



**Department of
Primary Industries**

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Procedure – Management of Aviation Operations

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1. Application / Scope

This procedure is issued as direction and guidance on the management of aviation operations being conducted on behalf of NSW Department of Primary Industries (NSW DPI).

Operators (including pilots and crewpersons), personnel of NSW DPI, Livestock Health and Pest Authorities (LHPAs) and other Government agencies working in NSW DPI aviation operations are required to manage and operate aircraft in a safe, efficient and cost-effective manner in accordance with applicable regulations and the contract or Expression of Interest (EOI).

The types of aviation operations conducted on behalf of NSW DPI include:

- Aerial Mustering;
- Aerial Shooting;
- Aerial Spotting;
- Aerial Spraying;
- Aerial Surveillance; and
- Aerial Transport (including winching and external load lifting).

Each of these operations has an approved task profile and associated risk assessment. Local Air Operations Managers shall ensure that all flights are conducted in accordance with the relevant task profile.

Operators shall operate in accordance with the relevant regulations and NSW DPI requirements. Where a conflict may occur between the regulations and NSW DPI requirements, the more restrictive requirement shall apply.

To the extent of any inconsistency, the following take precedence over this procedure where the standard is higher insofar as they relate to the management and use of aircraft and the provision of related services:

- any statutory requirements or other requirements under the laws of Australia (including, without limitation, Civil Aviation and WHS legislation);
- any Codes of Practice or related industry standards or guidelines;
- any guidelines or policies issued by Government or regulatory authorities;
- operators' Operations Manuals; and
- any manufacturer's recommendations.

Operators are asked to notify NSW DPI immediately of any inconsistencies that arise between this procedure and the above requirements, codes, guidelines and recommendations.

Operators and their pilots are responsible for ensuring that all people on the aircraft are essential for the task, appropriately qualified (where applicable), correctly attired and briefed.

The carriage of dangerous goods on aircraft, including additional fuel supplies, will only be permitted in accordance with Civil Aviation Regulations and Orders. Compliance with relevant Office of Environment and Heritage (OEH) and WorkCover NSW requirements relating to fuel and chemical handling and operations shall also be required.

2. Abbreviations / Definitions / Action Words

AAOM	Assistant Air Operations Manager
AAP	Annual Aviation Plan
ALG	Air Landing Ground
AOC	Air Operating Certificate
AOL	Approved Operators List (responsibility of NSW RFS Aviation Section)
AOM	Air Operations Manager
ASA	Air Services Australia

ASO	Air Surveillance Officers
Assets	Aviation Resources (e.g. fuel, aircraft, personnel, etc.)
ATSB	Australian Transport Safety Bureau
AusSAR	Australian Search and Rescue
Aviation Section – (NSW RFS)	– coordinates interagency aviation requirements including EOI
CASA	Civil Aviation Safety Authority Australia
CIRP	Critical Incident Response Plan
COB	Close of business
CWN	Call When Needed
EDM	Emergency and Disaster Management (server)
EOI	Expression of Interest
FCP	Forward Command Post
FOR	Flight Operations Return
HLS	Helicopter Landing Site
IAP	Incident Action Plan
LAOM	Local Air Operations Manager
LCC	Local Control Centre
LHPA	Livestock Health and Pest Authority
LJR	Low Jet Route
May	means a procedure or action that is recommended/optional
Must	means a procedure or action that is mandatory
NOTAMS	Notice(s) to airmen
NSW DPI	NSW Department of Primary Industries
NSW RFS	NSW Rural Fire Service
OEH	Office of Environment and Heritage
OM	Operations Manager
Operator	Air Operator
PPE	Personal protective equipment
RFS	Rural Fire Service
SAD	State Air Desk (NSW RFS) – coordinates aviation asset deployment/stand down
SAP	Section Action Plan
SAR	Search and Rescue
SCC	State Coordination Centre
Shall	means a procedure or action that is mandatory
Should	means a procedure or action that is highly recommended
SITREP	Situation Report
Status Board	Visual Display that shows information regarding aviation assets
TDRA	Task Description and Risk Assessment
TR	Task Request
UHF	Ultra-high frequency
VFR	Visual flight rating
VHF	Very high frequency
WHS	Work health and safety

3. Resources / Equipment

Only approved companies from the NSW Rural Fire Service (RFS) Approved Operators List (AOL) (in accordance with Aviation Contracting for Emergency Operations procedure), aircraft and pilots shall be used for NSW DPI aviation operations.

Aircraft and air operators must meet current specifications as determined and documented in the contract and/or EOI. NSW DPI preferred operators on the AOL have been audited and assessed by either an independent aviation advisor and/or a member of the NSW RFS State Air Desk (SAD) to regulatory, EOI and good aviation practice requirements.

Photo identification cards are required for endorsed pilots and crew.

Aircraft will generally be hired on a 'dry hire' basis with fuel being accounted for separately. Fuel may be supplied by the operator (but accounted for separately), a fuel supplier (accounts paid by the operator), or if previously agreed, arranged by NSW RFS with accounts being paid by NSW DPI.

4. Warnings

All flights must be in accordance with an approved task profile and its associated risk assessment.

All passengers, aircrew and operators involved in aircraft operations will wear Personal Protective Equipment (PPE) according to the relevant task profile.

All operations must be in accordance with:

- relevant legislation including the *Civil Aviation Act* and the *Work Health and Safety Act*,
- any practices set out in any workplace safety documents produced by WorkCover NSW and OEH,
- Operator references and Operations Manuals, and
- NSW and ACT Interagency Aviation Standard Operating Procedures.

Only trained, competent and authorised personnel are permitted to work around aircraft and operate as crew in aircraft and will be identified with a photo identification stating their role.

Only Operator personnel are permitted to fuel aircraft.

5. Procedure

5.1 Planning

5.1.1 General

The State Coordination Centre (SCC) in conjunction with NSW RFS SAD will assign aircraft operators, pilots and aircraft to a Local Control Centre (LCC). Aircraft will be managed within that region by the LCC. The Local Air Operations Manager can request additional resources from SCC. Refer to Appendix 7.

Task request numbers will be used to track aircraft jobs from request to invoicing.

All flights must have an Aircraft Task Operations Plan, passenger manifest and be briefed before flight.

There are four levels of Operators on the NSW RFS Approved Operators CWN List:

- Full audit by independent aviation assessor annually – Level 1
- Full audit by independent aviation assessor every 2-3 years – Level 2
- NSW RFS RAMP audit by NSW RFS – during operations – Level 3
- Desk top audit by NSW RFS during EOI assessment – Level 4

Only operators, aircraft and aircrew on the NSW RFS Approved Operators List are to be used for NSW DPI operations with preference to Level 1 and Level 2 Operators.

5.1.2 SCC

Prior to September/October each year, the SCC should evaluate the likely aviation requirements and budget to develop an Annual Aviation Plan, which provides guidance as to considerations such as likely:

- Tasks required;
- Priorities;
- Required aircraft type and numbers;

- Location of aircraft;
- Days of estimated requirement
- Approximate requirement; and
- Support requirements.

The Annual Aviation Plan will provide the basis for determining which operators should be audited (in conjunction with other Agencies in the EOI), confirming asset details and availability.

The Annual Aviation Plan should be amended to reflect the season as priorities, environment and expectations change. The amended plan should be distributed to the Regional Directors, NSW RFS Aviation Section, Interagency Aviation Working Group and other relevant parties.

5.1.3 NSW RFS

The NSW RFS Aviation Section distributes annually the:

1. NSW & ACT State Air Desk EOI for Call When Needed (CWN) Helicopters and Fixed Wing Aircraft to Support Emergency and Other Operations; and
2. EOI for CWN Fuel Trucks.

NSW RFS Aviation Section receives and assesses submissions, and enters information into the Approved Operators List database. The NSW RFS Aviation Section conducts Level 3 and Level 4 audits, and maintains all audit records. Occurrences will be investigated or coordinated by the NSW RFS Aviation Section including standing down and returning to flight status.

THE NSW RFS SAD using the AOL will deploy aviation assets on request from the SCC; advise the SCC of the allocated assets; and stand down assets as required.

5.1.4 LCC

When the LCC is formed, the LCC Operations Manager (OM) and LCC AOM (Air Operations Manager – maybe other agency personnel) should:

- Establish the required communications systems including computers, fixed and mobile telephones, contact lists of operators, airports, fuel suppliers and other support (refer to Appendix 2 for more detail);
- Update wall maps and the Status Board;
- Ensure all forms are readily available;
- Review these procedures: and
- Run a Critical Incident Response Plan (CIRP) exercise to ensure the procedures are known and validated, contact numbers and personnel are updated and to ensure the centre is set up to enable a proper response to a critical incident.

The AOM should develop a Section Action Plan (SAP) to identify the likely resources required. This is conducted to verify and update the allocation made by the SCC.

If during the operations, extra assets are required, then the LCC will raise a Task Request (TR) for the allocation of the resources by the SCC.

5.1.5 FCP

The Forward Command Post (FCP) should review the published task profiles, risk assessments and these procedures before aviation resources are likely to be needed or requested.

5.2 Request for Aviation Resources

An Aviation Decision Flow Chart (Appendix 6) and Aviation Asset Deployment (Appendix 7) can be used to assist with the tasking process.

5.2.1 FCP

The initial request for aviation support is generated by the FCP via a TR. The FCP must ensure the proposed task complies with a current task profile or if the task falls outside the accepted profiles, the FCP shall follow the process for conducting a new Aviation Risk Assessment in consultation with the LCC AOM (Procedure – Aviation Risk Assessment and Management Process).

The FCP shall develop a local Task Description and Risk Assessment (TDRA) and forward this to the LCC with the TR. The TDRA identifies the local hazards (such as terrain, wires, trees, structures, animals and sensitive areas) and considerations and proposed risk mitigation.

The FCP is also responsible for ensuring landholder permission has been gained for any aviation operations planned on the landholder property.

Unless an unexpected urgent requirement, any TR should be submitted to the LCC at the earliest opportunity but no later than 15:00 (3PM), the day prior to requirement.

5.2.2 LCC

On receipt of a valid TR and TDRA, the AOM should review the request and accompanying information to ascertain priority, allocate resources and if required send a further TR to the SCC if more than the already allocated resources are needed.

5.2.3 SCC

The SCC shall only respond to TRs generated by a LCC not a FCP.

On receipt of a valid TR from the LCC, the SCC Operations or Director should review the request and any accompanying information that justifies the requirement, to ascertain priority and allocation of resources.

SCC contacts NSW RFS SAD to request aviation asset(s) using the Aircraft Request, Retain or Release form. NSW RFS SAD will issue a Task Form notifying the SCC details of the aviation asset eg Operator, pilot details, communication, call sign, fuel supply, estimated time of arrival and confirmation of engagement. Normally assets are allocated on a daily basis.

SCC will coordinate chemical supply arrangements.

5.3 Approvals

An approved TR shall be allocated a Purchase Order number at the LCC. A task shall not be paid unless a Purchase Order number has been allocated.

A task may be rejected for a variety of reasons, including but not limited to:

- A lack of information;
- Inappropriate use of resources;
- Inconsistency with the LCC/SCC plan;
- Safety concerns; and/or
- Inadequate documentation.

5.3.1 FCP

A task shall not be conducted without an approved TR. Any amendments and/or additional tasking requires a new TR and associated approval. The redundant TR needs to be cancelled and the new /updated TR number recorded on it for audit/tracking purposes. In an emergency (threat to people not to property) a verbal approval to an amended or additional task may be obtained from the LCC AOM. Verbal approvals shall be followed up with a TR at the earliest practical time.

5.3.2 LCC

Generally, the LCC may approve task requests for tactical tasking of aviation resources. If the TR received from the FCP is valid, then the LCC AOM may recommend to the OM for approval. The OM may approve the TR up to the financial delegation provided.

If the likely cost of a TR exceeds the financial delegation of the OM, the TR shall be elevated to the appropriate position with the required financial delegation.

5.3.3 SCC

The SCC may approve task requests raised by the LCC. The SCC should not approve task requests raised by an FCP unless the relevant LCC OM or Controller is not available. Where the FCP raises a TR that exceeds the financial delegation of the LCC, the LCC recommends the TR for approval to the SCC.

The SCC AOM recommends approval to the SCC OM or in their absence, the Director, SCC.

5.4 Resource Requirements

5.4.1 LCC

The LCC AOM is the primary operational aviation resource planner within the LCC for aviation resources. The planning section of the LCC should also be planning with input from the LCC AOM but the focus should be over a longer period. Resources should be planned and drawn from allocated resources however, if circumstances and efficiency dictate, the extra resources may be requested from the SCC through the submission of a TR to the SCC.

The resources available and their disposition should be detailed on the LCC Status Board.

5.4.2 SCC

The SCC AOM has the responsibility of managing any extra or reallocation of resources that may be required. Information related to aviation operators, resources, personnel, etc. should all be held within the NSW RFS AOL.

5.5 Resource Allocation

5.5.1 SCC

The SCC manages NSW DPI aviation resources at a strategic level. The allocation of resources by the SCC is made to the LCCs. The SCC should not be involved in the operational management of resources at a local level.

When priorities change at a State level, the SCC via the NSW RFS SAD may reallocate existing resources or, using the information within the NSW RFS AOL, seek extra resources from NSW RFS SAD. Any proposed changes to resource allocation should support amendments to the IAP.

The Status Board is an important tool in providing the AOM with an instantaneous 'picture' of the allocation and disposition of assets.

Ongoing communication with the LCC is essential to ensuring proper and efficient allocation of aviation assets. If low levels of activity are encountered or planned, the SCC in consultation with the LCC may 'release or retain' operators via the NSW RFS SAD.

5.5.2 LCC

The LCC manages aviation resources at a tactical level, i.e. the day-to-day utilisation and allocation of aviation within the LCC area of responsibility. No aviation activity should happen without the planning and approval of the LCC.

The Status Board is an important tool in providing the AOM with an instantaneous 'picture' of the disposition of assets, their availability, priorities and the status of support services such as airfields.

5.6 Operational Planning

Operational planning and execution is the responsibility of the LCC utilising information provided by the FCP (TDRA, TR), the pilot and operator (conditions, availability and capability of the pilot/aircraft), and other sources of information (e.g. Bureau of Meteorology, airport operators, chemical and fuel providers).

The LCC coordinates activities that support aviation operations within the area of responsibility including but not limited to:

- Airfield access (refer to Appendix 4 for more details);
- Fuel availability and access (refer Appendix 5 for more detail);
- Assigning Air Surveillance Officers (ASO) (i.e. NSW DPI, LHPA, NSW RFS, or other agency aircrew);
- Chemical availability, location and transport;
- Ensuring the FCP has gained the appropriate permissions;
- Accommodation;
- Ground transport;
- Dangerous Goods movement, storage and handling; and
- Communications.

When planning, it is essential that the LCC work closely with the operator's nominated representative, the pilot and the FCP.

The LCC is responsible for determining and establishing, in consultation with the Operator, what facilities will be required in order to conduct the task, and then liaising with the appropriate agencies, organisations and individuals to have the facilities available. This may include such considerations as airfield, fuel providers, chemical delivery, ground transportation, and other service providers.

Although, with agreement of the operator, the operator may be assigned certain tasks by the LCC, the LCC must maintain oversight to ensure the capability is provided efficiently and economically and as agreed.

Planning for each flight should include the development of a:

- Task plan (Aircraft Task Operations Plan Form);
- Passenger Manifest (NSW RFS form); and
- Airbase Briefing Checklist (NSW RFS form).

Personnel permitted on aircraft include the pilot, Air Surveillance Officers, land owners/managers and passengers as outlined in the relevant task profile.

Non-authorized passengers are NOT permitted to travel in tasked aircraft.

All aircraft passengers are to be listed on a Passenger Manifest Form – the original of which is to be left with a competent person on the ground and a copy each held by the operator and the LCC.

All tasks, whether approved or not, are to be logged using the Aerial Control Log spreadsheet. Completion of task information can occur when Flight Operation Returns (FORs) are received from the operators/pilots.

5.7 Task Briefing

The briefing of a task is the responsibility of the LCC AOM (conducted by the AOM or the AAOM) and may be conducted face to face, by phone, or radio. Refer to Appendix 3 for further details. The pilot should receive a hardcopy of the briefing (email, fax, copy) and acknowledge receipt (Airbase Briefing Checklist). Copies of the brief should also be sent to the operator and the FCP.

Briefs are normally provided at least one hour before scheduled takeoff time so it is vital that the AOM/AAOM prepares the brief early. Provided it is maintained up-to-date, the Status Board will provide much of the required information. Multiple tasks may be briefed in a briefing session. Any minor updates should be briefed in breaks between tasks or in flight.

Briefing pilots while the aircraft is running (e.g. hot refuel or chemical loading) should be avoided. The pilot's focus will likely be on the task at hand rather than absorbing the information being provided during the brief.

It is at the briefing that the manifest is finalised and checked for accuracy. The task profile will detail who may be carried on particular flights. A copy of the manifest is to be kept by the operator and the LCC. An accurate manifest must be kept for all flights undertaken.

The pilot is responsible for providing a pre-flight briefing to any passengers and/or aircrew for each flight undertaken.

5.8 Flight Management

5.8.1 Flight Following

Flight Following is conducted to ensure a quick and reasonably accurate response to an accident or incident. It is a procedure whereby a competent person keeps track of the progress of a flight through radio or phone contact at 30-minute time intervals (may be extended to 60 minutes if the aircraft is operating within a known area), or satellite-based screen tracking. Search and Rescue (SAR) action is initiated if contact is not maintained or if there is some doubt as to the safety of the aircraft.

A 'competent person' is someone who is trained and assessed as competent to take responsibility for Flight Following and SAR arrangements. If flight following is being conducted by the LCC, then the task would normally be performed by the AOM or AAOM.

The LCC may assign the operator this task provided the operator agrees it can demonstrate that it can perform the task competently and the LCC regularly checks to ensure that the operator is performing the role as required and those checks are recorded in the Event Log. An operator may only conduct flight following on its own aircraft.

A flight following form is to be completed by whoever is conducting the flight following task and that shall be submitted at the end of each day's flying to the LCC. Even when a satellite-based flight following system is used, the record must still be kept to show that the operator was properly conducting the task.

The conduct of flight following by the LCC or the operator does not absolve the pilot from conforming to any required civil aviation procedures.

Flight-following requirements include:

- a) Scheduled reporting at 30-minute intervals to a competent person. The call period may be adjusted to suit specific operational conditions, but cannot exceed 60 minutes;
- b) Reporting should ideally be done using GRN or airband V- or UHF radio;
- c) Where radio communications are not possible, mobile or satellite phones may be utilised; and
- d) Approved satellite-based tracking systems may also be used but the Flight Following Form needs to be maintained to ensure that the tracking is being observed (the 60 minute call still needs to be made).

Flight Following responsibilities – use NSW DPI Flight Following Form or similar. The person conducting flight-following duties shall:

- Record aircraft type and registration or callsign(s);
- Monitor flight-following calls including, importantly time of departure (if an aircraft does not make a departure call within 15 minutes of the anticipated takeoff time, enquiries as to the whereabouts of the aircraft shall be made and SAR actions commenced if required);
- Record time of call, location and intentions of pilot;
- Record the time of flight to tanks dry (aircraft endurance);
- Record expected time of next call;
- When there is a change of passengers, record name changes on Passenger Manifest form;
- Record changes to tasking or of area of operations;
- Record time of arrival at final destination; and
- Initiate Search and Rescue and CIRP action if required.

Pilot is responsible for:

- Making a departure call to the flight-follower;
- Reporting location every 30 minutes thereafter (60 minutes in some circumstances is acceptable but the longer between calls, the longer it would be expected to locate a downed aircraft);
- Ensure an accurate crew/passenger manifest is maintained and reported;
- Reporting changes to tasking;
- Reporting changes to time of tanks dry (endurance);
- Reporting change of area of operations; and
- Reporting arrival at destination.

5.8.2 Aircraft Overdue Procedures (LCC)

Refer to the Interagency SOPs – SOP 1.6.1 for detailed instructions on search and rescue.

If an aircraft becomes overdue:

- Attempt to contact the aircraft
 - on agreed channel;
 - aircraft/pilot phone;
 - via ground personnel at last known location;
 - via other tasked aircraft;
 - via the operator at the nominated contact number.
- Continue to try at regular intervals;
- Arrange for Air Services Australia (ASA) to call the aircraft - Contact ASA on 1800 805 150 (information as recorded on the flight following form will be required);
- Consider if aircraft has diverted and not advised; and
- Notify the SCC of the possible overdue aircraft. SCC to contact NSW RFS SAD.

If there is still no contact with the aircraft after 30 minutes:

- Notify Air Services Australia on 1800 805 150;
- Mobilise available resources that may be available;
- Consider the use of locally tasked aircraft to conduct a preliminary search;
- Contact Australian Search and Rescue (AusSAR) on 1800 815 257;
- Notify local police and other emergency services; and
- Notify SCC of actions.

5.8.3 Flight Conduct

The Operator and pilot in cooperation with the AOM are responsible and accountable for the safe and efficient conduct of all flights. All tasks are to be conducted in accordance with an approved task profile, TDRA, Aircraft Task Operations Plan, and Air Operations Task Brief.

The pilot shall ensure the recording of appropriate information to ensure the proper completion of the FOR. This may include satellite location logs. An incomplete or incorrect FOR may result in the non-payment of an invoice. The ASO shall complete an Air Observation Report for surveillance or shooting tasks.

The AOM shall monitor the flight to ensure that its conduct is likely to safely and efficiently achieve the intended objectives. Any incidents must be reported using the NSW DPI EM Incident Report form and where appropriate the ATSB Aviation Accident or Incident Notification form. Refer to Appendix 1 for more details.

5.8.4 Debrief

Debriefing a flight is important in establishing what happened, what was achieved and for continual improvement of operations.

The LCC AOM should debrief the pilot and other aircrew following the flight and complete the Air Operations Debrief Form. Ideally, the Operator and FCP should also be involved.

5.8.5 Records

An essential aspect to the continual improvement of NSW DPI aviation operations is the collection of records for later review and analysis. It also assists to ensure that the conduct of the task matches the costs anticipated and agreed to.

There are numerous records that reflect the progression of a task from concept to completion and payment. The Aviation Task Checklist provides an aide-memoire to ensure that all required records are collected.

The SCC, LCC and FCP personnel shall each maintain a daily Event Log that records events and decisions. Forms identified on the Aviation Task Checklist shall be located on the EDM Server to be kept for later reference, auditing, review and analysis purposes.

The pilot shall fully and properly complete the FOR on the completion of each flight. One copy of the FOR shall be submitted to the FCP or the LCC for placement on the EDM Server on the completion of each day's operations while the Operator keeps another. The Operator, when invoicing, shall provide copies of the FOR(s) that the invoice(s) refer to and these shall be matched with the FORs submitted by the pilot to NSW DPI.

It is the responsibility of the AOM to ensure the Aerial Control Log for each task is maintained daily on the EDM Server by the LCC.

Aerial Spray Record Forms including Sat-Logs must be completed by the operator and submitted to the LCC within a week of the spray task completion. The operator shall also provide a copy of the spray record to the owner/occupier of the land sprayed.

Any occurrences must be properly recorded (Incident Report Form) and accidents responded to in accordance with the NSW DPI CIRP.

AOM is responsible for the completion of the task and the correct compilation of all records.

All records are to be scanned and placed within EDM, saved according to task numbers. The following records are to be collected, collated and retained by the LCC:

Form	Clause	Details
Aviation Task Checklist	5.8.5	raised and maintained by the LCC
Event Log	5.8	maintained by FCP, LCC and SCC personnel
Task Description & Risk Assessment (TDRA)	5.2	raised by the FCP and submitted to the LCC with the task request
Task Request	5.2	<ul style="list-style-type: none"> operational task: raised by the FCP and submitted to the LCC or raised by the LCC extra resource allocation: raised by the LCC and submitted to the SCC
Aircraft Request, Retain or Release form	5.2.3	raised by SCC and submitted to NSW RFS SAD
Task Form	5.2.3	issued by NSW RFS SAD to SCC – details asset deployment (SCC forwards to LCC)
Aircraft Task Operations Plan Form	5.6	raised by the LCC for each task
Airbase Briefing Checklist (NSW RFS form)	5.6, 5.7, App 3	raised by the LCC for each task
Passenger Manifest (NSW RFS form)	5.6 & 5.7 App 3	raised by the LCC and final copies held by LCC and Operator (if doing Flight Following)
Aerial Control Log	5.6 & 5.8.5	raised and maintained by the LCC (a spreadsheet)
Flight Operations Return	5.8 & 5.9	RFS carbon book of 3 - raised by the pilot; top copy (white) to LCC with the invoice by Operator, next copy (pink) given to the LCC, last copy (yellow) remains in book
Flight Following (NSW DPI or similar)	5.8	Operator and/or LCC - as per Operations Plan
Air Operations Task Debrief Form	5.8	raised by the LCC for each task
Incident Report Form (NSW DPI EM)	5.8	Pilot, Operator, any aircrew, FCP/LCC personnel - submitted as required to LCC
ATSB Aviation Accident or Incident Notification form	App 1	Pilot, Operator, any aircrew - submitted as required to ATSB or CASA or other agency (Police etc), copy to LCC
Purchase Order	5.3 & 5.9	raised by the LCC
Invoice	5.9	raised by Operator
Air Observation Report	5.8	Air Surveillance Officer to LCC
Aerial Spray Record	See below	Pilot - copy to LCC & Property Owner/Manager
Satellite Records	5.8.3 & 5.8.5	supplied by the Operator as part of Flight Following, spray or surveillance tasks
Post Control Check	5.10	completed by FCP

5.9 Payment Process

LCC Logistics is responsible for raising Purchase Orders in response to approved Task Requests. The Purchase Order shall include the TR number and is supplied to the Operator by Logistics LCC.

On completion of the task, the Operator raises the invoice referencing the PO and TR numbers and submits it with the white copy of the FOR to Logistics LCC. Logistics LCC shall ensure the documents are placed into the EDM for the AOM to validate the services provided are in accordance with the TR and the submitted invoice. Once the AOM has validated the invoice, Logistics LCC can arrange payment.

5.10 Review and Reports

The LCC shall provide to the SCC a daily 'Sitrep' (Situation Report) to provide an overall picture of the day's activities. The aviation component of the Sitrep should include:

- a) An overall summary of the day's activities;
- b) A disposition of aviation assets;
- c) What was planned versus what was achieved;
- d) A summary of tasks conducted and hours flown;
- e) Any occurrences (accidents or incidents); and
- f) Any activities that may be subject to public or media comment.

A summary of the aviation tasks and standard measures of those tasks is available in the Aerial Control Log spreadsheet. A systematic review of the efficiency and effectiveness of the task conduct is the responsibility of the SCC and LCC AOMs.

Effectiveness of spray tasks is conducted by the FCP inspecting sites at appropriate intervals after spray tasks are completed. These inspections are recorded on Post-Control Check forms. Checks are made to investigate complaints, to check for off-target impacts (non-target species or out-of-bounds area), and check efficacy. Samples may need to be collected for residue testing. Where issues are identified, the LCC must record it on an Incident Report form, notify the SCC and initiate an investigation. Spraying activities may need to be halted until the issue is resolved.

On-going review and analysis of incident reports and investigations by the SCC AOM and LCC AOMs must be undertaken to identify any trends and possible system improvements.

6. References

Policy

- TI-A-135 Enterprise risk management policy
- [TI-O-113 Emergency management – Use of aviation](#)

Procedures

- [Aviation risk assessment and management process](#)
- [Aviation contracting for emergency operations](#)
- NSW DPI Safety Standard 6 - Incident Management
- NSW DPI/NSW RFS Service Level Agreement
- NSW & ACT Interagency Aviation Standard Operating Procedures (NSW RFS document)
- [Risk assessment for emergency management](#)
- [Strategic planning for aviation resources](#)

Role descriptions

- [Aviation role descriptions](#)

Forms

- [Aerial control log](#)
- [Aerial spray record](#)
- [Aircraft request, retain or release](#) (NSW RFS form)
- [Aircraft task operations plan](#)
- [Air observation report – Locusts](#)
- [Air observation report – Natural disasters](#)
- [Airbase briefing checklist](#) (NSW RFS form)
- [Air operations task debrief](#)
- [ATSB Aviation Accident or Incident Notification form](#)
- [Aviation task checklist](#)
- [Event log](#)
- [Flight following](#)
- Flight Operations Return (FOR) – NSW RFS book (3 carbon copies)
- [Incident report form](#)
- [Passenger manifest](#) or NSW RFS book
- [Post control check](#)
- [Task Description & Risk Assessment \(TDRA\)](#)
- [Task request](#)

Task Profiles

- [Aerial Mustering](#)
- [Aerial Shooting](#)
- [Aerial Spotting in support of spraying](#)
- [Aerial Spraying](#)
- [Aerial Surveillance](#)
- [Aerial Transport](#)

Task Risk Assessments

- [Aerial Mustering](#)
- [Aerial Shooting](#)
- [Aerial Spotting](#)
- [Aerial Spraying](#)
- [Aerial Surveillance](#)
- [Aerial Transport \(including winching and external load lifting\)](#)

Legislative Acts and Regulations

- [Air Navigation Act 1920](#)
- [Civil Aviation Act, 1988](#)
- [Civil Aviation Advisory Publication \(CAAP\) 92-2\(1\)](#)
- [Civil Aviation Safety Regulations 1998](#)
- [Work Health and Safety Act, 2011](#)
- [Pesticides Act, 1999](#)
- [Rural Lands Protection Amendment Act 2008](#)
- [Transport Safety Investigation Regulations 2003](#)

Information

- [Australian Plague Locust, Landholder Control Strategies for NSW](#)
- [Australian Transport Safety Bureau](#)
- [Airservices Australia – Frequency assignment in the aeronautical radio frequency spectrum](#)
- NSW & ACT State Air Desk EOI for CWN Helicopters and Fixed Wing Aircraft to Support Emergency and Other Operations (available from NSW RFS)
- EOI for CWN Fuel Trucks (available from NSW RFS)

7. Appendices

- Appendix 1 Hazard, Incident and Accident Reporting
- Appendix 2 Guidance on Operations Centre Setup
- Appendix 3 Guidance on Aviation Briefings
- Appendix 4 Selection of Landing Sites
- Appendix 5 Refuelling and Loading
- Appendix 6 Aviation Decision Flow Chart
- Appendix 7 Aviation Asset Deployment

Appendix 1 - Hazard, Incident and Accident Reporting

(see 5.8.3)

Any personnel (flight crew, the aircraft owner, the operator, the hirer, aircraft crew and the ground crew) involved in or becoming aware of a hazard, accident or incident shall notify the LCC Air Operations Manager immediately and complete reports to the ATSB (as below). The AOM shall immediately notify the SCC. The SCC will keep the NSW DPI Health and Safety Unit and the NSW RFS SAD informed including copies of reports of major incidents and all injury report forms according to the NSW DPI Workplace Incident Management procedure.

Any immediately reportable or routine reportable matters as defined by the Transport Safety Investigation Regulations 2003 must be reported to the ATSB:

- using the accident/serious incident hotline, 1800 011 034
- followed by a written report within 72 hours using the online notification form or the [ATSB Aviation Accident or Incident Notification form](#) (found at www.atsb.gov.au)

A copy of the ATSB report must be forwarded from the LCC to SCC. Hazards and potential risks in aerial control must be reported as soon as they are identified and communicated to the whole operation.

When an accident occurs, the aircraft and anything in the aircraft is deemed to come into the custody of the Director of ATSB and it must not be removed or interfered with. The removal of persons, animals or mail is permissible (Air Navigation Act 1920 - Part 2A (Division 7)).

Rescuers are permitted to take such action as is necessary to protect the wreckage from further damage and to prevent danger to aircraft, to other transport and to the public.

Goods and baggage may only be removed from the wreckage under the supervision of the police or another authorised officer.

Notify OEH about incidents involving transport of dangerous goods and WorkCover NSW regarding other incidents with dangerous goods.

Flight Duty Limits and Fatigue Management

(see 5.5.2 and 5.6)

Operators and pilots of contracted aircraft are responsible for the maintenance of flight and duty times in accordance with CASA regulations and must ensure that these flight and duty times are not exceeded.

Pilots or operators must advise the Local Air Operations Manager when limitations are likely to affect control operations. Normally, the operator should manage crewing issues however should the operator be unable to provide alternate crew, LCCs shall liaise with the SCC regarding replacement aircraft and other management alternatives. SCC Operations will then liaise with the NSW RFS SAD. Flight and duty times and fatigue management is in accordance with Interagency Aviation SOPs.

Operators should also provide feedback to NSW DPI to ensure arrangements including location and accommodation facilitate fatigue management.

NSW DPI, LHPA and other agency personnel involved in aviation operations are not to occupy a crew position when fatigued.

Appendix 2 - Operations Centre Setup

(see 5.1.3)

Operations centres may be setup within other agencies control centre, enabling the use of communication equipment.

The following guidance is to assist in the setup and management of the day-to-day management of the LCC.

- a) First and foremost, preparation is the key to the successful management of an air operations desk or centre. Importantly, all contact numbers, environmental conditions, task information and aviation services should be readily accessible and accessible in different forms.
- b) The LCC Air Operations Manager/Assistant Air Operations Officer should have several folders with up to date information contained therein. Although the information can be held in soft-copy form, a hard-copy should be retained to ensure access and availability should power fail or IT issues. These folders should include but not limited to:
 - Contact names, numbers and email addresses (should include departmental, local airfield, operator, Air Services, AUSSAR, police and aviation advisor information);
 - Airfield data (should include information about each airfield likely to be used in the region and should notate operator contact, runway and aviation facilities, fuel availability, security, access information, any hazards and notations about road access);
 - Task (each task should have its own folder which details the task, location, nearest airfields, logistic support, etc. and should include any copies of invoices, receipts, and orders). Note: All task information should be located electronically on the EDM server under the task number to ensure that other roles have access to the information;
 - Weather (each day's weather should be obtained and held for archive purposes). General weather forecasts can be accessed at www.bom.gov.au;
 - Communications records including logs; and
 - CIRP (actions, contact numbers, instructions on handling the media).
- c) The LCC air operations shall also maintain a log of all communications and decisions and this should be retained for future review.
- d) The LCC should establish a 'Status board' as a large aide memoire. The Status board should show current information contained in the folders such as aircraft callsigns, location, task, next flight following check in, etc.

Communications

- SCC AOM is responsible (in conjunction with the LCC AOMs and operators) for ensuring an adequate communications network for aviation operations
- VHF airband frequencies are allocated to NSW DPI by Airservices Australia for use during responses.
- VHF airband base radios will be allocated to LCC as required.
- Frequencies will be allocated to LCC for exclusive use and should be used for Flight Following, SAR and tasking purposes.
- Use of government and non-government communication networks, eg. RFS, GRN, etc, may be authorised after consultation with the network owner.
- Mobile and satellite telephones may be utilised when no other method is available but the LCC and operators shall be cognisant of reliability of coverage and that there is an inherent delay in communications that adversely affect an emergency call (dialling and connection). A check call will be required on taxi and when in the operating area.

Appendix 3 - Aviation Briefings

(see 5.7)

Comprehensive briefings involving all operational personnel are a vital component to the conduct of safe and efficient aviation operations, given the complexity and risks associated with these operations. Pilots are however, ultimately responsible for the safe operation of the aircraft.

- a) Daily general briefings should involve pilots and operational personnel. Task-specific briefings (Airbase Briefing Checklist) should also be undertaken, either following general briefings or prior to tasks. Briefings should be based on the Aircraft Task Operations Plan and include:
- daily objectives;
 - control activity;
 - weather including expected cloud, wind, temperature and relative humidity/precipitation;
 - aircraft and tasking;
 - refuelling and loading;
 - communications and flight following;
 - low-level operations;
 - NOTAMS (Notice to Airmen) including an Low Jet Route (LJR) activity that may impinge on operations;
 - risk and safety issues including incidents, trends and specific safety hazards relevant to the period and area of operations; and
 - administration, including flight and duty times and maintenance issues, and time to next maintenance release.
- b) Weather information should be made available by the LCC Air Operations Manager; however, pilots are responsible for ensuring that they possess appropriate weather information. Crews need to be aware that extended areas of operation may involve significant local weather influences.
- c) Similarly, pilots are responsible for ensuring that they possess the latest NOTAMS, LJR and other required information to ensure the flight is conducted safely and within aviation regulations.
- d) Briefings need to specifically emphasise the risks associated with low level flying operations and the importance of hazard identification and assessment, cockpit communication and discipline.
- e) A sterile cockpit environment involves the elimination of non-essential communication or movement within the aircraft when conducting operations and in accordance with operator's instructions. This requires the application of rigorous crew resource management techniques including, but not limited to:
- the elimination of extraneous communication;
 - the elimination of distractions;
 - the verbalisation and read-back of hazards;
 - the verbalisation of intentions; and
 - the questioning of actions that are not consistent with safety or with previously verbalised intentions.
- f) All personnel are to receive a safety/emergency briefing from the pilot prior to any flight, specific to the type of aircraft in which they will be flying. The briefing should include points as detailed in the Passenger Manifest form. The pilot must complete this form prior to departure.

Appendix 4 - Considerations

(see 5.6)

Although it is unlikely that NSW DPI personnel will be called upon to manage an airbase, the following information is provided as guidance.

The management of airbases and the coordination of aircraft operations play a pivotal role in the safe and efficient use of aircraft.

- a) LCCs with aircraft operations shall appoint a dedicated, qualified Local Air Operations Manager (and where required, Assistant Air Operations Officers). The Local Air Operations Manager needs to have experience in aircraft operations and tasking. Role responsibilities are listed in role descriptions for aviation.
- b) Local Air Operations Managers may work from either the LCC or FCP or a forward airbase, depending on the nature of operations. Local Air Operation Managers are ground based and are not to fly.
- c) Airbase selection and establishment is an important factor in maintaining safety and operational efficiency. Issues to consider include:
 - infrastructure including road access;
 - proximity of accommodation and food supplies;
 - fuel availability and resupply;
 - airfield accommodation and ablutions;
 - water supply, insecticide storage and loading;
 - aircraft hazards including wires, structures and wildlife;
 - access;
 - availability of emergency services and emergency items such as fire extinguishers;
 - wind indicators;
 - communications;
 - security; and
 - aircraft maintenance facilities.
- d) The Local Air Operations Manager in consultation with the pilot or operator should undertake hazard identification and risk assessment for any potential airbase location. Airbases and flight paths need to be located well clear of any power lines and other hazards.

Selection of Landing Sites

Selection of landing sites is specified in the task profiles and the relevant Civil Aviation Advisory Publication.

Minimum standards are required in the selection of Aircraft Landing Areas (ALAs) and Helicopter Landing Sites (HLSs) to enhance safety. These procedures are **not** exhaustive.

- a) Use established landing grounds or known safe areas. ALAs and HLSs are to meet, as a minimum, the requirements documented in Civil Aviation Advisory Publication (CAAP) 92. Additional restrictions may be placed from time to time by Local Air Operations Managers or other stakeholders.
- b) CAAP 92 defines a basic ALA and HLS as a place that may be used as an aerodrome for infrequent opportunity and on a short-term basis for all operations by day and under visual flight rating (VFR). The use of the CAAP guidance, especially in relation to a basic ALA and HLS is, however, subject to the acceptance by the pilot of the requirement to exercise sound airmanship. Further, it is inappropriate to use the minimum basic criteria at operating bases

from which operations are intended to be conducted on a repetitive basis for more than a day.

- c) In circumstances where the basic criteria could be applied in accordance with CAAP 92, Pilots-in-Command shall allow appropriate safety margins in addition to the criteria for non-emergency situations.

Task Management

Multiple aircraft operations need to be closely monitored to ensure safety is maintained:

- a) Pilots will be responsible for maintaining separation between aircraft.
- b) A common radio frequency should be allocated to aircraft working in close proximity to ensure communications are maintained.
- c) Aircraft involved in spraying operations may be supported by a spotter helicopter to assist in hazard identification and the effective conduct of the task.
- d) All spotter aircraft flights will have appropriately trained and competent observers on board that have been approved by the LCC.
- e) Height separation may be needed between aircraft on different tasks that may be occurring in close proximity to each other.

Appendix 5 - Refuelling and Loading

(see 5.6)

Mixing/loading and refuelling crews shall wear appropriate PPE as specified by the Civil Aviation Safety Authority Australia (CASA) or WorkCover NSW, including, as a minimum, long trousers and long-sleeve shirts in a non-synthetic material, boots or fully enclosed footwear, ear protection (muffs, plugs), hats, eye protection (eg. goggles, tinted safety glasses), chemical gloves and safety vests.

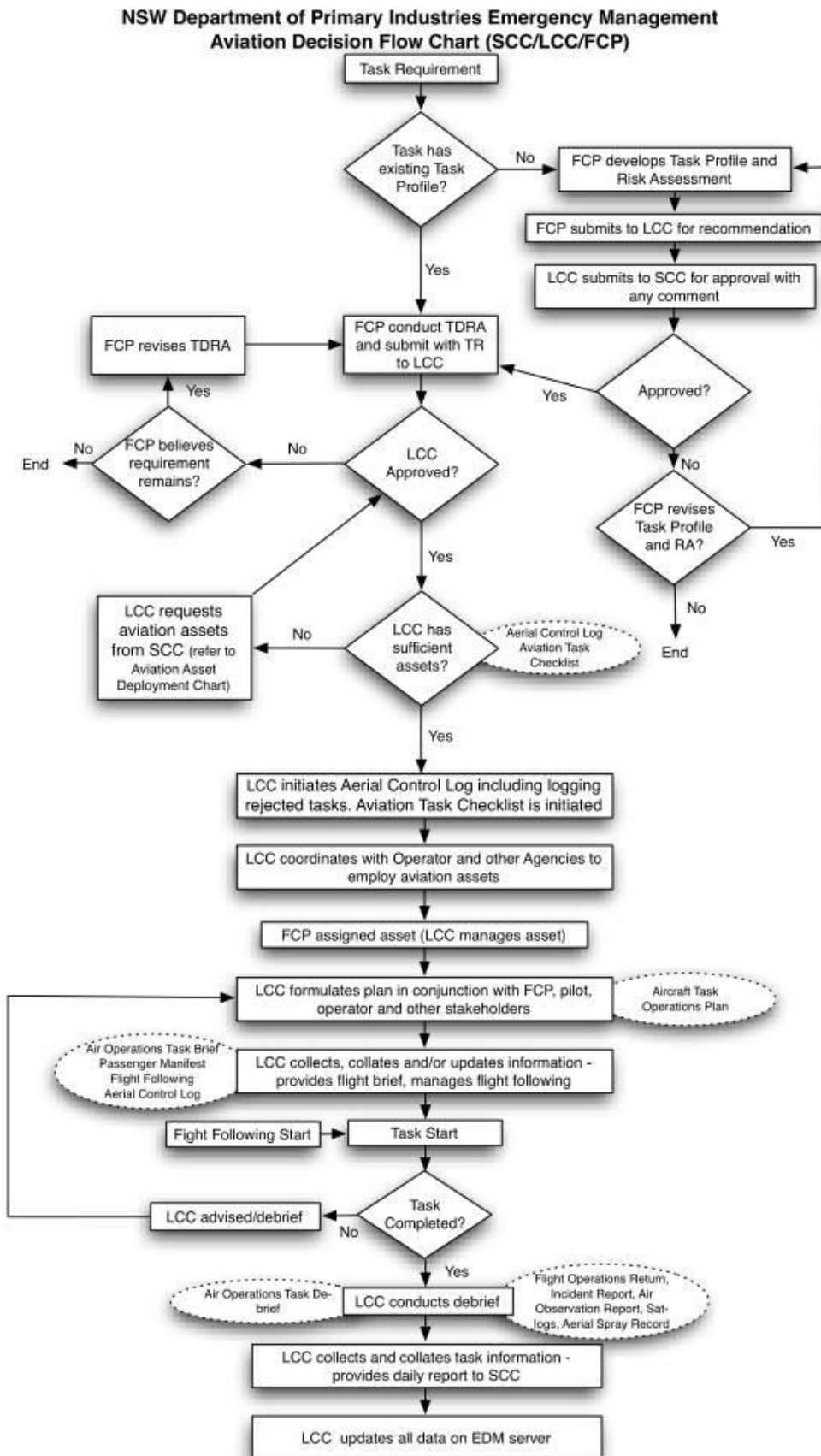
Operators shall ensure that proper hazard controls are in place. This shall include management of electronic devices in hydrocarbon environments, chemical and fuel storage, fire fighting and spill containment.

In larger and/or remote operations, the NSW RFS SAD may coordinate bulk fuel operators for the provision of fuel through the NSW RFS CWN Fuel Suppliers List.

Operators are responsible for:

- a) Ensuring fuel quality and testing, provision of refuelling personnel, and associated PPE;
- b) Mixing crews and loaders, equipment and associated PPE;
- c) All safety and fire precautions detailed in the operator's Air Operations Manual, including fire-fighting equipment, and bunding for fuel, chemicals and earthing procedures for the aircraft;
- d) Safety of personnel around aircraft – all authorised passengers (observers) and uninvolved aircrew are to move a minimum 25 metres clear of aircraft during refuelling and loading operations;
- e) Hot refuelling of turbine-powered helicopters with Jet A1 - permitted in accordance with approved flight and operations manuals;
- f) Hot refuelling of AVGAS-powered aircraft **is not permitted; and**
- g) Safe handling of pesticide in accordance with relevant OEH and WorkCover NSW requirements.

Appendix 6 – Aviation Decision Flow Chart



Appendix 7 – Aviation Asset Deployment

**NSW Department of Primary Industries Emergency Management
Aviation Asset Deployment**

