



Open Aviation Solutions

Precautionary Search and Landing — In-flight Notes

*CASA Recreational Pilot License (Aeroplane) – CASA Sample Syllabus
Lesson 24*

Language choices

"decide now" – reinforces acting on the judgement, not just recognising it.

"keep the field in sight" – repeated throughout the search and inspection.

"PAN early" – say it as soon as the decision is made, before the first pass – not once you're low and busy, or once things have already got worse.

Demonstration-Performance

For the sequence of each activity, choose whether you use:

- Demonstration-Performance: Explain, Demonstrate, Performance and Monitor, Evaluation
- DDM: Demonstrate, Direct, Monitor

or some other preference. Each in-flight activity just describes the sequence to be demonstrated and performed, regardless of the method you use.

Before starting the plane

- Confirm the student's **fuel log, best-endurance calculations**, and the **pre-flight documents** (MEL, NOTAMs, GNSS RAIM, ERSA, AIP) for today's flight are complete and correct – assessed this lesson (C2.1, C4.2)
- Confirm **approved practice areas/fields** for today, and the operator's **minimum height for a go-around** from a simulated precautionary landing – brief this explicitly, it is never flown to an actual touchdown outside an approved area or aerodrome unless a genuine short-field landing there is part of your operator's procedures
- **Cargo task** – hand the student a couple of small boxes and ask them to load them: "We're dropping some batteries off at another aerodrome while we're out." Let them work out where they go, how they're secured, and whether they're dangerous goods – assessed this lesson (C5.3)

Record	Start	End
Tacho		
Maintenance		
Time		

After departing / established in the climb

- Assess the **short-field take-off** on departure, if departing from a practice field used earlier in the flight — a revision/assessment item this lesson (A2.5)
- Confirm **local area airspace** and today's **approved practice fields/areas** for the precautionary-landing exercises
- Brief the first simulated scenario: "I'll demonstrate the first one — you watch the sequence, then it's yours."

Simulated precautionary landing – instructor demonstration

Sequence

- In the training area, declare the scenario: "Simulated deteriorating weather" (or "Simulated low fuel", "Simulated oil pressure fluctuation", "Simulated sick passenger") – "Simulated precautionary landing"
- **Decide** – narrate the decision out loud, tied to the simulated trigger
- **Configure** – slow, safe cruise, some flap, appropriate height
- **Select** – search the area and choose the field, narrating the WOSSSET criteria out loud – approach/overshoot paths, length, surface
- **Communicate** – simulate the PAN call to ATC (do not transmit unless genuinely required)
- **Prepare** – narrate the passenger brief – both done before the first pass, not squeezed in during it
- **Inspect** – join on the normal crosswind at 1000 ft trimmed for 80 kt, and time the field on downwind (10 s $\approx$ 400 m, 20 s $\approx$ 800 m). Then a wider 500 ft pass: time again and average the two timings (or use the GNSS groundspeed instead), and assess WOSSSET again – aim for at least 400 m, and check the aircraft manual's short-field landing distance. Then stay at 500 ft, configured, and fly the circuit at 500 ft (the practice standard; in real life terrain might argue for 1000 ft, or cloud base for staying low). Then the first low pass at ~200 ft to the right of the landing path, with full power applied two-thirds of the way along the runway, circuit, second (dummy) pass at ~50–100 ft to the right (full power two-thirds along again), re-check
- Fly the short-field landing, or go around no lower than the briefed minimum height

Simulated precautionary landing – student flown

Sequence

- Repeat from varying positions relative to the training area/approved fields, and with different simulated triggers (weather, low fuel, an engine indication, a sick passenger)
- Student flies the full vital-actions sequence from memory: decide, configure, select, communicate, prepare, inspect, land
- Prompt only if a step is missed or out of order – in particular the PAN call and passenger brief must be done before the first pass – let the sequence run uninterrupted otherwise
- Debrief briefly after each repetition: what worked, what would you do differently?

Short-field landing – revision

Sequence

- At the chosen/approved field: full flap, stable approach, aim point chosen short of obstacles
- Airspeed with elevator, descent rate with throttle – the standard approach split
- Aim to reach the minimum recommended speed crossing the boundary
- Minimal float, touch down precisely, then maximum braking without locking the wheels
- Go around without hesitation if the approach is unstable, too high, or too fast

Other abnormal situations (simulated)

Sequence

- Simulate a low-fuel situation or deteriorating weather distinct from the main exercise – e.g. a fuel-quantity discrepancy noticed in cruise, or a sudden reduction in visibility
- Student correctly identifies the situation and maintains safe control of the aeroplane throughout
- Student manages the situation in accordance with relevant procedures – which may mean triggering the full precautionary-landing sequence above, or a lesser response (diversion, altitude change) if appropriate

Return to aerodrome

- Establish cruise on descent back toward the aerodrome
- **Listen to AWIS/ATIS** — runway in use, circuit direction, QNH
- Fly a normal circuit and landing
- Complete the post-flight actions and administration (C2.3) at shutdown