

## Aviation Task Profile - Aerial Mustering

This task profile outlines the identified hazards associated with aerial mustering operations by helicopter. Failure to utilise the practical controls to those hazards identified in this plan will unnecessarily raise the risk profile of the task.

This task profile can be used to develop standards and/or to provide a reference for auditing and assessment by identifying the controls that are in place, assessing the risk and then determining what extra (if any) controls should be utilised.

Compliance with aviation and state work health and safety (WHS) regulations, as well as any other applicable regulation, are implied and are to be considered and complied with in addition to the controls identified in this profile.

<b>Task Profile Name</b>	Aerial Mustering – Helicopter Only
<b>Objectives of Task</b>	To muster livestock by air in support of NSW DPI Emergency Management tasks.
<b>Description of task</b>	<p>The task involves planned and short notice callout to at risk areas as part of emergency management. Heights flown en-route shall be a minimum of 500ft AO unless landing, taking off or due stress of weather. Landings and takeoffs at non-aerodromes will be required.</p> <p>Task entails locating and aggregating stock in affected areas and driving them by means of aerial manoeuvring to safer areas.</p> <p>Mustering operations will be conducted below 500ft AO. No other person shall be carried in the helicopter during mustering operations.</p>
<b>CASA permit/approval</b>	<p>Air Operating Certificate (AOC) and/or a Part 138 Aerial Work Certificate that includes approval for aerial mustering and use of pilots that have the qualifications that comply with the requirements of Part 138 and any other pertinent requirements have appropriate experience in low level flying.</p> <p>Operations are to be conducted within the parameters permitted by the Civil Aviation Safety Regulations, associated orders and relevant advisory publications. The Contractor's Operations Manual shall include specific guidance and instructions on the conduct of aerial mustering.</p>
<b>Aircraft Type</b>	Only helicopters may be utilised.
<b>Number of engines</b>	Single engine turbine or piston.

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<p><b>Task profile (sequence)</b></p>	<ul style="list-style-type: none"> <li>• Callout</li> <li>• Planning including map reconnaissance for hazards, assessments of takeoff and landing areas, aircraft and pilot support availability where appropriate</li> <li>• Briefing including update of hazards as shown on appropriate map, flight following procedures, weather, task objectives, landing/takeoff areas, communications, aerial risk assessment.</li> <li>• Fuelling when required</li> <li>• Start/Taxi/Takeoff</li> <li>• Transit to area of operation at a height commensurate with conditions and regulatory requirements but in any case at a height not below 500 feet (ft) Above Obstacles (AO).</li> <li>• Conduct route and area of operations identification, and aerial hazard survey prior to descent below 500ft AO at Helicopter Landing Sites (HLSs) and non-certified Aircraft Landing Areas (ALAs) or aerodromes.</li> <li>• Conduct area surveillance if landing at a non-certified HLS or ALA initially not below 500ft AO. Further descent requires prior authorisation (to use the HLS/ALA), risk assessment, and hazard identification.</li> <li>• Descend to conduct task commensurate with task objectives, authorisations, and conduct further hazard/target identification if required.</li> <li>• If operating to a certified aerodrome, conduct operations in accordance with standard regulatory, advisory and Company procedures and documentation.</li> <li>• Communicate with Air Services as required by standard regulatory, advisory and Company procedures and documentation.</li> <li>• Communicate with LCC or Contractor (as approved) for flight following and/or task update.</li> <li>• Transit to operating base/fuelling area.</li> <li>• Land / shut down.</li> <li>• Debrief and report.</li> </ul>

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<b>Task conditions or technical aspects</b>	<p>Information from aerial surveillance of the operating area may be available and may be augmented by information obtained from ground-based information.</p> <p>Flights into and out of non-certified HLSs/ALAs may be conducted in day visual conditions only and at a speed commensurate with safe operations in the environmental conditions being experienced. Flights into and out of certified aerodromes may be conducted in accordance with the CASA regulations, aircraft capabilities and pilot qualifications.</p> <p>Pilots should ensure helicopters operate with a minimum 5% power margin based on Out of Ground Effect power requirements (nil wind) or sufficient MAP margin (piston engines) to ensure that there is sufficient power for all operations and the MAP utilised never exceeds that calculated for the day. Consideration shall also be made of extreme environmental heat and cold on the safety of aircraft operations.</p> <p>The task is normally conducted when an agricultural incident occurs and it is determined that aerial mustering of livestock is needed.</p> <p>Maps may be provided to assist pilots, but these should not be relied on for the identification of hazards and therefore the reconnaissance of operating areas before descent is essential. The helicopter must be equipped with a GPS and mapping system to assist with the accurate recording of information (e.g. location). Ideally, the system must facilitate recording the flight path and events for later review if required.</p> <p>Although 500ft has been nominated as the safe level of operations, it should be noted that wires may be strung between hills at higher levels and therefore constant vigilance by the pilot is required even when transiting at this height.</p> <p>Descent below 500ft may be conducted when required for the task and after the pre-descent reconnaissance has been completed. The entire area that the aircraft operates below 500ft shall have been fully inspected in the pre-descent reconnaissance. The area should be continually assessed during the descent and operations below 500ft. The purpose should be only to muster livestock.</p> <p>A complete pre-landing survey is required to ensure that no obstacles may impinge on the safe operation of the helicopter.</p> <p>Helicopters are not to be operated with any part of the aircraft extending into vegetation (e.g. long grass which may be hiding fences, ant hills or posts).</p>
<b>Time of Year</b>	Operations are year-round
<b>Terrain description</b>	<p>The areas of operations will encompass all types of terrain including paddocks, hills, and urban areas.</p> <p>The high terrain areas can experience low air density, which can adversely affect helicopter's performance. Also, the terrain can experience severe downdraughts and turbulence as a result of the strong winds. Cloud can roll in quickly.</p> <p>The lower areas can experience extensive areas of fog, mist or smog, which can limit visibility.</p> <p>The areas can be extensively wooded and/or populated with domestic structures in close proximity to power lines. Fences may be hidden in long vegetation.</p> <p>Areas may be flooded or affected by smoke or other natural emergencies.</p>

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<b>Limitations</b>	<p>Flights into or out of non-certified landing areas conducted in day visual conditions only.</p> <p>Landings at, and departures from non-certified shall be preceded by an appropriate risk assessment including aerial aviation hazard identification and assessment, assessment of environmental risks.</p> <p>Descent below a safe height clear of all known and potential obstacles is not to be conducted prior to confirmation of hazards and consideration of aircraft performance, environmental conditions and the assessment of the risk associated while low flying.</p> <p>This is a single pilot operation only. No passengers or other personnel are to be carried on mustering flights.</p> <p>(CAAP 92-2) Helicopter Landing Site (HLS) are normally required for landings and departures, however, should the task require, operations to other areas may be authorised following a risk assessment.</p> <p>Pilots should be aware of the chances of blockages in aircraft intakes due to flying through insect swarms.</p>
<b>Height restrictions</b>	As a general rule, flights are to be conducted at the highest altitudes commensurate with the task objectives. Any operations to non-certified landing areas shall require to be identified in the task plan where possible.
<b>Minimum height above obstacles</b>	500ft AO is generally accepted as the minimum transit height unless otherwise authorised. This operating height is that required to complete the task within the CASA and Contractor limitations.
<b>Operating times</b>	Nominally 8 hours in any one day while consistent with the Contractors' fatigue management plan or CASA industry exemptions (whichever represents the greater restriction).
<b>Aviation Contractor Requirements</b>	<p>Contractor must be tasked through the RFS SAD and meet all requirements of the Standing Offer such as having:</p> <ul style="list-style-type: none"> <li>- a CASR Part 138 Operating Certificate and CASA authorisations suitable to the task</li> <li>- a demonstrably functioning Safety Management System</li> <li>- fatigue management, or CASA approved flight and duty time, system</li> <li>- been audited and assessed as being suitable and capable of conducting NSW DPI Emergency Management mustering operations</li> <li>- a proper and demonstrably functioning oversight of mustering operations</li> <li>- detailed and documented training system for mustering operations</li> <li>- a history of mustering operations with no accidents indicating a trend in poor oversight or safety management</li> <li>- proper and detailed maintenance records of the helicopter to be used in mustering operations</li> </ul>
<b>Crew composition</b>	1 - person crew; Pilot
<b>Qualification / Training of each Crewmember</b>	<b>Pilot</b> – CASA licenced, medically current, appropriate approvals, map and GPS navigation, Crew Resource Management, Fly the Wire (or similar), HUET (where required), mustering endorsed and experience (see Standing Offer)
<b>Role of each crew member</b>	<b>Pilot</b> – Identify hazards and maintain hazard clearance, operate aircraft, navigation, communication, responsible for safety of the aircraft, pre-flight briefings.
<b>Landing zone details</b>	Landings should be conducted to low risk (CAAP 92-2) Helicopter Landing Site (HLS).

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<b>Communication requirements</b>	<p>The communications requirements for flight following purposes shall be detailed during the pre-flight briefing. It should be noted that the communications management may reside with the Contractor but the LCC shall be responsible for ensuring that the flight following is being conducted.</p> <p>Communications should also be established and maintained between the aircraft and the ground crew element as appropriate in order to facilitate the communication of operational and hazard related information. Communications as required with flight services.</p> <p>Communications are to be established and maintained with other low flying aircraft in the immediate vicinity of ALAs or HLSs.</p>
<b>SAR requirements</b>	<p>Flight-following should be conducted by the aviation contractor using satellite-based tracking systems showing real time information with at a minimum location and height reports not exceeding 5 minutes. The Local Air Operations Manager should have access to the satellite tracking system where possible to monitor task progress and aircraft location. In circumstances where it is not possible or practical, the Local Air Operations Manager may decide to use an air base manager to coordinate flight following.</p>
<b>PPE</b>	<ul style="list-style-type: none"> <li>• Appropriate flying helmet (equipped with visor)</li> <li>• Flammable resistant clothing</li> <li>• Enclosed leather footwear (hardened toe and supported heel preferred)</li> <li>• Cotton or wool underclothing, socks</li> <li>• Aviation standard gloves (recommended)</li> </ul>