

This document was created in response to a Freedom of Information request made to CSIRO.

FOI Number: FOI2016/56

Date: 3 December 2016

Request: All documents (including internal notes) in relation to the kangaroo cull at the Ginninderra Field Station held by the CSIRO including:

- (a) any attendance at the Property by CSIRO personnel or agents of CSIRO in relation to the Cull;
- (b) any advice received or reports on the environmental impact of kangaroos at the Property and/or the necessity for the Cull;
- (c) the number of kangaroos at the Property before the cull and the method used to count the kangaroos
- (d) the number of kangaroos killed in the Cull (including both dependent pouch young and at-foot joeys of those kangaroos);
- (e) any approval of the Cull by the ACT Government and/or the Australian Federal Police;
- (f) any notifications made to the public or neighbouring properties in relation to the Cull;
- (g) the animal ethics protocol(s) in relation to the research being undertaken at the Property by the CSIRO;
- (h) the number and type of livestock being maintained by the CSIRO (or any other party) at the Property; and
- (i) the crops or other plants being maintained by the CSIRO (or any other party) at the Property."

Document(s): 1-32

For more information, please refer to CSIRO's FOI disclosure log at www.csiro.au/FOILog

From: [REDACTED] s47F
Sent: Thursday, 26 May 2016 12:53 PM
To: Isaac, Bruce (A&F, Ginninderra)
Subject: FW: Kangaroo Control- Plant Industries Gungahlin
Attachments: Quotation CSIRO Gungahlin 2016.pdf; Risk Assessment CSIRO Gungahlin 2016.pdf; Transfer Insurance Public Liability.pdf; Public Liability Insurance.pdf

Hi Bruce,

Thankyou for you calls regarding the control of Kangaroo at CSIRO Plant Industries Gungahlin. Please see attached quotation to carry out Kangaroo Control Plant Industries Gungahlin, note I have included Public Liability and Risk Assessment paperwork as to carry out this task.

I trust that this information is to your satisfaction and should you require any further or additional information please do not hesitate to contact me.

Yours,

[REDACTED] s47F

s47F

Quotation:- Kangaroo Control CSIRO Plant Industries – Gungahlin

Attention Mr. Bruce Isaac,

Dear Bruce thankyou for your call today regarding the control of Kangaroo at CSIRO Plant Industries site Gungahlin. s47F is happy to provide a quotation for Kangaroo Control on CSIRO Plant Industries Site in Gungahlin.

This quotation is based on works carried out two years prior for Kangaroo Culling where it had taken 6 nights for 100 Kangaroo.

With 150 Kangaroo tags this year I estimate this will take approximately 8-9 nights work to complete the kangaroo control on the CSIRO Plant Industries Site.

s47F

fixed price quotation to carry out this work will be s47G(1)(a)

s47G(1)(a)

Please note s47F for some five years, I have a full understanding of the site, infrastructure and grounds, also the sensitive issues that CSIRO have with this task.

Yours,

s47F

Monday, 9 May 2016



SSAA Insurance Brokers Pty Ltd

ABN 86 077 822 970

The Precinct, Suite 14, 539 Greenhill Rd, Hazelwood Park SA 5066

P 08 8332 0261 F 08 8332 0303 E insurance@ssaains.com.au Freecall 1800 808 608 www.ssaalb.com.au

SSAA Insurance Brokers Pty Ltd (CAR 315403 / ABN 86 077 822 970) is a Corporate Authorised Representative of Westcourt General Insurance Brokers (ABN 35 558 434 006 / AFSL 238447)

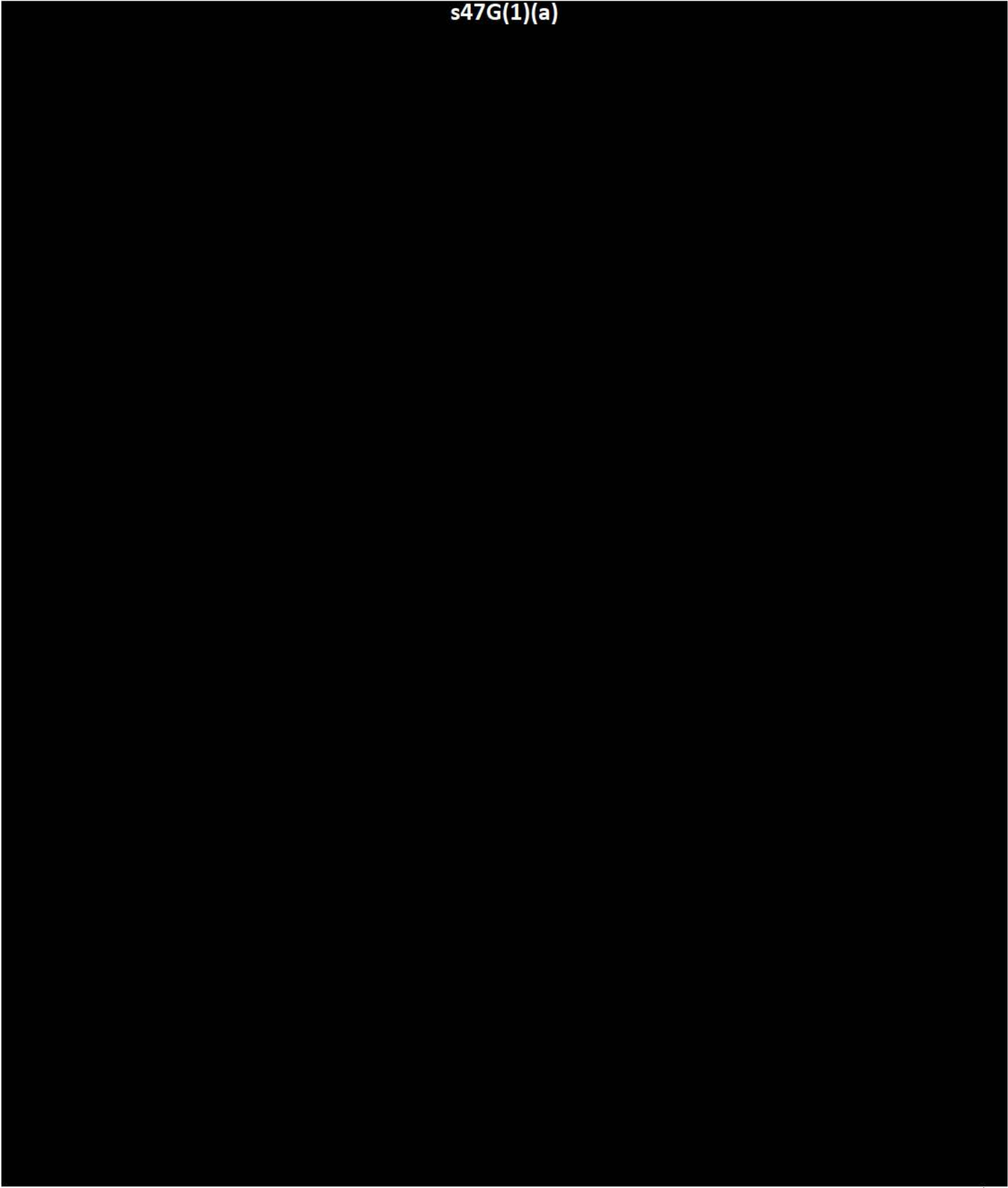
We have arranged the following insurance cover effective from the 4/06/2015. Please review the details thoroughly to ensure all information is correct and policy coverage meets your requirements.

s47G(1)(a)

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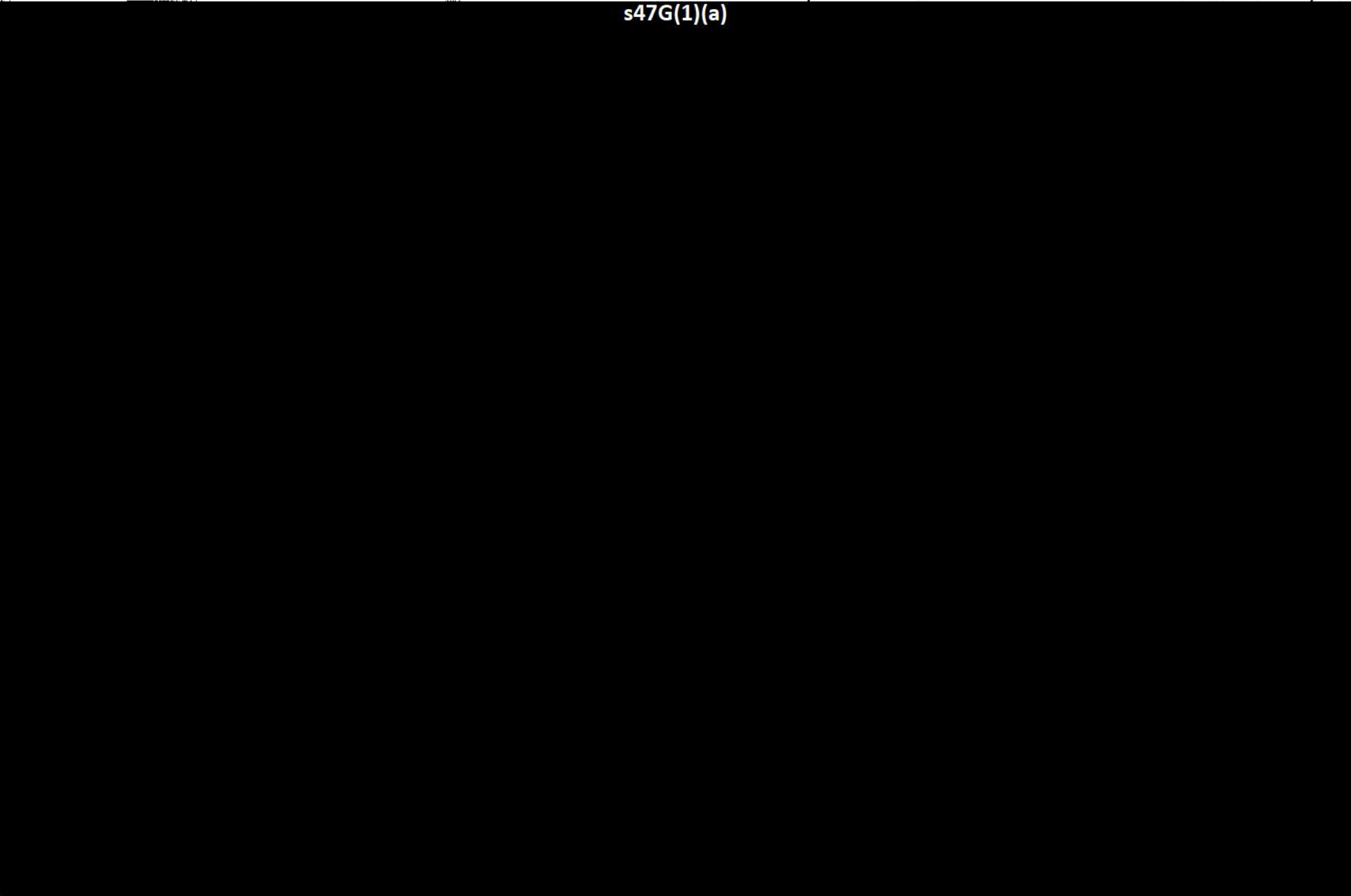
s47F

Safe Work Risk Assessment


Work Order # and
or Description of Task: Kangaroo Control

Location:
CSIRO Gungahlin – Plant Industries – Barton Highway

s47G(1)(a)



s47G(1)(a)



Transfer Order AUTHORITY


SERVICE ONE Alliance Bank

Account holder name(s): s47F Membership No.: s47F
Membership No.: s47F

PAYMENT DETAILS

I/we request the first payment to commence on: Date: 11 / 6 / 15

I/we request the payment made on the frequency of: (tick as required)

☒ Once off payment ☐ Weekly ☐ Fortnightly ☐ Four weekly ☐ Monthly

The payment is to be made until: ☐ further notice ☐ final payment on Date: / /

I/we request payment(s) debit from my/our Account No.: 59A

Payment amount: s47G(1)(a)

PAYMENT OPTIONS (please note fees are payable)

Payment(s) is to be made to: (complete A, B, C or D)

☐ A. Another SERVICE ONE account

Membership No.:

Account No.:

Name of account holder:

Reference:

☐ B. Another financial institution

BSB:

Account No.:

Name of account holder:

Reference:

☐ C. A cheque made out to

Name:

Address:

Suburb/City:

State: Postcode:

☐ D. Pay via BPAY®

Bill Code: s47F

Payee name: s47F

Account No.: s47F

BPAY® is registered to s47F



DECLARATIONS AND ACKNOWLEDGEMENTS

I agree to abide by the Terms and Conditions that are set out in SERVICE ONE's Financial Services Guide/Product Disclosure Statement, Operation of Accounts and access facilities, and Schedule of Fees and Charges. I agree to pay any fees associated with the use of this service as indicated in the Schedule of Fees and Charges.

NOTE: If the account/s is in a joint relationship (two to sign), all account owners are required to sign.

Signature s47F

Date 11 / 6 / 15

Signature

Print Name

Date / /

OFFICIAL USE ONLY (BRANCH)

Periodic payment created by operator: 760 Authority number: 112823 Bill details verified (for BPAY only): Yes ☐ No ☐

Forward the completed form to OPERATIONS

SERVICE ONE Alliance Bank is an agent for Bendigo and Adelaide Bank Limited.
Deposits and loans with SERVICE ONE Alliance Bank are deposits and loans of Bendigo and Adelaide Bank Limited AFSL/Australian Credit Licence 237879.
phone 1300 361 761 | fax 02 6215 7171
post Locked Bag 1 DEAKIN ACT 2600 | email members@serviceone.com.au | web serviceone.com.au | BSB 801 009

OPS-TQAV1.14

From: Sheldon, Candice (A&F, Black Mountain)
Sent: Tuesday, 31 May 2016 9:51 AM
To: Isaac, Bruce (A&F, Ginninderra)
Cc: Sheldon, Candice (A&F, Black Mountain)
Subject: RE: Kangaroo Culling

Hi Bruce

That's fine – as long as it is less than \$10K we only need one written quote. Ideally we would get two additional verbal quotes, but I am happy to skip this step given the reasons you outline.

If possible could s47F invoice us by June 20 (even if work is to be carried out later). If the cost ends up higher we can pay additional later.

Thanks

Candice

From: Isaac, Bruce (Agriculture, Ginninderra)
Sent: Tuesday, 31 May 2016 9:35 AM
To: Sheldon, Candice (Agriculture, Black Mountain) s47F
Subject: Kangaroo Culling

Hi Candice,

Although the quote for kangaroo culling exceeds s47G(1)(a) I would prefer to use s47F and not seek further quotations. He is the only culler we have used in the past, although s47F then. Since s47F has a good knowledge of GES and our priorities. s47F is willing to persevere with eradicating the kangaroos on the eastern side of GES which is the most difficult and time consuming but of most importance to us.

I am reluctant to seek the services of anyone else as we have complete confidence in s47F to do the job well and be discrete. Given the sensitive nature of this activity, the less people that know about it, the better.

Do you think there would be any problem with approving payment of this fee?

Regards, Bruce

From: Keen, Mikayla (Comms, North Ryde)
Sent: Tuesday, 7 June 2016 11:27 AM
To: Isaac, Bruce (A&F, Ginninderra); Nicoll, Roger (Comms, Black Mountain)
Subject: For review - GES issue brief
Attachments: IssueBrief-GES-KangarooCull-2016.docx

Hi Bruce,

Please find the latest version of the issues brief attached. If you could please check the facts and figures in the document (particularly the highlighted sections) I would greatly appreciate it.

I've also included my colleague Roger Nicoll here as he is providing comms support to Property and GES. Please continue to work with Roger in relation to the cull. I'm available to help but Roger should be the primary communication contact from now on.

You will notice there is a section about the fertility trials. Roger, Steve Henry provided the latest information (2013) so probably best to check in with him or Lyn Hines to update this information.

Thank you in advance for your time and assistance.

Best wishes,
Mikayla

Mikayla Keen
Acting Communication Manager
CSIRO Agriculture

s47F

s47F

www.csiro.au | @CSIROnews

Address: 5 Julius Ave, North Ryde 2113 NSW Australia

PLEASE NOTE

The information contained in this email may be confidential or privileged. Any unauthorised use or disclosure is prohibited. If you have received this email in error, please delete it immediately and notify the sender by return email. Thank you. To the extent permitted by law, CSIRO does not represent, warrant and/or guarantee that the integrity of this communication has been maintained or that the communication is free of errors, virus, interception or interference.

Please consider the environment before printing this email

Issue brief – Authorised kangaroo cull on CSIRO's Ginninderra Experiment Station (GES)

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| Background | <p>There is currently a resident population of over 500 kangaroos at GES, and around 45 of these are within an enclosed area that contains research crop trials. This is an area surrounded by security fence and is used for intensive agricultural research. As the kangaroos are captive inside a very small area, annual culling is undertaken to prevent the population from both damaging experiments and expanding to a point where they would starve to death.</p> <p>CSIRO also has a responsibility to maintain an important threatened remnant mixed native grassland on adjoining land (blocks 1609 and 1610).</p> <p>This native grassland is not used for research, but managed for preservation. Some grazing by sheep at strategic times is undertaken to maintain the natural diversity of the pasture.</p> <p>The grassland area has no security fencing and is easily accessible by kangaroos.</p> <p>Increasing urbanisation to the north and west of this grassland has placed pressure on the kangaroo population and they migrate in large numbers to any area where there is a source of food.</p> <p>CSIRO is happy to maintain a permanent population of kangaroos in this area, but unfortunately, the current number is not sustainable.</p> |
| CSIRO position | <ul style="list-style-type: none"> - CSIRO is undertaking this kangaroo cull from May 13, 2013, to take place over 6-12 nights depending on weather and effectiveness, to protect valuable research crops and endangered remnant native grasslands. After reviewing all possible options to reduce the number of kangaroos on the GES, culling was seen as the most humane and effective approach. - CSIRO does not mind having kangaroos on the property, but they need to be at levels which do not impact on the environment or valuable research trials. |
| Supporting information | <ul style="list-style-type: none"> - The kangaroos at GES are Eastern Greys - GES is divided into several leases, some of which are surrounded by a high security fence. - Kangaroo numbers can rapidly increase in enclosed areas, threaten trials and cause land degradation. - In organising the cull, CSIRO has liaised with the ACT Government, which has a management protocol on how to manage the kangaroos. - CSIRO investigated other management options including darting and relocation, but kangaroos are territorial so this approach would be very |

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| | <p>stressful for the kangaroos and logistically impractical. It is considered more humane to cull.</p> <ul style="list-style-type: none"> - CSIRO began to seek permission to cull kangaroos on GES in 2002. <p>Culling process</p> <ul style="list-style-type: none"> - Approval from the ACT Government (Parks Conservation and Lands), and the Australian Federal Police (AFP) is required before culling can occur. CSIRO has this approval. - As a rule, kangaroos are not culled during spring-summer because of the higher chance of joeys being in-pouch. - Permission has been granted to cull a total of 100 kangaroos up to the end of July 2013. - CSIRO also has in place strict guidelines for how the culling will be conducted. For example, shooting will only occur in certain areas of the GES away from fence lines, the animals will be approached quietly, all CSIRO Staff will be removed from the site, and all gates will be padlocked to ensure access to the property via entry roads is prevented. - Under the ACT Government's Management Protocol, a kangaroo shooter must be trained, certified and registered with the ACT Government and the AFP - The culling will take place during both day and night and will be determined by the availability of the accredited shooter. Spotlights will be used at night. - An accredited shooter is required to kill instantly with a shot to the head or the chest. - All shooting must cease if an animal is not killed instantly and the shooter must attend to this immediately. - If a kangaroo has a joey in pouch, the joey must also be culled immediately. <p>About the surrounding area</p> <ul style="list-style-type: none"> - CSIRO's GES is 600 ha. - The estimated number of kangaroos on the GES is ~35 in the enclosed block (1545) and well over 500 in the larger block (1610), dependant on seasonal conditions. - The area where the kangaroos are to be culled is surrounded by the suburbs of Giralang, Evatt, Spence and Nicholls. |
| Key talking points | <ul style="list-style-type: none"> - The number of kangaroos grazing on CSIRO's Ginninderra Experimental Station has reached levels where both valuable crop experiments and endangered native grasslands are being put at risk. - Many of the crops that are planted on the property have taken many years to finally reach a field trial and are quite valuable because the number of planted seeds are limited and are very hard to replace. |

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| | <p>- Having the kangaroos enter our field trials is like having them jumping into your own backyard and letting them have free reign to eat your vege patch. The only difference is that our research crops are bigger and a lot more valuable.</p> <p>- CSIRO investigated other management options including darting and relocation, but kangaroos are territorial so this approach would be very stressful for the kangaroos and logistically impractical. It is considered more humane to cull.</p> <p>- An increasing kangaroo population is putting threatened native grasslands at risk and as the property manager CSIRO has an obligation to protect this valuable national asset.</p> <p>- We have a license to cull 100 kangaroos, which is a relatively small number considering the large kangaroo population in the ACT. It's unlikely that 100 kangaroos will be culled before the end of July, when the cull license expires.</p> |
| Q&As | <p>1. How many kangaroos will you be culling?</p> <p>CSIRO holds a licence to cull 100 kangaroos at its Ginninderra Experimental Station. That does not necessarily mean 100 kangaroos will be culled and the actual number culled will most likely be less than that.</p> <p>2. When are you going to cull and how long will you be culling?</p> <p>We are currently in the process of culling and the license will expire at the end of July.</p> <p>3. Is this the first time CSIRO has culled kangaroos at its Ginninderra farm?</p> <p>We have conducted other culls in the past, but only after advice indicated that kangaroo numbers were placing pressure on research trials and threatened native grasslands, and when drought reduced the amount of food available and the kangaroos were suffering.</p> <p>The decision to cull is not taken lightly and we ensure culls are undertaken humanely.</p> <p>4. How do you ensure culls are undertaken humanely?</p> <p>A professional accredited shooter who is licensed by the ACT government and AFP is required to kill instantly with a shot to the head or the chest.</p> <p>All shooting must cease if an animal is not killed instantly and the shooter must attend to this immediately. If a kangaroo has a joey in pouch, the joey must also be culled immediately.</p> <p>5. How many kangaroos have been culled and why?</p> <p>Less than a hundred kangaroos have been culled in the last couple of years.</p> <p>Culls have been conducted when evidence shows kangaroo numbers have increased to a point where they're starting to impact on endangered native grasses and research trials, and when drought reduced the amount of food available and the kangaroos were suffering.</p> |

6. Have you ever consulted with the local community about the cull, particularly those living close the farm?

CSIRO has consulted with the ACT Government and in this case it was determined there was no need for community consultation.

The cull is being conducted in the safest possible way and does not impact on the day-to-day lives of nearby residents.

7. But don't you think the local community has a right to know and have a say in the decision-making about the fate of the kangaroos?

I understand why some people would like to have a say, and I would like to reassure them that CSIRO does not take the decision to cull lightly.

These kangaroos are in great numbers and are posing a serious threat to endangered native grasslands and valuable research trials – research trials that have, in some cases, taken 15 years of hard, intensive research to reach the planting stage.

We consulted with the ACT government, and CSIRO only contemplates a cull after there is evidence that shows kangaroo numbers are affecting endangered native grasses and research trials.

8. How many kangaroos are currently on your land?

It is estimated there are well over 500 kangaroos on our land at the moment.

9. Why do you lock the gates during the cull?

Before beginning the cull we need to ensure that all CSIRO staff are informed and accounted for and that members of the public who may not know about the cull taking place cannot enter the property.

10. Why don't you prevent the kangaroos entering the area in the first place?

The part of the property used for field trials is surrounded by security fence but it is possible that kangaroos can jump this fence. Members of the public have also fashioned holes in the fences to gain access to the property, through which kangaroos can enter.

We try to mend these holes as quickly as possible, but it is not always possible to fix them before kangaroos have gained access.

12. When only 20 kangaroos initially entered, why didn't you relocate those while the population was still manageable?

It is very difficult to move frightened kangaroos. It was attempted but was not successful. The property is relatively large and culling small numbers in large areas is also difficult.

13. Has CSIRO conducted any research into alternatives to culling kangaroos?

Yes, CSIRO is working on fertility control of large herbivores. This research applies to kangaroos and also to pest species such as camels, horses and donkeys.

The research has developed a vaccine that makes the animals sterile.

This research is ongoing and it will be several years before it could be potentially used at the GES site.

[for more detail about this research see Dr Lyn Hinds, CSIRO Ecosystem Sciences, Black Mountain s47F]

14. 100 kangaroos isn't a significant number, can't you just move them?

I understand that many people may be upset about the cull, and I'd like to reassure them CSIRO does not take the decision to cull lightly.

Moving the kangaroos raises a whole set of other issues. Kangaroos are territorial, stress on the animals may kill them, and we would just be moving the problem and creating a bigger problem elsewhere.

To move kangaroos, they need to be darted and transported. Then they need to recover from the anaesthetic and be released. There is no guarantee that the kangaroos will survive in the unfamiliar territory. Female kangaroos never leave the area where they were born and a move would be hugely stressful for them.

The move will also involve a huge amount of resources which could be better used towards researching and using other population control method such as the sterility vaccine.

15. Can't you just let the kangaroos eat the experimental crops and start again, or plant enough for the kangaroos to eat as well as get your experimental results?

Letting the kangaroos eat the research crops would not only halt important research trials but attract more and more kangaroos to the area, worsening the problem.

Furthermore, experiments are typically planted in specific patterns and the results of different areas of the experimental field often need to be compared. Having one section eaten and one not, would mean the whole experiment would no longer be valid.

16. How threatened are the native grasses on the CSIRO property?

The Federal and ACT governments have declared the grasslands on the GES property as threatened and as the property manager CSIRO has an obligation to work with the government to put in place practices that preserve these grasslands.

The kangaroo cull is just one part of this conservation effort.

More information can be found online here:

<http://www.environment.gov.au/biodiversity/threatened/publications/recovery/temperate-grasslands/pubs/temperate-grasslands.pdf>

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| | <p>http://www.qinninderralandcare.org.au/content.php?id=31</p> <p>17. Why don't you fence off the native grassland?</p> <p>A fence does exist, however it does not prevent kangaroos jumping into the grassland area. The grassland area is over 20 ha and to fence that off with kangaroo-proof fencing would not be financially viable or necessarily effective.</p> <p>18. What happens to the kangaroos after they are culled?</p> <p>Since the ACT is not zoned as a kangaroo harvesting area, no part of the culled kangaroos can be used. They are buried in deep pits.</p> |
| <i>Social media responses in case of enquiry</i> | <p>Tweet: Unfortunately, it is necessary to cull kangaroos on our GES property to protect endangered native grasses and valuable field trials. (128 characters)</p> <p>Tweet: The decision to cull kangaroos on our GES property has been taken in consultation with the ACT government. (107 characters)</p> <p>Tweet: The culling will be conducted by a professional shooter accredited by ACT government and the AFP. (97 characters)</p> |
| <i>CSIRO contact</i> | <p>Spokesperson;</p> <p>Communications: Roger Nicoll,</p> <p>GES Property Manager: Phil Dunbar, CSIRO Agriculture, ph.</p> |

s47F

From: Keen, Mikayla (Comms, North Ryde)
Sent: Tuesday, 7 June 2016 11:37 AM
To: Sheldon, Candice (A&F, Black Mountain)
Cc: Nicoll, Roger (Comms, Black Mountain)
Subject: FYI: GES issue brief
Attachments: IssueBrief-GES-KangarooCull-2016.docx Attachment - Duplicate Removed

Hi Candice,

Sending this to you so you're in the loop. Please let Roger know if you require more information.

Best wishes,
Mikayla

From: Isaac, Bruce (A&F, Ginninderra)
Sent: Tuesday, 7 June 2016 5:46 PM
To: Nicoll, Roger (Comms, Black Mountain)
Cc: Sheldon, Candice (A&F, Black Mountain)
Subject: GES Kangaroo Cull
Attachments: IssueBrief-GES-KangarooCull-2016.docx

Hi Roger,

This is the updated version of the document Mikayla sent me. Please contact me if you need any further information.

Regards, Bruce

s47F

Issue brief – Authorised kangaroo cull on CSIRO's Ginninderra Experiment Station (GES)

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|-------------------------------|--|
| Background | <p>There is currently a resident population of over 500 kangaroos at GES, and around 60 of these are within an enclosed area that contains research crop trials. This is an area surrounded by security fence and is used for intensive agricultural research. As the kangaroos are captive inside a very small area, annual culling is undertaken to prevent the population from both damaging experiments and expanding to a point where they would starve to death.</p> <p>CSIRO also has a responsibility to maintain an important threatened remnant mixed native grassland on adjoining land (blocks 1609 and 1610).</p> <p>This native grassland is not used for research, but managed for preservation. Some grazing by sheep at strategic times is undertaken to maintain the natural diversity of the pasture.</p> <p>The grassland area has no security fencing and is easily accessible by kangaroos.</p> <p>Increasing urbanisation to the north and west of this grassland has placed pressure on the kangaroo population and they migrate in large numbers to any area where there is a source of food.</p> <p>CSIRO is happy to maintain a permanent population of kangaroos in this area, but unfortunately, the current number is not sustainable.</p> |
| CSIRO position | <ul style="list-style-type: none"> - CSIRO is undertaking this kangaroo cull from June 10, 2016 until July 31, 2016 to take place over 6-12 nights depending on weather and effectiveness, to protect valuable research crops and endangered remnant native grasslands. After reviewing all possible options to reduce the number of kangaroos on the GES, culling was seen as the most humane and effective approach. - CSIRO does not mind having kangaroos on the property, but they need to be at levels which do not impact on the environment or valuable research trials. |
| Supporting information | <ul style="list-style-type: none"> - The kangaroos at GES are Eastern Greys - GES is divided into several leases, some of which are surrounded by a high security fence. - Kangaroo numbers can rapidly increase in enclosed areas, threaten trials and cause land degradation. - In organising the cull, CSIRO has liaised with the ACT Government, which has a management protocol on how to manage the kangaroos. |

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| | <ul style="list-style-type: none"> - CSIRO investigated other management options including darting and relocation, but kangaroos are territorial so this approach would be very stressful for the kangaroos and logistically impractical. It is considered more humane to cull. - CSIRO began to seek permission to cull kangaroos on GES in 2002. <p>Culling process</p> <ul style="list-style-type: none"> - Approval from the ACT Government (Parks Conservation and Lands), and the Australian Federal Police (AFP) is required before culling can occur. CSIRO has this approval. - As a rule, kangaroos are not culled during spring-summer because of the higher chance of joeys being in-pouch. - Permission has been granted to cull a total of 150 kangaroos up to the end of July 2016. - CSIRO also has in place strict guidelines for how the culling will be conducted. For example, shooting will only occur in certain areas of the GES away from fence lines, the animals will be approached quietly, all CSIRO Staff will be removed from the site, and all gates will be padlocked to ensure access to the property via entry roads is prevented. - Under the ACT Government's Management Protocol, a kangaroo shooter must be trained, certified and registered with the ACT Government and the AFP - The culling will take place during both day and night and will be determined by the availability of the accredited shooter. Spotlights will be used at night. - An accredited shooter is required to kill instantly with a shot to the head or the chest. - All shooting must cease if an animal is not killed instantly and the shooter must attend to this immediately. - If a kangaroo has a joey in pouch, the joey must also be culled immediately. <p>About the surrounding area</p> <ul style="list-style-type: none"> - CSIRO's GES is 701 ha. - The estimated number of kangaroos on the GES is ~60 in the enclosed block (1545) and well over 500 in the larger block (1610 & 1609), dependant on seasonal conditions. - The area where the kangaroos are to be culled is surrounded by the suburbs of Giralang, Evatt, Spence and Nicholls. |
| Key talking points | <ul style="list-style-type: none"> - The number of kangaroos grazing on CSIRO's Ginninderra Experimental Station has reached levels where both valuable crop experiments and endangered native grasslands are being put at risk. |

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|-----------------|--|
| | <ul style="list-style-type: none"> - Many of the crops that are planted on the property have taken many years to finally reach a field trial and are quite valuable because the number of planted seeds are limited and are very hard to replace. - Having the kangaroos enter our field trials is like having them jumping into your own backyard and letting them have free reign to eat your vege patch. The only difference is that our research crops are bigger and a lot more valuable. - CSIRO investigated other management options including darting and relocation, but kangaroos are territorial so this approach would be very stressful for the kangaroos and logistically impractical. It is considered more humane to cull. - An increasing kangaroo population is putting threatened native grasslands at risk and as the property manager CSIRO has an obligation to protect this valuable national asset. - We have a licence to cull 150 kangaroos, which is a relatively small number considering the large kangaroo population in the ACT. It's unlikely that 150 kangaroos will be culled before the end of July, when the cull license expires. |
| Q&As | <p>1. How many kangaroos will you be culling?</p> <p>CSIRO holds a licence to cull 150 kangaroos at its Ginninderra Experimental Station. That does not necessarily mean 150 kangaroos will be culled and the actual number culled will most likely be less than that.</p> <p>2. When are you going to cull and how long will you be culling?</p> <p>We are currently in the process of culling and the license will expire at the end of July.</p> <p>3. Is this the first time CSIRO has culled kangaroos at its Ginninderra farm?</p> <p>We have conducted other culls in the past, but only after advice indicated that kangaroo numbers were placing pressure on research trials and threatened native grasslands, and when drought reduced the amount of food available and the kangaroos were suffering.</p> <p>The decision to cull is not taken lightly and we ensure culls are undertaken humanely.</p> <p>4. How do you ensure culls are undertaken humanely?</p> <p>A professional accredited shooter who is licensed by the ACT government and AFP is required to kill instantly with a shot to the head or the chest.</p> <p>All shooting must cease if an animal is not killed instantly and the shooter must attend to this immediately. If a kangaroo has a joey in pouch, the joey must also be culled immediately.</p> <p>5. How many kangaroos have been culled and why?</p> <p>Less than a hundred kangaroos have been culled in the last couple of years.</p> |

Culls have been conducted when evidence shows kangaroo numbers have increased to a point where they're starting to impact on endangered native grasses and research trials, and when drought reduced the amount of food available and the kangaroos were suffering.

6. Have you ever consulted with the local community about the cull, particularly those living close the farm?

CSIRO has consulted with the ACT Government and in this case it was determined there was no need for community consultation.

The cull is being conducted in the safest possible way and does not impact on the day-to-day lives of nearby residents.

7. But don't you think the local community has a right to know and have a say in the decision-making about the fate of the kangaroos?

I understand why some people would like to have a say, and I would like to reassure them that CSIRO does not take the decision to cull lightly.

These kangaroos are in great numbers and are posing a serious threat to endangered native grasslands and valuable research trials – research trials that have, in some cases, taken 15 years of hard, intensive research to reach the planting stage.

We consulted with the ACT government, and CSIRO only contemplates a cull after there is evidence that shows kangaroo numbers are affecting endangered native grasses and research trials.

8. How many kangaroos are currently on your land?

It is estimated there are well over 500 kangaroos on our land at the moment.

9. Why do you lock the gates during the cull?

Before beginning the cull we need to ensure that all CSIRO staff are informed and accounted for and that members of the public who may not know about the cull taking place cannot enter the property.

10. Why don't you prevent the kangaroos entering the area in the first place?

The part of the property used for field trials is surrounded by security fence but it is possible that kangaroos can jump this fence. Members of the public have also fashioned holes in the fences to gain access to the property, through which kangaroos can enter.

We try to mend these holes as quickly as possible, but it is not always possible to fix them before kangaroos have gained access.

12. When only 20 kangaroos initially entered, why didn't you relocate those while the population was still manageable?

It is very difficult to move frightened kangaroos. It was attempted but was not successful. The property is relatively large and culling small numbers in large areas is also difficult.

13. Has CSIRO conducted any research into alternatives to culling kangaroos?

Yes, CSIRO is working on fertility control of large herbivores. This research applies to kangaroos and also to pest species such as camels, horses and donkeys.

The research has developed a vaccine that makes the animals sterile.

This research is ongoing and it will be several years before it could be potentially used at the GES site.

[for more detail about this research see Dr Lyn Hines, CSIRO Ecosystem Sciences, Black Mountain s47F]

14. 100 kangaroos isn't a significant number, can't you just move them?

I understand that many people may be upset about the cull, and I'd like to reassure them CSIRO does not take the decision to cull lightly.

Moving the kangaroos raises a whole set of other issues. Kangaroos are territorial, stress on the animals may kill them, and we would just be moving the problem and creating a bigger problem elsewhere.

To move kangaroos, they need to be darted and transported. Then they need to recover from the anaesthetic and be released. There is no guarantee that the kangaroos will survive in the unfamiliar territory. Female kangaroos never leave the area where they were born and a move would be hugely stressful for them.

The move will also involve a huge amount of resources which could be better used towards researching and using other population control method such as the sterility vaccine.

15. Can't you just let the kangaroos eat the experimental crops and start again, or plant enough for the kangaroos to eat as well as get your experimental results?

Letting the kangaroos eat the research crops would not only halt important research trials but attract more and more kangaroos to the area, worsening the problem.

Furthermore, experiments are typically planted in specific patterns and the results of different areas of the experimental field often need to be compared. Having one section eaten and one not, would mean the whole experiment would no longer be valid.

16. How threatened are the native grasses on the CSIRO property?

The Federal and ACT governments have declared the grasslands on the GES property as threatened and as the property manager CSIRO has an obligation to work with the government to put in place practices that preserve these grasslands.

The kangaroo cull is just one part of this conservation effort.

More information can be found online here:

| | |
|---|---|
| | <p>http://www.environment.gov.au/biodiversity/threatened/publications/recovery/temperate-grasslands/pubs/temperate-grasslands.pdf</p> <p>http://www.ginninderralandcare.org.au/content.php?id=31</p> <p>17. Why don't you fence off the native grassland?</p> <p>A fence does exist, however it does not prevent kangaroos jumping into the grassland area. The grassland area is over 20 ha and to fence that off with kangaroo-proof fencing would not be financially viable or necessarily effective.</p> <p>18. What happens to the kangaroos after they are culled?</p> <p>Since the ACT is not zoned as a kangaroo harvesting area, no part of the culled kangaroos can be used. They are buried in deep pits.</p> |
| <i>Social media responses in case of enquiry</i> | <p>Tweet: Unfortunately, it is necessary to cull kangaroos on our GES property to protect endangered native grasses and valuable field trials. (128 characters)</p> <p>Tweet: The decision to cull kangaroos on our GES property has been taken in consultation with the ACT government. (107 characters)</p> <p>Tweet: The culling will be conducted by a professional shooter accredited by ACT government and the AFP. (97 characters)</p> |
| <i>CSIRO contact</i> | <p>Spokesperson:</p> <p>Communications: Roger Nicoll,</p> <p>GES Property Manager: Bruce Isaac or Byron Corcoran, CSIRO Agriculture, ph. s47F</p> |

From: Virtue, Stephen (HSE, Black Mountain)
Sent: Wednesday, 8 June 2016 3:15 PM
To: Isaac, Bruce (A&F, Ginninderra)
Subject: RE: Kangaroos at GES

Hi Bruce,

John is comfortable with proceeding as Candice has probably mentioned. In regards to the public liability amount the CSIRO procurement states \$20 million. In this case due to the nature of this contract and the time imperative I am prepared to authorise we proceed on this occasion with the existing policy that is in place. Should we undertake the same activity next year there will be an expectation that the sum insured is \$20 million.

Regards,

Stephen

Stephen Virtue
Health, Safety and Environment Manager
CSIRO Agriculture

CSIRO Black Mountain Science and Innovation Park
GPO Box 1600, Canberra ACT 2601

s47F

www.csiro.au

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From: Isaac, Bruce (Agriculture, Ginninderra)
Sent: Monday, 6 June 2016 9:09 AM
To: Virtue, Stephen (HSE, Black Mountain)
Subject: Kangaroos at GES

s47F

Hi Stephen,

Have you had a chance to check with John Manners about proceeding with culling and whether \$10 million in public liability insurance is OK?

Dave came out and we did a site inspection last Wednesday, so he is ready to start if everything is right at our end.

Regards, Bruce

From: Nicoll, Roger (Comms, Black Mountain)
Sent: Thursday, 9 June 2016 6:16 PM
To: Manners, John (A&F, Black Mountain); Edwards, Steven (B&IS, Black Mountain)
Cc: Wallis, Mark (B&IS, Black Mountain); Morgan, Huw (Comms, Adelaide K. Ave);
Creagh, Ben (Comms, Dutton Park); Barnett, Guy (L&W, Black Mountain)
Subject: Issues brief for GES and kangaroos

Hi John and Steve

As you may be aware the annual culling of Kangaroos on the GES property is to take place weather permitting for 6-12 nights (middle of night/early morning) between June 10 and July 31.

The issues brief has been updated by Ag business unit and GES Property Manager Bruce Isaac. Based on past years we might not anticipate any media activity, but with the double election year and activity (by some opposed to GES development) in regard to the GES – it may be more likely this year.

The culling issue generally draw a lot of media coverage and conflict each year in the ACT (see links below).

<http://www.abc.net.au/news/2016-02-24/alleged-kangaroo-cull-whistle-blower-in-court/7195822>
<http://www.canberratimes.com.au/act-news/doubts-over-kangaroo-culling-science-20160408-go1u5k.html>
<http://www.canberratimes.com.au/act-news/kangaroo-cull-licence-allows-for-5000-to-be-killed-20150424-1mse8b.html>

As the property is still managed by Ag, I am proposing that John Manners would be our key spokesperson if the need arises. I am listed as first point of media contact.

Best regards
Roger

Roger Nicoll
Communications Manager
CSIRO Business and Infrastructure Services

s47F

CSIRO Communications, Discovery Building, North Science Rd, Acton, ACT, 2601
www.csiro.au |

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From: Isaac, Bruce (A&F, Ginninderra)
Sent: Friday, 10 June 2016 1:12 PM
To: Nicoll, Roger (Comms, Black Mountain)
Cc: Sheldon, Candice (A&F, Black Mountain)
Subject: Kangaroos

Hi Roger,

The kangaroo culling is scheduled to start on Tuesday, June 14 weather permitting. We intend to complete the job by the end of June if possible.

Regards, Bruce

From: [REDACTED] s47F
Sent: Friday, 10 June 2016 8:24 PM
To: Isaac, Bruce (A&F, Ginninderra)
Subject: RE: Kangaroo Control- Plant Industries Gungahlin
Attachments: Public Liability [REDACTED] s47F 2016 -2017.pdf

Hi Bruce,

As per our discussions please find attached Public Liability Insurance details for [REDACTED] s47F

Thankyou for all telephone discussion today I plan to start at CSIRO Agriculture on Tuesday Evening 14th June weather permitting, I shall call you Tuesday to line up start and plan for Kangaroo Control.

I trust that this information is to your satisfaction and should you require any further or additional information pleased do not hesitate to contact me.

Yours,

[REDACTED] s47F

From: [REDACTED] s47F
Sent: Friday, 10 June 2016 8:29 AM
To: 'bruce.isaac' [REDACTED] s47F
Subject: RE: Kangaroo Control- Plant Industries Gungahlin

Hi Bruce,

Thankyou for you calls regarding the control of Kangaroo at CSIRO Agriculture Nichols. As per your request please see attached Invoice required by 20th June 2016 for Kangaroo control 1125 Barton Highway, Nichols. I shall pay my Public Liability Insurance this evening and I will send you a copy as soon as the policy is sent back to me.

I trust that this information is to your satisfaction and should you require any further or additional information please do not hesitate to contact me.

Yours,

[REDACTED] s47F

From: CSIRO Enquiries
Sent: Wednesday, 15 June 2016 1:01 PM
To: Nicoll, Roger (Comms, Black Mountain)
Subject: Enquiries seeking your assistance for [REDACTED]

s47F

Hi Roger,

We have received the below email regarding Ginninderra shooting.
Are you able to assist with a response for the below issue?

If you reply directly to the enquirer, please cc csiroenquiries@csiro.au

Thank you,
Verena
Information Officer
CSIRO Enquiries
Phone: 1300 363 400

Original request:

Name: [REDACTED] s47F

Email: [REDACTED] s47F

Phone: [REDACTED]

Date:

Subject: CSIRO.au: Contact

Message: We live at the north end of Clarey cres Spence, ACT. We are just south of the CSIRO block with the Barton Hwy to its north and Owen Dixon Drive to the south. On a few nights recently, and particularly last night, we have heard sporadic bangs from that direction. They sound like gun shots. The source seems to move, sometimes further away. Is there any shooting happening on your land? I know the ACT gov is currently shooting kangaroos but I don't expect that CSIRO land would be included in that. Please reassure us that no one is shooting so close to houses and that the small population of roos on that block are not being killed.

<http://www.csiro.au/en/Contact/Contacts-areas>

ref:_00D20lloq._500w01Ed7Xj;ref

From: Nicoll, Roger (Comms, Black Mountain)
Sent: Wednesday, 15 June 2016 2:49 PM
To: Manners, John (A&F, Black Mountain); Sheldon, Candice (A&F, Black Mountain); Isaac, Bruce (A&F, Ginninderra); Edwards, Steven (B&IS, Black Mountain)
Cc: Creagh, Ben (Comms, Dutton Park); Morgan, Huw (Comms, Adelaide K. Ave); Barnett, Guy (L&W, Black Mountain)
Subject: Fw: Enquiries seeking your assistance for [REDACTED] s47F

Hi John, Steve and all

The Kangaroo culling operations at Ginninderra started last night (first night). CSIRO Enquiries has received two requests for information from residents (see bottom of this email). [REDACTED]

s47C

Thank you for getting in touch with us.

Best regards

From: Enquiries <csiroenquiries@csiro.au>
Sent: Wednesday, 15 June 2016 1:00 PM
To: Nicoll, Roger (Comms, Black Mountain)
Subject: Enquiries seeking your assistance for [REDACTED] s47F

Hi Roger,

We have received the below email regarding Ginninderra shooting.
Are you able to assist with a response for the below issue?

If you reply directly to the enquirer, please cc csiroenquiries@csiro.au

Thank you,
Verena
Information Officer
CSIRO Enquiries
Phone: 1300 363 400

Original request:

Name: Name: [REDACTED] s47F

Email: [REDACTED] s47F

Phone: [REDACTED]

Date:

Subject: CSIRO.au: Contact

Message: Indiscriminate shooting on the CSIRO site between Owen Dixon Drive and Barton Highway, 2330 14 June 2016.

Can you please confirm this exercise being an organised event controlled by CSIRO.

I have concerns regarding the exercise witnessed last night, which was being conducted within 100 metres of residential houses, I was spotlighted during a my phone conversation with ACT Police. ACT Police called to say it was not related to ACT Rangers, therefore it is a CSIRO matter.

<http://www.csiro.au/en/Contact/Complaints>

ref: _00D20Iloq._500w01Ed82I:ref

Original request:

Name: Name: [REDACTED] s47F

Email: [REDACTED] s47F

Phone: [REDACTED]

Date:

Subject: CSIRO.au: Contact

Message: We live at the north end of Clarey cres Spence, ACT. We are just south of the CSIRO block with the Barton Hwy to its north and Owen Dixon Drive to the south. On a few nights recently, and particularly last night, we have heard sporadic bangs from that direction. They sound like gun shots. The source seems to move, sometimes further away. Is there any shooting happening on your land? I know the ACT gov is currently shooting kangaroos but I don't expect that CSIRO land would be included in that. Please reassure us that no one is shooting so close to houses and that the small population of roos on that block are not being killed.

<http://www.csiro.au/en/Contact/Contacts-areas>

ref: _00D20Iloq._500w01Ed7Xj:ref

From: Nicoll, Roger (Comms, Black Mountain)
Sent: Wednesday, 15 June 2016 5:07 PM
To: s47F
Cc: CSIRO Enquiries
Subject: CSIRO.au: Contact

Dear s47F

This email is in response to your contact of earlier today.

CSIRO has arranged for limited culling of kangaroos on the Ginninderra Experiment Station, for a number of nights (weather permitting) over the next few weeks, to protect valuable research crops and endangered remnant native grasslands on the site.

The number of kangaroos on site has reached levels where both the research crops and endangered grasslands are at risk.

This activity has been approved by the ACT Government and the Australian Federal Police with an expert accredited operator adhering to strict protocols and safety guidelines.

Thank you for getting in touch with us.

Yours sincerely

Roger Nicoll
CSIRO Communications

From: Sheldon, Candice (A&F, Black Mountain)
Sent: Thursday, 16 June 2016 8:02 AM
To: Manners, John (A&F, Black Mountain); Nicoll, Roger (Comms, Black Mountain)
Cc: Isaac, Bruce (A&F, Ginninderra); Edwards, Steven (B&IS, Black Mountain); Creagh, Ben (Comms, Dutton Park); Morgan, Huw (Comms, Adelaide K. Ave); Barnett, Guy (L&W, Black Mountain); Sheldon, Candice (A&F, Black Mountain)
Subject: RE: Enquiries seeking your assistance for [REDACTED] s47F

Hi Roger
Bruce (GES) expects the kangaroo cull to be complete by end of June at latest.
Regards
Candice

-----Original Message-----

From: Manners, John (Agriculture, Black Mountain)
Sent: Wednesday, 15 June 2016 3:56 PM
To: Nicoll, Roger (Comms, Black Mountain) [REDACTED] s47F
Cc: Sheldon, Candice (Agriculture, Black Mountain) [REDACTED] s47F; Isaac, Bruce (Agriculture, Ginninderra) [REDACTED] s47F; Edwards, Steven (B&IS, Black Mountain) [REDACTED] s47F; Creagh, Ben (Comms, Dutton Park) [REDACTED] s47F; Morgan, Huw (Comms, Adelaide K. Ave) [REDACTED] s47F; Barnett, Guy (L&W, Black Mountain) [REDACTED] s47F
Subject: Re: Enquiries seeking your assistance for Glyn Whitworth

Happy with the reply Roger, I think the cull would usually be over in 3 ~weeks so I would shorten the time period.
Candice can confirm likely period - John

From: s47F
Sent: Thursday, 16 June 2016 9:38 AM
To: Nicoll, Roger (Comms, Black Mountain)
Subject: Re: CSIRO.au: Contact

Thank you for your reply, Roger, though I'm disgusted to hear the news.

How can you claim to be protecting grasslands or crops when you have sheep on the same land? Sheep damage grasslands with hard hooves while kangaroos have lived with this environment for millions of years.

This sounds to me as if you are clearing out the roos prior to proceeding with your urban development. Any killing of roos once you begin to close down the facility and begin to develop would be seen for what it is.. cruel, inhumane slaughter. But do it quietly now and you might just get away with it. Is that the strategy?

On 15 Jun 2016, at 5:15 PM, s47F wrote:

Dear s47F

This email is in response to your contact of earlier today.

CSIRO has arranged for limited culling of kangaroos on the Ginninderra Experiment Station, for a number of nights (weather permitting) over the next few weeks, to protect valuable research crops and endangered remnant native grasslands on the site.

The number of kangaroos on site has reached high levels where both the research crops and endangered grasslands are at risk.

This activity has been approved by the ACT Government and the Australian Federal Police with an expert accredited operator adhering to strict protocols and safety guidelines.

Thank you for getting in touch with us.

Yours sincerely

Roger Nicoll

CSIRO Communications

From: s47F
Sent: Thursday, 16 June 2016 10:03 AM
To: Nicoll, Roger (Comms, Black Mountain)
Subject: Re: CSIRO.au: Contact

Also, please tell me how many animals are involved; the number prior to this killing, how many already killed and how many more you are targeting. Thanks.

From: Nicoll, Roger (Comms, Black Mountain)
Sent: Thursday, 16 June 2016 1:29 PM
To: Kachel, Nick (Comms, Newcastle)
Cc: Singleton, Ellen (Comms, Clayton); Morgan, Huw (Comms, Adelaide K. Ave)
Subject: RE: Tweets re Gininderra kangaroo cull

Hi Nick and all

We could use a Tweet such as this below:

We continue to protect native grasslands and valuable cropping research at our Gininderra farm

We are going to have a webpage up in the next 24 hours to support this.

Cheers
 Roger

Roger Nicoll
 Communications Manager
CSIRO Business and Infrastructure Services

s47F

CSIRO Communications, Discovery Building, North Science Rd, Acton, ACT, 2601
www.csiro.au |

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From: Kachel, Nick (Comms, Newcastle)
Sent: Thursday, 16 June 2016 10:51 AM
To: Nicoll, Roger (Comms, Black Mountain) s47F
Cc: Singleton, Ellen (Comms, Clayton) s47F Morgan, Huw (Comms, Adelaide K. Ave)
 s47F
Subject: Tweets re Gininderra kangaroo cull

Hi Roger

We're starting to see a few tweets come through re the Kangaroo cull. Do we have a response we could use?

Carolyn Drew @kangarevolution

@CSIROnews You kill roos on your Gininderra site under the guise of protecting grasslands yet this will be sold and built on. Such liars.

Mudyin

@RoGodwinw67

@kangarevolution @CSIROnews What a disgrace @CSIROnews ...the genocide re Kangaroos in the #ACT continues

Nicholas Kachel

Communication Advisor

Social Media

CSIRO

s47F

www.csiro.au

From: Isaac, Bruce (A&F, Ginninderra)
Sent: Thursday, 16 June 2016 4:55 PM
To: 'actcommunication@afp.gov.au'
Subject: CSIRO Kangaroo culling

Kangaroo culling activity is planned to take place at CSIRO Ginninderra Experiment Station, 1125 Barton Highway tonight from approximately 18:30 until midnight. The property is bounded by the Barton Hwy, Owen Dixon Drive, Kuringa Drive and Wallaroo Road.

I am employed and reside on the property and can be contacted on [REDACTED] s47F
The accredited shooter [REDACTED] s47F

Thanks, Bruce Isaac

From: Isaac, Bruce (A&F, Ginninderra)
Sent: Monday, 20 June 2016 1:45 PM
To: 'actcommunication@afp.gov.au'
Subject: CSIRO Ginninderra kangaroo culling

Kangaroo culling will continue tonight from 18:30 onwards, weather permitting, at CSIRO Ginninderra Experiment Station, 1125 Barton Hwy.

My phone contact is [REDACTED] s47F

Accredited shooter is [REDACTED] s47F

Culling to occur in the area bounded by Barton Hwy, Owen Dixon Dve, Kuringa Dve and Wallaroo Rd.

Regards, Bruce Isaac

From: Isaac, Bruce (A&F, Ginninderra)
Sent: Wednesday, 22 June 2016 4:37 PM
To: 'actcommunication@afp.gov.au'
Subject: CSIRO Kangaroo culling

Kangaroo culling will take place at CSIRO Ginninderra Experiment Station, 1125 Barton Hwy tonight from 18:30 until midnight, weather permitting.

Area bounded by Barton Hwy, Owen Dixon Dve, Kuringa Dve and Wallaroo Rd.

Accredited shooter is [REDACTED] s47F

Thanks, Bruce Isaac
[REDACTED] s47F

From: Isaac, Bruce (A&F, Ginninderra)
Sent: Friday, 24 June 2016 4:05 PM
To: 'actcommunication@afp.gov.au'
Subject: CSIRO Kangaroo Culling

Kangaroo culling will take place at CSIRO Ginninderra Experiment Station, 1125 Barton Hwy tonight 24/6/16 from approximately 18:30 until midnight.

Area is bounded by Barton Hwy, Owen Dixon Dve, Kuringa Dve and Wallaroo Road.

Accredited shooter is

s47F

Thanks, Bruce Isaac

s47F

From: Isaac, Bruce (A&F, Ginninderra)
Sent: Saturday, 25 June 2016 5:07 PM
To: 'actcommunication@afp.gov.au'
Subject: CSIRO Kangaroo culling

Kangaroo culling to take place at CSIRO Ginninderra Experiment Station, 1125 Barton Hwy from approximately 18:30hrs. Area is bounded by Barton Hwy, Owen Dixon Drive, Kuringa Drive and Wallaroo Road.

Accredited shooter

s47F

s47F

Site contact: Bruce Isaac

From: Isaac, Bruce (A&F, Ginninderra)
Sent: Monday, 27 June 2016 11:03 AM
To: Sheldon, Candice (A&F, Black Mountain)
Subject: Kangaroo culling

Hi Candice,
The kangaroo cull has been completed with all tags used.

Regards, Bruce

From: s47F
Sent: Monday, 27 June 2016 11:04 AM
To: Isaac, Bruce (A&F, Ginninderra)
Subject: Kangaroo Control CSIRO Agriculture

Hi Bruce,

Firstly thankyou to yourself and CSIRO's assistance during the fulfilment of the current contract.

s47F budgeted to carry this work out over 9 evenings. However, due to emails and documented noise complaints to CSIRO and with a discussion I had with the AFP on Monday evening 14-6-16. After your advice to carry out this task ASAP we endeavoured to carry out works a lot later throughout the evenings and managed to tag out after 5 nights, even though the weather throughout the week was against us. Our last night Saturday 25-6-16 we left site at 4.00am after completion of tags and pickup of targeted species. Please see below numbers removed from each area at CSIRO Agriculture for your records:-

| <u>Date</u> | <u>Area 1 Eastern End</u> | <u>Area 2</u> | <u>Area 3</u> | <u>Evening Totals</u> | |
|--|---------------------------|---------------|---------------|-----------------------|---------------------|
| Tuesday 14 th June 2016 Fox Area 3 | 33 | 4 | 8 | 45 | One |
| Thursday 16 th June 2016 1 and 1 Fox Area 3 | 14 | 5 | 2 | 21 | One Fox Area |
| Monday 20 th June 2016 | 10 | 4 | 11 | 25 | |
| Wednesday 22 nd June Area 1 | 3 | 2 | 13 | 18 | One Fox |
| Saturday 25 th June 2016 1, 2 Foxes Area 2, 2 Foxes Area 3 | 4 | 3 | 34 | 41 | One Fox Area |
| Totals | 64 | 18 | 68 | 150 | <u>Grand</u> |
| <u>Total 150 Eastern Grey Kangaroo</u> | | | | | |
| CSIRO's Estimate of Eastern Grey Kangaroo per Area. | 55 | 20 | 300+ | | |
| s47F Estimate of Eastern Grey Kangaroo per Area after works Completed | 8 | 7 | 200+ | | |

s22

I trust that this information is to your satisfaction and should you require any further or additional information please do not hesitate to contact me.

Yours,

From: CSIRO Enquiries
Sent: Thursday, 21 July 2016 9:14 AM
To: Nicoll, Roger (Comms, Black Mountain)
Subject: Enquiries seeking your assistance for [REDACTED]

Hi Roger,

Are you able to provide a response for the below email re:the kangaroo cull at Ginninderra?

If you reply directly to the enquirer, please cc csiroenquiries@csiro.au

Thank you,
Verena
Information Officer
CSIRO Enquiries
Phone: 1300 363 400

Original request:

Name: Name: [REDACTED]

Email: [REDACTED]

Phone:

Date:

Subject: CSIRO.au: Contact

Message: Please send me the following details of the kangaroo cull carried out on the Ginninderra Field Station on the night of Sunday 3rd July:

1. The number of kangaroos on the station before the cull.
 2. The number left on the station after the cull.
 3. The number of kangaroos authorised to be shot by the licence issued by the ACT Government.
 4. The reason for the cull.
 5. Details of any warnings or notices given out before the cull.
- <http://www.csiro.au/en/Contact/Frequent-enquiries>
ref:_00D20lloq._500w01GPQuH:ref

From: Isaac, Bruce (A&F, Ginninderra)
Sent: Monday, 25 July 2016 1:02 PM
To: 'josh.clancy' [REDACTED] s47F
Subject: Kangaroo cull
Attachments: Kangaroo Culling Return 2016.pdf

Hi Josh,
Hope this copy is satisfactory.
Regards, Bruce



ACT
Government

Territory and Municipal Services

23485-23634

KANGAROO CULLING RETURN

Note:

To be returned to the Parks & Conservation Service within 14 days of the end of each cull period.

Stromlo depot (500 Cotter Rd) To: Rural Programs Officer

Stromlo Depot

PO Box 158 Canberra City

ACT 2601

or email: josh.clancy s47F

Licence Holder

CSIRO (Bruce Isaac)

Licence Number

s47F

Property Name
and Size

GINNINDERRA
EXPERIMENT
STATION

Ha

701

Number Approved

150

| DATE OF CULLING ACTIVITY | SHOOTER(S) | NO. CULLED (Do not include pouch young) | TAG NUMBERS USED | BALANCE (Do not include pouch young) |
|--------------------------------|------------|---|---------------------|--|
| | | | | 150 |
| 14-6-2016 | s47F | 45 | 23185-23529 | 105 |
| 16-6-2016 | | 21 | 23530-23548 | 84 |
| 20-6-2016 | | 25 | 23549-23573 | 59 |
| 22-6-16 | | 18 | 23574-23591 | 41 |
| 25-6-16 | | 68.41 | 23592-23634 | 00. |
| | | | | |
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I certify that this is an accurate representation of culling operations conducted under the authority of the above described licence, and I have returned any unused tags I was issued under this licence.

Name:

Bruce Isaac

s47F

Signature:

Date:

27/6/16

From: Sheldon, Candice (A&F, Black Mountain)
Sent: Monday, 31 October 2016 1:58 PM
To: Isaac, Bruce (A&F, Ginninderra)
Subject: FW: Ginninderra QoN
Attachments: SQ16-000332 (SI-145 CSIRO) (002).docx

Hi Bruce

Could you please have a go at providing the requested information.

Thanks

Candice

From: Green, Kristy (B&IS, Black Mountain)
Sent: Monday, 31 October 2016 1:48 PM
To: Sheldon, Candice (A&F, Black Mountain)
Subject: Ginninderra QoN

s47F

Hi Candice

Another question has been asked, see attached. Can you please view C) regarding the kangaroos and advise of an appropriate response. I have written a draft response for your consideration.

If I could please get a response by Wednesday that would be much appreciated.

Thanks
Kristy

Kristy Green

Project Officer to Mark Wallis
CSIRO Business & Infrastructure Services

s47F

CSIRO Discovery Centre, North Science Road, Acton ACT 2601
Postal address: GPO BOX 1700, Canberra, ACT 2601
www.csiro.au

We **ENABLE** Australia's Innovation Catalyst through Business and Infrastructure Services

PLEASE NOTE

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Economics Legislation Committee
ANSWERS TO QUESTIONS ON NOTICE
Industry, Innovation and Science Portfolio
2016-17 Supplementary Budget Estimates
20 October 2016

AGENCY: COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION

TOPIC: Flora and fauna species at Ginninderra site

REFERENCE: Written Question – Senator Rhiannon

QUESTION No.: SI-145

1. With reference to the CSIRO's development of the Ginninderra agricultural and horticultural testing station into an urban area, I was informed in the recent Senate Estimates hearings that ecological assessments are being done, with a full EIS yet to be written:
 - a. What are the threatened flora or fauna species known to exist at the site?
 - b. What is the most up to date species list CSIRO has of the site?
 - c. Are there kangaroos at the site? If there are any:
 - i. How many?
 - ii. Is it intended to shoot those kangaroos so that the urban development can occur at the site, or is the CSIRO committed to finding non-lethal solutions to removing wildlife so that development can occur at the site?
 - iii. How many kangaroos have been shot at the site previously, and when?

ANSWER

- 1) The Ecological Values report undertaken by Umwelt is now available on the Ginninderra website www.ginninderraproject.com.au
 - a) No threatened flora was identified during the ecological survey. Of the species targeted for survey, threatened species including golden sun moth, striped legless lizard, little eagle, white-winged triller and scarlet robin were recorded. Additional species listed as threatened in neighbouring NSW were also recorded, as was the migratory Latham's snipe.
 - b) The Ecological Report includes the most up to date information on the species located at the CSIRO Ginninderra Site. In summary;
 - i) At least 32.86 hectares of confirmed golden sun moth habitat, a Critically Endangered species under the EPBC Act, and Endangered under the NC Act
 - ii) 95 species of birds, including three Vulnerable birds under the NC Act (little eagle – breeding, scarlet robin and white-winged triller), one migratory bird under the EPBC Act (Latham's snipe)
 - iii) 12 species of reptiles, including striped legless lizard (Vulnerable under the EPBC Act and NC Act)
 - iv) 3 species of frogs (non-targeted list likely to be more)
 - v) 243 plant taxa across 62 plant families, including 128 native taxa, 117 exotic taxa and 16 planted-native taxa.
 - c) Yes there are eastern grey kangaroos on the site.

- i) There are often approximately XX kangaroos on the site.
- ii) The intention is to maintain current management processes for kangaroo management of the site throughout development.
- iii) Kangaroos have been managed in accordance with ACT regulations. Culling usually occurs during X.

From: Isaac, Bruce (A&F, Ginninderra)
Sent: Tuesday, 1 November 2016 7:05 AM
To: Sheldon, Candice (A&F, Black Mountain)
Subject: RE: Ginninderra QoN

Hi Candice,

Kangaroo culling takes place from March to July inclusive in accordance with ACT Government licence conditions. Licences are only valid during this period. At GES, we usually conduct the cull during June and July when the days are shorter and it is colder. This is so there is a reduced likelihood of local residents being outdoors and being disturbed by this activity.

This year 150 kangaroos were culled between June 14 and 25. No culling was done in 2015. I will check with Phil on numbers culled in previous years.

I estimate the current population at about 300. Most of them are located in the area west of Hall's Creek where our boundaries are just normal height farm fencing. If you think a more accurate assessment of numbers is required, I could go for a ride later and try to get a count of them. Since this years' cull, there are 13 on the eastern side and about 18 in the block between the bridge and Hall's Creek.

We are doing the annual shearing this week, so if you need to get in touch it would be best to ring or text me.

Regards, Bruce

From: Sheldon, Candice (A&F, Black Mountain)

Sent: Monday, 31 October 2016 1:58 PM

To: Isaac, Bruce (A&F, Ginninderra) [REDACTED] s47F

Subject: FW: Ginninderra QoN

Hi Bruce

Could you please have a go at providing the requested information.

Thanks

Candice

From: Isaac, Bruce (A&F, Ginninderra)
Sent: Tuesday, 8 November 2016 6:49 PM
To: Sheldon, Candice (A&F, Black Mountain); Green, Kristy (B&IS, Black Mountain)
Subject: RE: Ginninderra QoN

Hi Kristy and Candice,

The number of tags issued is the limit of the number of kangaroos that can be culled in that year. To date, the number issued has been the same as the number applied for, i.e. we have never asked for more tags than the ACT Parks & Conservation Service have been prepared to issue.

In 2016, 150 tags were issued and 150 kangaroos were culled between June 14 & 25.

Regards, Bruce

From: Sheldon, Candice (A&F, Black Mountain)
Sent: Tuesday, 8 November 2016 6:30 PM
To: Green, Kristy (B&IS, Black Mountain) [REDACTED] s47F
Cc: Sheldon, Candice (A&F, Black Mountain) [REDACTED] s47F Isaac, Bruce (A&F, Ginninderra) [REDACTED] s47F
Subject: RE: Ginninderra QoN

Hi Kristy

Bruce would have the details (I had thought they were included in the info we sent you previously).

Regards

Candice

From: Green, Kristy (B&IS, Black Mountain)
Sent: Tuesday, 8 November 2016 1:45 PM
To: Sheldon, Candice (A&F, Black Mountain) [REDACTED] s47F
Subject: RE: Ginninderra QoN

Hi Candice

One more question. The Kangaroo culls section do we have 2016 details? Also I am assuming tags means amount we are allowed to cull that year?

Thanks

Kristy

From: Sheldon, Candice (A&F, Black Mountain)
Sent: Tuesday, 1 November 2016 4:33 PM
To: Green, Kristy (B&IS, Black Mountain) [REDACTED] s47F
Cc: Sheldon, Candice (A&F, Black Mountain) [REDACTED] s47F
Subject: RE: Ginninderra QoN

Hi Kristy

I think all the info you need is in the two attached emails. As you will recall Roger Nicolls has some comms text around the roo cull. One point of interest is that kangaroos (in modern times) are a relatively recent addition to GES (1999 onwards).

Let me know if you have further questions or we have not responded adequately.

Cheers

Candice



Issue brief – Authorised kangaroo cull on CSIRO's Ginninderra Experiment Station (GES)

| | |
|-------------------------------|---|
| Background | <p>There is currently a resident population of over 500 kangaroos at GES, and around 60 of these are within an enclosed area that contains research crop trials. This is an area surrounded by security fence and is still being used for intensive agricultural research. As the kangaroos are captive inside a very small area, annual culling is undertaken to prevent the population from damaging experiments and expanding to a point where they would starve to death.</p> <p>CSIRO also has a responsibility to maintain an important threatened remnant mixed native grassland on adjoining land (blocks 1609 and 1610).</p> <p>This native grassland is not used for research, but managed for preservation. Some grazing by sheep at strategic times is undertaken to maintain the natural diversity of the pasture.</p> <p>The grassland area has no security fencing and is easily accessible by kangaroos.</p> <p>Increasing urbanisation to the north and west of this grassland has placed pressure on the kangaroo population and they migrate in large numbers to any area where there is a source of food.</p> <p>CSIRO has been amenable to maintaining a permanent population of kangaroos in this area, but unfortunately, the current number is not sustainable.</p> |
| CSIRO position | <ul style="list-style-type: none"> - CSIRO is undertaking this kangaroo cull between June 10, 2016 and July 31, 2016 to take place over 6-12 nights depending on weather and effectiveness, to protect valuable research crops and endangered remnant native grasslands. After reviewing all possible options to reduce the number of kangaroos on the GES, culling was seen as the most humane and effective approach. - CSIRO is amenable to having kangaroos on the property provided that they are at levels which do not adversely impact on the environment or valuable research trials. |
| Supporting information | <ul style="list-style-type: none"> - The kangaroos at GES are Eastern Greys - GES is divided into several leases, some of which are surrounded by a high security fence. - Kangaroo numbers can rapidly increase in enclosed areas, threaten trials and cause land degradation. - In organising the cull, CSIRO has liaised with the ACT Government, which has a management protocol on how to manage the kangaroos. |

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| | <ul style="list-style-type: none"> - CSIRO investigated other management options including darting and relocation, but kangaroos are territorial so this approach would be very stressful for the kangaroos and logistically impractical. It is considered more humane to cull. - CSIRO began to seek permission to cull kangaroos on GES in 2002. <p>Culling process</p> <ul style="list-style-type: none"> - Approval from the ACT Government (Parks Conservation and Lands), and the Australian Federal Police (AFP) is required before culling can occur. CSIRO has this approval. - As a rule, kangaroos are not culled during spring-summer because of the higher chance of joeys being in-pouch. - Permission has been granted to cull a total of 150 kangaroos up to the end of July 2016. - CSIRO also has in place strict guidelines for how the culling will be conducted. For example, shooting will only occur in certain areas of the GES away from fence lines, the animals will be approached quietly, all CSIRO Staff will be removed from the site, and all gates will be padlocked to ensure access to the property via entry roads is prevented. - Under the ACT Government's Management Protocol, a kangaroo shooter must be trained, certified and registered with the ACT Government and the AFP - The culling will take place during both day and night and will be determined by the availability of the accredited shooter. Spotlights will be used at night. - An accredited shooter is required to kill instantly with a shot to the head or the chest. - All shooting must cease if an animal is not killed instantly and the shooter must attend to this immediately. - If a kangaroo has a joey in pouch, the joey must also be culled immediately. <p>About the surrounding area</p> <ul style="list-style-type: none"> - CSIRO's GES is 701 ha. - The estimated number of kangaroos on the GES is ~60 in the enclosed block (1545) and well over 500 in the larger block (1610 & 1609), dependant on seasonal conditions. - The area where the kangaroos are to be culled is surrounded by the suburbs of Giralang, Evatt, Spence and Nicholls. |
| <p>Key talking points</p> | <ul style="list-style-type: none"> - The number of kangaroos grazing on CSIRO's Ginninderra Experimental Station has reached levels where both valuable crop experiments and endangered native grasslands are being put at risk. |

| | |
|-----------------|--|
| | <ul style="list-style-type: none"> - Many of the crops that are planted on the property have taken many years to finally reach a field trial and are quite valuable because the number of planted seeds are limited and are very hard to replace. - Having the kangaroos enter our field trials is like having them jumping into your own backyard and letting them have free reign to eat your vege patch. The only difference is that our research crops are bigger and a lot more valuable. - CSIRO investigated other management options including darting and relocation, but kangaroos are territorial so this approach would be very stressful for the kangaroos and logistically impractical. It is considered more humane to cull. - An increasing kangaroo population is putting threatened native grasslands at risk and as the property manager CSIRO has an obligation to protect this valuable national asset. <p>We have a licence to cull 150 kangaroos, which is a relatively small number considering the large kangaroo population in the ACT. It's unlikely that 150 kangaroos will be culled before the end of July, when the cull license expires.</p> |
| Q&As | <p>1. How many kangaroos will you be culling?</p> <p>CSIRO holds a licence to cull 150 kangaroos at its Ginninderra Experimental Station. That does not necessarily mean 150 kangaroos will be culled and the actual number culled will most likely be less than that.</p> <p>2. When are you going to cull and how long will you be culling?</p> <p>We are currently in the process of culling and the license will expire at the end of July.</p> <p>3. Is this the first time CSIRO has culled kangaroos at its Ginninderra farm?</p> <p>We have conducted other culls in the past, but only after advice indicated that kangaroo numbers were placing pressure on research trials and threatened native grasslands, and when drought reduced the amount of food available and the kangaroos were suffering.</p> <p>The decision to cull is not taken lightly and we ensure culls are undertaken humanely.</p> <p>4. How do you ensure culls are undertaken humanely?</p> <p>A professional accredited shooter who is licensed by the ACT government and AFP is required to kill instantly with a shot to the head or the chest.</p> <p>All shooting must cease if an animal is not killed instantly and the shooter must attend to this immediately. If a kangaroo has a joey in pouch, the joey must also be culled immediately.</p> <p>5. How many kangaroos have been culled and why?</p> <p>Less than a hundred kangaroos have been culled in the last couple of years.</p> |

Culls have been conducted when evidence shows kangaroo numbers have increased to a point where they're starting to impact on endangered native grasses and research trials, and when drought reduced the amount of food available and the kangaroos were suffering.

6. Have you ever consulted with the local community about the cull, particularly those living close the farm?

CSIRO has consulted with the ACT Government and in this case it was determined there was no need for community consultation.

The cull is being conducted in the safest possible way and does not impact on the day-to-day lives of nearby residents.

7. But don't you think the local community has a right to know and have a say in the decision-making about the fate of the kangaroos?

I understand why some people would like to have a say, and I would like to reassure them that CSIRO does not take the decision to cull lightly.

These kangaroos are in great numbers and are posing a serious threat to endangered native grasslands and valuable research trials – research trials that have, in some cases, taken 15 years of hard, intensive research to reach the planting stage.

We consulted with the ACT government, and CSIRO only contemplates a cull after there is evidence that shows kangaroo numbers are affecting endangered native grasses and research trials.

8. How many kangaroos are currently on your land?

It is estimated there are well over 500 kangaroos on our land at the moment.

9. Why do you lock the gates during the cull?

Before beginning the cull we need to ensure that all CSIRO staff are informed and accounted for and that members of the public who may not know about the cull taking place cannot enter the property.

10. Why don't you prevent the kangaroos entering the area in the first place?

The part of the property used for field trials is surrounded by security fence but it is possible that kangaroos can jump this fence. Members of the public have also fashioned holes in the fences to gain access to the property, through which kangaroos can enter.

We try to mend these holes as quickly as possible, but it is not always possible to fix them before kangaroos have gained access.

12. When only 20 kangaroos initially entered, why didn't you relocate those while the population was still manageable?

It is very difficult to move frightened kangaroos. It was attempted but was not successful. The property is relatively large and culling small numbers in large areas is also difficult.

13. Has CSIRO conducted any research into alternatives to culling kangaroos?

Yes, CSIRO is working on fertility control of large herbivores. This research applies to kangaroos and also to pest species such as camels, horses and donkeys.

The research has developed a vaccine that makes the animals sterile.

This research is ongoing and it will be several years before it could be potentially used at the GES site.

[for more detail about this research see Dr Lyn Hines, CSIRO Ecosystem Sciences, Black Mountain s47F]

14. 100 kangaroos isn't a significant number, can't you just move them?

I understand that many people may be upset about the cull, and I'd like to reassure them CSIRO does not take the decision to cull lightly.

Moving the kangaroos raises a whole set of other issues. Kangaroos are territorial, stress on the animals may kill them, and we would just be moving the problem and creating a bigger problem elsewhere.

To move kangaroos, they need to be darted and transported. Then they need to recover from the anaesthetic and be released. There is no guarantee that the kangaroos will survive in the unfamiliar territory. Female kangaroos never leave the area where they were born and a move would be hugely stressful for them.

The move will also involve a huge amount of resources which could be better used towards researching and using other population control method such as the sterility vaccine.

15. Can't you just let the kangaroos eat the experimental crops and start again, or plant enough for the kangaroos to eat as well as get your experimental results?

Letting the kangaroos eat the research crops would not only halt important research trials but attract more and more kangaroos to the area, worsening the problem.

Furthermore, experiments are typically planted in specific patterns and the results of different areas of the experimental field often need to be compared. Having one section eaten and one not, would mean the whole experiment would no longer be valid.

16. How threatened are the native grasses on the CSIRO property?

The Federal and ACT governments have declared the grasslands on the GES property as threatened and as the property manager CSIRO has an obligation to work with the government to put in place practices that preserve these grasslands.

The kangaroo cull is just one part of this conservation effort.

More information can be found online here:

| | |
|--|---|
| | <p>http://www.environment.gov.au/biodiversity/threatened/publications/recovery/temperate-grasslands/pubs/temperate-grasslands.pdf</p> <p>http://www.ginninderralandcare.org.au/content.php?id=31</p> <p>17. Why don't you fence off the native grassland?</p> <p>A fence does exist, however it does not prevent kangaroos jumping into the grassland area. The grassland area is over 20 ha and to fence that off with kangaroo-proof fencing would not be financially viable or necessarily effective.</p> <p>18. What happens to the kangaroos after they are culled?</p> <p>Since the ACT is not zoned as a kangaroo harvesting area, no part of the culled kangaroos can be used. They are buried in deep pits.</p> |
| Social media responses in case of enquiry | <p>Tweet: Unfortunately, it is necessary to cull kangaroos on our GES property to protect endangered native grasses and valuable field trials. (128 characters)</p> <p>Tweet: The decision to cull kangaroos on our GES property has been taken in consultation with the ACT government. (107 characters)</p> <p>Tweet: The culling will be conducted by a professional shooter accredited by ACT government and the AFP. (97 characters)</p> |
| CSIRO contact | <p>Spokesperson: John Manners</p> <p>Communications: Roger Nicoll,</p> <p>GES Property Manager: Bruce Isaac or Byron Corcoran, CSIRO Agriculture, ph. s47F</p> |



ACT
Government

Territory and Municipal Services

Dear ACT Rural Landholder

Re. Applications to cull kangaroos for damage mitigation purposes

Please find enclosed a Landholder licence application form to apply to undertake both mixed sex and male only kangaroo culling (under the *Nature Conservation Act 2014*) in 2016. If you plan to undertake kangaroo culling in 2016, you will need to:

1. Complete all fields required on the Landholder licence application form.
2. Identify the numbers of kangaroos required to be culled to suit your property needs, for both the mixed sex period and the male only period.
3. Arrange for your application to be received by COB 31 January 2016:

Postal Address
Attn: Josh Clancy
Stromlo PCS Depot
GPO Box 158
Canberra ACT 2601

Delivery Address
Stromlo PCS Depot
500 Cotter Rd
Weston ACT
(8.30am – 4.30pm, Mon-Fri)

Other contact details
Fax (02) 6207 2544
Ph (02) 6205 0855

A reminder, the licensing process is necessary because kangaroos are a native animal protected under the *Nature Conservation Act 2014*. As a result, an application is required for a 'Licence to Kill a Native Animal'. The mixed sex culling season in ACT allows for kangaroos of both sexes to be culled for five (5) months each year, from 1st March to 31st July. Landholders are encouraged to collect licences as soon as they are available and commence culling earlier in the season before the weather deteriorates. This way you will have a greater chance of completing your culling requirements.

You may notice some changes to the application form this year. The main change is that, from 2016, landholders and shooters will be licensed separately. For more information refer to the Frequently Asked Questions (FAQ) sheet at [Attachment A](#).

The licensing process involves several stages and four separate government agencies/entities. As a result, it takes one month to progress licence applications and produce licences. Additionally this requires relevant staff in each agency to be available and have capacity. For this reason there is no guarantee late applications will be accepted or amendments made. PCS encourages you to submit your licence applications on time.

Please refer to the kangaroo cull calendar and checklist at [Attachment B](#). This is provided for your reference to assist when preparing your application and as a reminder of deadlines related to the licensing process.

You are invited to attend an **information session** on the kangaroo cull licensing process. This will provide an opportunity to have any questions answered.

Where: Stromlo PCS Depot, 500 Cotter Road, Weston ACT

When: Tuesday 22 December 2015, 5.00pm to 6.00pm

Please note:

1. Cull licences (mixed sex or male only) will **only** be issued to landholders who have lodged returns the previous year.
2. Licences, tags and cull return forms will be ready to collect from the Stromlo Depot on **Monday 29 February 2016**.
3. Licence applications must be complete and accurate. Incomplete applications may result in delays or applications not being processed.
4. Although both applications are submitted together, the **male only** licence will not be available for approximately three weeks after the **mixed sex** culling season has closed and the **mixed sex** cull return has been received at Stromlo PCS Depot.
5. The male only cull is designed to protect spring pasture growth from excessive grazing by kangaroos. The season allows the shooting of male kangaroos only, regularly throughout the three month period; the idea is to scare the animal from crops or pasture, not to reduce the overall kangaroo population.
6. A list of standard mandatory conditions will be applied to all licences. See Attachment C. Licence applicants must read these and acknowledge that they have read and understood the conditions when signing the enclosed application form. In some circumstances additional conditions may be stipulated.
7. As in previous years, PCS will aim to conduct selected field audits of culling operations on 10% of issued licences.
8. Where a landholder owns more than one property a licence application is required for each property and separate licences will be issued. This requirement relates to the formulas supporting the policy to cull kangaroos on rural lands. For the kangaroo culling to remain viable in the ACT it needs to be able to withstand scrutiny.
9. If you are not the landholder (legal lessee or holder of a grazing licence) for the relevant property you will require a letter of authorisation from the landholder to act on their behalf.

If you have any questions relating to kangaroo management on ACT rural lands or the licensing process, or if you require contact details of accredited shooters, please contact Josh Clancy, Rural Programs Officer: Ph. 6205 0855 or Rebecca Dawson, Wildlife Program Coordinator: Ph. 6205 2695.

Yours sincerely,

s47F

Bruce Lambie
Manager

Rural Services and Natural Resource Protection Unit
ACT Parks and Conservation Service
14 December 2015

Frequently Asked Questions

December 2016 5

1. Why do I need a licence to shoot kangaroos?

All native animals including eastern grey kangaroos are protected under the *Nature Conservation Act 2014* (NCA), although a licence may be granted by the Conservator of Flora and Fauna to kill a native species. Landholders with a need to reduce kangaroo numbers on their property may apply for a licence to cull a specified number to reduce impacts and to ensure ongoing sustainable land management on their property.

Individuals found to be engaged in the unlicensed shooting of kangaroos may be fined or face imprisonment, or both, under the NCA. Such actions could compromise future culling programs for all ACT rural landholders. Additionally, Licence holders (Licensees) need to adhere to conditions of the licence. Failure to comply with the conditions of a licence is a strict liability offence under the NCA; this offence carries a maximum penalty of 20 penalty units¹.

2. Why have changes been made to the licensing process?

During 2015, stakeholders involved in the licensing process, including landholders, identified issues and experienced problems, related to licensing. Additionally, the 2015 kangaroo cull licensing process experienced a large number of licences requiring amendment. As a result, PCS reviewed the licensing process and made amendments in an attempt to improve the licensing process for all relevant parties. Most changes are minor e.g. changes to the application form or the licence conditions. PCS emphasize that the changes have been made to improve the licensing process or to assist landholders and shooters understand their obligations related to kangaroo culling. Importantly, the essential legal obligations and requirements for landholders and shooters have not changed.

¹ At the time of writing the value of a penalty unit for an offence is \$150 for an individual and \$750 for a corporation.

3. Who can shoot kangaroos on my property?

Anyone wishing to undertake shooting of kangaroos in the ACT must hold a current Kangaroo Culling Permit. This is obtained through the successful completion of the ACT Shooter Proficiency Test (conducted every two years). The test ensures that individuals culling kangaroos have the marksmanship ability, species identification skills and awareness of animal welfare requirements to comply with the *National Code of Practice for the Humane Shooting of Kangaroos and Wallabies for Non-Commercial Purposes* and licence conditions. From 2016, holders of a Kangaroo Culling Permit will also require a Licence to Kill A Native Animal under the NCA.

4. Why are landholders and shooters being licensed separately?

The new method of licensing will provide greater flexibility for landholders engaging shooters and negate the need to amend licences if there are any changes to shooters availability. Historically, most ACT Landholders conducted their own kangaroo culling. Now many Landholders have shooters undertaking kangaroo culling on their behalf. There is a legal requirement (under Section 264 of the NCA) that shooters are identified as someone, other than the applicant, having control of the activity the licence is issued for; in this case a 'licence to kill a native animal'. Previously, individual shooters were named on the landholder's licence to cover this legislative requirement.

Anyone, who will be shooting kangaroos, in the ACT, will require a Licence authorising them to do so.

- **The Landholder** will apply for the Landholder 'Licence to Kill a Native Animal', under the NCA, to shoot a *specified number* of kangaroos *on an identified property*.
- **Accredited Shooters** will apply for a separate shooter 'Licence to Kill a Native Animal', under the NCA. For the shooter's licence to be valid, the shooter must have the authorisation of a licensed Landholder and be able to demonstrate this by holding a copy of the Landholder's licence during culling activity on the relevant property.

Note: If the Landholder is also an accredited shooter and only intends to cull on their property then they will not require an additional licence. However, if the Landholder is an accredited shooter and intends to undertake kangaroo culling on other properties, then they will require a separate licence to do so.

The new system is also designed to improve the individual shooter's understanding of their obligations under the NCA and other legislation. Essentially, nothing has changed in this respect; the licence conditions have remained largely unchanged for over twenty years. Landholders and shooters will now have to sign an acknowledgement stating that they have read and understood the conditions associated with the licence.

5. How many kangaroos can I shoot?

The decision to cull kangaroos on any lease is a commercial decision and the landholder needs to determine the level of control that is necessary to offset the impacts of kangaroos to ensure the continued productive viability of their lease.

On the cull application form, the landholder indicates the number of kangaroos they want to cull on their property and this number is compared to the maximum permitted. This number is determined by government ecologists with expertise in kangaroo management. In general the maximum number of kangaroos that can be culled on any one property is determined using a scientific formula that takes into allowance the size of the property and immigration. The immigration allowance varies between properties according to the type of adjoining land use and the potential for kangaroos to move onto your property.

The formula also allows the lessee to progressively increase the number culled each year until a level of control is reached that provides adequate protection from the impacts of excessive kangaroo numbers. If the number applied for exceeds the maximum, PCS will reduce the number applied for to the maximum amount.

6. What if I am unable to shoot all the kangaroos I apply for; will the number I can apply for the next year be reduced?

If unforeseen circumstances result in you being unable to fulfil your culling requirements this will not impact on the number you can apply for the following year.

7. What are my responsibilities as a Landholder?

As a Landholder your responsibilities are as follows:

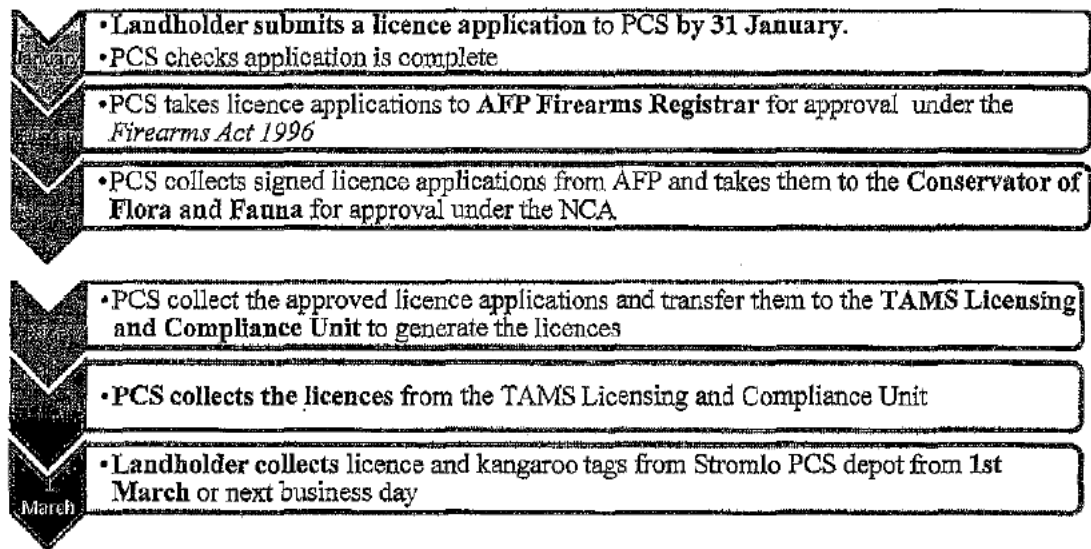
- i. **Consider your requirements** and apply to remove as many kangaroos as may be required to reduce economic impacts on your property. Include an application for male only culling at the same time, if required to protect spring pastures.
- ii. **Submit your application on time.** Applications are due in January 2016 which provides sufficient time for PCS to process and have licences ready for collection on 1 March or the next business day. There will no longer be an option for a second application through the culling season.
- iii. **Organise shooters and schedule culling to commence earlier in the season.**
Landholders are encouraged to book shooters and commence culling activities earlier in the season and not leave culling until late in the season (June, July) to begin. Other Landholders will want to cull kangaroos and book shooters as well. Avoid being limited to the end of the season when the nights are colder and paddocks may be wet.
- iv. **Provide licensed individuals with authorisation to cull kangaroos** on your property and **keep records** accordingly. You must provide any authorised shooters with a copy of your licence to carry while undertaking culling on your property.
- v. **Familiarise individual shooter/s with your property and its boundaries**, in addition to providing a map. From 2016, PCS will provide standard maps to accompany licence applications and licences.
- vi. **Be familiar with, and adhere to, all licence conditions.**
- vii. **Submit returns on time.**

8. What does the licensing process involve?

The kangaroo cull licensing process is administered by the ACT Parks and Conservation Service (PCS), and involves three other parties:

- i. the Australian Federal Police (AFP) Firearms Registrar
- ii. the Office of the Conservator of Flora and Fauna and
- iii. TAMS Licensing and Compliance Unit.

The process involved in licensing is as follows:



Processing licence applications and the production of licences is an administrative and time consuming process for multiple agencies and takes four weeks. Late applications are discouraged and amendments are not guaranteed.

9. Why do the applications go to the AFP for approval?

A significant number of rural leases in the ACT share a boundary with, or are in close proximity to, public land. In accordance with Section 221 (1) of the *Firearms Act 1996*, the AFP Registrar of firearms must give written approval to discharge firearms on any land that is near a public place, so they need a clear understanding of the property boundaries. The AFP Firearms registrar may also impose any restrictions, in relation to public safety involving the discharge of firearms on any ACT lands. Any restrictions imposed will be listed as conditions on your licence and on the KCP, if applicable.

10. Why can't I shoot kangaroos all year round?

The risk of orphaning dependent pouch young and young at foot arising from the shooting of kangaroos is an animal welfare issue often raised in opposition to kangaroo culling. Avoiding shooting female kangaroos during programs intended to reduce populations is difficult. Eastern grey kangaroo young are known to emerge permanently from the pouch by 10.6 months of age. The mixed sex culling period is based on research which demonstrates the

majority of ACT Kangaroos emerge from the pouch permanently between October and February, thus culling between March and July greatly minimises the likelihood of orphaning young of this age.

11. Why do I need to tag carcasses?

The tagging of carcasses allows for those kangaroos that have been shot legally to be clearly identified during inspection activities. There are significant penalties under the *Nature Conservation Act 2014* for the unlicensed killing of kangaroos.

12. Do I need to bury the carcasses?

In general it is up to the Licensee to determine how they dispose of the carcasses. Depending on the location of the lease, some landholders may choose to bury the carcasses, while other landholders may choose to leave them lay and decompose where they were shot. If carcasses are left to decompose, they must not be left in public view, near waterways or heaped in piles. In some circumstances the ACT Government may deem that it is necessary that all carcasses are to be placed in a burial pit.

If you choose to construct a new pit to dispose of carcasses, please identify suitable sites away from waterways or other areas of environmental significance. Please contact the Environment Protection Authority (ph 132281) prior to construction and notify them of your intention to construct a burial pit. EPA staff will advise of any issues regarding your selected site.

13. Why is there a male only culling period in spring?

Although landholders should aim to reduce the kangaroo numbers on their property during the mixed sex (March to July) period, it is recognised that there is a need to protect rested paddocks and spring pasture growth from excessive kangaroo grazing. If an effective job is done in your district during the main culling period, ideally the later male only season will be only a minor addition to your overall kangaroo management program. The regular shooting of a few (male) kangaroos is a strategy aimed at providing a scaring-off affect to keep kangaroos away from rested paddocks or spring pasture; it is not designed as an extension of the mixed-sex period cull to reduce the kangaroo population. The maximum number permitted for the male only cull period is determined as 30% of the total number culled during the mixed sex period.

14. When can I collect my male only cull period licence and tags?

Male only cull period licences and tags will only be issued:

- If the landholder has undertaken culling during the mixed sex period
- If the landholder has submitted their return on the mixed sex cull.

Note: the number permitted to be culled during the male only period is calculated from your mixed sex cull return, there will be a delay of approximately three weeks to enable processing of returns and the creation of licences. This delay can be minimised by ensuring you submit your mixed sex return, on time, at the end of the first culling period. This is also a Licence requirement.

15. What happens if I am audited?

To ensure that licence conditions are being met and complied with, PCS conducts field audits of the rural culling program. This is an important process which helps to defend the integrity of the culling program. It is a licence condition that the licence holder agrees to a culling audit by PCS, if requested. PCS aim to conduct field audits of ten percent (10%) of licence holders and shooters, selected on a rotational basis. PCS will be in contact with the licensee to arrange a time for an authorised Conservation Officer to accompany their shooter/s during culling operations. The Conservation Officer will spend as much time as necessary with the shooter to monitor compliance with licence conditions.

16. Why do I need to submit a cull return?

Cull returns allow PCS to monitor the rural culling program and assess the effectiveness of the formulas used to determine permissible cull numbers. Modifications to the formula have been made in recent years through analysis of cull return data, to ensure that the licensing process is meeting the needs of ACT Rural Land holders. There is no advantage to be gained by providing incorrect information.

17. Is there opposition to kangaroo culling?

You may be aware that kangaroo management across Australia is subject to ongoing opposition by certain animal liberation groups and there have been protests in the ACT targeting kangaroo culling on government lands. The ACT has been identified by activist groups for special attention because kangaroo culling in the national capital has a high profile

in overseas countries where activist groups are seeking to close export markets. Consequently any aspect of kangaroo management may be a target, despite there being no commercial kangaroo industry in the ACT.

The ACT rural culling program is subject to stringent controls that are in place to maintain the integrity of the program. You can assist further with this by ensuring that all cull licence conditions are strictly adhered to, maintaining a low profile when conducting culls, and by reporting any illegal shooting to PCS.

18. What can I do to maximise the benefits of culling kangaroos on my property?

- Cull annually to avoid infrequent large culls.
- Encourage your neighbours to undertake culling where possible.
- Manage kangaroo impacts in relation to other factors influencing total grazing pressure by controlling rabbits and undertaking best practice farm management by ensuring appropriate stocking rates, strategic grazing and resting paddocks.

KANGAROO CULLING CALENDAR and CHECKLIST

| January | February | March - July | August | September - October | November | December |
|---|---|--|---|---|---|--|
| Submit Licence Application | Licence applications are processed | Culling Season 1 March to 31 July | Provide cull Return | Male only culling season continues, if applicable | Provide male only cull Return | Receive application form and information package |
| Check: | Organise shooters and schedule culling | Collect licence & tags early March | within 14 business days (of 31 July) | Male only culling season finishes 31 October | within 14 business days (of 31 October) | |
| numbers have been considered | | licences available from 1 March or next business day | Male only culling season commences | | | |
| application includes both mixed sex & male only | | Culling season ends 31 July | Collect male only licence & tags, if applicable | | | |
| licence application is complete | | | | | | |
| No culling allowed | No culling allowed | | | | No culling allowed | No culling allowed |



Licence Number: LK2016838

Commencement Date: 04/03/2016

Expiry Date: 31/07/2016

Licence issued under Section 273 of the Nature Conservation Act 2014

This approved licence is issued to:

Bruce Isaac and J. Manners

11125 Barton Highway

via Mitchell ACT 2911

For the purpose of:

AUTHORISING THE LICENCE HOLDER TO KILL A NATIVE ANIMAL (EASTERN GREY KANGAROO: MACROPUS GIGANTEUS) IN THE ACT DURING CULL PERIODS AS ADVISED BY THE CONSERVATOR OF FLORA AND FAUNA.

At the following location/s:

Property:
Ginninderra Experiment Station
District:
Belconnen
Block:
1545

| Common Name | Scientific Name | Male | Female | Unknown | Total |
|-----------------------|--------------------|------|--------|---------|-------|
| Eastern Grey Kangaroo | Macropus giganteus | 0 | 0 | 150 | 150 |

This Licence is issued subject to the following conditions:

- 1 This licence is not transferable. Any person other than the Licensee intending to kill a native animal must hold a relevant Licence issued under the Nature Conservation Act 2014. This includes euthanasia of pouch young.
- 2 This licence is only valid for the period stated.
- 3 This licence is only valid for the property identified on the licence.
- 4 The Licensee must ensure that a copy of this licence is provided to Authorised Shooter/s undertaking culling activity on the property.
- 5 Without notice, a Conservation Officer authorised under the Nature Conservation Act 2014 may attend the property identified on this licence to observe any activity performed under this licence. The Licensee must comply with any request for an audit of culling activity to be undertaken by a Conservation Officer.
- 6 The Licensee or Authorised Shooter must be in possession of this licence or a copy of it while undertaking culling activity or transport of carcasses. This licence is to be provided for inspection on request by a Conservation Officer or Police Officer.

See next page for more conditions...

- 7 The Licensee or Authorised Shooter must notify the AFP on 13144⁴ or via email, in advance of each culling operation. *act communication @ afp*
- 8 Before commencing culling operations, the Licensee or Authorised Shooter/s must ensure that there is no evidence that may indicate that members of the public may be present in areas subject to culling. Culling is not to commence until the Licensee or Authorised Shooter/s are confident there are no members of the public in the culling area. *gov.au*
- 9 Culling of kangaroos and euthanasia of pouch young must be conducted in accordance with the National Code of Practice for the Humane Shooting of Kangaroos and Wallabies for Non-Commercial Purposes.
- 10 This licence authorises only the destruction of the number of animals specified on the licence. It is the Licensee's responsibility to ensure the total number of animals culled does not exceed the maximum.
- 11 The Licensee or Authorised Shooter/s must ensure that a numbered tag issued with this licence is attached to each carcass, or if the skin is removed for any purpose the tag must remain attached to the skin.
- 12 Only the Licensee or Authorised Shooter/s may be in possession of any part of kangaroos killed under this licence.
- 13 Meat and skins of any kangaroo killed under this licence are not to be sold or traded.
- 14 This licence permits the destruction of dependent pouch young in accordance with the National Code of Practice for the Humane Shooting of Kangaroos and Wallabies for Non-Commercial Purposes. Dependent pouch young do not count towards the licence quota.
- 15 Kangaroos killed under this licence must not be left:
i. Within public view
ii. In piles
iii. Lying within 50m of a watercourse
In this clause, 'public view' includes within 100m of a boundary with a public road, nature reserve, trail or car park.
- 16 The Licensee or Authorised Shooter/s must maintain a record of the following pursuant to this licence:
i. Dates of culling activity
ii. Number of eastern grey kangaroos killed
iii. Names of individual shooters for each date/period of culling activity
iv. Tag numbers used
- 17 It is the Licensee's responsibility to keep a record of the information listed in clause 16 and be able to provide this record, on request, to a Conservation Officer, anytime during the duration of this licence.

See next page for more conditions...

- 18 The Licensee will provide a record (Return) detailing the information in clause 16 and return unused tags to the ACT Parks and Conservation Service within 14 calendar days of the end of the licence period.

Note: It is the licensee's responsibility to ensure they are familiar with statutory and regulatory provisions related to the activity authorised under this licence. Contravention of a provision of the Nature Conservation Act 2014 may result in imposition of additional conditions, amending conditions, suspension of, or cancellation of, a licence.

Interpretation for the purposes of this licence:

- A) 'Licensee' means the person holding this licence.
- B) 'Landholder' means: The legal lessee or authorised manager of the property who holds a nature conservation licence for culling a specified number of kangaroos.
- C) 'Property' means: the place identified on this licence and its legal boundaries.
- D) 'Authorised Shooter' means: A holder of a relevant licence issued under the Nature Conservation Act 2014. In addition, the Authorised Shooter requires authorisation from a Landholder prior to shooting kangaroos on an identified property.
- E) 'Tag' means: a label with an assigned number designed to be fixed to a carcass as an identifier.
- F) 'Pouch young' means: any kangaroo young found within the pouch of a female kangaroo regardless of its developmental stage.

s47F

(Delegate of the Conservator)

Date:

4/3/16

LK2016838 - Page 3 of 3

29/1/2016

Business in Confidence



ACT
Government

Territory and Municipal Services

COPY

Landholder: Application for a Licence to kill a native animal

Nature Conservation Act 2014 (Section 273)

All details must be filled in correctly before this licence application is processed. The applicant must be the lessee of the property, or someone legally authorised to act on the lessee's behalf.

| | | |
|---|---|---|
| Name: <i>J. MANNERS</i> <i>BRUCE ISAAC</i> | | Property name (as identified on lease) or SDMS Licence ID no. (as appears on grazing licence): <i>GINNANDERRA EXPERIMENT STATION</i> |
| Phone: <i>s47F</i> | Address: <i>1125 BARTON HWY</i> <i>VIA MITCHELL. ACT. 2911</i> | |
| Email: <i>s47F</i> | District: <i>BELCONNEN</i> | |

I apply for a licence to take and kill the following numbers of eastern grey kangaroos (*Macropus giganteus*), on the above property, for the purposes of damage mitigation:

| | |
|--|---|
| Number of Mixed sex: <i>150</i> | Number of Male only*: |
| Culling activity not to be undertaken until licences and tags have been issued. Culling period: 1 March 2016 to 31 July 2016. | Culling activity not to be undertaken until licences and tags have been issued. Culling period: 1 August 2016 to 31 October 2016. *A male only licence will only be issued once a return for the mixed sex cull is received. Maximum permissible no. licensed = 30% of number culled during mixed sex cull. |

If the Applicant intends to undertake kangaroo culling on the property identified above, complete the details below. Any person/s, other than the Applicant, undertaking kangaroo culling requires a separate licence (issued to the authorised shooter) under the *Nature Conservation Act 2014*.

| Full Name | Firearms Licence No. | Expiry | Calibre/s to be used | Kangaroo Cull Permit No. | Expiry |
|-----------|----------------------|--------|----------------------|--------------------------|--------|
| | | | | | |

COPY

Acknowledgment

Bruce ISAAC

I, JOHN MANUFRAS, the Landholder, applicant for this licence to kill a native animal in the ACT, certify that the information provided in this Licence application is true and correct. By signing this application I also acknowledge that I have read and understood the above conditions and the conditions attached to this form. I will be required to comply with all licence conditions and any other relevant statutory obligations associated with the proposed activity including the use of firearms on the property.

Signature of Applicant:

| | |
|------|--------------|
| s47F | Date 19/1/16 |
| s47F | |

29/1/16

Important:

The success of this application cannot be predicted and should not be anticipated. Providing false or misleading information is an offence under the *Criminal Code* 2002 and may incur a penalty.

CSIRO GUNNINDEKRA

Please address all correspondence to:-
Bruce ISAAC
AS PER DETAILS ON FRONT OF FORM

Business in Confidence

COPY

Office use only

This application is not valid unless all signature blocks are completed.
Approval is subject to the endorsement of the: Parks & Conservation Service,
AFP Firearms Registrar and Conservator of Flora and Fauna, or Delegate.

Number approved for **mixed sex** cull:
(1/03/2016 to 31/07/2016)

Approved by: _____

Date: _____

Number approved for **male only** cull:
(1/08/2016 to 31/10/2016)

Approved by: _____

Date: _____

Conditions/comments:

Name of PCS Approving Officer: _____

Signature: _____ Date: _____

Approval subject to endorsement of AFP Firearms Registrar

Yes ☐

No ☐

Conditions/comments relating to *Firearms Act 1996*

Name of AFP Firearms Registrar: _____

Signature: _____ Date: _____

Name of Conservator of Flora and Fauna or Delegate: _____

Signature: _____ Date: _____

s47F



Personal Attendance Record

All times to be in 24 hour clock notation

CS/S24/5



Personal Attendance Record

All times to be in 24 hour clock notation

CS/S24/5

s47F

January

WEEK 2

February 2016

March 2016

April 2016

| | | | | | | | | | | | | | | |
|---|----|----|----|----|---|---|----|----|----|---|---|----|----|----|
| 1 | 8 | 15 | 22 | 29 | M | 7 | 14 | 21 | 28 | M | 4 | 11 | 18 | 25 |
| 2 | 9 | 16 | 23 | | T | 1 | 8 | 15 | 22 | T | 5 | 12 | 19 | 26 |
| 3 | 10 | 17 | 24 | | W | 2 | 9 | 16 | 23 | W | 6 | 13 | 20 | 27 |
| 4 | 11 | 18 | 25 | | T | 3 | 10 | 17 | 24 | T | 7 | 14 | 21 | 28 |
| 5 | 12 | 19 | 26 | | F | 4 | 11 | 18 | 25 | F | 1 | 8 | 15 | 22 |
| 6 | 13 | 20 | 27 | | S | 5 | 12 | 19 | 26 | S | 2 | 9 | 16 | 23 |
| 7 | 14 | 21 | 28 | | S | 6 | 13 | 20 | 27 | S | 3 | 10 | 17 | 24 |

013/353 Wednesday 13

8:00 am

— Sow millet (shirohie) VR10, VR15, VR14, VR13 west
 — No fertiliser, No sprays.

9:00

10:00

11:00

12:00

1:00

2:00

3:00

4:00

5:00 pm

014/352 Thursday 14

8:00 am

— Sow millet CR7 (Grazing canola plots), VR9, VR8, VR3
 No fertiliser, No sprays

9:00

10:00

11:00

12:00

1:00

2:00

3:00

4:00

5:00 pm

February 2016

March 2016

April 2016

January

WEEK 3

| | | | | | | | | | | | | | | |
|---|----|----|----|----|---|---|----|----|----|---|---|----|----|----|
| 1 | 8 | 15 | 22 | 29 | M | 7 | 14 | 21 | 28 | M | 4 | 11 | 18 | 25 |
| 2 | 9 | 16 | 23 | | T | 1 | 8 | 15 | 22 | T | 5 | 12 | 19 | 26 |
| 3 | 10 | 17 | 24 | | W | 2 | 9 | 16 | 23 | W | 6 | 13 | 20 | 27 |
| 4 | 11 | 18 | 25 | | T | 3 | 10 | 17 | 24 | T | 7 | 14 | 21 | 28 |
| 5 | 12 | 19 | 26 | | F | 4 | 11 | 18 | 25 | F | 1 | 8 | 15 | 22 |
| 6 | 13 | 20 | 27 | | S | 5 | 12 | 19 | 26 | S | 2 | 9 | 16 | 23 |
| 7 | 14 | 21 | 28 | | S | 6 | 13 | 20 | 27 | S | 3 | 10 | 17 | 24 |

022/344 Friday 22

8.00 am

sow millet VR6 - 40kg/Ha - granular 15
- No sprays.

9.00

10.00

11.00

Noon

1.00

2.00

3.00

4.00

5.00 pm

023/343 Saturday 23

024/342 Sunday 24

8.00 am

8.00 am

9.00

9.00

10.00

10.00

11.00

11.00

Noon

Noon

1.00

1.00

2.00

2.00

3.00

3.00

4.00

4.00

5.00 pm

5.00 pm

February

WEEK 6

December 2015

| | | | | |
|---|---|----|----|----|
| M | 7 | 14 | 21 | 28 |
| T | 1 | 8 | 15 | 22 |
| W | 2 | 9 | 16 | 23 |
| T | 3 | 10 | 17 | 24 |
| F | 4 | 11 | 18 | 25 |
| S | 5 | 12 | 19 | 26 |
| S | 6 | 13 | 20 | 27 |

January 2016

| | | | | |
|---|---|----|----|----|
| M | 4 | 11 | 18 | 25 |
| T | 5 | 12 | 19 | 26 |
| W | 6 | 13 | 20 | 27 |
| T | 7 | 14 | 21 | 28 |
| F | 1 | 8 | 15 | 22 |
| S | 2 | 9 | 16 | 23 |
| S | 3 | 10 | 17 | 24 |

February 2016

| | | | |
|---|---|----|----|
| M | 1 | 8 | 15 |
| T | 2 | 9 | 16 |
| W | 3 | 10 | 17 |
| T | 4 | 11 | 18 |
| F | 5 | 12 | 19 |
| S | 6 | 13 | 20 |
| S | 7 | 14 | 21 |

12 Friday 043/323

Lunar New Year

8.00 am

9.00

10.00

11.00

Noon

1.00

2.00

3.00

4.00

5.00 pm

13 Saturday 044/322

Lunar New Year (China)

8.00 am

9.00

10.00

11.00

Noon

1.00

2.00

3.00

4.00

5.00 pm

14 Sunday 045/321

8.00 am

9.00

10.00

11.00

Noon

1.00

2.00

3.00

4.00

5.00 pm

Sow stockade + Kilgys - Ngoh 970 (T1506076cm)
Plots - 4, 5, 18, 31, 32, 35
+ 100 kg/ha granular 15 (treated 200 mL impact)

| 016. | March 2016 | April 2016 | May 2016 |
|------|---------------|----------------|---------------|
| 22 | 7 14 21 28 M | 4 11 18 25 M | 30 2 9 16 23 |
| 23 | 8 15 22 29 T | 5 12 19 26 T | 31 3 10 17 24 |
| 24 | 9 16 23 30 W | 6 13 20 27 W | 4 11 18 25 |
| 25 | 10 17 24 31 T | 7 14 21 28 T | 5 12 19 26 |
| 26 | 1 18 25 F | 1 8 15 22 29 F | 6 13 20 27 |
| 27 | 2 19 26 S | 2 9 16 23 30 S | 7 14 21 28 |
| 28 | 3 20 27 S | 3 10 17 24 S | 8 15 22 29 |

February

WEEK 7

(China) Wilmington's Birthday (U.S.A.)

046/320 Monday 15

8:00 am *[Handwritten signatures and scribbles]*

10:00 Saw wheat stockade + Chem shed PDK - Manning. wheat plots 6, 15, 16, 17, 33, 34

1:00 Manning (Hart Brothers) - (N78 - 1611)

2:00 Saw Manning Wheat (1.5 ha)

3:00 Bare Pdn Cuscut.

047/319 Tuesday 16

8:00 am

9:00

10:00

11:00

Noon

1:00

2:00

3:00

4:00

6:00 pm

March

WEEK 12

| January 2016 | | | | | February 2016 | | | | |
|--------------|---|----|----|-------|---------------|---|----|----|-------|
| M | 4 | 11 | 18 | 25 | M | 1 | 8 | 15 | 22 29 |
| T | 5 | 12 | 19 | 26 | T | 2 | 9 | 16 | 23 |
| W | 6 | 13 | 20 | 27 | W | 3 | 10 | 17 | 24 |
| T | 7 | 14 | 21 | 28 | T | 4 | 11 | 18 | 25 |
| F | 1 | 8 | 15 | 22 29 | F | 5 | 12 | 19 | 26 |
| S | 2 | 9 | 16 | 23 30 | S | 6 | 13 | 20 | 27 |
| S | 3 | 10 | 17 | 24 31 | S | 7 | 14 | 21 | 28 |

| March 2016 | | | | |
|------------|---|----|----|----|
| M | 7 | 14 | 21 | 28 |
| T | 1 | 8 | 15 | 22 |
| W | 2 | 9 | 16 | 23 |
| T | 3 | 10 | 17 | 24 |
| F | 4 | 11 | 18 | 25 |
| S | 5 | 12 | 19 | 26 |
| S | 6 | 13 | 20 | 27 |

21 Monday 081/285

Anniv. Day* (Otago-N.Z.) Vernal Equinox Day Holiday (Jan)

8.00 am

slow stockade pasture (clover/goatsfoot) 12 kg/ha
60 kg/ha MAP

9.00

GPlots

10.00

11.00

Noon

1.00

2.00

3.00

4.00

5.00 pm

22 Tuesday 082/284

8.00 am

9.00

10.00

11.00

Noon

1.00

2.00

3.00

4.00

5.00 pm

April
WEEK 15

| May 2016 | June 2016 | July 2016 |
|--------------------|----------------|---------------|
| 25 30 2 9 18 23 M | 6 13 20 27 M | 4 11 18 25 |
| 26 31 3 10 17 24 T | 7 14 21 28 T | 5 12 19 26 |
| 27 4 11 18 25 W | 1 8 15 22 29 W | 6 13 20 27 |
| 28 5 12 19 26 T | 2 9 16 23 30 T | 7 14 21 28 |
| 29 6 13 20 27 F | 3 10 17 24 F | 1 8 15 22 29 |
| 30 7 14 21 28 S | 4 11 18 25 S | 2 9 16 23 30 |
| 31 8 15 22 29 S | 5 12 19 26 S | 3 10 17 24 31 |

102/264 Monday 11

7.00 am

SOW VRI susie (candla) 1ha..

8.00

9.00

10.00

11.00

12.00

1.00

2.00

3.00

4.00

5.00 pm

103/263 Tuesday 12

6.00 am

Lime VRI CR9 - 2 ton/ha.

7.00

8.00

9.00

10.00

11.00

12.00

1.00

2.00

3.00

4.00

5.00 pm

April

WEEK 16

May 2016

June 2016

July 2016

| | | | |
|------|-----------------|----------------|---------------|
| 3 25 | 30 2 9 16 23 M | 6 13 20 27 M | 4 11 18 25 |
| 3 26 | 31 3 10 17 24 T | 7 14 21 28 T | 5 12 19 26 |
| 3 27 | 4 11 18 25 W | 1 8 15 22 29 W | 6 13 20 27 |
| 1 28 | 5 12 19 26 T | 2 9 16 23 30 T | 7 14 21 28 |
| 2 29 | 6 13 20 27 F | 3 10 17 24 F | 1 8 15 22 29 |
| 3 30 | 7 14 21 28 S | 4 11 18 25 S | 2 9 16 23 30 |
| 4 | 8 15 22 29 S | 5 12 19 26 S | 3 10 17 24 31 |

111/255 Wednesday 20

8.00 am

9.00

Lime VR4 west
VR3 — 2 ton/Ha
VR3 west

10.00

11.00

12.00

1.00

2.00

3.00

4.00

5.00 pm

112/254 Thursday 21

8.00 am

Lime VR9 — 2 Ton/Ha

9.00

sow wheat VR12 ~~(100 kg/Ha)~~ — 60 kg/Ha MAP

10.00

11.00

12.00

1.00

2.00

3.00

4.00

5.00 pm

April
WEEK 16

| February 2016 | | | | | | |
|---------------|---|----|----|----|----|--|
| M | 1 | 8 | 15 | 22 | 29 | |
| T | 2 | 9 | 16 | 23 | | |
| W | 3 | 10 | 17 | 24 | | |
| T | 4 | 11 | 18 | 25 | | |
| F | 5 | 12 | 19 | 26 | | |
| S | 6 | 13 | 20 | 27 | | |
| S | 7 | 14 | 21 | 28 | | |

| March 2016 | | | | | | |
|------------|---|----|----|----|----|--|
| M | 7 | 14 | 21 | 28 | | |
| T | 1 | 8 | 15 | 22 | 29 | |
| W | 2 | 9 | 16 | 23 | 30 | |
| T | 3 | 10 | 17 | 24 | 31 | |
| F | 4 | 11 | 18 | 25 | | |
| S | 5 | 12 | 19 | 26 | | |
| S | 6 | 13 | 20 | 27 | | |

| April 2016 | | | | | | |
|------------|---|----|----|----|--|--|
| M | 4 | 11 | 18 | 25 | | |
| T | 5 | 12 | 19 | 26 | | |
| W | 6 | 13 | 20 | 27 | | |
| T | 7 | 14 | 21 | 28 | | |
| F | 1 | 8 | 15 | 22 | | |
| S | 2 | 9 | 16 | 23 | | |
| S | 3 | 10 | 17 | 24 | | |

22 Friday 113/253

8.00 am

9.00 Sow VRII - ~~60~~ Wheat (100 kg/Ha)

10.00 60 kg/Ha MAP

11.00

Noon

1.00

2.00

3.00

4.00

5.00 pm

23 Saturday 114/252

Passover (Israel)

24 Sunday 115/251

8.00 am

9.00

10.00

11.00

Noon

1.00

2.00

3.00

4.00

5.00 pm

8.00 am

9.00

10.00

11.00

Noon

1.00

2.00

3.00

4.00

5.00 pm

May

WEEK 18

| March 2016 | | | | | April 2016 | | | | | May 2016 | | | | | |
|------------|---|----|----|----|------------|---|---|----|----|----------|----|---|----|---|----|
| M | | 7 | 14 | 21 | 28 | M | | 4 | 11 | 18 | 25 | M | 30 | 2 | 9 |
| T | 1 | 8 | 15 | 22 | 29 | T | | 5 | 12 | 19 | 26 | T | 31 | 3 | 10 |
| W | 2 | 9 | 16 | 23 | 30 | W | | 6 | 13 | 20 | 27 | W | | 4 | 11 |
| T | 3 | 10 | 17 | 24 | 31 | T | | 7 | 14 | 21 | 28 | T | | 5 | 12 |
| F | 4 | 11 | 18 | 25 | | F | 1 | 8 | 15 | 22 | 29 | F | | 6 | 13 |
| S | 5 | 12 | 19 | 26 | | S | 2 | 9 | 16 | 23 | 30 | S | | 7 | 14 |
| S | 6 | 13 | 20 | 27 | | S | 3 | 10 | 17 | 24 | | S | 1 | 8 | 15 |

2 Monday 123/243

May Day (NT-Aust) Orthodox Easter Monday
Labour Day Holiday (H.K., M'sia, Spore, Thailand) May Day Holiday (Rep of I)

8.00 am

9.00

10.00

11.00

Noon

1.00

2.00

3.00

4.00

5.00 pm

3 Tuesday 124/242

Constitution Day

8.00 am

9.00

Sow Lupins VR9 (All 3 blocks) 54 kg/ha MAP.
83 kg/ha VR18

10.00

11.00

Noon

1.00

2.00

3.00

4.00

5.00 pm

| June 2016 | | | | | July 2016 | | | | | August 2016 | | | | | |
|-----------|---|----|----|----|-----------|---|----|----|----|-------------|---|----|----|----|----|
| M | 6 | 13 | 20 | 27 | M | 4 | 11 | 18 | 25 | M | 1 | 8 | 15 | 22 | 29 |
| T | 7 | 14 | 21 | 28 | T | 5 | 12 | 19 | 26 | T | 2 | 9 | 16 | 23 | 30 |
| W | 1 | 8 | 15 | 22 | W | 6 | 13 | 20 | 27 | W | 3 | 10 | 17 | 24 | 31 |
| T | 2 | 9 | 16 | 23 | T | 7 | 14 | 21 | 28 | T | 4 | 11 | 18 | 25 | |
| F | 3 | 10 | 17 | 24 | F | 1 | 8 | 15 | 22 | F | 5 | 12 | 19 | 26 | |
| S | 4 | 11 | 18 | 25 | S | 2 | 9 | 16 | 23 | S | 6 | 13 | 20 | 27 | |
| S | 5 | 12 | 19 | 26 | S | 3 | 10 | 17 | 24 | S | 7 | 14 | 21 | 28 | |

May
WEEK 18

Primary Day (Japan)

125/241 Wednesday 4

8.00 am

SOW Lupins - VR17
VR7 - 83 kg/Ha MAP - 54 kg/Ha.
VR14

9.00

10.00

11.00

12.00

1.00

2.00

3.00

4.00

5.00 pm

Union Day (France, Germany, Indonesia) Children's Day (Japan, Rep of Korea) Coronation Day (Thailand)

126/240 Thursday 5

6.00 am

SOW Lupins VR15
CR1 - 83 kg/Ha Map - 54 kg/Ha.
CR11

7.00

8.00

9.00

10.00

11.00

12.00

1.00

2.00

3.00 pm

May

WEEK 18

| March 2016 | | | | | | April 2016 | | | | | | May | |
|------------|---|----|----|----|----|------------|---|----|----|----|----|-----|----|
| M | 7 | 14 | 21 | 28 | | M | 4 | 11 | 18 | 25 | | M | 30 |
| T | 1 | 8 | 15 | 22 | 29 | T | 5 | 12 | 19 | 26 | | T | 31 |
| W | 2 | 9 | 16 | 23 | 30 | W | 6 | 13 | 20 | 27 | | W | 4 |
| T | 3 | 10 | 17 | 24 | 31 | T | 7 | 14 | 21 | 28 | | T | 5 |
| F | 4 | 11 | 18 | 25 | | F | 1 | 8 | 15 | 22 | 29 | F | 6 |
| S | 5 | 12 | 19 | 26 | | S | 2 | 9 | 16 | 23 | 30 | S | 7 |
| S | 6 | 13 | 20 | 27 | | S | 3 | 10 | 17 | 24 | | S | 1 |

6 Friday 127/239

8.00 am

Spray VR3 w + CRGE 118g sakura

9.00

50g Logan B

2L RU450

10.00

11.00

Sow CR9 (Richards) - wheat (east-west + north-south 50

Noon

Sow Urumbie Barley - VR3 w 54kg/ha MAP

1.00

2.00

3.00

4.00

5.00 pm

7 Saturday 128/238

8.00 am

9.00

10.00

11.00

Noon

1.00

2.00

3.00

4.00

5.00 pm

8 Sunday 129/237

8.00 am

9.00

10.00

11.00

Noon

1.00

2.00

3.00

4.00

5.00 pm

June 2016

| | | | | | |
|---|----|----|----|----|---|
| 6 | 13 | 20 | 27 | M | |
| 7 | 14 | 21 | 28 | T | |
| 1 | 8 | 15 | 22 | 29 | W |
| 2 | 9 | 16 | 23 | 30 | T |
| 3 | 10 | 17 | 24 | F | |
| 4 | 11 | 18 | 25 | S | |
| 5 | 12 | 19 | 26 | S | |

July 2016

| | | | | | |
|---|----|----|----|----|---|
| 4 | 11 | 18 | 25 | M | |
| 5 | 12 | 19 | 26 | T | |
| 6 | 13 | 20 | 27 | W | |
| 7 | 14 | 21 | 28 | T | |
| 1 | 8 | 15 | 22 | 29 | F |
| 2 | 9 | 16 | 23 | 30 | S |
| 3 | 10 | 17 | 24 | 31 | S |

August 2016

| | | | | | |
|---|----|----|----|----|---|
| 1 | 8 | 15 | 22 | 29 | M |
| 2 | 9 | 16 | 23 | 30 | T |
| 3 | 10 | 17 | 24 | 31 | W |
| 4 | 11 | 18 | 25 | T | |
| 5 | 12 | 19 | 26 | F | |
| 6 | 13 | 20 | 27 | S | |
| 7 | 14 | 21 | 28 | S | |

May

WEEK 19

134/232 Friday 13

10 am

spray CR10 (Kerrie Ramm) 112g - Sakura
1.6L - Alawex
2.0L - RU450

10

10

sow wheat plots (Kerrie Ramm) - CR10

10

10

10

10

10

10

10 pm

Idha's Birthday
(Rep of Korea)

135/231

Saturday 14

136/230

Sunday 15

10 am

8.00 am

10

9.00

10

10.00

10

11.00

10

Noon

10

1.00

10

2.00

10

3.00

10

4.00

10 pm

5.00 pm

May
WEEK 20

| March 2016 | | | | | | April 2016 | | | | | | May 2016 | | | | | |
|------------|---|----|----|----|----|------------|---|----|----|----|---|----------|---|----|----|----|--|
| M | | 7 | 14 | 21 | 28 | M | 4 | 11 | 18 | 25 | M | 30 | 2 | 9 | 16 | 23 | |
| T | 1 | 8 | 15 | 22 | 29 | T | 5 | 12 | 19 | 26 | T | 31 | 3 | 10 | 17 | 24 | |
| W | 2 | 9 | 16 | 23 | 30 | W | 6 | 13 | 20 | 27 | W | | 4 | 11 | 18 | 25 | |
| T | 3 | 10 | 17 | 24 | 31 | T | 7 | 14 | 21 | 28 | T | | 5 | 12 | 19 | 26 | |
| F | 4 | 11 | 18 | 25 | | F | 1 | 8 | 15 | 22 | F | | 6 | 13 | 20 | 27 | |
| S | 5 | 12 | 19 | 26 | | S | 2 | 9 | 16 | 23 | S | | 7 | 14 | 21 | 28 | |
| S | 6 | 13 | 20 | 27 | | S | 3 | 10 | 17 | 24 | S | 1 | 8 | 15 | 22 | 29 | |

16 Monday 137/229

Whit Monday (France) Whit Monday (Germany)

8.00 am

9.00

10.00

11.00

Noon

1.00

2.00

3.00

4.00

5.00 pm

17 Tuesday 138/228

8.00 am

Sow CR9 Plots - SUSAN KROON / RUDY BIFOLIS

9.00

WHEAT Plots

10.00

11.00

Noon

1.00

2.00

3.00

4.00

5.00 pm

23
24
25
26
27
28
29

| June 2016 | | | | |
|-----------|---|----|----|----|
| M | 6 | 13 | 20 | 27 |
| T | 7 | 14 | 21 | 28 |
| W | 1 | 8 | 15 | 22 |
| T | 2 | 9 | 16 | 23 |
| F | 3 | 10 | 17 | 24 |
| S | 4 | 11 | 18 | 25 |
| S | 5 | 12 | 19 | 26 |

| July 2016 | | | | |
|-----------|---|----|----|----|
| M | 4 | 11 | 18 | 25 |
| T | 5 | 12 | 19 | 26 |
| W | 6 | 13 | 20 | 27 |
| T | 7 | 14 | 21 | 28 |
| F | 1 | 8 | 15 | 22 |
| S | 2 | 9 | 16 | 23 |
| S | 3 | 10 | 17 | 24 |

| August 2016 | | | | |
|-------------|---|----|----|----|
| M | 1 | 8 | 15 | 22 |
| T | 2 | 9 | 16 | 23 |
| W | 3 | 10 | 17 | 24 |
| T | 4 | 11 | 18 | 25 |
| F | 5 | 12 | 19 | 26 |
| S | 6 | 13 | 20 | 27 |
| S | 7 | 14 | 21 | 28 |

June
WEEK 22

A.)

153/213 Wednesday 1

8.00 am

9.00

10.00

11.00

Noon

1.00

2.00

3.00

4.00

5.00 pm

Republic Day (Italy)

154/212 Thursday 2

8.00 am

Sow Barley LAF VR4 - Schaner 23 kg/Ha
CR9 (around track) MAP - 54 kg/Ha

9.00

10.00

Sow TOS2 (sue) CR9 (wheat)

11.00

Noon

1.00

2.00

3.00

4.00

5.00 pm

June

WEEK 22

April 2016

| | | | | |
|---|---|----|----|----|
| M | 4 | 11 | 18 | 25 |
| T | 5 | 12 | 19 | 26 |
| W | 6 | 13 | 20 | 27 |
| T | 7 | 14 | 21 | 28 |
| F | 1 | 8 | 15 | 22 |
| S | 2 | 9 | 16 | 23 |
| S | 3 | 10 | 17 | 24 |

May 2016

| | | | | | |
|---|----|---|----|----|----|
| M | 30 | 2 | 9 | 16 | 23 |
| T | 31 | 3 | 10 | 17 | 24 |
| W | | 4 | 11 | 18 | 25 |
| T | | 5 | 12 | 19 | 26 |
| F | | 6 | 13 | 20 | 27 |
| S | | 7 | 14 | 21 | 28 |
| S | 1 | 8 | 15 | 22 | 29 |

June 2016

| | | | | |
|---|---|----|----|----|
| M | 6 | 13 | 20 | 27 |
| T | 7 | 14 | 21 | 28 |
| W | 1 | 8 | 15 | 22 |
| T | 2 | 9 | 16 | 23 |
| F | 3 | 10 | 17 | 24 |
| S | 4 | 11 | 18 | 25 |
| S | 5 | 12 | 19 | 26 |

3 Friday 155/211

8.00 am

Sow Barley VR5/10 schooner - 83 kg/Ha
MAP - 54 kg/Ha

9.00

10.00

Sow Plots VR13 (cathrine) 100 kg/Ha granular

11.00

Sow schooner Buffers rest of VR13 - granular 15.

Noon

1.00

2.00

3.00

4.00

6.00 pm

4 Saturday 156/210

*Birthday of HM
the Yang di-Pertuan Agong (M'sia)*

5 Sunday 157/209

8.00 am

9.00

10.00

11.00

Noon

1.00

2.00

3.00

4.00

5.00 pm

8.00 am

9.00

10.00

11.00

Noon

1.00

2.00

3.00

4.00

5.00 pm

June

WEEK 24

| April 2016 | | | | | May 2016 | | | | | June 2016 | | | | |
|------------|---|----|----|----|----------|----|---|----|----|-----------|---|----|----|----|
| M | 4 | 11 | 18 | 25 | M | 30 | 2 | 9 | 16 | M | 6 | 13 | 20 | 27 |
| T | 5 | 12 | 19 | 26 | T | 31 | 3 | 10 | 17 | T | 7 | 14 | 21 | 28 |
| W | 6 | 13 | 20 | 27 | W | | 4 | 11 | 18 | W | 1 | 8 | 15 | 22 |
| T | 7 | 14 | 21 | 28 | T | | 5 | 12 | 19 | T | 2 | 9 | 16 | 23 |
| F | 1 | 8 | 15 | 22 | F | | 6 | 13 | 20 | F | 3 | 10 | 17 | 24 |
| S | 2 | 9 | 16 | 23 | S | | 7 | 14 | 21 | S | 4 | 11 | 18 | 25 |
| S | 3 | 10 | 17 | 24 | S | 1 | 8 | 15 | 22 | S | 5 | 12 | 19 | 26 |

13 Monday 165/201

Queen's Birthday* (ex. WA-Aust) Queen's Birthday/Volunteer's Day* (SA-Aust)

8.00 am

9.00

10.00

11.00

Noon

1.00

2.00

3.00

4.00

5.00 pm

14 Tuesday 166/200

8.00 am

Sow VR3 Field PEAS (MORGAN)

9.00

10.00

11.00

Noon

1.00

2.00

3.00

4.00

5.00 pm

July 2016

August 2016

September 2016

June

WEEK 24

| | | | | | | | | | | | | | | | |
|---|---|----|----|----|---|---|----|----|----|----|---|---|----|----|----|
| M | 4 | 11 | 18 | 25 | M | 1 | 8 | 15 | 22 | 29 | M | 5 | 12 | 19 | 26 |
| T | 5 | 12 | 19 | 26 | T | 2 | 9 | 16 | 23 | 30 | T | 6 | 13 | 20 | 27 |
| W | 6 | 13 | 20 | 27 | W | 3 | 10 | 17 | 24 | 31 | W | 7 | 14 | 21 | 28 |
| T | 7 | 14 | 21 | 28 | T | 4 | 11 | 18 | 25 | | T | 1 | 8 | 15 | 22 |
| F | 1 | 8 | 15 | 22 | F | 5 | 12 | 19 | 26 | | F | 2 | 9 | 16 | 23 |
| S | 2 | 9 | 16 | 23 | S | 6 | 13 | 20 | 27 | | S | 3 | 10 | 17 | 24 |
| S | 3 | 10 | 17 | 24 | S | 7 | 14 | 21 | 28 | | S | 4 | 11 | 18 | 25 |

167/199 Wednesday 15

8.00 am

Sow CR2 + CR4 Morgan Field Peas

9.00

10.00

11.00

Noon

1.00

2.00

3.00

4.00

5.00 pm

168/198 Thursday 16

8.00 am

9.00

10.00

11.00

Noon

1.00

2.00

3.00

4.00

5.00 pm