexed and prevented from roaming at least during the night.

Required information and actions

The information and actions required to manage cats more effectively in the Campbelltown local LGA:

- Change of legislation to contain cats at least during the night
- Education campaigns about how indoor style living is not bad for cats
- Financial incentives for cat owners to keep their cats inside the home
- Subsidies to de-sex cats and build cat runs
- A phone hotline or app so neighbours can do in cats roaming free and help council to enforce the law
- Real stories from wildlife carers of wild animals which have been harmed by cats.

How to deal with conflict

The stakeholder had no suggestions about the best ways to deal with conflicts that arise around cat management in their communities.

Key Findings (Interviews)

How domestic cat management is being handled is influenced by the capacity and motivation of both the Council and the community. The main benefits of current programs and challenges for the Blue Mountains LGA are summarised below.

- De-sexing and microchipping programs beneficial but more funding and improved access required.
- Effective behaviour change strategies required to target particular issues such as cat containment and dumping of cats.
- Large populations of unowned, stray or feral cats. Maybe trial TNR programs for cat colonies.
- More action by Council to create WPAs and curfew / containment policy.

Phone survey

Respondent demographics

Campbelltown City Council was one of the LGAs to be targeted with the phone survey. One hundred and fifty-nine responses were collected. Most of respondents (n=123, 77%) were female the remaining 23% were male. The average age of respondents was 56.0 years.

When asked to describe their locality, nine (6%) indicated they lived in a city, 129 (81%) indicated they lived in a suburb, 17 (11%) as semi-rural, and three (2%) as rural. Most of the respondents (n=131, 82%) lived in a house with a medium to large outdoor space (yard). Ten (6%) lived in a house with only a small outside space (courtyard or small garden). Six (4%) lived in a semi-detached house or townhouse with a garden, five (3%) lived in a semi-detached house or townhouse with only a small outside space (courtyard or small garden), and a further five (3%) lived in a flat. Two described their dwelling as 'other'. Most of the respondents indicated they owned their dwelling (n=117, 74%), 39 were renting (25%) and three (2%) had 'other' arrangements.

Adoption of responsible cat ownership behaviours

Ninety-two respondents (58%) had one cat in their household, 38 (24%) owned two cats, 17 (11%) owned three cats, six (4%) owned four cats and the remaining four (4%) indicated they owned more than four cats. Two of these respondents reported having eight cats in their household.

De-sexing rates were relatively high with 148 (93%) respondents reporting their cats were de-sexed, one respondent was unsure. Microchipping rates were a lower at 88%, with three

respondents unsure. Registration with the local council was lower again at 74%, although ten owners were unsure if their cats were registered.

Keeping cats indoors at all times was the most common cat living arrangement (n=58, 36%). The next most popular arrangement was keeping cats indoors at night but allowing them to roam freely during the day (n=48, 30%). Twenty-eight respondents (18%) allowed their cat indoors and restricted their outdoor access (e.g. in an escape-proof yard / run, or on a lead), and sixteen (10%) let their cat indoors and allowed them to roam free when outside. Nine respondents (6%) reported that their cat lived outside all the time.

Of the respondents who allowed their cats to roam freely outside (n=73), 70 (96%) indicated that their cat would be likely to some extent be roaming freely in the morning (6am-noon) as well as in the afternoon (noon-6pm). Thirty-three (45%) indicated that their cat would be likely to some extent be roaming freely in the evening (6pm-midnight), and 25 (34%) indicated that their cat would be likely to some extent be roaming freely from midnight to dawn.

The respondents who allowed their cats to roam freely outside were asked about their future intentions of preventing their cats from roaming freely. Results are presented in Figure C1. In the future respondents were more likely to prevent their cat from roaming freely all the time (mean 1.2 where 1= extremely unlikely and 5= extremely likely) and more often than they do currently (mean 1.2) than to install a fence or enclosure (mean 1.1).

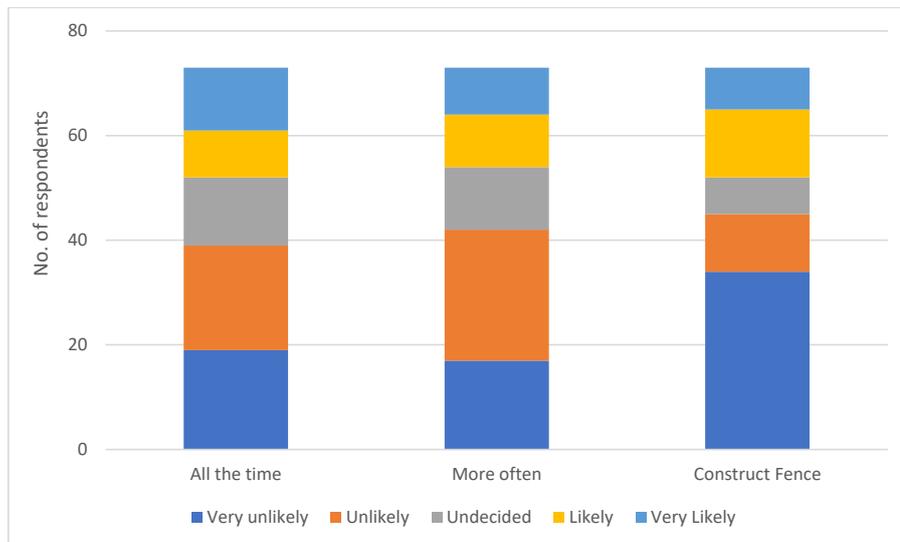


Figure C1. Likelihood of preventing free roaming of cats in the future across Campbelltown LGA.

Drivers and barriers to cat containment

Respondents were given the opportunity in an open-ended format to list at least three factors they have considered when deciding whether to allow their cat to roam freely or not. At least one factor was listed by 157 (99%) of respondents. The main factors listed by the respondents when preventing their cat from roaming freely are shown in Figure C2. Protecting wildlife, including small mammals, koalas, birds, and reptiles, was the most popular response. General safety and preventing traffic accidents were the next popular.

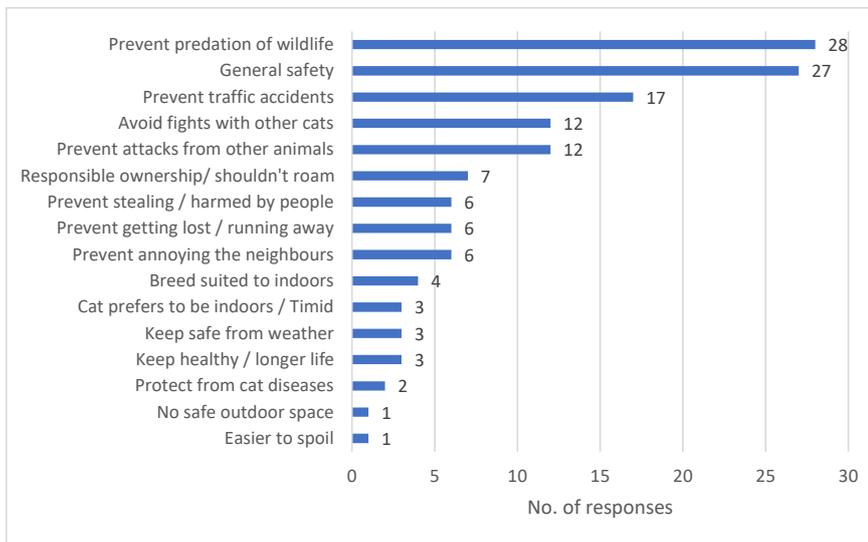


Figure C2. Main factors considered by respondents when preventing their cat from roaming freely.

The listed factors considered by respondents when deciding to allow their cat to roam freely are shown in Figure C3. The top response was that the cat owners do not consider any factors. The perception that their cat doesn't roam very far from their property and that their cat preferred to be outside were the next most popular considerations.

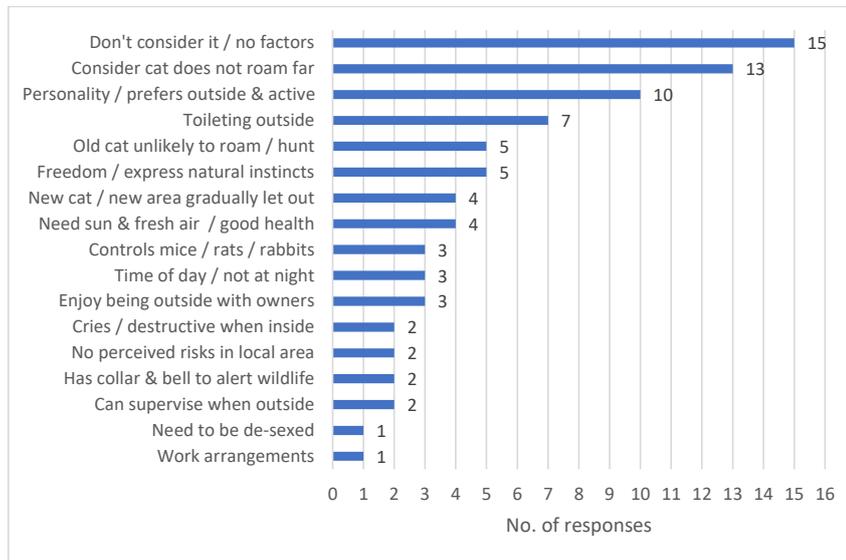


Figure C3. Main factors considered by respondents when deciding to allow their cat to roam freely.

After listing their own considerations, respondents were then asked to rate their agreement with 14 statements pertaining to previously identified drivers of and barriers to preventing cats from roaming freely (See Q5 in Appendix 4). The average ratings are summarised in Figure C4.

Most respondents were confident they could prevent their cat from roaming if they wished to, and they could provide everything to ensure their cat was happy. Most respondents disagreed that their current living circumstances made it difficult to prevent their cat from roaming. There were no statistical differences in this agreement rating and respondent's type of dwelling ($F=0.87, p=0.55$), locality ($F=0.19, p=0.94$) or own / rent situation ($F=0.07, p=0.93$).

Wildlife protection and keeping cats safe were strongest drivers of cat containment. This corresponds with the results from the open-ended question (Figure C2). On average respondents disagreed that cats should be free to roam, however there were statistical differences ($F=13.63, p<0.001$) between those owners who currently restrict their cat's movements (Inside all the time 1.70, Inside & restricted outside 1.70), practice a night curfew (2.26) or let their cats roam freely (Free outside all the time 2.56, Inside & free outside 2.78).

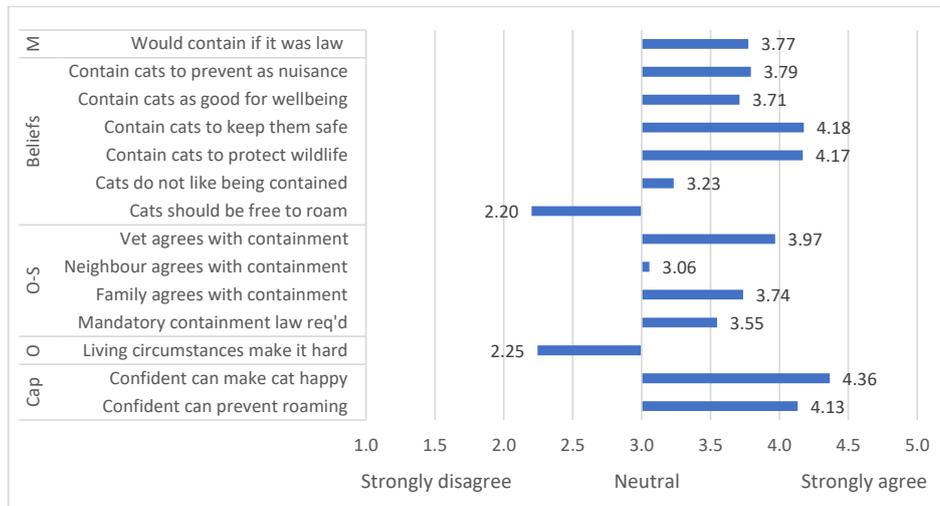


Figure C4. Mean agreement scores to the 14 driver and barrier statements (Cap=Individual capability factors, O=Physical opportunity factor, O-S=Social opportunity factors, Beliefs=Internal motivational factors, M=External motivational factor).

Online survey

Respondent demographics

- 515 respondents completed the online survey – 291 (57%) were cat owners and 224 (43%) did not own a cat.
- Most cat owners were female (244, 84%), with 36 males (12%). Three cat owners identified as non-binary, and 8 did not answer this question.
- Most non-cat owners were also female (161, 72%), with 54 males (24%), two non-binary and 7 non-responses.
- The overall average age was 43.1 years (±13.1). The average age for cat owners was slightly younger – 42.1 years (±13.3), and non-cat owners was slightly older – 44.4 years (±12.7).

Cat ownership behaviours

The majority of respondents (n=128, 44%) had one cat in their household, 88 (30%) owned two cats, 32 (11%) owned three cats and 14 (5%) owned four cats. The remaining 10% owned five cats or more, with four households reporting they owned eleven cats each.

Keeping cats indoors all the time was the most popular cat living arrangement (n=118, 41%). The next most popular arrangement was keeping cats indoors with restricted outdoor access (e.g. in an escape-proof yard / run, or on a lead) (n=95, 33%). Forty-six respondents kept their cats indoors at night but let them roam freely during the day (16%) and twenty-nine (10%) let their cat indoors and allowed them to roam free when outside. Three respondents reported that their cat lived outside all the time.

Feeding of free roaming cats

Fifty-seven cat owners (20%) and fifteen non-cat owners (7%) indicated they had cared for unowned free-roaming cats.

Drivers and barriers to cat containment

Cat owners were given the opportunity in an open-ended format to list the factors they have considered when deciding whether to allow their cat to roam freely or not. At least one factor was listed by 273 (94%) of cat owners. The main factors listed by the respondents when preventing their cat from roaming freely are shown in Figure C5. Protecting wildlife, including small mammals, birds, and reptiles, was the most popular response. Preventing traffic accidents, general safety and preventing attacks from other animals, mainly dogs, were the next popular.

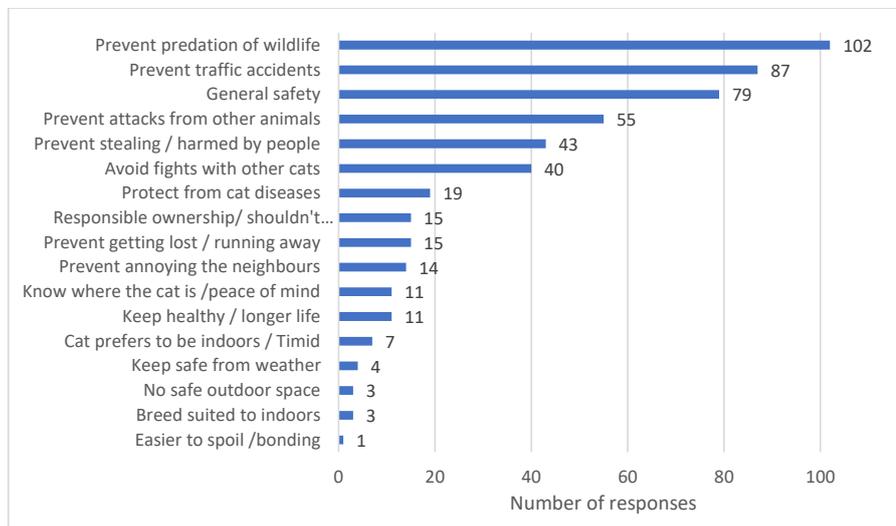


Figure C5. Main factors considered by cat owners when preventing their cat from roaming freely.

The listed factors considered by cat owners when deciding to allow their cat to roam freely are shown in Figure C6. The top response was that their cat preferred to be outside and active. The next popular response was the time of day – cats should be prevented from roaming at night it was OK during the day. The perception that their cat doesn't roam very far from their property and that it was Ok for their cat to roam if it was desexed and / or microchipped were next most popular considerations.

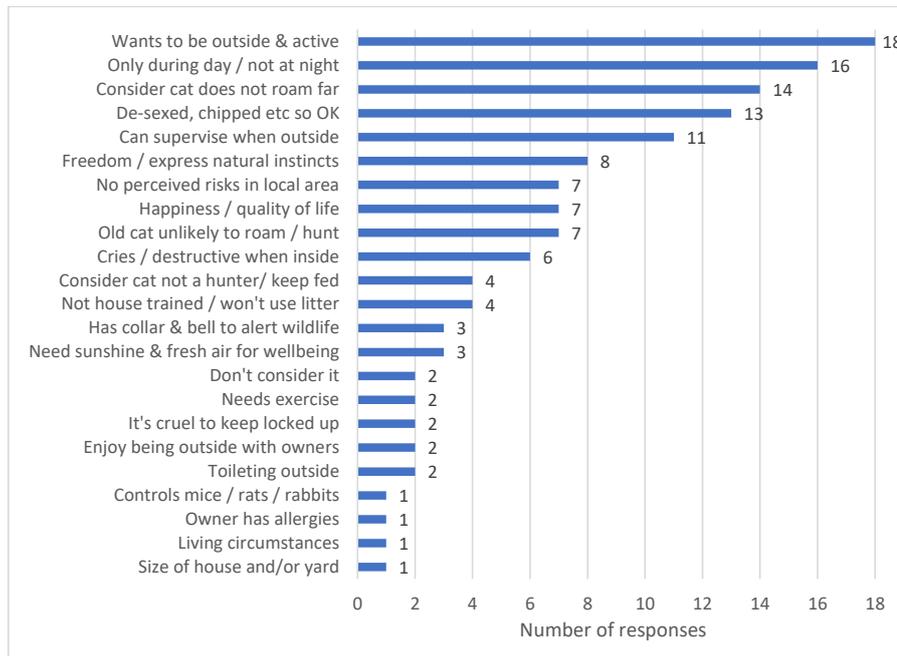


Figure C6. Main factors considered by cat owners when deciding to allow their cat to roam freely.

After listing their own considerations, cat owners were then asked to rate their agreement with 15 statements pertaining to previously identified drivers of and barriers to preventing cats from roaming freely (See Q7 in Appendix 5). The average ratings are summarised in Figure C7.

Like the phone survey, most respondents were confident they could prevent their cat from roaming if they wished to, and they could provide everything to ensure their cat was happy. Most respondents disagreed that their current living circumstances made it difficult to prevent their cat from roaming. There were no statistical differences in this agreement rating and respondent's type of dwelling ($F=1.21, p=0.30$) or own / rent situation ($F=1.18, p=0.31$).

Keeping cats safe and protecting wildlife were the strongest drivers of cat containment. This corresponds with the results from the open-ended question (Figure C5). On average respondents disagreed that cats should be free to roam, however there were statistical differences ($F=29.25, p<0.001$) between those owners who currently restrict their cat's movements (Inside all the time 1.70, Inside & restricted outside 1.71), practice a night curfew (3.07) or let their cats roam freely (Inside & free outside 3.45, Free outside all the time 3.67).

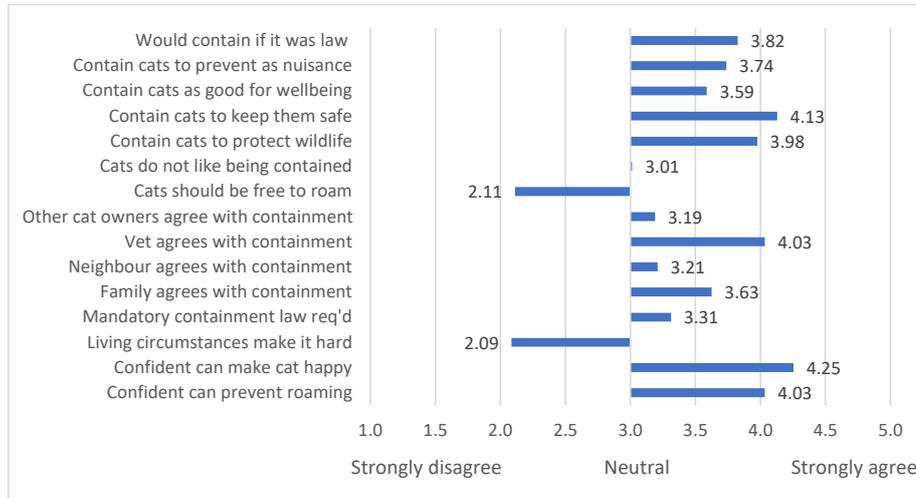


Figure C7. Mean cat owner agreement scores to the 15 driver and barrier statements.

Those respondents who did not own cats were also to rate their agreement with 10 statements pertaining to previously identified drivers of and barriers to preventing cats from roaming freely. The average ratings are shown in Figure C8. There were statistical differences between the ratings of cat owners and non-owners for seven of the ten shared statements. Those respondents who do not own cats were more likely to agree that cats should be prevented from roaming to protect wildlife ($F=41.78, p < 0.001$), to prevent them being a nuisance ($F=50.46, p < 0.001$) and to improve the cat's well-being ($F=4.79, p=0.03$). They were less likely to agree that cats should be free to roam ($F=87.57, p < 0.001$). These respondents also were more likely to agree that their family ($F=57.32, p < 0.001$) and neighbours ($F=19.52, p < 0.001$) agreed with cat containment, and that the laws should be changed ($F=111.21, p < 0.001$).

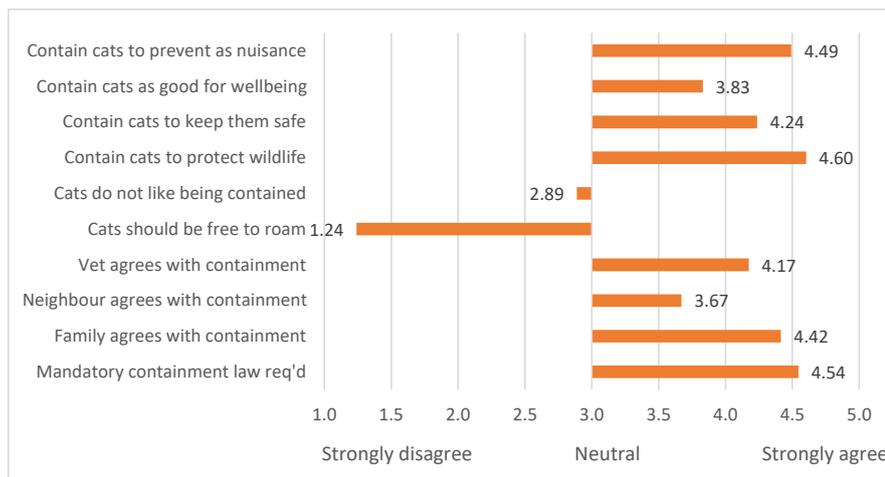


Figure C8. Mean non-cat owner agreement scores to ten driver and barrier statements.

Key Findings (Surveys)

The adoption of responsible cat ownership behaviours across the Campbelltown LGA is influenced by the capacity and motivation of the cat owners. Current cat owner management behaviours and identified driver and barrier factors from the public consultation are summarised below.

- Reported de-sexing rates were high but microchipping and particularly registration of cats could be improved.
- There is some support for full containment (between 36-41% adoption of indoors all the time and 18-33% restricted outdoor access). Also, some support for night curfews (between 16-30% adoption) with approximately 16-30% of cat owners currently allowing their cats to roam freely most of the time.
- A small number of cat owners had more than three cats in their household.
- One fifth of cat owners reported they cared for stray and unowned cats.
- Main drivers for containment were to reduce wildlife predation, keep the cat safe and reduce nuisance behaviour.
- Strong barriers to full containment were owners' beliefs about the needs and behaviours of their cats, as well as different perceptions of the risks at night versus those at day.
- Family members and vets were seen as important influencers for containment adoption.
- There was some agreement by cat owners that the introduction of cat containment legislation would motivate compliance. Those residents that do not own cats strongly agreed with this legislation change.

Hornsby Shire Council

Council Interview Results

Baseline cat data

The Hornsby Shire Council reported from 2010 to 2021 they had:

- 6112 registered cats
- 9457 microchipped cats

The number of de-sexed cats was unknown.

Current cat management initiatives

Hornsby Shire Council undertakes a range of cat management initiatives. In conjunction with the National Desexing Network they offer subsidised de-sexing program, and strongly recommend cat containment as part of 'responsible cat ownership'. This LGA currently has no declared Wildlife Protection Areas (WPAs).

Compliance monitoring

As part of compliance monitoring this Council cross-checks entries in the Companion Animal Register to access information regarding those cats not registered and / or de-sexed. Owners are contacted, advising them of the Council's requirements.

Information

The Hornsby Shire Council has a pamphlet available providing information on responsible cat management. Their Officers provide one on one support when required.

Nuisance cats

Officers liaise with residents to trap and return nuisance domestic cats to their owner. Owners are educated on the importance of keeping their cat contained.

Stray and feral cats

There are several known locations in urban areas of this LGA where feral cats breed and are fed by residents. The Council actively works with residents who report feral cats. Officers trap the reported cats and determine if they need to be returned to the owner or if the cat is feral.

What the Council thought was working well

By actively responding to customer concerns of cats causing environmental and private premises damage has resulted in a reduction of roaming cats in this LGA.

Challenges to effective cat management

The main challenges of cat management identified by Hornsby Shire Council:

- Residents who regularly feed cats but do not take responsibility (don't de-sex)
- Residents with multiple animals who might not have the capacity to ensure their cats are managed appropriately.

Future intentions

Identified future cat management intentions:

- Continue community education on cat containment
- Engage with 'Link Housing' so can support cat owning residents.

Stakeholder Interview Results

Involvement in cat management

A range of stakeholders from the Hornsby LGA were interviewed. Their roles and activities related to cat management:

- **Thornleigh Vet Hospital:** vet hospital, also Ku-ring-gai Pound.
- **Hornsby Heights Vet Hospital:** rescue, rehabilitate and adopt out kittens.
- **A community member:** foster rescued animals.

What stakeholders' thought was working well

Stakeholders were asked what was working well for cat management in their local LGA. The main factors identified by the stakeholders:

- The strong emphasis on de-sexing, microchipping and vaccinating
- Advice to owners on why to keep cats inside and providing the public with avenues to find owners of lost cats.

Challenges to effective cat management

The main challenges to effective cat management identified by the stakeholders:

- Needs to be clearer rules for cat owners
- Outdoor cats causing wildlife injuries and fights
- Local populations of stray and feral cats.

Cat management vision

Aim of cat management

Stakeholders were asked what the aim of cat management should be in their LGA. There was consensus among the stakeholders that the main aims should be to:

- Reduce the stray population (trap de-sex and release, rehome friendly cats)
- Reduce number of cats per household
- Require cat owners to de-sex and contain their cats.

Required information and actions

Stakeholders were asked what information and actions are required to manage cats more effectively in their local LGA. Their responses:

- Change legislation to require 24-hour cat containment and clarify management of stray cats
- More involvement with community towards TNR and keeping cats safe
- Rules on how many cats one owner can have (max two)

- Monitoring the impacts on wildlife populations
- Using video collars to see what the cats are predating, important because cats can be killing lots of wildlife without roaming far from home.

How to deal with conflict

Stakeholders were asked about the best ways to deal with conflicts that arise around cat management in their communities. Their suggestions:

- Clear laws with respect to strays and microchipping
- Factual evidence to our clients on their cat's health.

Key Findings (Interviews)

How domestic cat management is being handled is influenced by the capacity and motivation of both the Council and the community. The main benefits of current programs and challenges for the Hornsby Shire LGA are summarised below.

- Roaming cats remain a problem, so needs to be clearer rules for cat owners and continue community education on cat containment.
- Focus needed on the populations of stray and feral cats. Behaviour change strategies to target residents who regularly feed cats but do not take responsibility (e.g., de-sex).
- Introduce restrictions on the number of cats kept in households.
- Provide more support to residents with multiple animals who might not have the capacity to ensure their cats are managed appropriately, and those cat owners in government housing.

Online survey

Hornsby Shire Council was not one of the selected LGAs targeted with the phone survey, however residents were invited to have their say via the online survey.

Respondent demographics

- 639 respondents completed the online survey – 391 (61%) were cat owners and 248 (39%) did not own a cat.
- Most cat owners were female (310, 78%), with 62 males (16%). Three cat owners identified as non-binary, and 16 did not answer this question.
- Most non-cat owners were also female (174, 70%), with 66 males (27%), one non-binary and seven non-responses.
- The overall average age was 47.4 years (± 13.2). The average age for cat owners was younger – 45.3 years (± 12.2), and non-cat owners was older – 50.7 years (± 14.1).

Cat ownership behaviours

Just over half of respondents (n=213, 54%) had one cat in their household, 128 (33%) owned two cats, 35 (9%) owned three cats and eleven (3%) owned four cats. The remaining 1% owned five or more cats, the greatest number reported was six cats in a household.

Keeping cats indoors all the time was the most common cat living arrangement (n=133, 34%). The next most popular arrangements were keeping cats inside at night but letting them roam freely during the day (n=115, 29%) and allowing cats indoors and restricting their outdoor access (n=99, 25%). Forty-two respondents (11%) let their cat indoors and allowed them to roam free when outside. Two respondents had cats that freely roamed outside all the time.

Feeding of free roaming cats

Respondents were asked if they cared for any free-roaming cats that were not their own. Twenty-six respondents indicated they did care for unowned free-roaming cats - ten cat owners (3%) and 16 non-cat owners (7%).

Drivers and barriers to cat containment

Cat owners were given the opportunity in an open-ended format to list the factors they have considered when deciding whether to allow their cat to roam freely or not. At least one factor was listed by 273 (92%) of cat owners. The main factors listed by the respondents when preventing their cat from roaming freely are shown in Figure H1. Protecting wildlife, including small mammals, birds, and reptiles, was the most popular response. General safety and preventing traffic accidents were the next popular.

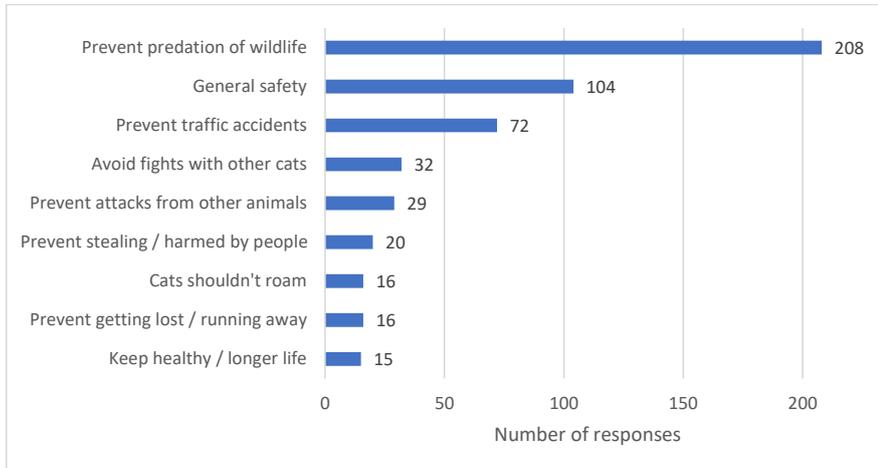


Figure H1. Main factors considered by cat owners when preventing their cat from roaming freely.

The listed factors considered by cat owners when deciding to allow their cat to roam freely are shown in Figure H2. The top response was time of day – cats should be prevented from roaming at night it was OK to roam during the day. The next popular response was the perception that their cat doesn't roam very far from their property.

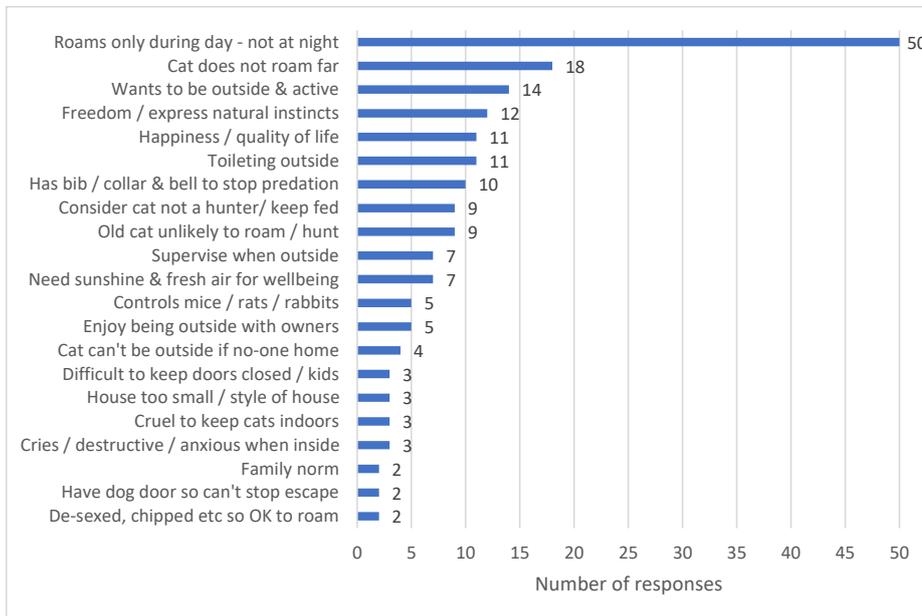


Figure H2. Main factors considered by cat owners when deciding to allow their cat to roam freely.

After listing their own considerations, cat owners were then asked to rate their agreement with 15 statements pertaining to previously identified drivers of and barriers to preventing cats from roaming freely (See Q7 in Appendix 5). The average ratings are summarised in Figure H3.

On average respondents disagreed that their current living circumstances made it difficult to prevent their cat from roaming. There were no statistical differences in this agreement rating and their own / rent situation ($F=1.12, p=0.38$), however there was a difference with respondent’s type of dwelling ($F=2.30, p=0.30$). Respondents living in flats or units disagreed more strongly with this statement, than respondents all other types of dwellings.

Protecting wildlife was the strongest driver of cat containment. This corresponds with the results from the open-ended question (Figure H1). On average respondents disagreed that cats should be free to roam, however there were statistical differences ($F=46.93, p<0.001$) between those owners who currently restrict their cat’s movements (Inside all the time 1.51, Inside & restricted outside 1.51), practice a night curfew (2.70) or let their cats roam freely (Inside & free outside 3.43, Free outside all the time 3.50).

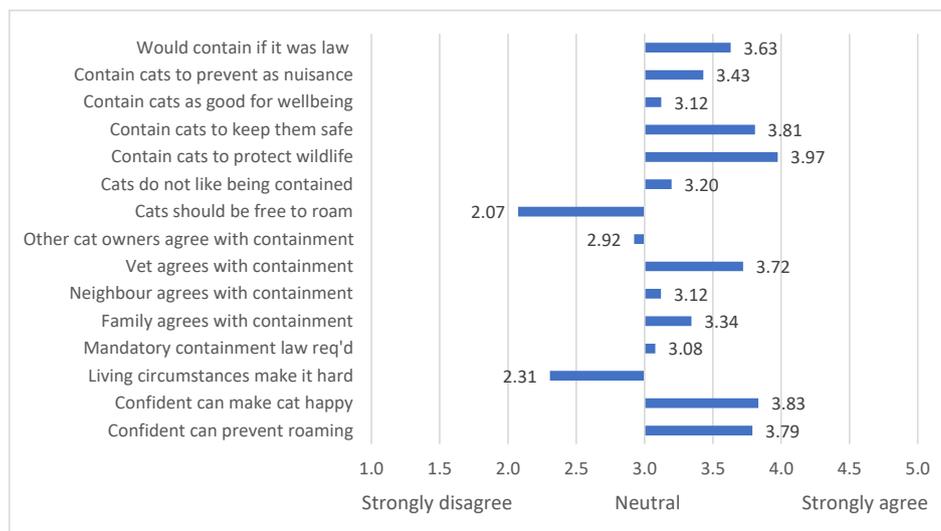


Figure H3. Mean cat owner agreement scores to the 15 driver and barrier statements

Those respondents who did not own cats were also to rate their agreement with 10 statements pertaining to previously identified drivers of and barriers to preventing cats from roaming freely. The average ratings are shown in Figure H4. There were statistical differences between the ratings of cat owners and non-owners for all ten shared statements. Those respondents who do not own cats were more likely to agree that cats should be prevented from roaming to protect wildlife ($F=64.99, p < 0.001$), to prevent them being a nuisance ($F=89.88, p < 0.001$), to keep them safe ($F=13.74, p < 0.001$), and to improve the cat’s well-being ($F=28.86, p < 0.001$).

They were less likely to agree that cats should be free to roam ($F=77.81, p<0.001$) and that cats do not like to be contained ($F=77.81, p=0.01$). These respondents also were more likely to agree that their family ($F=94.91, p <0.001$), neighbours ($F=10.44, p=0.001$) and vets ($F=26.58, p <0.001$) supported cat containment, and that the laws should be changed ($F=159.09, p <0.001$).

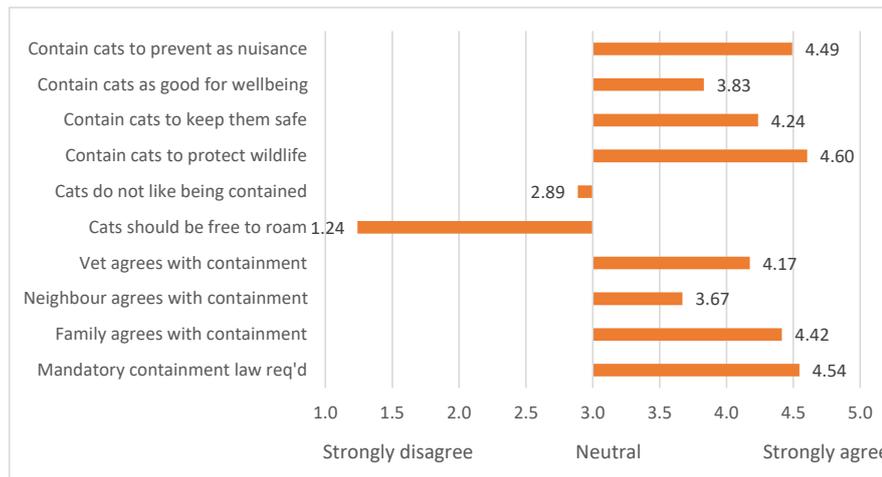


Figure H4. Mean non-cat owner agreement scores to ten driver and barrier statements.

Key Findings (Surveys)

The adoption of responsible cat ownership behaviours across the Hornsby LGA is influenced by the capacity and motivation of the cat owners. Current cat owner management behaviours and identified driver and barrier factors from the public consultation are summarised below.

- There is some support for full containment (34% currently keeping cats indoors all the time and 25% restricted outdoor access) and night curfews (currently 30% adoption). Further encouragement is required particularly for the remaining cat owners who pose no restrictions on their cats’ movements.
- There is a small number of residents who care for stray and unowned cats.
- Main drivers for containment were to reduce wildlife predation and keep the cat safe.
- Strong barriers to full containment were owners’ perceptions of the wildlife predation risks at night versus those during the day, and beliefs about their cats’ behaviours and needs.
- Vets were seen as important influencers for containment adoption by cat owners.
- There was some agreement that the introduction of cat containment legislation would motivate compliance. Those residents that do not own cats strongly agreed with this legislation change.

Kyogle Shire Council

Council Interview Results

Baseline cat data

Kyogle Shire Council reported in the past year they had:

- 288 registered cats
- 415 microchipped cats.

The number of de-sexed cats was unknown.

Current cat management initiatives

Kyogle Shire Council currently does not limit the number of cats that could be kept per household. They recommend cats be kept at home but do not have an official night curfew / containment policy. They did not report any declared Wildlife Protection Areas (WPAs).

A subsidised de-sexing program is offered in the LGA by the Animal Farewell League.

Currently this LGA is an active partner in their Regional Cat Management Plan, working with the North Coast Local Land Services and other stakeholders in a range of feral cat management programs.

Compliance monitoring

As part of compliance monitoring Kyogle cross-checks entries in the Companion Animal Register to access information regarding those cats not registered and / or de-sexed. Owners are contacted, advising them of the Council's requirements. Compliance is not consistently monitored when individual cats are either brought to their attention and / or impounded.

Information

The Kyogle Shire Council provides information on responsible cat ownership in their community newsletter.

Nuisance cats

Nuisance cat complaints are received through the Council's Customer Request Management System but currently given low priority because of the lack of resources.

Stray and feral cats

Survey, monitoring and trapping work by researchers, other land managers (e.g. NPWS), Landcare and property owners has shown that there is a problem with stray/feral cats. Kyogle LGA is currently working with the North Coast Local Land Services (the NSW Government agency in charge of implementing the regional Pest Animal Management Plan – developed under the NSW *Biosecurity Act 2015*) in trapping programs targeting stray and feral cat populations. The trapping is conducted by an outside company, Biodiversity Australia.

What the Council thought was working well

Being part of the Regional Cat Management Plan project and working with other stakeholders was the one thing Kyogle Council noted was working well for them. With regards to pet cats there was nothing in particular – highlighting the problems this LGA is currently facing with cat

management, and how this project - Keeping Cats Safe at Home - will be able to assist by increasing their capacity to improve cat management outcomes.

Challenges to effective cat management

The main challenges of cat management identified by this LGA:

- Availability of dedicated staff, budget and resources
- Lack knowledge on what could be to manage cats – i.e., policies regarding number of cats per household; containment or confined; areas where cats prohibited, compliance enforcement and monitoring
- Council's pound facilities cannot accept cats
- Information on Council's website outdated
- As Council currently treats cat management as a low priority, the community may no longer think it is worth reporting cat nuisance.

Future intentions

Identified future cat management intentions:

- Education within Council to increase priority of cat management
- Improved resources, and increase in dedicated staff
- Development of cat management policies and review of practices.

Stakeholder Interview Results

Involvement in cat management

A range of stakeholders from the Kyogle LGA were interviewed. Their roles and activities related to cat management:

- **Kyogle Veterinary Clinic:** Cats make up about half of their small animal work. Conduct discounted de-sexing for Animal Welfare League.
- **K.I.T.T.E.N. Rescue Inc:** Rehome (microchip, register, de-sex) abandoned and surrendered cats.
- **Northern Rivers Wildlife Carers Inc:** Not directly involved but have worked with Catnip a cat enclosure company and the local RSPCA branch.
- **Lismore Animal Rights and Rescue Shelter:** Help with de-sexing and re homing animals. Assist with veterinary assistance.
- **North Coast Local Lands Service:** Work under the NSW Biosecurity Act to manage feral or stray cats in rural areas. Work with Council to handle collected cats.

What stakeholders' thought was working well

Stakeholders were asked what was working well for cat management in their local LGA. The main factors identified by the stakeholders:

- Good rangers
- Subsidised de-sexing days (de-sexing program with Animal Farewell League)
- Campaigns promoting cats inside the properties and building cat enclosures
- Local cat rescue lady rehoming kittens
- Development of regional Cat Management Plan.

Challenges to effective cat management

The main challenges to effective cat management identified by the stakeholders:

- Cost a barrier to de-sexing as a low-income area
- Changing beliefs about early de-sexing (vets & owners)
- Overpopulation of cats and lots of colonies as people don't de-sex and abandon them.
- Lack of Council capacity and resources (Council doesn't have pound)
- Council doesn't have a good record with rehoming, most cats they take are euthanised
- Rescue groups unable to fill the gap
- The belief cat owners have cats should do whatever they want.

Cat management vision

Aim of cat management

Stakeholders were asked what the aim of cat management should be in their LGA. There was consensus among the stakeholders that the main aim should be enforcing compulsory de-sexing and at least introduce a night curfew for cats.

Required information and actions

Stakeholders were asked what information and actions are required to manage cats more effectively in their local LGA. Their responses:

- Clear information for the public
- More accessible de-sexing – subsidised de-sexing for low socioeconomic population
- An easy way for local people to surrender unwanted kittens so they are not dumped
- Encouraging cat owners to think about the safety of their cats
- Provide information and plans on how to build economical cat enclosures
- Legislation that enforces at least a night curfew.

How to deal with conflict

Stakeholders were asked about the best ways to deal with conflicts that arise around cat management in their communities. Their suggestions:

- Rescue groups collaborating with each other
- Having group sessions to talk about the problems we are all facing and try to find solutions
- Councils should be more involved.

Key Findings (Interviews)

How domestic cat management is being handled is influenced by the capacity and motivation of both the Council and the community. The main benefits of current programs and challenges for the Kyogle Shire LGA are summarised below.

- Policy, practices, resourcing and staffing issues within Councils needs to be addressed.
- Subsidised de-sexing program run in conjunction with the Animal Farewell League and free pet registration have been beneficial. This needs to be boosted as still many owners can't afford to de-sex cats.
- There is a need to provide better information about responsible cat management, along with effective behaviour change strategies.
- Effective rehoming of surrendered animals needs to be addressed.
- Continued cooperation with other agencies on addressing the populations of stray and feral cats.
- There is a reluctance and disagreement about cat containment practices. Strengthening the current legislation would add clarity.

Phone survey

Respondent demographics

Kyogle Shire was one of the LGAs to be targeted with the phone survey. Thirty responses were collected. Most of the respondents (87%) were female the remaining 13% were male. The average age of respondents was 53 years.

When asked to describe their locality, nine (30%) indicated they lived in a town, two (7%) as semi-rural, and 19 (63%) as rural. Most of the respondents (n=28, 93%) lived in a house with a medium to large outdoor space (yard). One lived in a house with only a small outside space (courtyard or small garden) and one (3%) chose the 'other' option but did not offer a description. Most of the respondents indicated they owned their dwelling (n=24, 80%), and six were renting (20%).

Adoption of responsible cat ownership behaviours

Just over half of respondents (n=17, 57%) had one cat in their household, four (13%) owned two cats, five (17%) owned three cats and two (7%) owned four cats. Two respondents indicated they had eight cats each.

De-sexing rates were reasonably high (93%) with 28 respondents reporting their cats were de-sexed. Microchipping rates were much lower at 53%, with one respondent unsure. Registration with the local council was lower again at 37%, with two respondents unsure if their cats were registered.

Keeping cats indoors at night but letting them roam freely during the day was the most common cat living arrangement (n=12, 40%). The next most popular arrangements were letting their cat indoors and allowing them to roam free when outside or letting the cat live

outside all the time (both n=6, 20%). Four owners (13%) were keeping cats indoors all the time and two (7%) allowed their cat indoors and restricted their outdoor access (e.g. in an escape-proof yard / run, or on a lead).

Of the respondents who allowed their cats to roam freely outside (n=24), all indicated that their cat would be likely to some extent be roaming freely in the morning (6am-noon), 23 (96%) indicated that their cat would be likely to some extent be roaming freely in the afternoon (noon-6pm), 15 (63%) indicated that their cat would be likely to some extent be roaming freely in the evening (6pm-midnight), while 13 (54%) indicated that their cat would be likely to some extent be roaming freely from midnight to dawn.

The respondents who allowed their cats to roam freely outside were asked about their future intentions of preventing their cats from roaming freely. Results are presented in Figure K1. In the future respondents were more likely to prevent their cat roaming freely all the time (mean 1.8 where 1= extremely unlikely and 5= extremely likely) or prevent it from roaming more often than they do currently (mean 1.7) than install a fence or enclosure (mean 1.6).

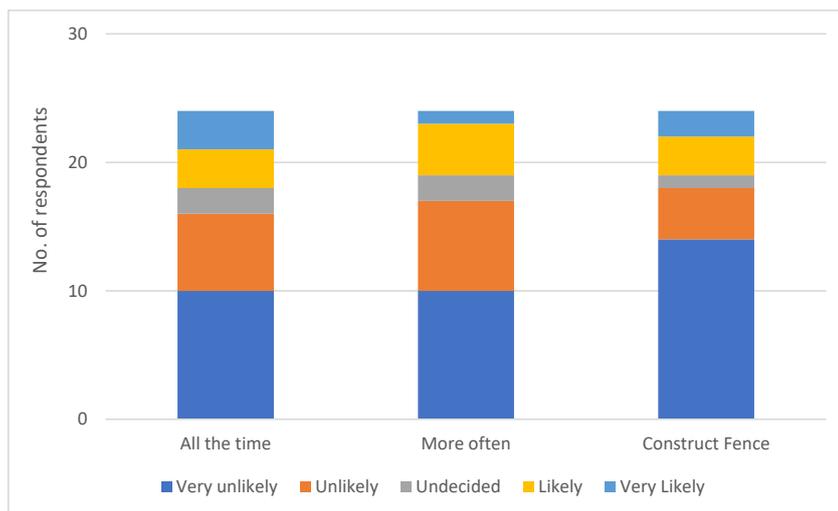


Figure K1. Likelihood of preventing free roaming of cats in the future across Kyogle LGA.

Drivers and barriers to cat containment

Respondents were given the opportunity in an open-ended format to list at least three factors they have considered when deciding whether to allow their cat to roam freely or not. All respondents listed at least one factor. The main factors listed by the respondents when preventing their cat from roaming freely are shown in Figure K2. Protecting wildlife, including small mammals, birds, and reptiles, was the most popular response. Avoiding fighting with other cats, general safety and preventing people stealing or harming the cats were the next frequent.

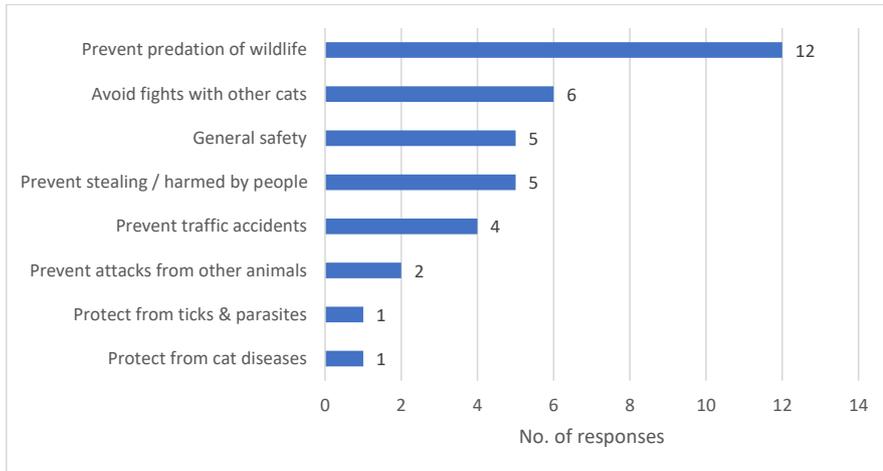


Figure K2. Main factors considered by respondents when preventing their cat from roaming freely.

The listed factors considered by respondents when deciding to allow their cat to roam freely are shown in Figure K3. The consideration that their cat doesn't roam very far from their property and whether the cat controlling pest rodents or rabbits were the top two responses.

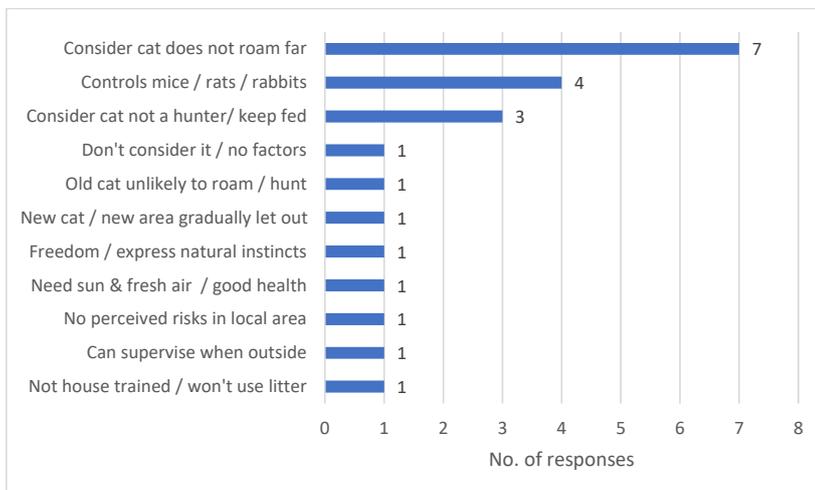


Figure K3. Main factors considered by respondents when deciding to allow their cat to roam freely.

After listing their own considerations, respondents were then asked to rate their agreement with 14 statements pertaining to previously identified drivers of and barriers to preventing cats from roaming freely (See Q5 in Appendix 4). The average ratings are summarised in Figure K4.

Most respondents were confident they could provide everything to ensure their cat was happy. Most respondents disagreed that their current living circumstances made it difficult to prevent their cat from roaming. There were no statistical differences in this agreement rating and respondent’s type of dwelling ($F=0.88, p=0.43$), locality ($F=1.61, p=0.21$) or own / rent situation ($F=2.34, p=0.14$).

Wildlife protection was the strongest drivers of cat containment. This corresponds with the results from the open-ended question (Figure K2). On average respondents disagreed that cats should be free to roam, however there were differences between those owners who currently restrict their cat’s movements (Inside all the time 1.00, Inside & restricted outside 1.00), practice a night curfew (2.5) or let their cats roam freely (Free outside all the time 2.17, Inside & free outside 2.83). Owing to the small, unequal sample sizes these differences could not be statistically compared.

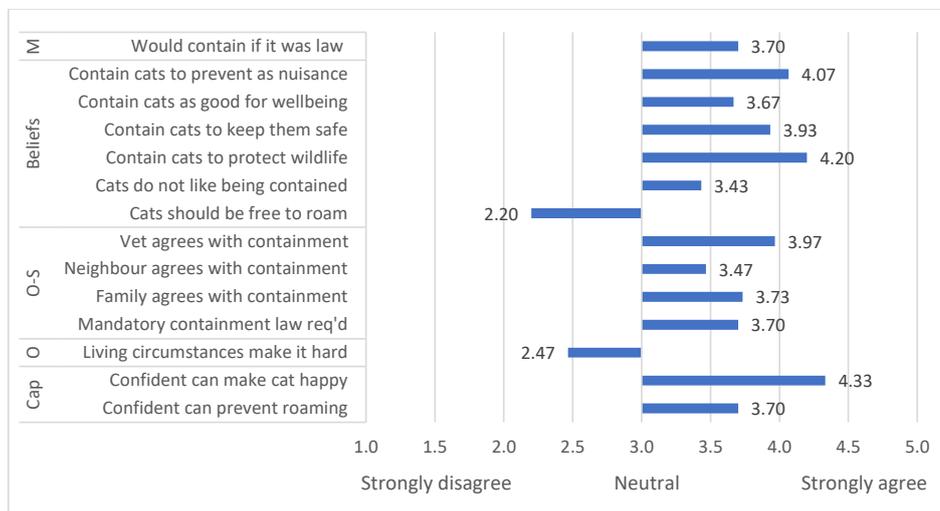


Figure K4. Mean agreement scores to the 14 driver and barrier statements (Cap=Individual capability factors, O=Physical opportunity factor, O-S=Social opportunity factors, Beliefs=Internal motivational factors, M=External motivational factor).

Online survey

Respondent demographics

- 90 respondents completed the online survey – 24 (27%) were cat owners and 66 (73%) did not own a cat.
- Most cat owners were female (17, 71%), with five males (21%). Two did not answer this question.
- Most non-cat owners were also female (38, 58%), with 23 males (35%) and three respondents who identified as non-binary (5%). Two did not answer this question.
- The overall average age was 56.3 years (± 14.7). The average age for cat owners (56.3 years ± 12.8) and non-cat owners (56.4 years ± 15.4) were similar.

Cat ownership behaviours

The majority of respondents (n=14, 58%) had one cat in their household, seven (29%) owned two cats, and three (13%) owned three cats.

Keeping cats indoors at night but letting them roam freely during the day and keeping cats indoors all the time were the most common cat living arrangement (both n=8, 33%). The next most popular arrangements were allowing cat indoors either allowing them to roam free when outside or restricting their outdoor access (both n=4, 17%). No respondents reported having a cat that lived outside all the time.

Feeding of free roaming cats

Respondents were asked if they had cared for any free-roaming cats that were not their own. Three non-cat owners (5%) indicated they did care for unowned free-roaming cats. No cat owners reported this behaviour.

Drivers and barriers to cat containment

Cat owners were given the opportunity in an open-ended format to list the factors they have considered when deciding whether to allow their cat to roam freely or not. At least one factor was listed by 24 (96%) of the cat owners. The main factors listed by the respondents when preventing their cat from roaming freely are shown in Figure K5. Protecting wildlife, including small mammals, birds, and reptiles, was the most popular response.

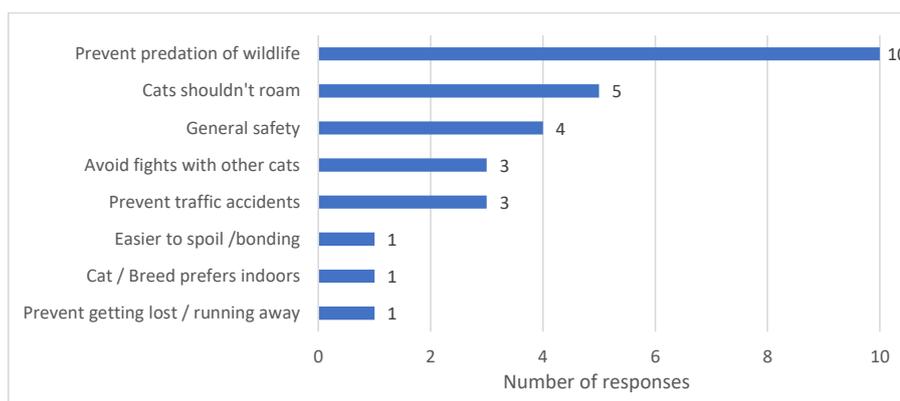


Figure K5. Main factors considered by cat owners when preventing their cat from roaming freely.

The listed factors considered by cat owners when deciding to allow their cat to roam freely are shown in Figure K6. The top responses were the time of day – cats should be prevented from roaming at night and it was OK during the day, they had an older cat who was unlikely to roam or hunt, and their cat became very anxious and destructive if it was not allowed outside.

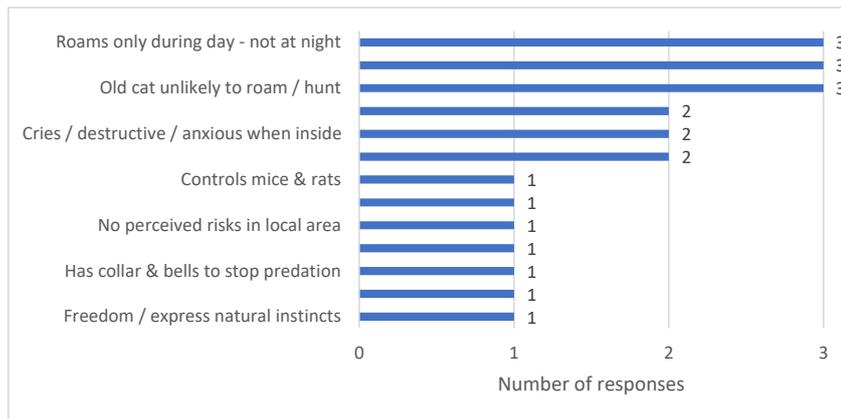


Figure K6. Main factors considered by cat owners when deciding to allow their cat to roam freely.

After listing their own considerations, cat owners were then asked to rate their agreement with 15 statements pertaining to previously identified drivers of and barriers to preventing cats from roaming freely (See Q7 in Appendix 5). The average ratings are summarised in Figure K7.

Online respondents were not as confident they could prevent their cat from roaming if they wished to, and they could provide everything to ensure their cat was happy as the phone survey respondents. Most respondents disagreed that their current living circumstances made it difficult to prevent their cat from roaming. Owing to the small sample sizes the differences between dwelling types and ownership could not be statistically compared.

Wildlife protection was the strongest drivers of cat containment. This corresponds with the results from the open-ended question (Figure K2). On average respondents disagreed that cats should be free to roam, however there were differences between those owners who currently restrict their cat’s movements (Inside all the time 1.25, Inside & restricted outside 1.25), practice a night curfew (2.75) or let their cats roam freely (Inside & free outside 2.50). Owing to the small sample sizes these differences could not be statistically compared.

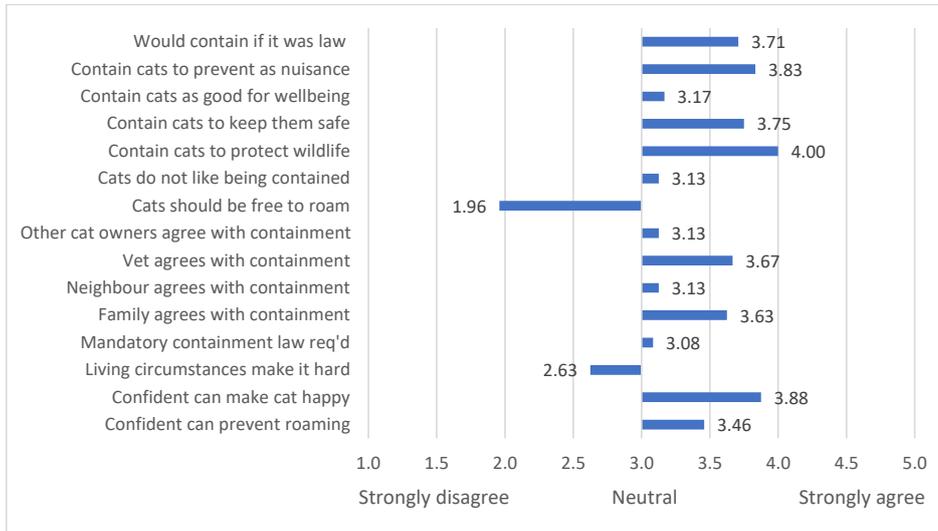


Figure K7. Mean cat owner agreement scores to the 15 driver and barrier statements.

Those respondents who did not own cats were also to rate their agreement with 10 statements pertaining to previously identified drivers of and barriers to preventing cats from roaming freely. The average ratings are shown in Figure K8. There were statistical differences between the ratings of cat owners and non-owners for four of the ten shared statements. Those respondents who do not own cats were less likely to agree that cats should be free to roam ($F=20.63, p < 0.001$). These respondents were more likely to agree that their family ($F=25.98, p < 0.001$) and vets ($F=6.86, p = 0.01$) supported cat containment, and that the laws should be changed ($F=40.54, p < 0.001$).

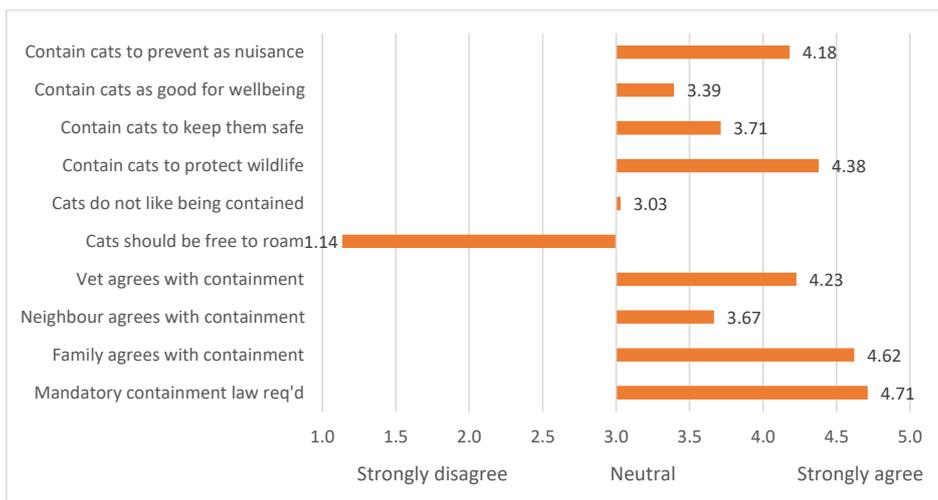


Figure K8. Mean non-cat owner agreement scores to ten driver and barrier statements.

Key Findings (Surveys)

The adoption of responsible cat ownership behaviours across the Kyogle LGA is influenced by the capacity and motivation of the cat owners. Current cat owner management behaviours and identified driver and barrier factors from the public consultation are summarised below.

- Reported de-sexing rates were reasonable but microchipping and registration of cats need to be improved.
- There is some support for night curfews (between 32-40% adoption), however support for full containment is lower (between 13-32% adoption of indoors all the time and 7-16% restricted outdoor access) and needs to be encouraged. Around 20-40% of cat owners pose no restrictions on their cats' movements.
- There is a small number of residents who care for stray and unowned cats.
- The main drivers for containment were to reduce the impact on wildlife as well as reduce the nuisance caused to neighbours.
- Strong barriers for full containment were perceptions of the wildlife predation risks at night versus those at day and the cat's personality and behaviour.
- With the larger proportion of rural residents and reliance on cats to control pests, de-sexing of these unrestricted cats is an important issue.
- There was moderate agreement that the introduction of cat containment legislation would motivate compliance. Those residents that do not own cats strongly agreed with this legislation change.

Northern Beaches Council

Council Interview Results

Baseline cat data

The Northern Beaches Council reported they had:

- 16,821 registered cats
- 16,866 microchipped cats.

The number of de-sexed cats was unknown.

Current cat management initiatives

The NSW Companion Animals Act 1998 allows Councils to declare Wildlife Protection Areas (WPAs). Northern Beaches has two categories of WPAs based on the special habitat that these areas contain: Category 1 - dogs and cats prohibited at all times, and Category 2 - cats prohibited at all times but dogs permitted on leash on Council-maintained pathways.

The Council strongly recommends 'responsible cat ownership', including cat containment.

Compliance monitoring

As part of compliance monitoring this Council cross-checks entries in the Companion Animal Register to access information regarding those cats not registered and / or de-sexed. Owners are contacted, advising them of the Council's requirements.

The Council undertakes regular monitoring and trapping programs to detect and remove cats from their WPAs. Owners may be fined if their cat is found in these areas.

Information

The Northern Beaches Council has information outlining cat owner responsibilities, cat control programs and further resources available on their website. Their Officers provide cat owners with a printed brochure summarising these topics. Bi-monthly digital newsletter and social media posts can feature information about cats.

Nuisance cats

A Council Ranger will attend to investigate any nuisance cat complaints. Nuisance orders are issued, when enough evidence (statements, video and/or photos and medical reports) can be collected.

Stray and feral cats

Stray and feral cats are not managed by the Council as they are not considered a problem.

What the Council thought was working well

The Council was asked what they thought was working well with their cat management. Their responses:

- Mail-outs to unregistered cat owners
- Drafting of marketing plans for Responsible Cat Ownership.

Challenges to effective cat management

The main challenges of cat management identified by Northern Beaches Council:

- Limited powers under current legislation to enforce responsible cat ownership
- Difficulties in collecting proof that a cat has repeatedly caused issues for a Nuisance Order, and its only in place for 6 months.

Future intentions

Identified future cat management intentions:

- Active social media presence to engage community
- Including at ownership information in rate mail-out
- RSPCA support for trapping in WPAs.

Stakeholder Interview Results

Involvement in cat management

A range of stakeholders from the Northern Beaches LGA were interviewed. Their roles and activities related to cat management:

- **Collaroy Plateau Veterinary Hospital:** Treat domestic cats for illness & injury and are involved in preventative health care.
- **Mona Vale Veterinary Hospital:** Treat many injured cats involved in accidents. Perform de-sexing & microchipping.
- **Pittwater Natural Heritage Association:** No direct involvement but support management of free-roaming cats.
- **Save Manly Dam Catchment Committee:** No direct involvement but are concerned by the impact of domestic and feral cats on wildlife.
- **Cat-owning member of the public:** owns multiple cats, involved in cat rescue and assists people in social housing with getting cats de-sexed.

What stakeholders' thought was working well

Stakeholders were asked what was working well for cat management in their local LGA. The main factors identified by the stakeholders:

- Greater uptake of cat containment measures due to increase in information and use of social media to spread word
- Increase in rescue and fostering organisations established in the LGA
- Improved camera monitoring of tracks and trails to detect cats, dogs and foxes accessing the national park at night.

Challenges to effective cat management

The main challenges to effective cat management identified by the stakeholders:

- Overcoming opposition

- People who loathe to contain their cats – they refuse to acknowledge and accept the data on roaming as they believe its cats' nature to roam
- Cat management across multiple agencies – needs to be more coordination
- Stop demonising cat owners – reframe message so not just about 'cats killing wildlife'
- Council needs to be more proactive, need to address limitations to constructing cat enclosures under building codes
- Currently, there is no legal framework to deal with problem cats apart from humane trapping by individuals on their own property.

Cat management vision

Aim of cat management

Stakeholders were asked what the aim of cat management should be in their LGA. There was consensus among the stakeholders that the main aims should be to ensure all new cats are de-sexed, microchipped and fully contained and that existing cat owners should be encouraged to contain their cats to protect native fauna.

Required information and actions

Stakeholders were asked what information and actions are required to manage cats more effectively in their local LGA. Their responses:

- Publicity and education about responsible cat ownership, needs to be positive and about benefits for cats. Reach local cat owners through community Facebook groups, local magazine (Tawny Frogmouth), and free local newspaper (The Review)
- Provide better support for cat owners
- Legislation for keeping cats contained and higher penalties owners who do not comply, and rehoming/disposal of the problem cats
- Continual development of camera monitoring to better target areas of concern
- Development of a non-invasive method of tagging a camera detected cat
- Better consistency of regulation of domestic animals in natural areas between NPWS and local government.

How to deal with conflict

Stakeholders were asked about the best ways to deal with conflicts that arise around cat management in their communities. Their suggestions:

- Education is the best way to deal with conflict, in a firm and friendly manner
- Clear legislation and guidelines with ramifications for those who do not follow them as an incentive to do the right thing
- Community forums/discussion nights, surveys, discussion with local veterinary hospitals
- Outreach and knowledge base of the key parties involved – cat owners, veterinarians, environmental groups, local government rangers.

Key Findings (Interviews)

How domestic cat management is being handled is influenced by the capacity and motivation of both the Council and the community. The main benefits of current programs and challenges for the Northern Beaches LGA are summarised below.

- Adoption of cat containment improving but still need to overcome opposition by particular segments using targeted behaviour change strategies.
- Current legislation needs to be strengthened to enforce responsible cat ownership and deal with problem cats.
- Inter-agency cooperation on cat management needs to continue.

Online survey

Northern Beaches Council was not one of the selected LGAs targeted with the phone survey, however residents were invited to have their say via the online survey.

Respondent demographics

- 1,472 respondents completed the online survey – 626 (43%) were cat owners and 846 (57%) did not own a cat.
- Most cat owners were female (489, 78%), with 11 males (2%). One cat owner identified as non-binary, and 18 did not answer this question.
- Most non-cat owners were also female (546, 65%), with 265 males (31%), four non-binary and 31 non-responses.
- The overall average age was 55.0 years (± 14.1). The average age for cat owners was younger – 51.6 years (± 13.2), and non-cat owners was older – 57.6 years (± 14.3).

Cat ownership behaviours

The majority of respondents (n=383, 62%) had one cat in their household, 191 (31%) owned two cats, 30 (4%) owned three cats and ten (2%) owned four cats. The remaining 1% owned five or more cats, the greatest number reported was eleven cats in a household.

Keeping cats inside at night but letting them roam freely during the day was the most common cat living arrangement (n=226, 36%). The next most popular arrangements were keeping cats indoors all the time (n=178, 28%) and allowing cats indoors and restricting their outdoor access (n=145, 23%). Seventy-five respondents (12%) let their cat indoors and allowed them to roam free when outside. The cat of one respondent roamed freely outside all the time.

Feeding of free roaming cats

Respondents were asked if they cared for any free-roaming cats that were not their own. Fifty-five respondents indicated they did care for unowned free-roaming cats - 29 cat owners (5%) and 28 non-cat owners (3%).

Drivers and barriers to cat containment

Cat owners were given the opportunity in an open-ended format to list the factors they have considered when deciding whether to allow their cat to roam freely or not. At least one factor was listed by 574 (92%) of cat owners. The main factors listed by the respondents when preventing their cat from roaming freely are shown in Figure N1. Protecting wildlife, including small mammals, birds, and reptiles, was the most popular response. General safety and preventing traffic accidents were the next popular.

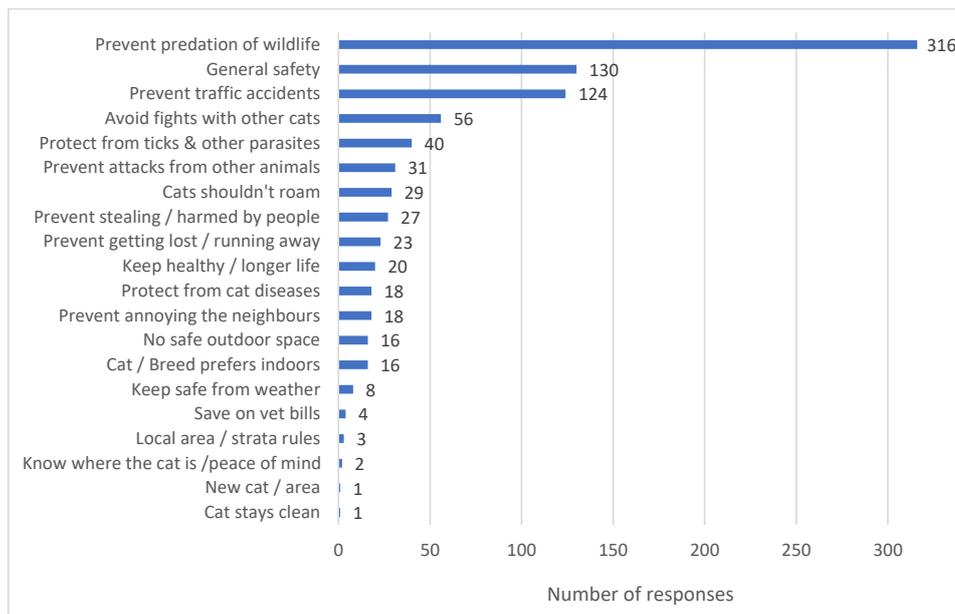


Figure N1. Main factors considered by cat owners when preventing their cat from roaming freely.

The listed factors considered by cat owners when deciding to allow their cat to roam freely are shown in Figure N2. The top response was the time of day – cats should be prevented from roaming at night it was OK during the day. The perceptions that their cat doesn't roam very far from their property and those cats need to be outside and active were next most popular considerations.

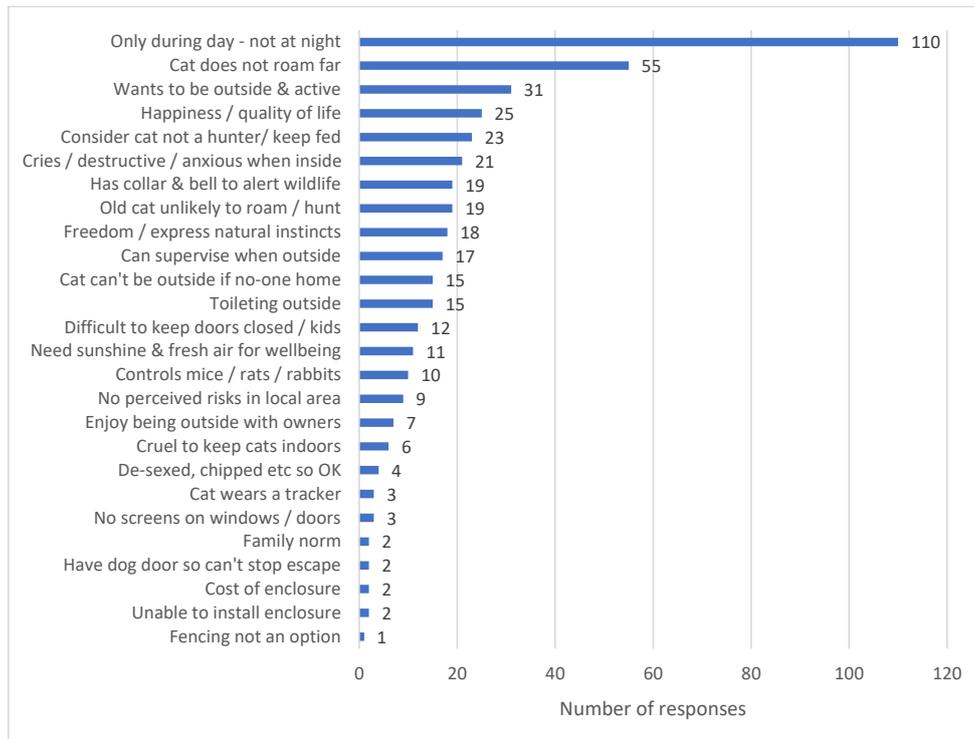


Figure N2. Main factors considered by cat owners when deciding to allow their cat to roam freely.

After listing their own considerations, cat owners were then asked to rate their agreement with 15 statements pertaining to previously identified drivers of and barriers to preventing cats from roaming freely (See Q7 in Appendix 5). The average ratings are summarised in Figure N3.

Most respondents disagreed that their current living circumstances made it difficult to prevent their cat from roaming. There were no statistical differences in this agreement rating and their own / rent situation ($F=0.31, p=0.73$), however there was a statistical difference in this agreement rating and respondent's type of dwelling ($F=5.20, p<0.001$). Respondents living in flats or units more strongly disagreed with this statement than respondents in other types of dwellings.

Protecting wildlife were the strongest drivers of cat containment. This corresponds with the results from the open-ended question (Figure N1). On average respondents disagreed that cats should be free to roam, however there were statistical differences ($F=52.62, p<0.001$) between those owners who currently restrict their cat's movements (Inside all the time 1.52, Inside & restricted outside 1.68), practice a night curfew (2.52) or let their cats roam freely (Inside & free outside 3.25, Free outside all the time 5.00).

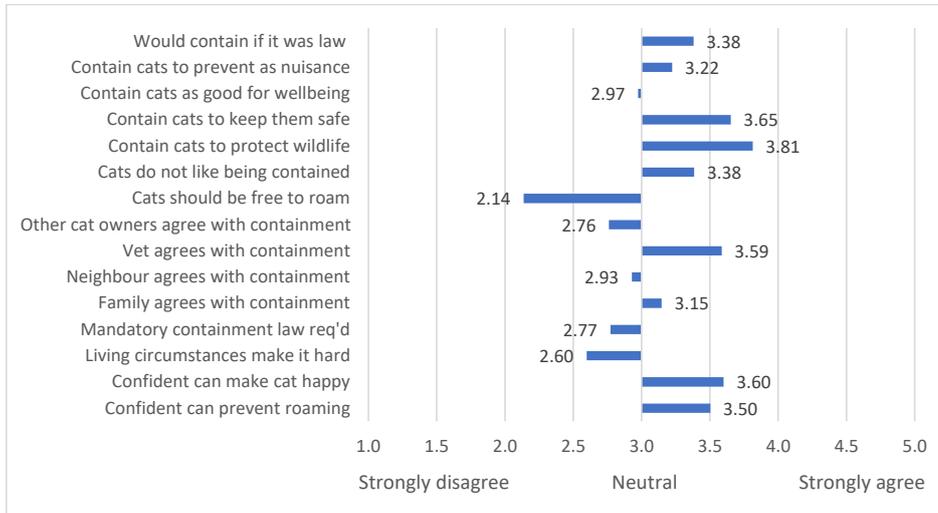


Figure N3. Mean cat owner agreement scores to the 15 driver and barrier statements

Those respondents who did not own cats were also to rate their agreement with 10 statements pertaining to previously identified drivers of and barriers to preventing cats from roaming freely. The average ratings are shown in Figure N4. There were statistical differences between the ratings of cat owners and non-owners for all ten shared statements. Those respondents who do not own cats were more likely to agree that cats should be prevented from roaming to protect wildlife ($F=178.72, p < 0.001$), to prevent them being a nuisance ($F=292.58, p < 0.001$), to keep them safe ($F=5.42, p=0.02$), and to improve the cat's well-being ($F=40.83, p < 0.001$). They were less likely to agree that cats should be free to roam ($F=236.28, p < 0.001$) and that cats do not like to be contained ($F=21.48, p < 0.001$). These respondents also were more likely to agree that their family ($F=329.36, p < 0.001$), neighbours ($F=80.98, p=0.001$) and vets ($F=81.23, p < 0.001$) supported cat containment, and that the laws should be changed ($F=587.19, p < 0.001$).

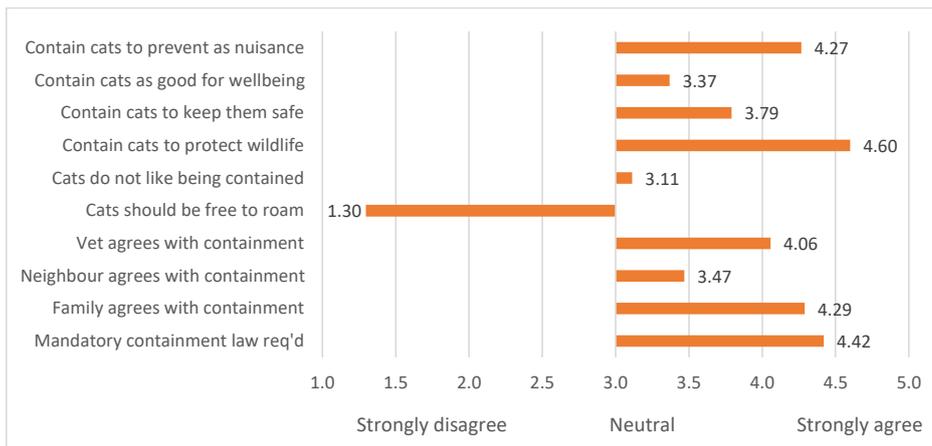


Figure N4. Mean non-cat owner agreement scores to ten driver and barrier statements.

Key Findings (Online Survey)

The adoption of responsible cat ownership behaviours across the Northern Beaches LGA is influenced by the capacity and motivation of the cat owners. Current cat owner management behaviours and identified driver and barrier factors from the public consultation are summarised below.

- There is some support for full containment (28% currently keeping cats indoors all the time and 23% restricted outdoor access), although night curfew is more popular (currently 36% adoption). Further encouragement is required to increase full containment.
- There is a small number of residents who care for stray and unowned cats.
- The main drivers for containment were to reduce wildlife predation and cat safety.
- Strong barriers to full containment were owners' perceptions of the risks of wildlife predation at night versus those at day, and beliefs about the behaviours of their cats.
- There was weak agreement by cat owners that cat containment legislation was required. Those residents that do not own cats strongly agreed with this legislation change.

City of Parramatta Council

Baseline cat data

The Council did not provide any baseline data at the time of the interview.

Current cat management initiatives

The Council generally limits households to two cats per their Keeping of Animals Policy. They recommend responsible cat ownership, including containment. The Council conducts annual de-sexing and vaccination days for cats.

City of Parramatta Council have declared eight Wildlife Protection Areas (WPAs) under the NSW Companion Animals Act 1998. Cats (controlled or not) are prohibited from these areas.

Compliance monitoring

As part of compliance monitoring this Council cross-checks entries in the Companion Animal Register to access information regarding those cats not registered and / or de-sexed. They conduct a bi-annual mail out to residents to register their animals and penalties are issued for cat registration. Council does not actively inspect properties for the number of cats, although will act if complaints are received. When nuisance complaints are received, Council will approach the cat owner and ensure that the cat is microchipped, registered and de-sexed. Council has cameras monitoring wildlife in the WPAs and conducts trapping programs to remove offending cats (initially conduct letter box drop to alert residents of cat trapping program).

Information

Council provides brochures to cat owners with information on responsible cat ownership – keeping them stimulated, having them de-sexed, microchipped and registered, wearing a collar and bell, keeping them indoors at night, etc.

Nuisance cats

Nuisance cat complaints are handled on a case-by-case basis and generally, a response is formulated based on the nature of complaints. This can be achieved with notices, orders and penalties being issued to offenders.

Stray and feral cats

Council has issues with residents who feed stray / feral cats but who don't realise that the cats then breed, and the issue gets out of control

What the Council thought was working well

The Council felt that the prospect of issuing a penalty to an offender was providing a good response from cat owners. Also, that the WPAs allowed for roaming cat removal.

Challenges to effective cat management

The main challenges of cat management identified by City of Parramatta Council:

- Limited power to act against people that keep and feed stray cats which are not de-sexed and hence able to breed
- Cats traditionally seen as an outside animal
- Resources and public education for trapping on WPAs.

Future intentions

The main identified future cat management actions:

- Harsher penalties for offenders who feed and keep unde-sexed / feral cats
- Restrictions on cat movement for example, curfews at night and restriction on cats able to roam outside of their properties to defecate with penalties
- Limit number of cats per household, maximum 2-3
- More severe penalties for breaching Nuisance Cat Order
- Penalties for people keeping more than a specified limit of cats on their property
- Focus in areas around bushlands and educate cat owners to keep cats safe at home.
- Education for people who have the old school view that cats need to roam free, that is their right
- Education in enrichment and ways to keep cats stimulated at home. About the risks of letting your cat go outside and meet stray cats who can spread disease.
- Funds for de-sexing cats all year around
- Engage with colony feeders to encourage change of conditions for the cats.

Key Findings (Interviews)

How domestic cat management is being handled is influenced by the capacity and motivation of both the Council and the community. The main benefits of current programs and challenges for the Parramatta LGA are summarised below.

- Council needs to provide more resources towards strategies to encourage residents to de-sex, register and microchip cats, as well as persuade them to keep their cats indoors/in a cat proof backyard or at least inside overnight.
- More resources are required to enforce current policies (e.g. registration) and update others (cat containment in areas near WPAs).
- Tougher legislation required on de-sexing.
- Need to engage stray cat feeders and support de-sexing and improved welfare of these animals.

Online survey

City of Parramatta Council was not one of the selected LGAs targeted with the phone survey, however residents were invited to have their say via the online survey.

Respondent demographics

- 480 respondents completed the online survey – 364 (76%) were cat owners and 116 (24%) did not own a cat.
- Most cat owners were female (305, 84%), with 50 males (14%). Nine respondents did not answer this question.
- Most non-cat owners were also female (88, 76%), with 24 males (21%). One respondent identified as non-binary and three did not answer this question.
- The overall average age was 44.5 years (± 13.3). The average age for cat owners was younger – 42.9 years (± 12.9), and non-cat owners was older – 49.5 years (± 13.3).

Cat ownership behaviours

Just under half of respondents (n=177, 49%) had one cat in their household, 136 (38%) owned two cats, 25 (7%) owned three cats and ten (3%) owned four cats. The remaining 3% owned five or more cats, the greatest number reported was eleven cats in a household.

Keeping cats indoors all the time was the most popular cat living arrangement (n=152, 42%). The next most popular arrangements were allowing cats indoors and restricting their outdoor access (n=103, 28%) and keeping cats inside at night but letting them roam freely during the day (n=71, 20%). Thirty-four respondents (9%) let their cat indoors and allowed them to roam free when outside. Three respondents let their cats roam freely outside all the time.

Feeding of free roaming cats

Respondents were asked if they cared for any free-roaming cats that were not their own. Fifty-three respondents indicated they did care for unowned free-roaming cats - 45 cat owners (12%) and 8 non-cat owners (7%).

Drivers and barriers to cat containment

Cat owners were given the opportunity in an open-ended format to list the factors they have considered when deciding whether to allow their cat to roam freely or not. At least one factor was listed by 343 (94%) of cat owners. The main factors listed by the respondents when preventing their cat from roaming freely are shown in Figure P1. Protecting wildlife, including small mammals, birds, and reptiles, was the most popular response. General safety, preventing traffic accidents and avoiding fights with other cats were the next popular.

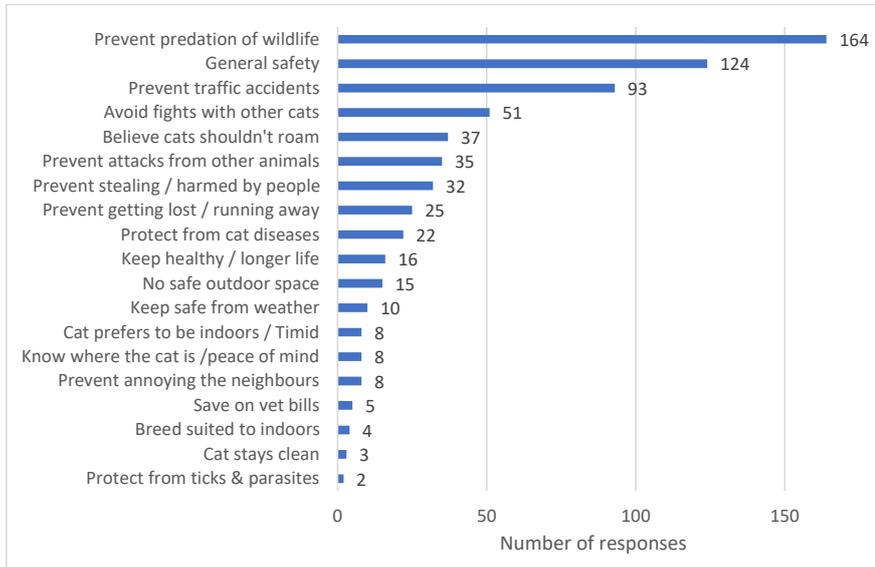


Figure P1. Main factors considered by cat owners when preventing their cat from roaming freely.

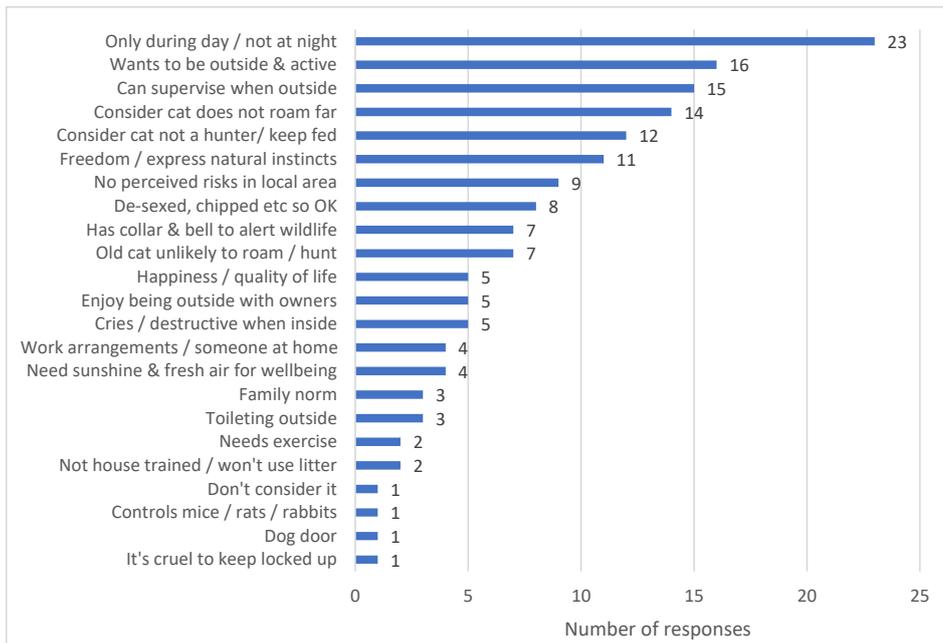


Figure P2. Main factors considered by cat owners when deciding to allow their cat to roam freely.

The listed factors considered by cat owners when deciding to allow their cat to roam freely are shown in Figure P2. The top response was the time of day – cats should be prevented from roaming at night, but it was OK during the day. The next popular responses were that their cat preferred to be outside and active, that the owners was able to supervise them when they were outside and the perception that their cat doesn't roam very far from their property.

After listing their own considerations, cat owners were then asked to rate their agreement with 15 statements pertaining to previously identified drivers of and barriers to preventing cats from roaming freely (See Q7 in Appendix 5). The average ratings are summarised in Figure P3.

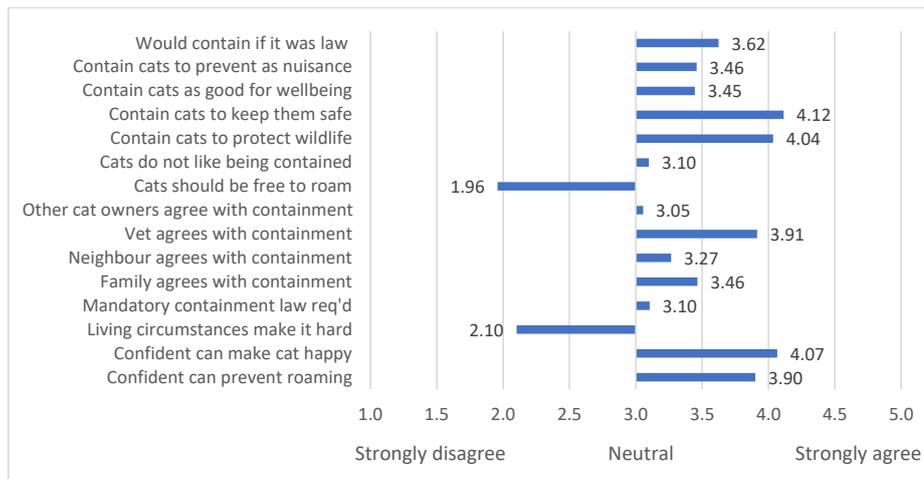


Figure P3. Mean cat owner agreement scores to the 15 driver and barrier statements.

Most cat owners were confident they could provide everything to ensure their cat was happy. Most respondents disagreed that their current residential circumstances made it hard to prevent their cat from roaming, however there was a statistical difference in this agreement rating and respondent's type of dwelling ($F=8.79, p<0.001$), with owners in flats (some outside space 1.50, no outside space 1.20) or other circumstances (1.25) more likely to disagree than those in houses (with yard 2.46, no yard 2.21) and semi-detached or townhouses (with garden 2.67, no garden 2.49). There was also a statistical difference in this agreement rating and the own / rent situation ($F=4.33, p=0.01$), with respondents renting (1.85) more likely to disagree than those owning (2.26).

Keeping cats safe and protecting wildlife were the strongest drivers of cat containment. On average respondents disagreed that cats should be free to roam, however there were statistical differences ($F=47.16, p<0.001$) between those owners who currently restrict their cat's movements (Inside all the time 1.68, Inside & restricted outside 1.43), practice a night curfew (2.45) or let their cats roam freely (Inside & free outside 3.53, Free outside all the time 5.00).

Those respondents who did not own cats were also to rate their agreement with 10 statements pertaining to previously identified drivers of and barriers to preventing cats from roaming freely. The average ratings are shown in Figure P4. There were statistical differences between the ratings of cat owners and non-owners for six of the ten shared statements. Those respondents who do not own cats were more likely to agree that cats should be prevented from roaming to protect wildlife ($F=21.64, p < 0.001$), to prevent them being a nuisance ($F=39.23, p < 0.001$) and to improve the cat's well-being ($F=5.55, p=0.02$). They were less likely to agree that cats should be free to roam ($F=21.71, p < 0.001$). These respondents also were more likely to agree that their family ($F=30.18, p < 0.001$) agreed with cat containment, and that the laws should be changed ($F=62.05, p < 0.001$).

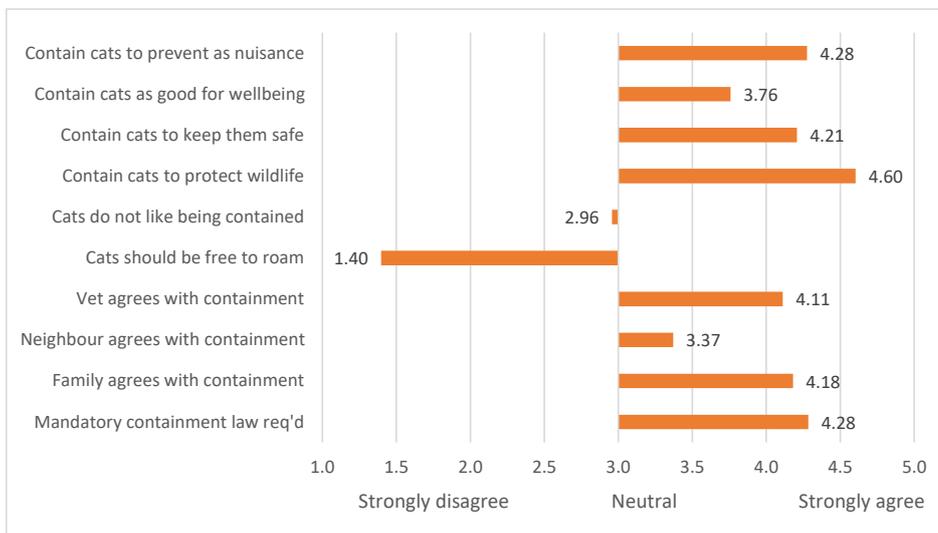


Figure P4. Mean non-cat owner agreement scores to ten driver and barrier statements.

Key Findings (Online Survey)

The adoption of responsible cat ownership behaviours across the Parramatta LGA is influenced by the capacity and motivation of the cat owners. Current cat owner management behaviours and identified driver and barrier factors from the public consultation are summarised below.

- There is some support for full containment (42% currently keeping cats indoors all the time and 28% restricted outdoor access). Twenty percent of cat owners only allow their cats to roam freely during the day, and the remaining 20% let their cats roam freely all the time. Encouragement is required to increase containment rates.
- There are a number of residents, particularly cat owners, who feed stray and unowned cats.
- Main drivers for containment were to reduce wildlife predation and keep the cats safe.
- Strong barriers to full containment were owners' different perceptions of the risks at night versus those at day, as well as their beliefs about the needs and behaviours of their cats.
- There was weak agreement by cat owners that the introduction of cat containment legislation would motivate compliance. Those residents that do not own cats strongly agreed with this legislation change.

Shoalhaven City Council

Baseline cat data

The Shoalhaven City Council reported they had:

- 11,994 registered cats
- 9663 microchipped cats

The number of de-sexed cats was unknown.

Current cat management initiatives

The Council conducts microchipping days and all animals adopted from their Animal Shelter are de-sexed. They strongly recommend 'responsible cat ownership', including cat containment. Some estates and new developments within Shoalhaven City Council have restrictive covenants, where the keeping of cats on private properties is prohibited.

Compliance monitoring

As part of compliance monitoring this Council cross-checks entries in the Companion Animal Register to access information regarding those cats not registered and / or de-sexed. Owners are contacted individually as well as in a monthly mailout, advising them of the Council's requirements. Shoalhaven indicated they do not monitor the areas where the keeping of cats on private properties is prohibited.

Information

The Shoalhaven City Council has information outlining cat owner responsibilities, cat control programs and further resources available on their website, as well as a flyer and brochure which can be handed out by rangers. The animal shelter and rangers provide one on one education.

Nuisance cats

Once a nuisance cat complaint is received, if the cat owner is known a ranger can visit them to provide education. The public can hire traps from the Animal Shelter where they can also take the trapped cat. Flyers are available for complainant to do a letter box drop in their neighbourhood.

Stray and feral cats

Feral and stray cats are known to exist, but the problem is undetermined. Occasional management at the waste depot is conducted by the local shooting club.

What the Council thought was working well

The Council representative was unable to answer the question about what was working well with their current cat management initiatives.

Challenges to effective cat management

The main challenges of cat management identified by Shoalhaven City Council:

- Not knowing the scope of the problems – i.e., how many feral, semi-owned and owned but not microchipped or desexed cats are in the community
- How many cats are allowed to roam day or night and what is the toll on wildlife

- Understanding what cat owners know about responsible pet ownership.

Future intentions

The main identified future cat management intention was to increase the effort by a range of stakeholders to create solutions to the cat problems.

Stakeholder Interview Results

Involvement in cat management

A range of stakeholders from the Shoalhaven LGA were interviewed. Their roles and activities related to cat management:

- **RSPCA Shoalhaven Volunteer Branch:** Rehome cats and kittens, cover costs of health checks, de-sexing, vaccinating and microchipping.
- **Berry vet clinic:** Cats make up 15% of the small animal case load. The clinic has the tender for Shoalhaven pound and works closely with council.
- **Birdlife:** Not directly involved in management of cats but have worked on campaigns to protect birds, and wildlife from cats.

What stakeholders' thought was working well

Stakeholders were asked what was working well for cat management in their local LGA. The main factor identified by the stakeholders was a Council that was proactive on cats and working with animal welfare groups - de-sexing and rehoming programs as well as financial assistance for health care.

Challenges to effective cat management

The main challenges to effective cat management identified by the stakeholders:

- Large number of cats being abandoned/lost/not microchipped and left to breed
- Reports of people allowing their cats to breed freely and selling illegally and limited power of Rangers to enter these properties.

Cat management vision

Aim of cat management

Stakeholders were asked what the aim of cat management should be in their LGA. There was consensus among the stakeholders that the main aims should to de-sex more cats and encourage 24-hour containment.

Required information and actions

Stakeholders were asked what information and actions are required to manage cats more effectively in their local LGA. Their responses:

- Free de-sexing campaign
- Education on how cats affect wildlife and solutions to avoid having cats outside

- Keeping cats inside the properties 24 hours or not have cats at all
- Incentives for people who are doing the right thing
- Resources for council/ranger services to set up a meeting with a 'problem' owner and talk about options and support
- Educate vets about cat containment so they are giving up-to-date advice.

How to deal with conflict

Stakeholders were asked about the best ways to deal with conflicts that arise around cat management in their communities. Their suggestions:

- Education is the best way to deal with conflict, in a firm and friendly manner
- Clear legislation and guidelines with ramifications for those who do not follow them as an incentive to do the right thing
- Community forums/discussion nights, surveys, discussion with local veterinary hospitals
- Outreach and knowledge base of the key parties involved – cat owners, veterinarians, environmental groups, local government rangers.

Key Findings (Interviews)

How domestic cat management is being handled is influenced by the capacity and motivation of both the Council and the community. The main benefits of current programs and challenges for the Shoalhaven City LGA are summarised below.

- Continued work with welfare agencies on de-sexing and rehoming programs as well as financial assistance for health care.
- Greater understanding of the scope of the problem is required by Council and stakeholders to develop better management strategies.

Online survey

Shoalhaven City Council was not one of the selected LGAs targeted with the phone survey, however residents were invited to have their say via the online survey.

Respondent demographics

- 595 respondents completed the online survey – 271 (46%) were cat owners and 324 (54%) did not own a cat.
- Most cat owners were female (231, 85%), with 32 males (12%). Three cat owners identified as non-binary, and five did not answer this question.
- Most non-cat owners were also female (210, 65%), with 106 males (33%) and eight non-responses.
- The overall average age was 55.0 years (± 14.2). The average age for cat owners was younger – 50.3 years (± 13.5), and non-cat owners was older – 59.0 years (± 13.6).

Cat ownership behaviours

Just over half of respondents (n=143, 53%) had one cat in their household, 93 (34%) owned two cats, 22 (8%) owned three cats and ten (4%) owned four cats. The remaining 1% owned five or more cats, the greatest number reported was eight cats in a household.

Keeping cats indoors all the time was the most common cat living arrangement (n=99, 37%). The next most popular arrangements were allowing cats indoors and restricting their outdoor access (n=83, 31%) and keeping cats inside at night but letting them roam freely during the day (n=67, 25%). Twenty respondents (7%) let their cat indoors and allowed them to roam free when outside. Two respondents had cats that roamed freely outside all the time.

Feeding of free roaming cats

Respondents were asked if they cared for any free-roaming cats that were not their own. Sixteen respondents indicated they did care for unowned free-roaming cats - ten cat owners (4%) and six non-cat owners (2%).

Drivers and barriers to cat containment

Cat owners were given the opportunity in an open-ended format to list the factors they have considered when deciding whether to allow their cat to roam freely or not. At least one factor was listed by 246 (91%) of cat owners. The main factors listed by the respondents when preventing their cat from roaming freely are shown in Figure S1. Protecting wildlife, such as small mammals, birds, and reptiles, was the most popular response. General safety and preventing traffic accidents were the next popular.

The listed factors considered by cat owners when deciding to allow their cat to roam freely are shown in Figure S2. The top response was that the owners considered that their cat did not roam far from their property. The next popular response was they were able to supervise their cat when it was outdoors. The cat preferring to be outside and active and that the cat posed no risk to wildlife as it had a collar and bell were next most popular considerations.

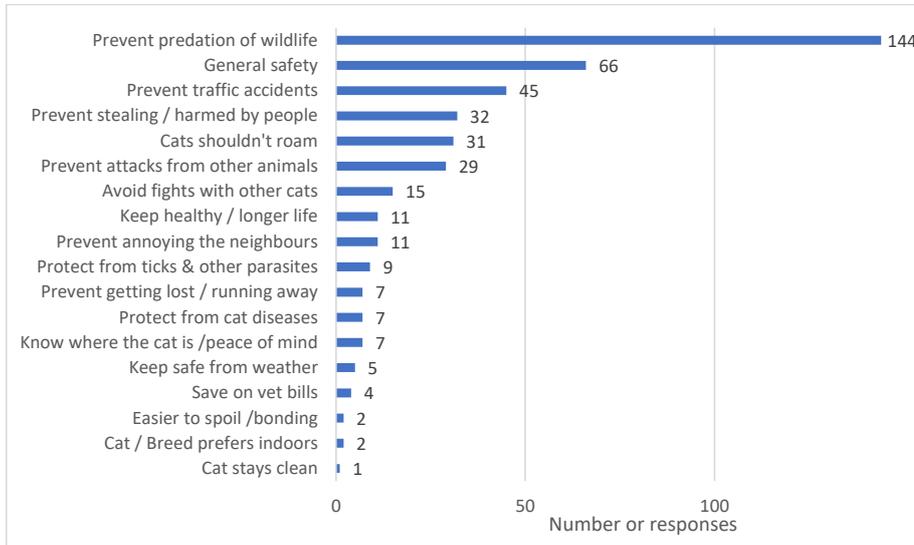


Figure S1. Main factors considered by cat owners when preventing their cat from roaming freely.

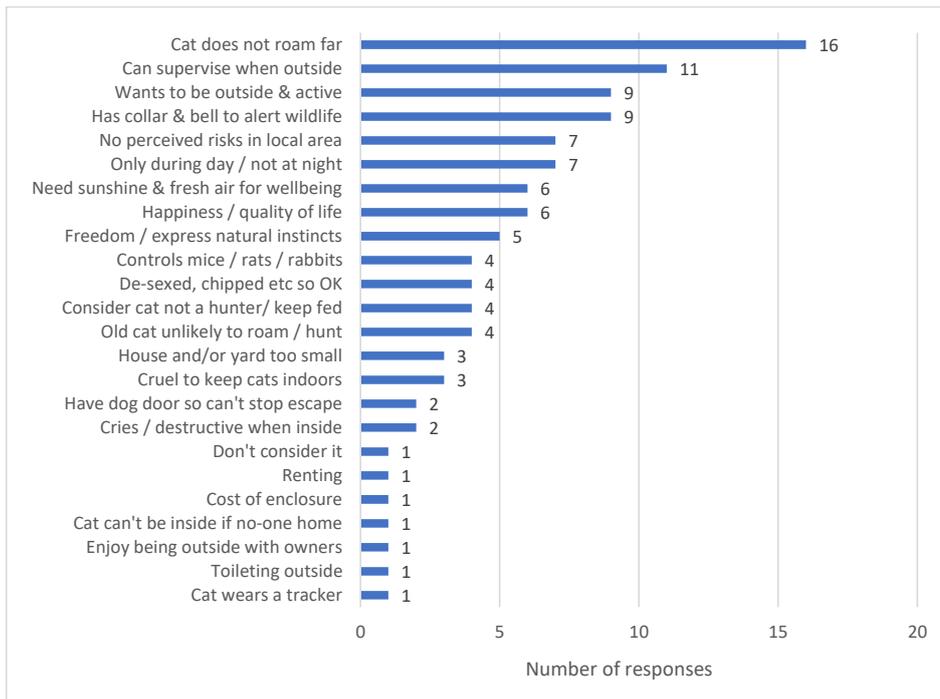


Figure S2. Main factors considered by cat owners when deciding to allow their cat to roam freely.

After listing their own considerations, cat owners were then asked to rate their agreement with 15 statements pertaining to previously identified drivers of and barriers to preventing cats from roaming freely (See Q7 in Appendix 5). The average ratings are summarised in Figure S3.

Most respondents were confident they could provide everything to ensure their cat was happy. Most respondents disagreed that their current living circumstances made it difficult to prevent their cat from roaming. There were no statistical differences in this agreement rating and respondent’s type of dwelling ($F=1.24, p=0.29$) or own / rent situation ($F=3.00, p=0.06$).

Protecting wildlife and keeping cats safe were the strongest drivers of cat containment. This corresponds with the results from the open-ended question (Figure S1). On average respondents disagreed that cats should be free to roam, however there were statistical differences ($F=22.76, p<0.001$) between those owners who currently restrict their cat’s movements (Inside all the time 1.39, Inside & restricted outside 1.42), practice a night curfew (2.61) or let their cats roam freely (Inside & free outside 2.55, Free outside all the time 3.50).

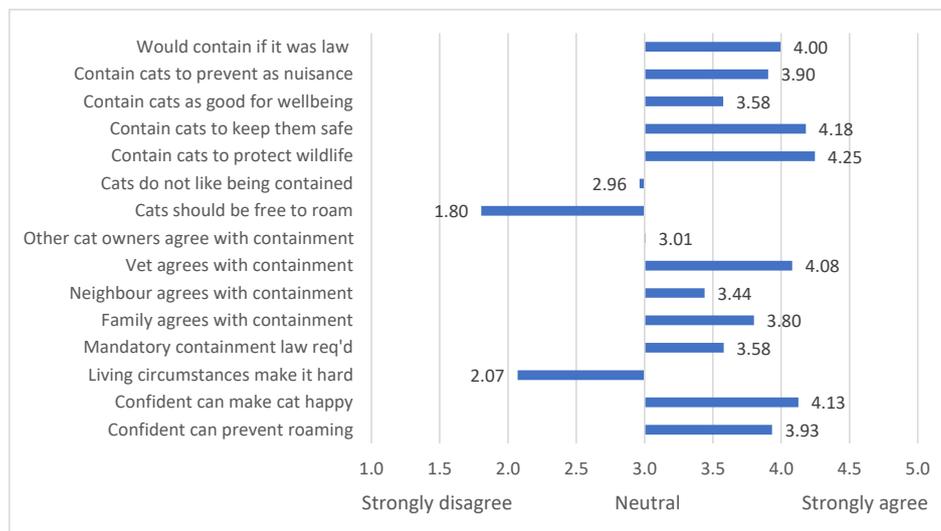


Figure S3: Mean cat owner agreement scores to the 15 driver and barrier statements.

Those respondents who did not own cats were also to rate their agreement with 10 statements pertaining to previously identified drivers of and barriers to preventing cats from roaming freely. The average ratings are shown in Figure S4. There were statistical differences between the ratings of cat owners and non-owners for five of the ten shared statements. Those respondents who do not own cats were more likely to agree that cats should be prevented from roaming to protect wildlife ($F=8.94, p=0.003$) and to prevent them being a nuisance ($F=36.05, p <0.001$). They were less likely to agree that cats should be free to roam ($F=65.57, p <0.001$). These respondents were also more likely to agree that their family ($F=37.33, p <0.001$) supported cat containment, and that the laws should be changed ($F=94.71, p <0.001$).

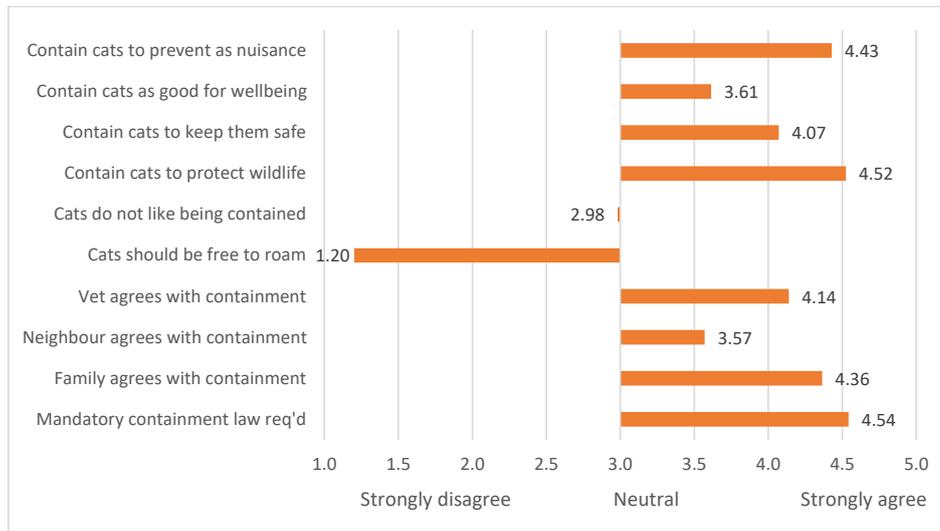


Figure S4. Mean non-cat owner agreement scores to ten driver and barrier statements.

Key Findings (Surveys)

The adoption of responsible cat ownership behaviours across the Shoalhaven LGA is influenced by the capacity and motivation of the cat owners. Current cat owner management behaviours and identified driver and barrier factors from the public consultation are summarised below.

- There is some support for full containment (37% currently keeping cats indoors all the time and 31% restricted outdoor access) and night curfews (currently 25% adoption). Further encouragement is required particularly for the remaining cat owners who pose no restrictions on their cats’ movements.
- There is a small number of residents who care for stray and unowned cats.
- Main drivers for containment were to reduce wildlife predation and keep the cat safe.
- Strong barriers to full containment were owners’ beliefs about their cats’ behaviours and their ability to control it.
- Family members and vets were seen as important influencers for containment adoption.
- There was strong agreement that a cat containment legislation should be introduced, particularly by non-cat owners, and cat owners agreed that it would motivate compliance.

Tweed Shire Council

Council Interview Results

Baseline cat data

The Tweed Shire Council reported from July 2014 they have:

- 6153 registered cats
- 3108 microchipped cats
- 2363 de-sexed cats.

Current cat management initiatives

Tweed Shire Council undertakes a range of cat management initiatives. There are two estates within the LGA that have curfew (dawn to dusk) covenants on their titles. The Council recommends cat containment as part of 'responsible cat ownership'. The Council offers subsidised de-sexing and microchipping programs.

The NSW Companion Animals Act 1998 allows Councils to declare Wildlife Protection Areas (WPAs). Tweed has designated three bushland reserves as WPAs where both dogs and cats are prohibited.

Compliance monitoring

As part of compliance monitoring this LGA cross-checks entries in the Companion Animal Register to access information regarding those cats not registered and / or de-sexed. Owners are contacted, advising them of the Council's requirements. Tweed Council rangers patrol and monitor key locations, including WPAs. Trail cameras have been placed in strategic locations to assist with monitoring compliance, and cage trapping is implemented in areas with low levels of voluntary compliance.

Information

The Tweed Shire Council have developed their 'Love Cats Love Wildlife' campaign and conduct a range of community engagement programs, local school presentations, and workshops on responsible pet ownership. They conduct a 'Secret life of cats' tracking project. Tweed also hosts an interactive website for people to view lost/impounded animals and post for lost pet information.

Nuisance cats

Nuisance cat complaints are investigated and actioned by the Council rangers.

Stray and feral cats

Tweed Shire Council is currently aware of semi-owned/ unowned cat populations in several areas and engages with all relevant stakeholders to try to improve the welfare of these cats. Captured semi-owned/ unowned cats that have been reported by the community are rehomed through the volunteer organisation 'Friends of the Pound' (FOP) where possible.

What the Council thought was working well

Tweed LGA believe the total cat exclusion (cats prohibited) on several estates is one of their current cat management initiatives that is working well.

Challenges to effective cat management

The main challenges of cat management identified by this LGA:

- Low levels of registration and microchipping
- Low levels of containment
- Lack of legislative power for enforcement.

Future intentions

Identified future cat management intentions:

- Reforming current legislation to include mandatory containment which would provide a clear regulatory framework.

Stakeholder Interview Results

Involvement in cat management

Only two stakeholders from the Tweed LGA were interviewed. Their role and activities related to cat management:

- **Murwillumbah vet:** GP vet. Working with Tweed Shire Council on Love Cats Love Wildlife project. Strong interest in behaviour and enrichment
- **North Coast Local Lands Service:** Work under the NSW Biosecurity Act to manage feral or stray cats in rural areas. Work with Council to handle collected cats.

What stakeholders' thought was working well

The stakeholders were asked what was working well for cat management in their local LGA.

The main factors identified:

- The Love Cats Love Wildlife campaign which has been effective at bringing cat containment to people's attention
- Multiple contact points with cat owners – so they hear the same messaging from the vet practice as well as the Council
- Development of the Regional Cat Management plan.

Challenges to effective cat management

The main challenge to effective cat management identified by the stakeholders:

- Getting some vets on board to promote cat containment messaging
- Improving current legislation to support compliance activities by the Council.

Cat management vision

Aim of cat management

The stakeholders were asked what the aim of cat management should be in their LGA. The main aims identified was to increase fulltime containment of cats, not just at night and the creation of a regional ca management plan.

Required information and actions

The stakeholders were asked what information and actions are required to manage cats more effectively in their local LGA. Their responses:

- Highlight to cat owners how containment affects longevity, not just wildlife impacts
- Provide cat owners with information about potential risks to cats from roaming
- Encourage vets to incorporate messaging about containment in their practice mission statements and values
- Incentives for cat owners: FOP have a long-standing low-cost de-sexing program
- Council take charge with community support.

How to deal with conflict

The stakeholder did not offer a response to the question about the best ways to deal with conflicts that arise around cat management in their communities.

Key Findings (Interviews)

How domestic cat management is being handled is influenced by the capacity and motivation of both the Council and the community. The main benefits of current programs and challenges for the Tweed Shire LGA are summarised below.

- Council's Love Cats Love Wildlife project has been effective at bringing cat containment to people's attention but needs to continue and get all stakeholders involved.
- Programs targeting low levels of registration and microchipping required.
- Current legislation needs to be reformed to include clearer regulatory framework for containment and greater power to enforce.

Phone survey

Respondent demographics

Tweed Shire was one of the LGAs to be targeted with the phone survey. Seventy-one responses were collected. Forty-four respondents (62%) were female, the remaining 38% were male. The average age of respondents was 58 years.

When asked to describe their locality, 41 (58%) indicated they lived in a town, 18 (25%) as semi-rural, and 12 (17%) as rural. Most of the respondents (n=58, 82%) lived in a house with a medium to large outdoor space (yard). Two (3%) lived in a house with only a small outside space (courtyard or small garden). Five (7%) lived in a semi-detached house or townhouse with only a small outside space (courtyard or small garden), and six (8%) lived in a flat or unit with some outside space (patio or balcony). Most of the respondents indicated they owned their dwelling (n=63, 89%), eight were renting (11%).

Adoption of responsible cat ownership behaviours

The majority of respondents (n=52, 73%) had one cat in their household, 16 (23%) owned two cats, two owned three cats, and one had 4 cats.

De-sexing rates were high with 97% of respondents reporting their cats were de-sexed, with one respondent unsure. Registration with the local council was lower at 77%, although nine (13%) of owners were unsure if their cats were registered. Due to an oversight, respondents in this LGA were not asked about microchipping rates.

Keeping cats indoors at night but letting them roam freely during the day was the most common cat living arrangement (n=23, 32%). The next most popular arrangement was keeping cats indoors all the time (n=21, 30%). Eleven respondents (15%) allowed their cat indoors and restricted their outdoor access (e.g. in an escape-proof yard / run, or on a lead), and 15 (21%) let their cat indoors and allowed them to roam free when outside. Only one respondent had a cat that lived outside all the time.

Of the respondents who allowed their cats to roam freely outside (n=39), 33 (85%) indicated that their cat would be likely to some extent be roaming freely in the morning (6am-noon) as well as in the afternoon (noon-6pm), 14 (38%) indicated that their cat would be likely to some extent be roaming freely in the evening (6pm-midnight), while ten (26%) indicated that their cat would be likely to some extent be roaming freely from midnight to dawn.

The respondents who allowed their cats to roam freely outside were asked about their future intentions of preventing their cats from roaming freely. Results are presented in Figure T1. In the future respondents were more likely to prevent their cat roaming more often than they do currently (mean 1.4 where 1= extremely unlikely and 5= extremely likely) or prevent it from roaming freely all the time (mean 1.3) than to install a fence or enclosure (mean 1.1).

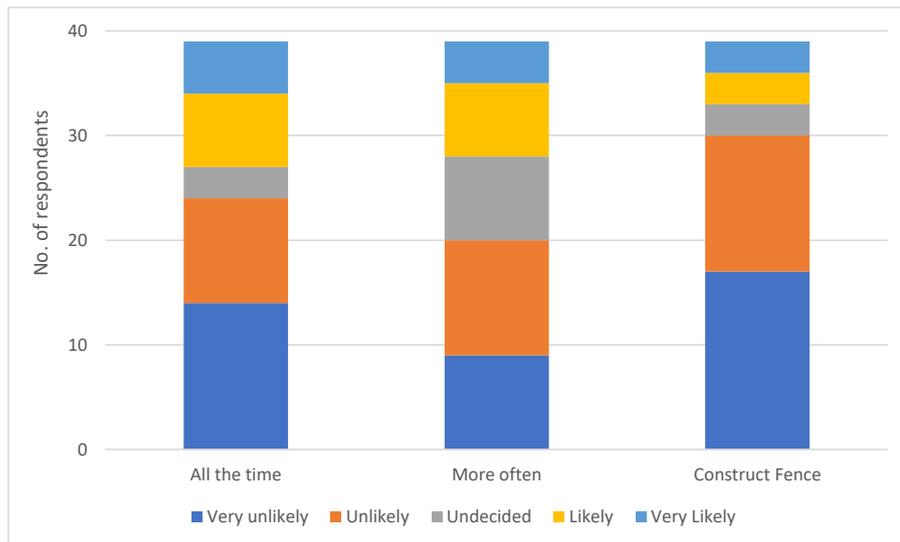


Figure T1. Likelihood of preventing free roaming of cats in the future across Tweed LGA.

Drivers and barriers to cat containment

Respondents were given the opportunity in an open-ended format to list at least three factors they have considered when deciding whether to allow their cat to roam freely or not. Seventy respondents (99%) listed at least one factor. The main factors listed by the respondents when preventing their cat from roaming freely are shown in Figure T2. Protecting wildlife, including small mammals, birds, and reptiles, was the most popular response. Preventing traffic accidents, avoiding fighting with other cats and the belief that cats should not roam were the next common responses.

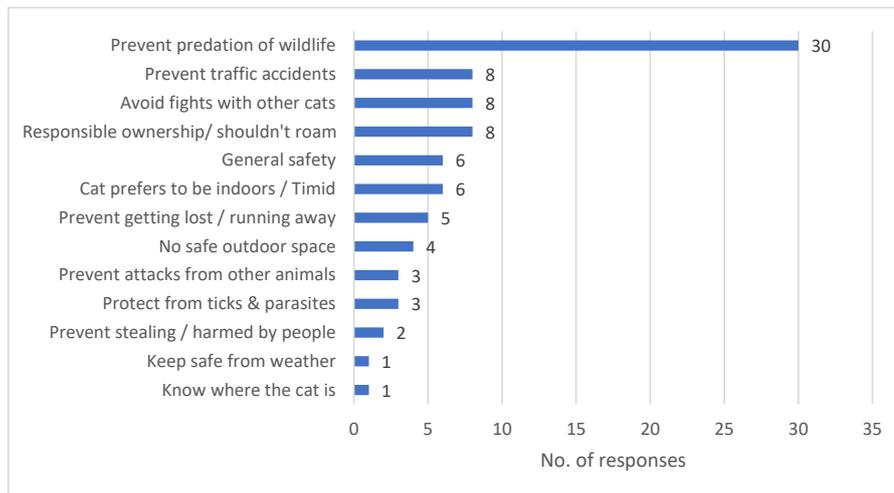


Figure T2. Main factors considered by respondents when preventing their cat from roaming freely.

The listed factors considered by respondents when deciding to allow their cat to roam freely are shown in Figure T3. The consideration of the cat's personality and its preference for outdoors was the top response, followed by whether the cat was considered to be a hunter and its destructive behaviour if not allowed outside.

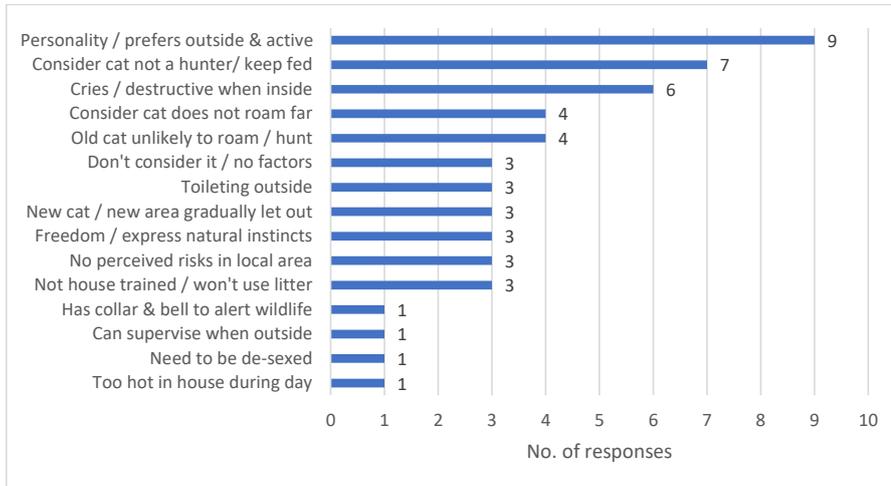


Figure T3. Main factors considered by respondents when deciding to allow their cat to roam freely.

After listing their own considerations, respondents were then asked to rate their agreement with 14 statements pertaining to previously identified drivers of and barriers to preventing cats from roaming freely (See Q5 in Appendix 4). The average ratings are summarised in Figure T4.

Most respondents were confident they could prevent their cat from roaming if they wished to, and they could provide everything to ensure their cat was happy. Most respondents disagreed that their current living circumstances made it difficult to prevent their cat from roaming. There were no statistical differences in this agreement rating and respondent's type of dwelling ($F=0.57, p=0.63$), locality ($F=0.45, p=0.64$) or own / rent situation ($F=0.27, p=0.61$).

Wildlife protection and having support from vets were the strongest drivers of cat containment. This corresponds with the results from the open-ended question (Figure T2). On average respondents disagreed that cats should be free to roam, however there were differences between those owners who currently restrict their cat's movements (Inside all the time 2.52, Inside & restricted outside 2.00), practice a night curfew (1.91) or let their cats roam freely (Free outside all the time 4.00, Inside & free outside 2.47). Owing to the small, unequal sample sizes these differences could not be statistically compared.

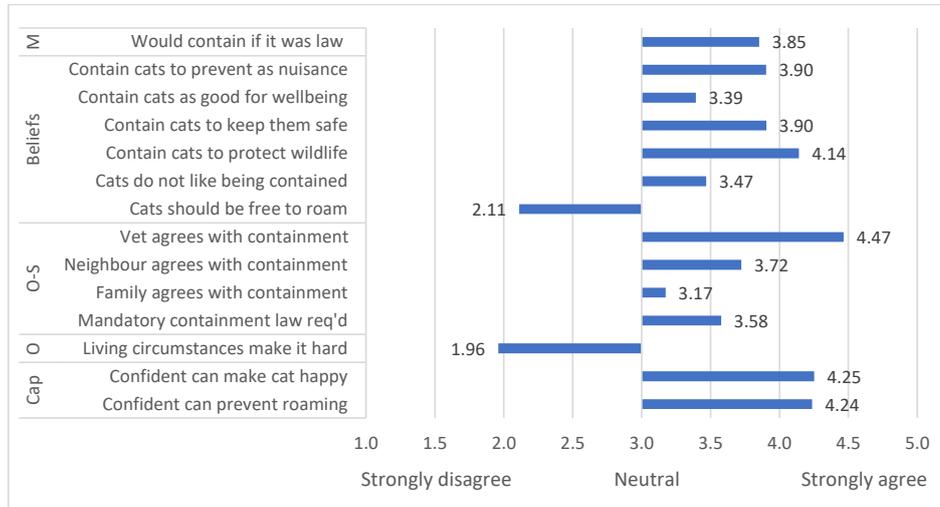


Figure T4. Mean agreement scores to the 14 driver and barrier statements (Cap=Individual capability factors, O=Physical opportunity factor, O-S=Social opportunity factors, Beliefs=Internal motivational factors, M=External motivational factor).

Online survey

Respondent demographics

- 671 respondents completed the online survey – 296 (44%) were cat owners and 375 (56%) did not own a cat.
- Most cat owners were female (252, 85%), with 27 males (9%) and four respondents who identified as non-binary (1%). Thirteen cat owners did not answer this question.
- Most non-cat owners were also female (256, 68%), with 113 males (30%) and one respondent who identified as non-binary. Five non-cat owners did not answer this question.
- The overall average age was 51.2 years (±14.6). Cat owners were slightly younger (48.7 years ±14.6) and non-cat owners slightly older (53.2 years ±14.4).

Cat ownership behaviours

The majority of respondents (n=172, 59%) had one cat in their household, 88 (30%) owned two cats, twenty-three (8%) owned three cats, four (1%) owned four cats and five (1%) indicated they owned five cats or more.

Allowing cats indoors and restricting their outdoor access was the most common cat living arrangement (n=97, 33%). Keeping cats indoors all the time (n=85, 29%) and keeping them indoors at night but letting them roam freely during the day (n=82, 28%) were the next most popular arrangements. Thirty-one owners allowed cat indoors letting them roam free when outside (2%). One respondent reported having a cat that lived outside all the time.

Feeding of free roaming cats

Eleven cat owners (4%) and eleven non-cat owners (3%) indicated they had cared for unowned free-roaming cats.

Drivers and barriers to cat containment

Cat owners were given the opportunity in an open-ended format to list the factors they have considered when deciding whether to allow their cat to roam freely or not. At least one factor was listed by 266 (90%) cat owners. The main factors listed by the respondents when preventing their cat from roaming freely are shown in Figure T5. Protecting wildlife, including small mammals, birds, and reptiles, was the most popular response. General safety and preventing traffic accidents were the next popular.

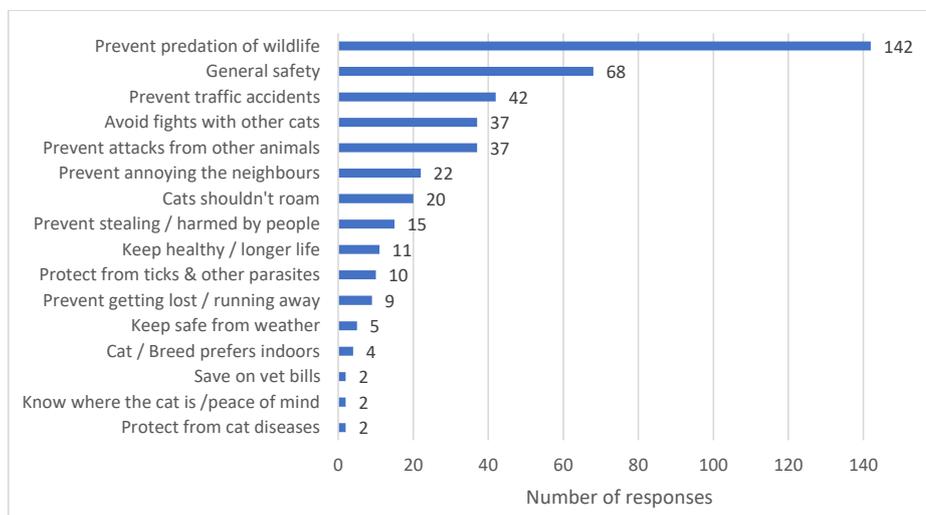


Figure T5. Main factors considered by cat owners when preventing their cat from roaming freely.

The listed factors considered by cat owners when deciding to allow their cat to roam freely are shown in Figure T6. The top response was the time of day – cats were prevented from roaming at night, but it was OK during the day. The perception that their cat doesn't roam very far from their property was the next most popular consideration.

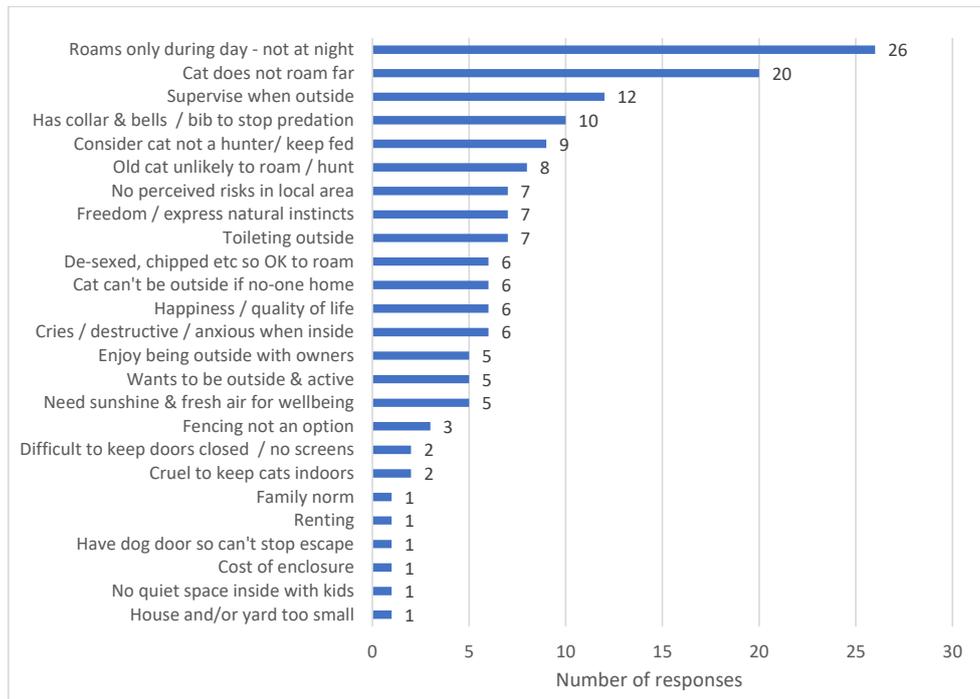


Figure T6. Main factors considered by cat owners when deciding to allow their cat to roam freely.

After listing their own considerations, cat owners were then asked to rate their agreement with 15 statements pertaining to previously identified drivers of and barriers to preventing cats from roaming freely (See Q7 in Appendix 5). The average ratings are summarised in Figure T7.

Online respondents were less confident they could prevent their cat from roaming if they wished to, and they could provide everything to ensure their cat was happy than the phone survey respondents. Most respondents disagreed that their current living circumstances made it difficult to prevent their cat from roaming. There were no statistical differences in this agreement rating and respondent's type of dwelling ($F=1.20, p=0.31$) or own / rent situation ($F=2.07, p=0.13$).

Keeping cats safe and protecting wildlife were the strongest drivers of cat containment. This corresponds with the results from the open-ended question (Figure T5). On average respondents disagreed that cats should be free to roam, however there were statistical differences ($F=23.49, p<0.001$) between those owners who currently restrict their cat's movements (Inside all the time 1.49, Inside & restricted outside 1.48), practice a night curfew (2.32) or let their cats roam freely (Inside & free outside 2.97, Free outside all the time 4.00).

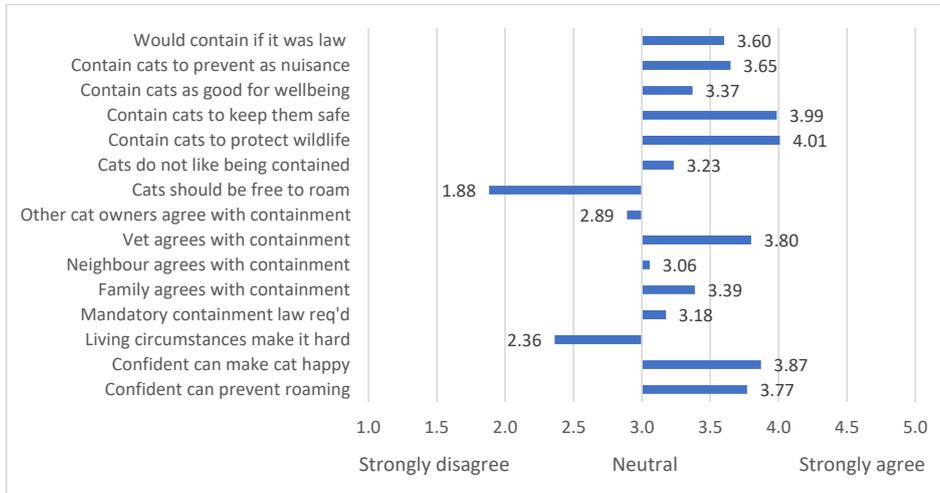


Figure T7. Mean cat owner agreement scores to the 15 driver and barrier statements.

Those respondents who did not own cats were also to rate their agreement with 10 statements pertaining to previously identified drivers of and barriers to preventing cats from roaming freely. The average ratings are shown in Figure T8. There were statistical differences between the ratings of cat owners and non-owners for nine of the ten shared statements. Those respondents who do not own cats were more likely to agree that cats should be prevented from roaming to protect wildlife ($F=94.11, p < 0.001$), to prevent them being a nuisance ($F=85.94, p < 0.001$) and to improve the cat's well-being ($F=10.61, p=0.001$). They were less likely to agree that cats should be free to roam ($F=98.27, p < 0.001$) and that cats disliked being contained ($F=12.28, p < 0.001$). These respondents also were more likely to agree that their family ($F=133.47, p < 0.001$), neighbours ($F=36.22, p < 0.001$) and vets ($F=34.42, p < 0.001$) supported cat containment, and that the laws should be changed ($F=204.77, p < 0.001$).

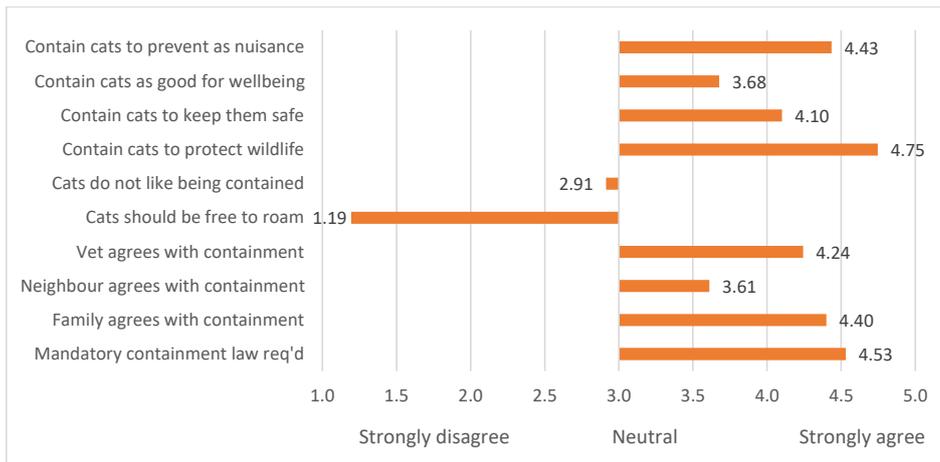


Figure T8. Mean non-cat owner agreement scores to ten driver and barrier statements.

Key Findings (Surveys)

The adoption of responsible cat ownership behaviours across the Tweed LGA is influenced by the capacity and motivation of the cat owners. Current cat owner management behaviours and identified driver and barrier factors from the public consultation are summarised below.

- Reported de-sexing rates were reasonable but microchipping and registration of cats need to be improved.
- There is support for night curfews (between 28-32% adoption), as well as full containment (between 28-30% adoption of indoors all the time and 15-33% restricted outdoor access). Around 6-20% of cat owners pose no restrictions on their cats' movements.
- There is a small number of residents who care for stray and unowned cats.
- The main drivers for containment were to reduce the impact on wildlife, keep cats safe as well as reduce the nuisance caused to neighbours.
- Strong barriers to full containment were owners' perceptions of the risks of wildlife predation at night versus that during day and beliefs about the needs and behaviours of their cats.
- Vets were seen as important influencers for containment adoption.
- There was some agreement by cat owners that the introduction of cat containment legislation would motivate compliance. Those residents that do not own cats strongly agreed with this legislation change.

Walgett Shire Council

Baseline cat data

The Walgett Shire Council reported they had 635 registered, microchipped and desexed cats.

Current cat management initiatives

The Council conducts subsidised de-sexing programs in association with the RSPCA. They strongly recommend 'responsible cat ownership', including cat containment.

Compliance monitoring

The Council currently does not cross-check entries in the Companion Animal Register to monitor information regarding those cats not registered and / or de-sexed in their LGA.

Information

Walgett Shire Council offer a handout on responsible cat ownership and verbal education on the impact of roaming cats.

Nuisance cats

The LGA conducts a trapping program to determine if the nuisance cat is a pet or feral. If identifiable, the owners are contacted.

Stray and feral cats

There are several known locations in the LGA where feral cats reside and are fed by residents. These are managed through extensive trapping of public and private property.

What the Council thought was working well

The Council was asked what was working well with their current cat management initiatives. Their response:

- De-sexing programs conducted with the RSPCA
- Educating people on a one-to-one basis.

Challenges to effective cat management

The main challenges of cat management identified by Walgett Shire Council:

- Minimal containment of cats
- Cat owners' lack of capacity to contain their cat
- Feeding of stray cats.

Future intentions

The identified future cat management intentions:

- Educational material targeting rural areas
- Tougher legislation on keeping cats safe at home.

Stakeholder Interview Results

The Darriwa Elders Group, an important stakeholder group in the Walgett LGA, was interviewed.

What stakeholders' thought was working well

These stakeholders are currently not directly involved in cat management activities so were unable to answer this question on what was working well.

Challenges to effective cat management

The main challenges to effective cat management identified by the Darriwa Elders Group:

- Lots of stray cats in town and on the Reserves that are tolerated and sometimes feed (perception that control rodents and snakes)
- Low de-sexing rate
- Lack of connection between disappearing wildlife and increased cat numbers.

Cat management vision

Aim of cat management

This stakeholder group was asked what the aim of cat management should be in their LGA. There was consensus that the main aims should be to improve knowledge around what to do about stray cats and the impact cats have on wildlife.

Required information and actions

The information and actions are required to manage cats more effectively in their local LGA:

- GPS tracking or video collars on some cats to demonstrate what some of the cats have been getting up to
- Use local social media to share educational material.

How to deal with conflict

There were no suggestions on the best ways to deal with conflicts that arise around cat management in their communities.

Key Findings (Interviews)

How domestic cat management is being handled is influenced by the capacity and motivation of both the Council and the community. The main benefits of current programs and challenges for the Shoalhaven City LGA are summarised below.

- The de-sexing programs conducted with the RSPCA are beneficial but more needs to be done to improve the low de-sexing rate.
- Minimal containment of cats in LGA so require educational material and behaviour change strategies suitable for rural areas. Offering support to those cat owner who do not have the capacity to contain their cats will be important.
- Lots of stray cats in town and on the Reserves so approaches to reduce these population and change feeders' behaviour.

Online survey

Walgett Shire Council was not one of the selected LGAs targeted with the phone survey, however residents were invited to have their say via the online survey.

Respondent demographics

- 13 respondents completed the online survey – 9 (69%) were cat owners and 4 (31%) did not own a cat.
- Seven of the cat owners were female (78%), one was male, and one did not answer this question.
- Three of the non-cat owners were female (75%), and one was male.
- The overall average age was 42.9 years (± 13.6). The average age for cat owners was younger – 38.9 years (± 12.7), and non-cat owners was older – 52.0 years (± 12.5).

Cat ownership behaviours

A third of the cat owners (n=3) had one cat in their household, three (33%) owned two cats, 2 (22%) owned three cats and one (11%) owned four cats.

Three cat owners kept their cats indoors all the time (33%), two kept their cats inside at night but let them roam freely during the day (22%), one allowed their cats indoors and restricted their outdoor access (11%) and one (11%) let their cat indoors and allowed them to roam free when outside. Two respondents had cats that roamed freely outside all the time.

Feeding of free roaming cats

Only one respondent, a cat-owner, indicated they cared for unowned free-roaming.

Drivers and barriers to cat containment

Cat owners were given the opportunity in an open-ended format to list the factors they have considered when deciding whether to allow their cat to roam freely or not. All cat owners listed at least one factor. The main factors listed by the respondents when preventing their cat from roaming freely are shown in Figure W1. Protecting wildlife, including small mammals, birds, and reptiles, was the most popular response. Preventing attacks from other animals such as dogs and snakes and preventing traffic accidents were the next popular. The five listed factors considered by cat owners when deciding to allow their cat to roam freely are also shown in Figure W1.

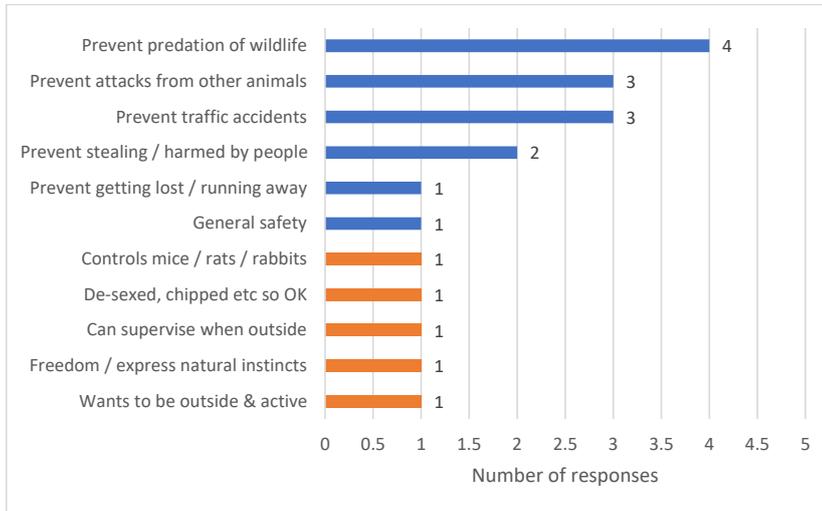


Figure W1. Main factors considered by cat owners when preventing their cat from roaming freely (top six factors in blue) and when deciding to allow their cat to roam freely (bottom five factors in orange).

After listing their own considerations, cat owners were then asked to rate their agreement with 15 statements pertaining to previously identified drivers of and barriers to preventing cats from roaming freely (See Q7 in Appendix 5). The average ratings are summarised in Figure W2. Most cat owners were confident they could provide everything to ensure their cat was happy. The perception that cats do not like to be contained was a strong barrier to cat containment.

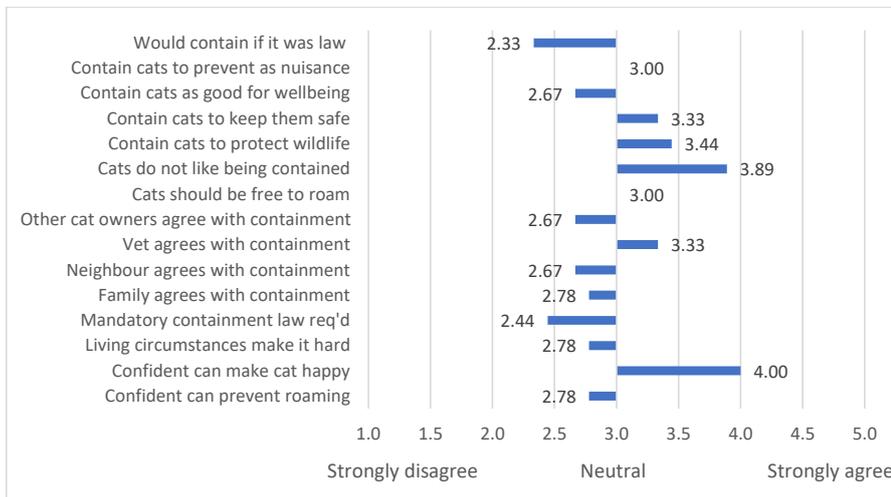


Figure W2. Mean cat owner agreement scores to the 15 driver and barrier statements.

The four respondents who did not own cats were also to rate their agreement with 10 statements pertaining to previously identified drivers of and barriers to preventing cats from roaming freely. The average ratings are shown in Figure W3. Although there was not a big enough sample to compare statistically, these respondents were more likely to agree that cats should be prevented from roaming to protect wildlife, to prevent them being a nuisance, to keep cats safe and to improve the cat’s well-being. They were less likely to agree that cats should be free to roam. These respondents also were more likely to agree that their family and neighbours supported cat containment, and that the laws should be changed.

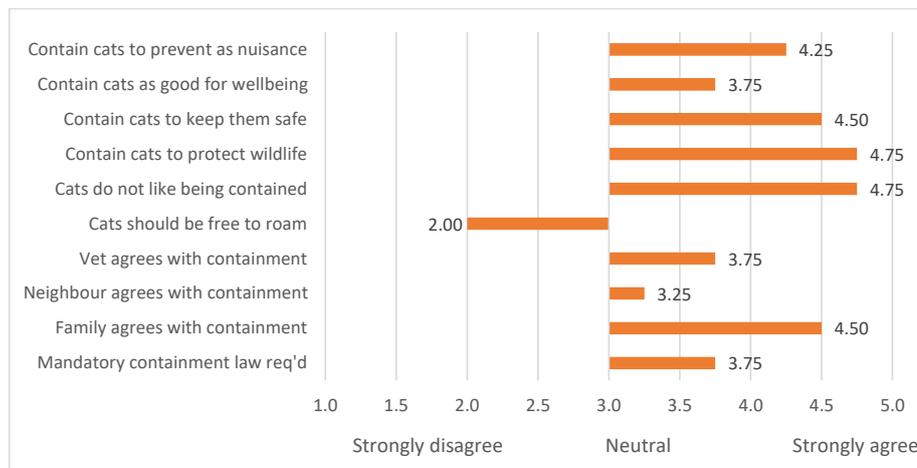


Figure W3. Mean non-cat owner agreement scores to ten driver and barrier statements.

Key Findings (Surveys)

The adoption of responsible cat ownership behaviours across the Walgett LGA is influenced by the capacity and motivation of the cat owners. Current cat owner management behaviours and identified driver and barrier factors from the public consultation are summarised below.

- There is some support for full containment (33% currently keeping cats indoors all the time and 11% restricted outdoor access) and night curfews (currently 22% adoption). Further encouragement is required particularly for the remaining cat owners who pose no restrictions on their cats’ movements.
- Important barriers for containment are the belief that cats do not like to be contained and owners’ confidence in preventing their cat from roaming.
- There is a small number of residents who care for stray and unowned cats.
- Cat owners perceive a lack of important social influencers for containment adoption.
- The introduction of cat containment legislation would unlikely motivate compliance.

Weddin Shire Council

Baseline cat data

The Weddin Shire Council reported they had:

- <5% of cats registered
- 5% microchipped cats

The number of de-sexed cats was unknown.

Current cat management initiatives

In their Locals Order Policy for the Keeping of Animals, Weddin Shire Council recommends that no more than two cats are kept per household, along with 'responsible cat ownership', including cat containment, particularly at night.

Compliance monitoring

As part of compliance monitoring this Council cross-checks entries in the Companion Animal Register to access information regarding those cats not registered. Owners are contacted advising them of the Council's requirements.

Information

The Council provides information and media releases on legislative requirements, "Nuisance Cat" Order, responsible cat ownership, consequences on having a roaming cat and statistics surrounding damage caused by a roaming cat.

Nuisance cats

Once a nuisance cat complaint is received, owner of cat is initially contacted and educated in relation to responsible cat ownership. Traps to private property owners are offered to catch feral/wild cats.

Stray and feral cats

There is a known problem of dumping of unwanted litters in the LGA. No management currently conducted.

What the Council thought was working well

The Council representative was unable to answer the question about what was working well with their current cat management initiatives.

Challenges to effective cat management

The main challenges of cat management identified by Weddin Shire Council:

- Availability and affordability of kittens - easily replaced
- Limitation of current legislation
- The inability to capture and impound a cat
- Lack of responsible ownership behaviour and lack of owners admitting the cat is theirs

Future intentions

The main identified future cat management intention was to obtain the funding to increase microchipping and de-sexing rates.

Stakeholder Interview Results

Involvement in cat management

A range of stakeholders from the Weddin LGA were interviewed. Their roles and activities related to cat management:

- **Lachlan Valley Vet:** Main clinic in Forbes, only in Grenfell one day per week, mainly de-sexing and vaccinations. Cats probably 40% of that practice. Some work with Council.
- **A community member:** Concerned about the impact of cats on wildlife. Regularly traps and kills cats on his property. Will euthanise surrendered cats from other locals.

What stakeholders' thought was working well

Stakeholders were asked what was working well for cat management in their local LGA. The main factor identified by the stakeholders was the low-cost de-sexing and reminders for new kitten owners by the vet practice.

Challenges to effective cat management

The main challenges to effective cat management identified by the stakeholders:

- Lack of awareness and misconceptions about de-sexing
- Cost of accessing desexing due to limited vet services
- Large population of non-managed cats at rubbish tip.

Cat management vision

Aim of cat management

Stakeholders were asked what the aim of cat management should be in their LGA. There was consensus among the stakeholders that the main aims should be to increase access to and uptake of desexing and encourage containment of cats.

Required information and actions

Stakeholders were asked what information and actions are required to manage cats more effectively in their local LGA. Their responses:

- Offering free de-sexing is a great idea - but putting at least a small price (e.g. \$10) is preferable as people perceive the service (and the animal) as having a value
- Provide resources to vets on prepubertal de-sexing for cats
- Promote the good cat owners who do contain their cats as an example to others in the area
- Best way to communicate is through the local paper (as older demographic)
- Provide educational resources to children through the local school.

How to deal with conflict

Stakeholders did not have any suggestions to deal with conflicts that arise around cat management in their communities.

Key Findings (Interviews)

How domestic cat management is being handled is influenced by the capacity and motivation of both the Council and the community. The main benefits of current programs and challenges for the Weddin LGA are summarised below.

- Low-cost de-sexing and reminders for new kitten owners by vet practice is working well but more work required to increase awareness and address misconceptions about de-sexing.
- Funding to increase microchipping and de-sexing and greater access to vet services is required.
- Council lacks capacity to manage large population of stray cats at the tip and enforce current legislation.

Online survey

Weddin Shire Council was not one of the selected LGAs targeted with the phone survey, however residents were invited to have their say via the online survey.

Respondent demographics

- 143 respondents completed the online survey – 56 (39%) were cat owners and 87 (61%) did not own a cat.
- Most cat owners were female (41, 73%), with 11 males (20%). One cat owner identified as non-binary, and three did not answer this question.
- Most non-cat owners were also female (45, 52%), with 38 males (44%). One non-cat owner identified as non-binary, and three did not answer this question.
- The overall average age was 51.5 years (± 15.9). The average age for cat owners was younger – 48.3 years (± 15.5), and non-cat owners was older – 53.4 years (± 15.9).

Cat ownership behaviours

Most of the cat owners ($n=32$, 58%) had one cat in their household, 17 (31%) owned two cats, and five (9%) owned three cats. The remaining 2% owned four or more cats, the greatest number reported was six cats in a household.

Nineteen respondents (35%) let their cat indoors and allowed them to roam free when outside. Twelve respondents (22%) reported keeping their cats indoors all the time and another twelve (22%) kept their cats indoors and allowed restricted outdoor access. Nine respondents (16%) kept their cats inside at night but let them roam freely during the day and three (5%) had cats that roamed freely outside all the time.

Feeding of free roaming cats

Respondents were asked if they cared for any free-roaming cats that were not their own. Nine respondents indicated they did care for unowned free-roaming cats – seven cat owners (13%) and two non-cat owners (2%).

Drivers and barriers to cat containment

Cat owners were given the opportunity in an open-ended format to list the factors they have considered when deciding whether to allow their cat to roam freely or not. At least one factor was listed by 48 (86%) of cat owners. The main factors listed by the respondents when preventing their cat from roaming freely are shown in Figure WE1. Protecting wildlife, including small mammals, birds, and reptiles, was the most popular response. General safety, preventing traffic accidents and avoiding fights with other cats were the next popular.

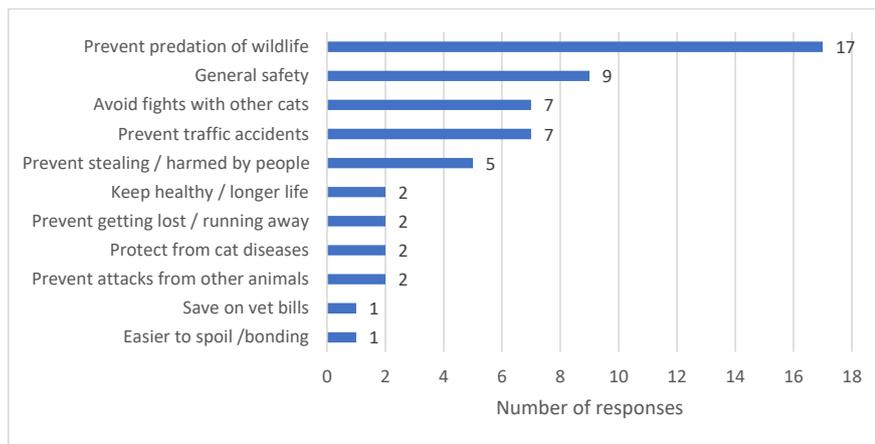


Figure WE1. Main factors considered by cat owners when preventing their cat from roaming freely.

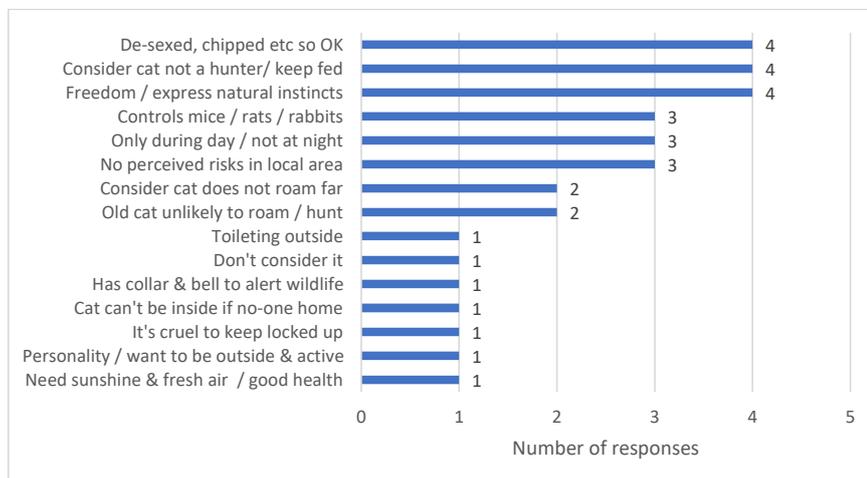


Figure WE2. Main factors considered by cat owners when deciding to allow their cat to roam freely.

The listed factors considered by cat owners when deciding to allow their cat to roam freely are shown in Figure WE2. The top responses were that owners did not consider their cat was a hunter, the cats were desexed and / or microchipped so the owners perceived it was OK to let them roam, and that cats should be allowed to roam as it was their instinct.

After listing their own considerations, cat owners were then asked to rate their agreement with 15 statements pertaining to previously identified drivers of and barriers to preventing cats from roaming freely (See Q7 in Appendix 5). The average ratings are summarised in Figure WE3.

Most cat owners were relatively confident they could provide everything to ensure their cat was happy. Keeping cats safe was the strongest drivers of cat containment. There was not much support for a change in containment laws. On average respondents disagreed that cats should be free to roam, however there were statistical differences ($F=6.39, p<0.001$) between those owners who currently restrict their cat’s movements (Inside all the time 1.67, Inside & restricted outside 2.08), practice a night curfew (2.56) or let their cats roam freely (Inside & free outside 3.26, Free outside all the time 4.67).

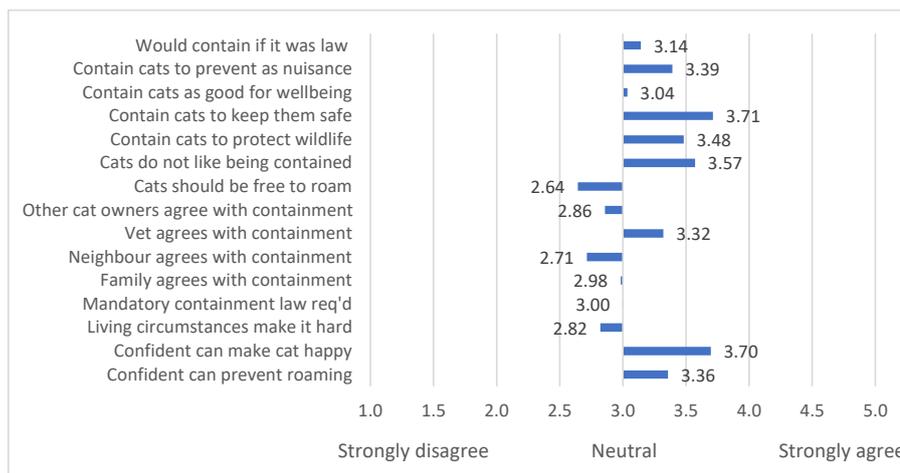


Figure WE3. Mean cat owner agreement scores to the 15 driver and barrier statements.

Those respondents who did not own cats were also to rate their agreement with 10 statements pertaining to previously identified drivers of and barriers to preventing cats from roaming freely. The average ratings are shown in Figure WE4. Although there was not a big enough sample to compare statistically, these respondents were less likely than the cat owners to agree that cats should be able to roam where they please and cats do not like containing, and more likely to agree with all the other factors.

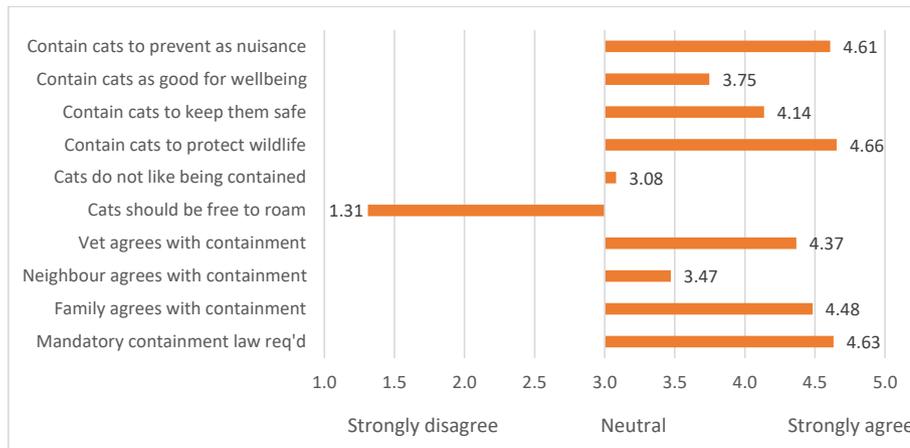


Figure WE4. Mean non-cat owner agreement scores to ten driver and barrier statements.

Key Findings (Surveys)

The adoption of responsible cat ownership behaviours across the Weddin LGA is influenced by the capacity and motivation of the cat owners. Current cat owner management behaviours and identified driver and barrier factors from the public consultation are summarised below.

- Most cat owners let their cats roam freely all the time (41%) or during the day (night curfews 16%). There is some support for full containment (21% currently keeping cats indoors all the time and 21% restricted outdoor access), however further encouragement is required.
- There is a small number of residents who care for stray and unowned cats.
- Main drivers for containment were to reduce wildlife predation and reduce nuisance behaviour.
- Owners’ perception of their cats’ needs, and behaviour pose major barriers to cat containment.
- There was strong support from non-cat owners for a change in legislation, however there was little agreement by cat owners that the introduction of cat containment legislation would motivate compliance.

General Stakeholder Consultation

A number of broader-based stakeholder organisations and individuals were also interviewed. These stakeholders operated within selected LGAs, but also across other LGAs and States.

Involvement in cat management

These stakeholders' roles and activities related to cat management:

- **Cat Protection Society:** Rescue cats and kittens and find them a home. Work with councils, vets and other organisations to provide accessible veterinary services: registering, de-sexing, microchipping.
- **Inner City Strays:** Re-home kittens and cats from Sydney City area streets.
- **Cat Harness Australia:** Provide cat owners confidence, equipment and education on responsible cat ownership.
- **Catnets:** Sell nets and products to cat owners so they can build their own cat enclosures. Promote and educate in responsible cat ownership.
- **Sydney Wildlife:** Rescue and rehabilitate wildlife (see the harm that cats can do). Operates across all areas of Sydney. Offer advice about responsible cat ownership & have a leaflet on installing the Catmax Cleamet Enclosure.
- **Threatened Species Recovery Hub:** Synthesise research findings into a range of resources for various target audiences. Engage with Councils and Vets.
- **Canberra Street Cat Alliance:** Cat rescue organisation – manage colonies, conduct TNR programs, and re-home cats and kittens.
- **RSPCA Victoria:** Runs 'safe cat safe wildlife' program. Coordinates outreach programs e.g. Mildura loves pets, which provides free de-sexing, microchipping and vaccination to all residents using a voucher system through local vets.
- **Landcare NSW:** Not directly involved in cat management but have groups across NSW and seen the impacts that cats have on wildlife.
- **NSW NPWS:** Enforcement of NPW Act, BCA and Regulations regarding domestic animals in National Parks.

What stakeholders' thought was working well

These stakeholders were asked what was working well for cat management in their local LGA. Their responses:

- Interagency cooperation between Councils and Welfare groups with de-sexing and re-homing programs
- Cooperation with colony carers, TNR approach to managing semi-owned and unowned cat populations
- Messaging around keeping cats safe and positive social media stories of responsible cat ownership
- Establishment in some areas of cat management plans which may include mandatory cat containment provisions
- Having good relationships with vets, and in some instances providing them with training and equipment to make sure they can work safely with unsocialised cats
- Having good people / rangers on the ground with good rapport with local community.

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Challenges to effective cat management

The main challenges to effective cat management identified by the stakeholders:

- People not de-sexing their cats and dumping their kittens.
- Lack of education about caring for pets properly
- Belief that cats are wild and should be outside
- The lack of government laws to force owners to keep their cats indoors
- Cat colonies at the back of businesses - reliance in industrial areas for rodent control
- Establishing relationships between stakeholder groups.

Cat management vision

Aim of cat management

Stakeholders were asked what the aim of cat management should be in their LGA. There was consensus among these stakeholders that the main aims should be:

- Responsible pet ownership – microchipping, registration, de-sexing and keeping cats contained to owner property
- Reduction of street cat numbers to zero
- Eliminate the number of native animals killed or injured by cats.

Required information and actions

Stakeholders were asked what information and actions are required to manage cats more effectively in their local LGA. Their responses:

- Education on responsible cat ownership and incentives for de-sexing and keeping cats contained
- Change in the legislation and lots of de-sexing campaigns
- Remove all barriers to enable cat owners to de-sex their cats including registration fees and transportation
- Provide excellent customer service so that people accessing free de-sexing have a positive experience
- Advise on how to keep cats inside their properties
- Develop companion animal management plan
- Education for children in schools
- More frequent ranger patrols to enforce of the Companion Animals Act and communication by council that there all be more frequent patrols and there will be penalties given rather than just warnings.

How to deal with conflict

Stakeholders' suggestions for dealing with conflict that arises around cat management in local communities:

- Don't blame cats for everything
- Think about how ramifications of actions e.g., 24-hour containment may cause people who don't like cats to take matters in their own hands when they see a roaming cat in the street and hurt the cat
- Consider people who don't have the ability or resources to keep their cats contained
- Clarify 'stray' category in legislation
- People who support cats and people who support wildlife have to meet halfway – cat night curfew is good halfway point
- Involving all local stakeholder especially vets and rescue organisations
- Ensuring the quality of care provided it is of high standard, not cutting corners because the service is free.

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Appendices

Appendix 1: Behaviour Change Strategies

Appropriate behaviour change strategies for the identified driver and barrier factors are detailed in Table A1.

Note that the LGAs will not be able to tackle all identified leverage points at once and will need to prioritise. It not wise to try and change too many behaviours at once – people may be overwhelmed and disengage completely.

Table A1: Linking identified COM drivers and barriers to appropriate behaviour change tools to promote adoption of responsible cat ownership (RPO) in the selected LGAs (after Hine, McLeod, & Driver, 2019).

COM Factor	Focus of intervention	Recommended behaviour change tools
Capability		
Awareness of local roaming cat issues	Promote awareness of local roaming cat issues and promote the role that RPO and stray /feral cat management plays in resolving the problem.	Provide factual information on roaming cat issues and management activities in the local area across a range of communication channels.
Awareness of RPO requirements	Promote awareness of the requirements of RPO.	Provide information on RPO requirements across a range of communication channels.
Awareness of where to get assistance - RPO / nuisance cats	Promote awareness of how to get help.	Provide information on available sources of assistance and how people can access across a range of communication channels.
Skills in training pet cats	Establish and improve physical skills, support and improve cognitive skills.	Provide targeted training material and workshops on various training techniques. Offer advice and support participation.
Opportunity		
Owners-can't afford de-sexing	Modify the environment to reduce the cost.	Offer subsidies for de-sexing. Cooperate with other stakeholders as required. Provide timely prompts to encourage participation.
Owners-can't access RPO requirements	Modify the environment to make it easier.	Offer increased access to de-sexing and microchipping activities. Cooperate with other stakeholders as required.
Owners-can't afford / access containment options	Modify the environment to make it possible, easier and affordable.	Offer options and increased access for people with different circumstances – e.g., rentals, different outdoor spaces, different planning requirements.
Owners-deal with unwanted animals	Encourage participation in desired action (surrender & de-sexing) and discourage undesired actions (i.e. dumping).	Increase the availability of places and make it easier to surrender unwanted cats and to access de-sexing. Increase social unacceptability of dumping (regulation, peer pressure).
Council-lack of staff / resources	Modify the Council environment to increase support for cat management.	Develop solutions that are socially acceptable to Council management in consultation with the community. Apply for funding from external sources if required.
Council-lack of facilities	Modify the environment to provide required facilities.	Plan and upgrade facilities as required. Develop alternates options.
Council-lack of authority	Modify the environment to increase Council authority.	Develop Council policies and push for improvements in current legislation.
Motivation		
Owners-belief that their cat doesn't roam far or hunt	Improve awareness of cats roaming and hunting behaviour	Demonstrate cats roaming and hunting behaviour using GPS or camera collars or similar technology. Provide information on other similar people's experiences and participation. Use credible community sources that the individual can associate with and trust.
Owners-don't believe in containment, early de-sexing, microchipping or registration	Increase understanding of method. Highlight the positive aspects and dispel any underlying misconceptions. Enforce compliance where possible.	Provide transparent information about method options and consequences so people can compare and make an informed choice. Emphasis correct facts. Provide feedback on other local people's performance and experiences. Use credible community sources that the individual can associate with and trust. Offer advice, encourage and support in a social setting. Adopt a perspective that is linked to the individual's values. Incentivise adoption or enforce compliance with punishments.
Owners-belief that cats are 'cheap' pet	Increase understanding of what owning a cat involves and enhance personal responsibility. Dispel any underlying misconceptions.	Provide information about what other local people and credible sources think about owning pet cats and give feedback about other people's experiences. Adopt a perspective that is linked to the individual's values.
Residents-belief that feeding unowned cats is beneficial	Increase understanding of issue, dispel any misconceptions and enhance personal responsibility.	Provide information of consequences of only feeding and not taking other actions. Clearly describe actions residents should take. Adopt a perspective that is linked to the individual's values and social norms.

Appendix 2: Council survey

Confidential

Page 1

Council Survey

We are seeking your insights into cat management in your council area. Information from this survey, along with insights from other stakeholders including the cat owning and non-cat owning general public will inform the design of the behaviour change project Keeping Cats Safe at Home.

This project aims to reduce impacts of pet cats on wildlife and to increase containment of pet cats to their owner's property.

By completing this survey you are agreeing to us collecting personal information about you for the purposes of this project. Your information will be stored securely and your identity and information will be kept strictly confidential, except as required by law.

If you have any questions or require further information please contact Dr Gemma Ma (0490 431 554, gma@rspcansw.org.au).

Thank you!

This project has been assisted by the NSW Government through its Environmental Trust.

Name _____

Council _____

Phone _____

Email _____

Please describe your current role _____

How many pet cats are currently registered in your council area? _____

How many pet cats are currently microchipped in your council area? _____

How many of the currently microchipped cats in your council area are desexed? _____

Does your council monitor compliance with microchipping requirements for cats?
 Yes
 No
 I don't know

Does your council monitor compliance with registration requirements for cats?
 Yes
 No
 I don't know

Confidential

Page 2

Does your council monitor compliance with desexing requirements for cats?

- Yes
- No
- I don't know

How is compliance monitored?

Does your council set a limit on the number of cats per household?

- Yes
- No
- I don't know

Please describe

How is this monitored or enforced?

Does your council have any requirements for cats to be contained or confined?
E.g. a night curfew or cats required to be contained in certain areas

- Yes
- No
- I don't know

Please describe

For what reason is this required?

How is compliance monitored or enforced?

Confidential

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Does your council prohibit cats from any suburbs or areas?

- Yes
- No
- I don't know

Please describe

For what reason is this required?

How is compliance monitored or enforced?

How does your council respond to complaints about nuisance cats?

Does your council provide information to pet cat owners about responsible cat management?

- Yes
- No
- I don't know

Please describe

What is working well for the management of pet cats in your council area?

What are the main challenges for the management of pet cats in your council area?

What information or actions would help your council manage pet cats more effectively?

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Do you consider there is a problem with stray or feral cats in your council area?

- Yes
- No
- I don't know

Please describe

Does your council carry out any management activities that aim to control stray or feral cats?

- Yes
- No
- I don't know

Please describe

Does your council monitor whether these actions are effective?

- Yes
- No
- I don't know

How are these activities monitored?

How much does your council spend annually on managing cats? (please provide estimate, including staffing and operational resources)

Please list any other individuals, businesses or organisations that might also have an interest in cat management in your council area

Appendix 3: Stakeholder survey

Confidential

Page 1

Keeping Cats Safe at Home - Stakeholder Survey

RSPCA NSW is currently consulting the community for a new project, Keeping Cats Safe at Home, which has been funded by a major grant from the NSW Government through its Environmental Trust. This project aims to reduce the impacts owned pet cats have on wildlife and will also encourage cat owners to keep their cats at home to keep them safe from injury and disease.

As an important stakeholder for this project we would greatly appreciate your input into defining the current cat-related challenges in your area and designing an intervention that will be most effective in your community.

If you would like any further information about this project please contact Dr Gemma Ma (0490 431 554, gma@rspcansw.org.au).

By completing this survey you are agreeing to us collecting personal information about you for the purposes of this project. Your information will be stored securely and your identity/information will be kept strictly confidential, except as required by law. You can read more about the RSPCA NSW privacy policy here: <https://www.rspcansw.org.au/privacy-policy/>

Please complete the survey below.

Thank you!

- 1) Local Government Area _____
- 2) Name _____
- 3) Organisation _____
- 4) Phone number _____
- 5) Email _____
- 6) How are you (or your organisation) involved with the management of domestic cats?

- 7) Do you (or your organisation) provide information or services to pet cat owners relating to cat management?

- 8) What is working well for the management of cats in your Local Government Area?

- 9) What are the main challenges for the management of cats in your Local Government Area?

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Page 2

10) What information or actions would help manage pet cats more effectively in your Local Government Area?

11) What do you think should be the aim of cat management in your area?

12) What do you think are the best ways to deal with conflicts that arise around cat management in your community?

13) Are there other people or organisations we should consult about cat management in your Local Government Area?

Appendix 4: Target Audience phone survey

Q1a. How many cats do own? _____

Q1b. (Repeat for each cat)

a. What is your cat's gender	<input type="radio"/> Female	<input type="radio"/> Male	<input type="radio"/> Don't know
b. Is it de-sexed?	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Don't know
c. Is it microchipped?	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Don't know
d. Is it registered with your local Council?	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Don't know
	<input type="radio"/> Not required for my Council		

Q2. Which of the following best describes your cats living arrangements?

- Inside all the time
- Outside all the time (free to roam)
- Inside during the night, but outside during the day (free to roam)
- Inside and outside, allowed to free roam when outside
- Inside and outside, but restricted from roaming freely (e.g. in cat escape-proof yard/ run, on a lead or fully supervised when outside)

Q3. What are the main factors you consider when deciding whether to allow your cat to roam freely or not? _____

Q4. On a typical day, for each of the following time periods, please indicate how often your cat is likely to be freely roaming outdoors (not in an enclosure)?

	Never	Some of the time	About half the time	Most of the time	Always
6am - Noon	<input type="radio"/>				
Noon - 6pm	<input type="radio"/>				
6pm - Midnight	<input type="radio"/>				
Midnight - 6am	<input type="radio"/>				

Q5. To what extent you agree or disagree with each of the following statements.

<i>(rotate)</i>	Do not agree	Slightly agree	Somewhat agree	Agree	Strongly agree
a. Cats should be free to roam wherever they choose	<input type="radio"/>				
b. Cats should be prevented from roaming freely to protect wildlife	<input type="radio"/>				
c. Cats should be prevented from roaming freely to keep them safe	<input type="radio"/>				
d. Cats should be prevented from roaming freely as it is good for their health and wellbeing	<input type="radio"/>				
e. Cats should be prevented from roaming freely as they can be viewed as a nuisance or unwelcome visitors by neighbours	<input type="radio"/>				
f. Cats do not like being prevented from roaming freely	<input type="radio"/>				

<i>(Q5 continued)</i>	Do not agree	Slightly agree	Somewhat agree	Agree	Strongly agree
g. I am confident I can prevent my cat roaming freely at all times if I wish	<input type="radio"/>				
h. I am confident that I can provide everything to ensure my cat is happy when it is not roaming freely	<input type="radio"/>				
i. The law should be changed to require pet cats to be kept at their owner's property at all times	<input type="radio"/>				
j. Preventing cat roaming freely is a practice that my family and friends would agree with	<input type="radio"/>				
k. Preventing cats roaming freely is a practice that my neighbours would agree with	<input type="radio"/>				
l. Preventing cats roaming freely is a practice that veterinarians would agree with	<input type="radio"/>				
m. Cats should be prevented from roaming freely in the future if it is required by law	<input type="radio"/>				
n. Preventing my cat roaming freely is difficult in my current residential circumstances	<input type="radio"/>				

Q6a. How likely is it that you will do the following with your cat in the future?

	Very unlikely	Unlikely	Unsure	Likely	Very likely
Prevent my cat from roaming freely at all times	<input type="radio"/>				
Prevent my cat from roaming freely more often than I do currently	<input type="radio"/>				
Install modified fencing or a cat escape-proof enclosure	<input type="radio"/>				

Q6b. What do you consider to be the most important issues or concerns relating to cats in your local area?

Q7a. In what kind of dwelling do you currently live?

- House with large / medium outside space
- House with small outside space (patio or small garden/courtyard)
- Semi-detached, terrace or townhouse with medium outside space (large garden)
- Semi-detached, terrace or townhouse with small outside space (patio or small garden/courtyard)
- Flat, unit, apartment with small outside space (balcony or patio)
- Flat, unit, apartment with no outside space
- Other _____

Q7b. Which of the following best describes your ownership of this dwelling?

- I or my family owns or is paying it off
- I or my family rent it
- Other _____

Q8a. What is your suburb / town? _____

And your postcode? _____

Q8b. How would you describe your locality?

- City
- Suburb / town
- Semi-rural
- Rural

Q8c. Your age at last birthday? _____

	Female	Male	Non-binary	Prefer not to say
Q8d. Gender?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Pet cat roaming behaviour will be investigated through another part of this project.

Q9a. Would you consider participating by hosting a remote sensing camera(s) at your property for two 28 day periods during the next four years? YES NO

Q9b. Would you consider participating by allowing your cat to wear a GPS logger harness for a 28 day period(s) during the next four years? YES NO

Q10a. Would you consider allowing us to contact you towards the end of the project (2024) to evaluate the programs offered by your Council? YES NO

Q10b. Would like to receive feedback about the overall results of this study YES NO

Q10c. Copy of the Participant’s Information Statement? YES NO

If you answered YES, please indicate your preferred form of feedback and address:

Postal: _____

Email: _____

Appendix 5: Target Audience online survey

Q1. Do you own any cats? Y / N

Q2. How many cats do own? _____

Q3. Do you care for other free-roaming cats? Y / N

Q4. Which of the following best describes your cats living arrangements?

- Solely inside
- Solely free roaming (outside)
- Solely inside during the night, but free to roam during the day
- Inside and outside, allowed to free roam when outside
- Inside and outside, but restricted from roaming freely (e.g. in cat escape-proof yard/ run, on a lead or fully supervised when outside)

Q5. What are the main factors you consider when deciding whether to allow your cat to roam freely or not? _____

Q6. On a typical day, for each of the following time periods, please indicate how often your cat is likely to be freely roaming outdoors (not in an enclosure)?

	Never	Some of the time	About half the time	Most of the time	Always
6am - Noon	<input type="radio"/>				
Noon - 6pm	<input type="radio"/>				
6pm - Midnight	<input type="radio"/>				
Midnight - 6am	<input type="radio"/>				

Q7. To what extent you agree or disagree with each of the following statements.

<i>(rotate)</i>	Do not agree	Slightly agree	Somewhat agree	Agree	Strongly agree
a. Cats should be free to roam wherever they choose	<input type="radio"/>				
b. Cats should be prevented from roaming freely to protect wildlife	<input type="radio"/>				
c. Cats should be prevented from roaming freely to keep them safe	<input type="radio"/>				
d. Cats should be prevented from roaming freely as it is good for their health and wellbeing	<input type="radio"/>				
e. Cats should be prevented from roaming freely as they can be viewed as a nuisance or unwelcome visitors by neighbours	<input type="radio"/>				
f. Cats do not like being prevented from roaming freely	<input type="radio"/>				
g. I am confident I can prevent my cat roaming freely at all times if I wish	<input type="radio"/>				
h. I am confident that I can provide everything to ensure my cat is happy when it is not roaming freely	<input type="radio"/>				
i. The law should be changed to require pet cats to be kept at their owner's property at all times	<input type="radio"/>				
j. Preventing cat roaming freely is a practice that my family and friends would agree with	<input type="radio"/>				
k. Preventing cats roaming freely is a practice that my neighbours would agree with	<input type="radio"/>				
l. Preventing cats roaming freely is a practice that veterinarians would agree with	<input type="radio"/>				

<i>(Q7 continued)</i>	Do not agree	Slightly agree	Somewhat agree	Agree	Strongly agree
m. Preventing cats roaming freely is a practice that other cat owners would agree with	<input type="radio"/>				
n. Cats should be prevented from roaming freely in the future if it is required by law	<input type="radio"/>				
o. Preventing my cat roaming freely is difficult in my current residential circumstances	<input type="radio"/>				

Q8. How likely is it that you will do the following with your cat in the future?

	Very unlikely	Unlikely	Unsure	Likely	Very likely
Prevent my cat from roaming freely at all times	<input type="radio"/>				
Prevent my cat from roaming freely more often than I do currently	<input type="radio"/>				
Install modified fencing or a cat escape-proof enclosure	<input type="radio"/>				

Q9. What do you consider to be the most important issues or concerns relating to cats in your local area?

Q10. In what kind of dwelling do you currently live?

- House with large / medium outside space
- House with small outside space (patio or small garden/courtyard)
- Semi-detached, terrace or townhouse with medium outside space (large garden)
- Semi-detached, terrace or townhouse with small outside space (patio or small garden/courtyard)
- Flat, unit, apartment with small outside space (balcony or patio)
- Flat, unit, apartment with no outside space
- Other _____

Q11. Which of the following best describes your ownership of this dwelling?

- I or my family owns or is paying it off
- I or my family rent it
- Other _____

Q12. What is your suburb / town? _____

And your postcode? _____

Q13. Your age at last birthday? _____

	Female	Male	Non-binary	Prefer not to say
Q14. Gender?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Pet cat roaming behaviour will be investigated through another part of this project.

Q15a. Would you consider participating by hosting a remote sensing camera(s) at your property for two 28 day periods during the next four years? YES NO

Q15b. Would you consider participating by allowing your cat to wear a GPS logger harness for a 28 day period(s) during the next four years? YES NO

