



NSW DEPARTMENT OF  
**PRIMARY INDUSTRIES**

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<b>Title</b>	Activation of aerial support in a plague locust campaign	<b>Version</b>	2
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## 1. OVERVIEW

This policy outlines when the use of aircraft will commence for the control or surveillance of declared pest insects, particularly the Australian plague locust. When using aircraft (fixed-wing and helicopters) for the control or monitoring of locusts, a risk management approach will be taken.

## 2. BACKGROUND

The most effective, efficient and safe method of controlling locusts is through the implementation of ground control by land managers (both public and private). Land managers should not assume there will be aerial support and must initially use ground control methods. However, there may be extenuating circumstances where ground control of locusts exceeds the capability of a land manager and ground spray contractors and in this instance the use of aerial support will be considered by Industry & Investment NSW (I&I NSW). I&I NSW Locust Commissioner will make the decision regarding the initiation of use of aircraft in a response only after approval is given by the Plague Locust Management Group. Once aircraft use is approved by the Locust Commissioner, approval for tasking will be with the State Controller or State Operations Manager.

## 3. SCOPE

This policy is issued with the concurrence of the Director-General of I&I NSW under Clause 6.2 of the Memorandum of Understanding between the Director-General of I&I NSW and State Management Council of the Livestock Health and Pest Authorities.

This policy only relates to locust-related aerial support activities and not other emergencies or general business. The two main uses of aircraft in locust control campaigns are for surveillance and spraying.

Aerial support for surveillance purposes may be introduced to ascertain the extent of the situation and landholder compliance to reporting requirements. In these instances, the location of any locust bands spotted will be relayed to land managers to assist them with ground control measures. A preference may be given to the use of fixed wing aircraft during initial surveillance activities as they are cost effective and operate at heights where fewer hazards exist.

Aerial support for spraying will not be considered until it is determined that effective ground control is no longer achievable. When ground control exceeds the capability of the land manager and ground control options are exhausted, aerial support will be considered. Before aerial control (spraying) is considered there must be a minimum target size (see 4e) and the area to be sprayed must be determined safe for aerial control activities. A risk management approach will be taken and as a result there are likely to be a high number of instances where aerial locust control will not be feasible due to associated risks to personnel, operators, the public and the environment.

## 4. POLICY

This policy must be used in conjunction with the I&I NSW Aircraft Operations Policy A-070 which provides the safety framework for the use of aircraft. I&I NSW will only use contracted aircraft that meet the requirements of the Expression of Interest Provision of 'Call When Needed' Helicopter and Fixed Wing Aircraft Support for Emergency and Other Operations (EOI).

Forward Command Post (FCP) staff will identify tasks for aircraft, based on 'ground-truthing' by FCP field staff. The Local Coordination Centre (LCC) will use aircraft that have been allocated to the LCC by the State Coordination Centre (SCC). The task job number allocated to each job by the LCC will be used to track the progress of the job and payment.

Careful pre-aerial control planning must be undertaken to identify possible spray targets before control commences. Potential off-site impacts should be considered when deciding when and where to undertake aerial control. There are legislative requirements (see related legislation in section seven) that must also be taken into consideration when planning and conducting locust aerial control campaigns.

Before the deployment of aircraft for surveillance and aerial control occurs, the following trigger points **MUST** be met:

### 1. Surveillance

The NSW Locust Commissioner or the Deputy NSW Locust Commissioner may, at their discretion, request that surveillance be undertaken in the early stages of a campaign to determine nymph banding status and the extent of the problem, particularly when it appears that landholders are not reporting/detecting bands.

Before I&I NSW becomes involved, a Livestock Health and Pest Authority (LHPA) senior ranger may request aerial surveillance if they reasonably expect there are bands in the district that are not being reported/detected by landholders, and the bands are likely to fledge and affect other properties.

Once a FCP is established, the Officer In Charge may request aerial surveillance if they reasonably expect there are bands in the district that are not being reported/detected by landholders, and the bands are likely to fledge and affect other regions.

### 2. Control (spraying of nymphs)

The NSW Locust Commissioner or Deputy NSW Locust Commissioner may, at their discretion, request that aerial spraying of nymphs commences when it appears that ground control of nymph bands is becoming beyond the capability of the local landholders and ground spray contractors and they pose a threat to other properties. The target size must be at least 100 hectares in size (see 4e).

The Minister for Primary Industries may request that aerial spraying of nymph bands commences.

Before I&I NSW becomes involved, a LHPA senior ranger may request aerial control of nymph bands if they detect (through surveillance) significant bands that cannot be physically ground-controlled by landholders (rough terrain/significant numbers/meet target size) or ground spray contractors and are likely to fledge and affect other properties.

Once a FCP is established, the Officer-In-Charge may request aerial control of bands if they detect (through surveillance) significant bands that cannot be physically ground-controlled by landholders (rough terrain/significant numbers/meet target size) or ground spray contractors and are likely to fledge and affect other regions.

### 3. Control (spraying of swarming/roosting adults)

The NSW Locust Commissioner or Deputy NSW Locust Commissioner may, at their discretion, request that aerial spraying of swarming/roosting adults commences when the adults pose a significant threat to other regions, the target size is least 100 hectares in size and it cannot be physically ground-controlled.

The Minister for Primary Industries may request that aerial spraying of swarming/roosting adults commences.

Before I&I NSW becomes involved, a LHPA senior ranger may request aerial control of swarming/roosting adults to commence when the adults pose a significant threat to other properties within the LHPA district, the target size is least 100 hectares and it cannot be physically ground-controlled.

Once a FCP is established, the Officer-In-Charge may request aerial control of swarming/roosting adults commences when the adults pose a significant threat to other regions, the target size is least 100 hectares in size and it cannot be physically ground-controlled.

While aerial control by the APLC generally occurs west of the Newell Highway, the APLC charter is control only of locusts that may cause a cross-jurisdictional threat. However, where a swarm is adjacent to an area where aerial control is being undertaken by either I&I NSW or APLC, on advice from the LCC and SCC managers, the NSW Locust Commissioner or the APLC Director may agree to aerial control being undertaken by APLC on I&I NSW's behalf, or I&I NSW undertaking aerial control on APLC's behalf.

#### 4. Risk assessment

A risk assessment must be conducted for the proposed use of aircraft for surveillance and/or aerial control in the region including available control measures.

Once the **trigger points** for the deployment of aerial support have been met, a risk management approach must be undertaken before aerial activities are to commence. Considerations with minimum requirements include:

- a) **Safety of contractors and staff:** safety is of paramount importance. The EOI stipulates that contractors must meet strict requirements before they, their pilots or their aircraft will be considered. These include the provision of Safety Management Systems; show experience, specify aircraft type etc. A number of Task Profiles, specific to certain aerial operations, have been developed. These stipulate Personal Protective Equipment requirements and also identify specific training requirements that must be undertaken. I&I NSW and LHPA personnel who have not attended appropriate aerial training courses **WILL NOT** be considered for any tasks involving aircraft.
- b) **Local aviation hazards:** there are a number of local conditions that must be considered. These can include, but are not limited to, the type of terrain that aircraft will be operating in, how familiar the aerial operator is with the area and any powerlines, cables or old telephone wires that are suspended in the air. There may also be a number of aircraft operating in the area or flying through the area of operation.
- c) **Environmental considerations:** environmentally sensitive areas include watercourses, crops (stage and type), organic farms, threatened species, houses, urban areas, apiary sites, areas identified by the occupier or neighbouring occupier as a concern and any other areas as identified (such as school bus runs, dwellings). Please refer to the Environmental Considerations in a Locust Control Response Policy.
- d) **Weather conditions:** weather conditions should be checked prior to conducting any aerial activities. The weather conditions, for example thunderstorms, can impact on safety while conditions such as wind (spray drift) and rain can impact on spraying.
- e) **Area to be controlled:**

The criteria for commencement of **aerial control of nymphs** are:

- Each target should be at least 100 ha in area and the nymphs should be banded (80 or more per square metre). However, 3 by 35 ha targets or similar that make one target may be considered as long as the small targets are adjacent or in very close proximity. Similarly, sub-bands (31-80 per square metre) may be considered as a target if they are mixed in with bands and cover significant enough areas to pose a considerable risk to other properties.
- Operations must be conducted in accordance with the [Pesticides Act 1999](#), the [Protection of the Environment Operations Act 1997](#) and current guidelines.

The criteria for commencement of **aerial control of adult swarms** or **roosting adults** are:

- Each target should be at least 100 ha in area and be medium (11-50 locusts per square metre) to high (greater than 50 per square metre) density. However, 3 by 35 ha targets or similar that make one target may be considered as long as each small target is adjacent or in very close proximity. Low density targets (4–10 per square metre) may be considered if they cover significant areas, the conglomeration of which would pose a considerable risk to other properties. Random small areas of low density swarms or roosting adults are not reasonable targets. Operations can be conducted in accordance with the *Pesticides Act 1999*, the *Protection of the Environment Operations Act 1997* and current guidelines.

**It is an offence under section 15 of the Pesticides Act 1999 to contravene the insecticide label requirements.**

- f) **Potential impact to other lands:** aerial surveillance and control will be used if the control of locusts cannot be effectively conducted on the ground by the landholder or a contractor, and the locusts are going to move and impact on other properties or regions. Instances where this can occur include:
- bands moving from property to property
  - bands reaching fledging stage, maturing into adults and migrating to other properties/regions thereby causing damage in other areas
  - roosting adults that may migrate to other properties/regions thereby causing damage in other areas and potentially laying again, extending the length of the control program and increasing costs substantially

There will be a need to involve aircraft to reduce the likelihood of these events occurring.

When conducting aerial operations the impact to adjacent lands needs to be considered. This can include the noise of aircraft frightening stock in neighbouring paddocks. It is important to ensure that no insecticide drifts onto a neighbour's property.

- g) **Insecticide type:** insecticides of choice for aerial control include Fenitrothion and Fipronil in the Ultra Low Volume formulation. Fenitrothion is the insecticide of choice for aerial control programs authorised by I&I NSW. In circumstances that prevent the use of insecticides, Metarhizium (Green guard) is the alternate choice. Metarhizium is a biological control agent that can be used in environmentally sensitive areas. When using any insecticide or biological control agent please ensure that the requirements of the label, Material Safety Data Sheet and the permit are strictly adhered to.

## 5. PROCEDURES

- [Aerial control of plague locusts](#)
- [Environmental considerations in a locust control response](#)
- [Ground control of plague locusts](#)
- [Insecticide management for plague locusts](#)
- [Surveillance of plague locusts](#)

## 6. DEFINITIONS/ABBREVIATIONS

EOI – Expression of Interest Provision of ‘Call When Needed’ Helicopter and Fixed Wing Aircraft Support For Emergency and Other Operations

FCP – Forward Command Post (set-up in Livestock Health and Pest Authority offices who report back to the LCC)

I&I NSW – Industry & Investment NSW (formerly NSW Department of Primary Industries)

LCC – Local Coordination Centre (set up regionally to oversee a number of FCP's and report back to the SCC)

LHPA – Livestock Health and Pest Authority (formerly Rural Lands Protection Boards)

MSDS - Material Safety Data Sheet – required for each insecticide

roosting adult locusts – adult locusts that have settled on the ground (usually in cold conditions or while laying)

SCC – State Coordination Centre – coordinates activities across the State

swarming adults – air-borne adult locust

## 7. RELATED LEGISLATION

- [Pesticides Act 1999](#) and [Pesticides Regulation 2009](#)
- [Rural Lands Protection Act 1998](#)
- [National Parks and Wildlife Act 1974](#)
- [Threatened Species Conservation Act 1995](#)
- [Protection of the Environment Operations Act 1997](#)
- [Occupational Health and Safety Act 2000](#)
- [Civil Aviation Act 1988](#)

## 8. RELATED POLICIES

- A-038 Occupational Health and Safety
- [O-070 Occupational health and safety in emergency management](#)
- A-070 Aircraft Operations
- [O-046 Responsibilities in plague locust campaigns](#)
- [O-047 Activation for ground control for plague locusts](#)
- [O-049 Use of insecticides for plague locust control](#)
- [O-050 Environmental considerations in a locust control response](#)

## 9. RELATED DELEGATIONS

- Nil

## 10. RELATED DOCUMENTS

- [Australian Plague Locust, Landholder Control Strategies for NSW](#)
- [SAFEMEAT brochure 'Plague locusts, wingless grasshoppers and livestock residues](#)
- [Expression of Interest Provision of 'Call When Needed' Helicopter and Fixed Wing Aircraft Support For Emergency and Other Operations](#)

## 11. REVISION HISTORY

Version	Date	Amendments
1	2 January 2009	For approval
2	17 August 2009	Update NSW DPI to I&I NSW; inclusion of ground spray contractors; use of aerial control only after ground control options exhausted

## 12. DATE OF NEXT REVIEW

30 June 2010

**13. CONTACT OFFICER**

Manager, General Emergency Preparedness & Response (Emergencies & Animal Welfare Branch).