Schedule 6 Flight Test Standards

Remote pilot licence — (RePL)

Appendix 1 Aeroplane category flight test

1. Flight test requirements

1.1 An applicant for a remote pilot licence in the aeroplane category must demonstrate their competency as follows: for each unit of competency mentioned in column 3 of an item of the Table in clause 3, the applicant must perform each Item/manoeuvre mentioned in column 4 of the item, subject to the applicable accuracy and tolerance mentioned in column 5 of the item.

Note Item numbers appear in column 1; unit codes for each unit of competency appear in column 2.

1.2 For subclause 1.1, a sustained deviation outside the applicable flight tolerance is not permitted.

1.3 For topic/requirement RA3 – Land and recover, in the Table in clause 3, if sufficient cross-wind conditions do not exist at the time of the flight test then, the element may be excluded from the flight test provided the flight test examiner (the ***examiner***) is satisfied that the applicant's training records indicate that relevant competency has been achieved during training.

1.4 Manoeuvres may be completed in automated operation mode if:

(a) there is no option for manual flight; or

(b) the applicant chooses to qualify with an "automated only" restriction on their RePL.

2. Knowledge requirements

The applicant may be required by the examiner to demonstrate their knowledge of the following with respect to the operation of an RPA in the aeroplane category:

(a) the limitations of the licence;

(b) normal, abnormal and emergency flight procedures;

(c) operating limitations;

(d) weight and balance limitations;

(e) aircraft performance data, including take-off and landing performance data;

(f) flight planning and risk assessment;

(g) applicability of drug and alcohol regulations;

(h) in-flight data;

(i) emergency equipment;

(j) energy planning for the flight;

(k) managing payload and bystanders;

(l) energy source (fuel, battery charge) management;

(m) RPAS functions and features, including the meaning of any audible or visual indications.

3. Practical flight standards

Item	Unit code	Unit of competency	Item/manoeuvre	Accuracy/tolerance
1	RC1	Pre- and post-flight actions and procedures	1 Complete a JSA for a theoretical operation, relevant to the type of operations that the candidate will undertake when licensed, in accordance with an operational scenario provided by the examiner.	1 The JSA addresses the safety of the operation; identifies safety risks arising from the operation; and has formulated risk mitigation measures for the operation, including a risk management plan.
			2 The following: (a) assembly, inspection and preparation of the aircraft and ground station for flight, referring to the operator's procedures manual as required; (b) disassembly and post-flight procedures.	2 The following: (a) familiarisation with equipment and manuals to successfully assemble and disassemble the system; (b) all pre- and post-flight procedures completed correctly; (c) dexterity with equipment/tooling; (d) completes a post-flight damage inspection.
2	RC2	Energy management	***1 Electric-powered RPA*** (a) identifies the amount of energy required and available for each flight stage, including reserves; (b) changes batteries within reserve limits (as required); (c) ensures RPS power within limits.	1 The following: (a) the calculated RPA operation endurance is within +/- 10%; (b) sufficient reserves are available to cover variations and contingencies; (c) the RPA is operated within the manufacturer's or operator's voltage and current limits.

Item	Unit code	Unit of competency	Item/manoeuvre	Accuracy/tolerance
			2 Very small or small RPA with liquid-fuel system (a) identifies the amount of energy available for each flight stage, including reserves; (b) confirms correct amount of fuel is on aircraft; (c) fuels and refuels as required; (d) ensures RPS power within limits; (e) carries out fuel quality and contamination checks.	2 The following: (a) the calculated RPA operation endurance is within +/- 10%; (b) sufficient reserves are available to cover variations and contingencies; (c) safe fuelling and refuelling procedures; (d) identifies correct fuel grade.
3	RC3	Manage crew, payload and bystanders	(a) communicates effectively with simulated crew and bystanders; (b) ensures payloads are correctly attached and suitable for the RPA (as applicable).	[No tolerances.]
4	RNT	Non-technical skills for the RPAS	(a) maintains effective lookout for other aircraft and hazards; (b) maintains situational awareness; (c) sets priorities and makes good decisions.	(a) identifies and effectively manages hazards associated with the flight of the RPA; (b) chooses safest option when confronted with hazardous situation.
5	RAF	Autoflight systems for the RPAS	(a) performs examiner-selected items/manoeuvres in flight test schedule using automated flight controls; (b) programs the RPAS to complete an amendment to the planned flight; (c) safely manages the RPA in an emergency situation.	(a) demonstrates good understanding of automated flight modes; (b) programs flight and amendment to plan in a timely way; (c) flies the RPA accurately during manoeuvres.

Item	Unit code	Unit of competency	Item/manoeuvre	Accuracy/tolerance
6	RA1	Ground operation and launch	(a) where applicable, taxi aircraft to take-off commencement point; (b) launch the aircraft or take-off and fly a circuit pattern; (c) where applicable, trim aircraft.	(a) aircraft taxied safely, and taxi/pre-take-off checks completed; (b) safe and stable launch/take-off; (c) even rate of climb; (d) maintains nominated circuit height; (e) where applicable, aircraft trimmed correctly for each stage of flight; (f) lateral distances should be sufficient to allow stabilised final approach segment.
7	RA2	Normal operations	1 Complete standard turns both left and right.	1 The following: (a) turns should be straight and level with minimal variation in height; (b) turns should be of an equal radius, independent of wind direction.
			2 Complete steep turns in different directions.	2 The following: (a) turns should be straight and level with minimal variation in height; (b) turns should be of a constant radius, independent of wind direction.

Item	Unit code	Unit of competency	Item/manoeuvre	Accuracy/tolerance
8	RA3	Land or recover	(a) overfly the landing area at circuit height and then complete a landing with touch and go (remain 5 m off the ground if no undercarriage); (b) repeat in opposite direction; (c) demonstrate cross-wind landing technique.	(a) approach attitude controlled by elevator and power; (b) stabilised descent controlled by power; (c) aircraft accurately positioned for landing; (d) constant climb-away angle.
9	RA4	Advanced manoeuvres	***1 Inward and outward figure of 8*** Fly at nominated height away from pilot and turn left or right 90 degrees, fly 30 m at a constant height turn left or right 180 degrees and fly back past the pilot for a further 30 m; then turn in the opposite direction 180 degrees again and then fly back to centre point opposite pilot and repeat.	1 The following: (a) accurate altitude control; (b) equal circle size and crossover point directly in front of pilot.
			2 Demonstrate the use of all available flight modes.	2 Familiar with all modes and demonstrates competent ability to use them.
			3 Simulate a typical complex task the applicant will be performing when qualified, using appropriate control method/s, radio procedures where applicable. *Note* The manoeuvre must assume full crew/team availability with examiner as an informed participant requiring briefing if applicable.	3 The following: (a) maintains safe distance from obstacles; (b) other relevant tolerances at examiner's discretion; (c) conducts suitable team briefing, including intent of operation, emergency plans, any other specific relevant tasking for team members.

Item	Unit code	Unit of competency	Item/manoeuvre	Accuracy/tolerance
10	RA5	Abnormal situations and emergencies	***1 Glide approach/simulated "dead stick"*** The manoeuvre must: (a) simulate zero power landing by bringing throttle to idle on command; (b) land/recover the aircraft without using engine/motor power from circuit height at a position over the landing area;	1 The following: (a) uses elevators to maintain slight nose-down attitude; (b) manoeuvres the aircraft to a suitable position to land/recover in the landing/recovery area; (c) maintains safe control of the aircraft; (d) completes pre-landing/ recovery checks; (e) lands safely and without damage to the aircraft.
			2 Demonstrate/simulate the use of all available fail-safe equipment and modes.	2 The following: (a) familiar with fail-safe features and how to use them effectively in flight; (b) ensures safe outcome from abnormal/ emergency scenarios.
			3 Recover from aerodynamic stall in different configurations.	3 The following: (a) correct recovery technique used; (b) returns to safe level flight.

Schedule 6 Flight test standards

Remote pilot licence — (RePL)

Appendix 2 Helicopter category (multirotor class) flight test

1. Flight test requirements

1.1 An applicant for a remote pilot licence in the helicopter category (multirotor class) must demonstrate their competency as follows: for each unit of competency mentioned in column 3 of an item of the Table in clause 3, the applicant must perform each Item/manoeuvre mentioned in column 4 of the item, subject to the applicable accuracy and tolerance mentioned in column 5 of the item.

Note Item numbers appear in column 1; unit codes for each unit of competency appear in column 2.

1.2 For subclause 1.1, a sustained deviation outside the applicable flight tolerance is not permitted.

1.3 For Unit code RM1 in the Table in clause 3, if sufficient cross-wind conditions do not exist at the time of the flight test then, the element may be excluded from the flight test provided the flight test examiner (the ***examiner***) is satisfied that the applicant's training records indicate that relevant competency has been achieved during training.

1.4 Manoeuvres may be completed in automated operation mode if:

(a) there is no option for manual flight; or

(b) the applicant chooses to qualify with an "automated only" restriction on their RePL.

2. Knowledge requirements

The applicant may be required by the examiner to demonstrate their knowledge of the following with respect to the operation of an RPA in the Helicopter category (multirotor class):

(a) the limitations of the licence;

(b) normal, abnormal and emergency flight procedures;

(c) operating limitations;

(d) weight and balance limitations;

(e) aircraft performance data, including take-off and landing performance data;

(f) flight planning and risk assessment;

(g) applicability of drug and alcohol regulations;

(h) in-flight data;

(i) emergency equipment;

(j) energy planning for the flight;

(k) managing payload and bystanders;

(l) energy source (fuel, battery charge) management;

(m) RPAS functions and features, including the meaning of any audible or visual indications.

3. Practical flight standards

Item	Unit code	Unit of competency	Item/manoeuvre	Accuracy/tolerances
1	RC1	Pre- and post-flight actions and procedures	1 Complete a JSA for a theoretical operation, relevant to the type of operations that the candidate will undertake when licensed, in accordance with an operational scenario provided by the examiner.	1 The JSA addresses the safety of the operation; identifies safety risks arising from the operation; and has formulated risk mitigation measures for the operation, including a risk management plan.
			2 The following: (a) assembly and preparation of the aircraft and ground station for flight, referring to the operator's procedures manual as required; (b) disassembly and post-flight procedures.	2 The following: (a) familiar with equipment and manuals to successfully assemble and disassemble the system; (b) all pre- and post-flight procedures completed correctly; (c) dexterity with equipment/ tooling.
2	RC2	Energy management	***1 Electric-powered RPA*** (a) identifies the amount of energy required and available for each flight stage, including reserves; (b) changes batteries within reserve limits (as required); (c) ensures RPS power within limits.	1 The following: (a) the calculated RPA operation endurance is within +/- 10%; (b) sufficient reserves are available to cover variations and contingencies; (c) the RPA is operated within the manufacturer's or operator's voltage and current limits.

Item	Unit code	Unit of competency	Item/manoeuvre	Accuracy/tolerances
			2 Very small or small RPA with liquid-fuel system (a) identifies the amount of energy available for each flight stage, including reserves; (b) confirms correct amount of fuel is on aircraft; (c) fuels and refuels as required; (d) ensures RPS power within limits; (e) carries out fuel quality and contamination checks.	2 The following: (a) the calculated RPA operation endurance is within +/- 10%; (b) sufficient reserves are available to cover variations and contingencies; (c) safe fuelling and refuelling procedures; (d) identifies correct fuel grade.
3	RC3	Manage crew, payload and bystanders	(a) communicates effectively with simulated crew and bystanders; (b) ensures payloads are correctly attached and suitable for the RPA (as applicable).	[No tolerances.]
4	RAF	Autoflight systems for the RPAS	(a) performs examiner-selected items/ manoeuvres in flight test schedule using automated flight controls; (b) programs the RPAS to complete an amendment to the planned flight; (c) safely manages the RPA in an emergency situation.	(a) demonstrates good understanding of automated flight modes; (b) programs flight and amendment to plan in a timely way; (c) flies the RPA accurately in manoeuvres, including landings and hovers.

Item	Unit code	Unit of competency	Item/manoeuvre	Accuracy/tolerances
5	RNT	Non-technical skills for the RPAS	(a) maintains effective lookout for other aircraft and hazards; (b) maintains situational awareness; (c) sets priorities and makes good decisions.	(a) identifies and effectively manages hazards associated with the flight of the RPA; (b) chooses safest option when confronted with hazardous situation.
6	RM1	Control on ground, launch, hover and landing	(a) start engines/motors and ready aircraft for lift-off; (b) lift-off to height of 2 m, hover for 10 seconds, land; (c) demonstrate cross- or tail-wind landing technique.	(a) controlled ascent and descent with minimal drift throughout exercise; (b) stable hover; (c) lands within the nominated landing area.
7	RM2	Normal operations	***1 Without GPS hold*** (a) lift-off to height of 2 m and establish stable hover; (b) fly straight out for 10 m (over cone); (c) re-establish hover, return tail first; (d) re-establish hover and land on lift-off spot; (e) repeat above with "GPS hold" on.	1 The following: (a) controlled ascent and descent with minimal drift (including height) throughout; (b) stable hover; (c) straight line out and back; (d) land accurately in take-off spot.
			2 The following: (a) lift-off to height of 5 m and turn aircraft 90 degrees left or right, turn opposite direction 180 degrees, turn back 90 degrees; (b) land at lift-off spot.	2 The following: (a) controlled ascent and descent with minimal drift (including height) throughout exercise; (b) stable hover; (c) accurate landing at lift-off position.

Item	Unit code	Unit of competency	Item/manoeuvre	Accuracy/tolerances
8	RM3	Advanced manoeuvres	***1 Figure of 8*** (a) lift-off to height of 5 m, establish stable hover, turn left or right 90 degrees fly 10 m at a constant height; (b) without stopping, turn outward 180 degrees and fly back past pilot for a further 10 m; (c) without stopping turn outward 180 degrees again and then fly back to starting point; (d) turn outwards (tail towards pilot) hover and land.	1 The following: (a) turns should be accurate and over nominated points [*Markers should be placed at the 180 degree turn points.*]; (b) smooth flying with even, balanced turns; (c) airspeed should be consistent from when the RPA departs the first hover until entering the final hover; (d) accurate landing at nominated spot.
			2 Vertical rectangle Lift-off to height of 2 m and hover and complete a vertical nose out rectangle climbing to 10 m high and 10 m wide. *Note* First movement is sideways left or right; remote pilot should be at the middle of the 10-metre side; sides (vertical axis) should be above marker cones.	2 The following: (a) smooth flying with even and controlled ascent and descent rates; (b) no drift (especially forward or back); (c) accurately positions aircraft.

Item	Unit code	Unit of competency	Item/manoeuvre	Accuracy/tolerances
			3 Simulate a typical complex task the applicant will be performing when qualified, using all available control method/s, radio procedures where applicable. [Assume full crew/team available and assume examiner is an informed participant requiring briefing if applicable.]	3 The following: (a) maintains safe distance from object of inspection/photography; (b) other relevant tolerances at examiner's discretion; (c) conducts suitable team briefing, including intent of operation, emergency plans, any other specific relevant tasking for team members.
9	RM4	Abnormal situations and emergencies	1 From normal flight at a position approximately 50 m away from the pilot, fly the RPA back to the take-off position and land keeping 5 m from remote pilot while in full manual mode (that is, no stabilisation or GPS).	1 Applicant manoeuvres and lands the RPA safely without GPS or other stabilisation.
			2 The following: (a) simulated emergency, including activation of fail-safe functions/ equipment; (b) safe termination of flight in other degraded modes of operation at examiner's discretion.	2 Applicant demonstrates an understanding of failure modes and terminates flight safely.

Schedule 6 Flight Test Standards

Remote pilot licence — (RePL)

Appendix 3 Helicopter category (single rotor class) flight test

1. Flight test requirements

1.1 An applicant for a remote pilot licence in the helicopter category (single rotor class) must demonstrate their competency as follows: for each unit of competency mentioned in column 3 of an item of the Table in clause 3, the applicant must perform each Item/manoeuvre mentioned in column 4 of the item, subject to the applicable accuracy and tolerance mentioned in column 5 of the item.

Note Item numbers appear in column 1; unit codes for each unit of competency appear in column 2.

1.2 For subclause 1.1, a sustained deviation outside the applicable flight tolerance is not permitted.

1.3 For Unit code RH3 in the Table in clause 3, if sufficient cross-wind conditions do not exist at the time of the flight test then, the element may be excluded from the flight test provided the flight test examiner (the ***examiner***) is satisfied that the applicant's training records indicate that relevant competency has been achieved during training.

1.4 Manoeuvres may be completed in automated operation mode if:

(a) there is no option for manual flight; or

(b) the applicant chooses to qualify with an "automated only" restriction on their RePL.

2. Knowledge requirements

The applicant may be required by the examiner to demonstrate their knowledge of the following with respect to the operation of an RPA in the Helicopter category (single rotor class):

(a) the limitations of the licence;

(b) normal, abnormal and emergency flight procedures;

(c) operating limitations;

(d) weight and balance limitations;

(e) aircraft performance data, including take-off and landing performance data;

(f) flight planning and risk assessment;

(g) applicability of drug and alcohol regulations;

(h) in-flight data;

(i) emergency equipment;

(j) energy planning for the flight;

(k) managing payload and bystanders;

(l) energy (fuel, battery charge) management;

(m) RPAS functions and features, including the meaning of any audible or visual indications.

3 Practical flight standards

Item	Unit code	Unit of competency	Item/manoeuvre	Accuracy/tolerance
1	RC1	Pre- and post-flight actions and procedures	1 Complete a JSA for a theoretical operation, relevant to the type of operations that the candidate will undertake when licensed, in accordance with an operational scenario provided by the examiner.	1 The JSA addresses the safety of the operation; identifies safety risks arising from the operation; and has formulated risk mitigation measures for the operation, including a risk management plan.
			2 The following: (a) assembly and preparation of the aircraft and ground station for flight, referring to the operator's procedures manual as required; (b) disassembly and post-flight procedures.	2 The following: (a) familiar with equipment and manuals to successfully assemble and disassemble the system; (b) all pre- and post-flight procedures completed correctly; (c) dexterity with equipment/ tooling.
2	RC2	Energy management	***1 Electric-powered RPA*** (a) identifies the amount of energy required and available for each flight stage, including reserves; (b) changes batteries within reserve limits (as required); (c) ensures RPS power within limits.	1 The following: (a) the calculated RPA operation endurance is within +/- 10%; (b) sufficient reserves are available to cover variations and contingencies; (c) the RPA operated within manufacturer's or operator's voltage and current limits.

Item	Unit code	Unit of competency	Item/manoeuvre	Accuracy/tolerance
			2 Very small or small RPA with liquid-fuel system (a) identifies the amount of energy available for each flight stage, including reserves; (b) confirms correct amount of fuel is on aircraft; (c) fuels and refuels as required; (d) carries out fuel quality and contamination checks; (e) ensures RPS power within limits.	2 The following: (a) the calculated RPA operation endurance is within +/- 10%; (b) sufficient reserves are available to cover variations and contingencies; (c) safe fuelling and refuelling procedures; (d) identifies correct fuel grade.
3	RC3	Manage crew, payload and bystanders	(a) communicates effectively with simulated crew and bystanders; (b) ensures payloads are correctly attached and suitable for the RPA (as applicable).	[No tolerances.]
4	RAF	Autoflight systems for the RPAS	(a) performs examiner-selected items/ manoeuvres in flight test schedule using automated flight controls; (b) programs the RPAS to complete an amendment to the planned flight; (c) safely manages the RPA in an emergency situation.	(a) demonstrates good understanding of automated flight modes; (b) programs flight and amendment to plan in a timely way; (c) flies the RPA accurately in manoeuvres, including landings and hovers.

Item	Unit code	Unit of competency	Item/manoeuvre	Accuracy/tolerance
5	RNT	Non-technical skills for the RPAS	(a) maintains effective lookout for other aircraft and hazards; (b) maintains situational awareness; (c) sets priorities and makes good decisions.	(a) identifies and effectively manages hazards associated with the flight of the RPA; (b) chooses safest option when confronted with hazardous situation.
6	RH1	Control on ground	(a) start engines/motors and ready aircraft for lift-off; (b) lift-off to height of 2 m, hover for 10 seconds, land.	(a) controlled ascent and descent with minimal drift throughout exercise; (b) stable hover.
7	RH2	Launch, hover and landing	***Without GPS hold*** (a) lift-off to height of 2 m and establish stable hover; (b) fly straight out for 10 m (over cone); (c) re-establish hover, return tail first; (d) re-establish hover and land on lift-off spot; (e) repeat above with "GPS hold" on.	(a) controlled ascent and descent with minimal drift (including height) throughout; (b) stable hover; (c) straight line out and back; (d) land accurately in take-off spot.
8	RH3	Normal operations	1 The following: (a) lift-off to height of 5 m and turn aircraft 90 degrees left or right, turn opposite direction 180 degrees, turn back 90 degrees; (b) land at lift-off spot; (c) conduct a cross- or tail-wind landing.	1 The following: (a) controlled ascent and descent with minimal drift (including height) throughout exercise; (b) stable hover; (c) accurate landing at lift-off position; (d) the aircraft lands accurately.

Item	Unit code	Unit of competency	Item/manoeuvre	Accuracy/tolerance
			2 The following: (a) lift-off to height of 5 m and turn aircraft 90 degrees left or right, turn opposite direction 180 degrees, turn back 90 degrees; (b) land at lift-off spot.	2 The following: (a) controlled ascent and descent with minimal drift (including height) throughout exercise; (b) stable hover; (c) accurate landing at lift-off position.
9	RH4	Advanced manoeuvres	***1 Figure of 8*** (a) lift-off to height of 5 m, establish stable hover, turn left or right 90 degrees, fly 10 m at a constant height and without stopping, turn outward 180 degrees and fly back past pilot for a further 10 m and without stopping, turn outward 180 degrees again and then fly back to starting point; (b) turn outwards (tail towards pilot), hover and land.	1 The following: (a) turns should be accurate and over nominated points [*Cones should be placed at the 180 degree turn points*.]; (b) smooth flying with even, balanced turns; (c) airspeed should be consistent from when the RPA departs the first hover until entering the final hover; (d) accurate landing at nominated spot.

Item	Unit code	Unit of competency	Item/manoeuvre	Accuracy/tolerance
			2 Vertical rectangle (a) lift-off to height of 2 m and hover; (b) complete a vertical nose out 10 m wide rectangle climbing to 10 m high. *Note* First movement is sideways left or right. Pilot should be at the middle of the 10-m side, and sides (vertical axis) should be above marker cones.	2 The following: (a) smooth flying with even and controlled ascent and descent rates; (b) no drift (especially forward and back); (c) accurately positions aircraft.
			3 Simulate a typical complex task the applicant will be performing when qualified, using all available control method/s and radio procedures where applicable. [Assume full crew/team available, and assume examiner is an informed participant requiring briefing if applicable.]	3 The following: (a) maintains safe distance from object of inspection/ photography; (b) other relevant tolerances at examiner's discretion; (c) conducts suitable team briefing, including intent of operation, emergency plans, any other specific relevant tasking for team members.
10	RH5	Abnormal situations and emergencies	1 From normal flight, at a position approximately 50 m away from the pilot, fly the RPA back to the take-off position and land, keeping 5 m from the remote pilot while in full manual mode (that is, no stabilisation or GPS).	1 Applicant manoeuvres and lands the RPA safely without GPS or other stabilisation.

Item	Unit code	Unit of competency	Item/manoeuvre	Accuracy/tolerance
			2 The following: (a) simulated emergency, including activation of fail-safe functions/ equipment; (b) safe termination of flight in other degraded modes of operation at examiner's discretion.`	2 Applicant demonstrates an understanding of failure modes and terminates flight safely.

Schedule 6 Flight Test Standards

Remote pilot licence — (RePL)

Appendix 4 Powered-lift category flight test

1. Flight test requirements

1.1 An applicant for a remote pilot licence in the powered-lift category must demonstrate their competency as follows: for each unit of competency mentioned in column 3 of an item of the Table in clause 3, the applicant must perform each Item/manoeuvre mentioned in column 4 of the item, subject to the applicable accuracy and tolerance mentioned in column 5 of the item.

Note Item numbers appear in column 1; unit codes for each unit of competency appear in column 2.

1.2 For subclause 1.1, a sustained deviation outside the applicable flight tolerance is not permitted.

1.3 For Unit code RP1 in the Table in clause 3, if sufficient cross-wind conditions do not exist at the time of the flight test then, the element may be excluded from the flight test provided the flight test examiner (the ***examiner***) is satisfied that the applicant's training records indicate that relevant competency has been achieved during training.

1.4 Manoeuvres may be completed in automated operation mode if:

(a) there is no option for manual flight; or

(b) the applicant chooses to qualify with an "automated only" restriction on their RePL.

1.5 A non-vertical landing manoeuvre, otherwise required under Unit code RP5 in clause 3 to demonstrate the RPA landing, is not required if such a landing is likely to cause damage to the aircraft, provided that a successful go-around is conducted instead from a position where a non-vertical landing, if made, would otherwise be assured.

2. Knowledge requirements

The applicant may be required by the examiner to demonstrate their knowledge of the following with respect to the operation of an RPA in the powered-lift category:

(a) the limitations of the licence;

(b) normal, abnormal and emergency flight procedures;

(c) operating limitations;

(d) weight and balance limitations;

(e) aircraft performance data, including take-off and landing performance data;

(f) flight planning and risk assessment;

(g) applicability of drug and alcohol regulations;

(h) in-flight data requirements (for example, GPS height);

(i) emergency equipment;

(j) energy planning for the flight;

(k) managing payload and bystanders;

(l) battery management;

(m) RPAS functions and features, including the meaning of any audible or visual indications.

3. Practical flight standards

Item	Unit code	Unit of competency	Item/manoeuvre	Accuracy/tolerance
1	RC1	Pre- and post-flight actions and procedures	1 Complete a JSA for a theoretical operation, relevant to the type of operation that the candidate will undertake when licensed, in accordance with an operational scenario provided by the examiner.	1 The JSA addresses the safety of the operation; identifies safety risks arising from the operation; and has formulated risk mitigation measures for the operation, including a risk management plan.
			2 The following: (a) assembly and preparation of the aircraft and ground station for flight, referring to the operator's procedures manual as required; (b) disassembly and post-flight procedures.	2 The following: (a) familiar with equipment and manuals to successfully assemble and disassemble the system; (b) all pre- and post-flight procedures completed correctly; (c) dexterity with equipment/ tooling.

Item	Unit code	Unit of competency	Item/manoeuvre	Accuracy/tolerance
2	RC2	Energy management	***1 Electric-powered RPA*** (a) identifies the amount of energy required and available for each flight stage, including reserves; (b) changes batteries within reserve limits; (c) ensures RPS power within limits; (d) ensures RPS power within limits.	1 The following: (a) the calculated RPA operation endurance is within +/- 10%; (b) sufficient reserves are available to cover variations and contingencies; (c) the RPA operated within manufacturer's or operator's voltage and current limits.
			2 Very small or small RPA with liquid-fuel system (a) identifies the amount of energy available for each flight stage, including reserves; (b) confirms correct amount of fuel is on aircraft; (c) fuels and refuels as required; (d) ensures RPS power within limits; (e) carries out fuel quality and contamination checks.	2 The following: (a) the calculated RPA operation endurance is within +/- 10%; (b) sufficient reserves are available to cover variations and contingencies; (c) safe fuelling and refuelling procedures; (d) identifies correct fuel grade.

Item	Unit code	Unit of competency	Item/manoeuvre	Accuracy/tolerance
3	RC3	Manage crew, payload and bystanders	(a) communicates effectively with simulated crew and bystanders; (b) ensures payloads are correctly attached and suitable for the RPA (as applicable).	[No tolerances.]
4	RAF	Autoflight systems for the RPAS	(a) performs examiner-selected items/ manoeuvres in flight test schedule using automated flight controls; (b) programs the RPAS to complete an amendment to the planned flight; (c) safely manages the RPA in an emergency situation.	(a) demonstrates good understanding of automated flight modes; (b) programs flight and amendment to plan in a timely way; (c) flies the RPA accurately in manoeuvres, including aeroplane-style landings and hovers.
5	RNT	Non-technical skills for the RPAS	(a) maintains effective lookout for other aircraft and hazards; (b) maintains situational awareness; (c) sets priorities and makes good decisions.	(a) identifies and effectively manages hazards associated with the flight of the RPA; (b) chooses safest option when confronted with hazardous situation.

Item	Unit code	Unit of competency	Item/manoeuvre	Accuracy/tolerance
6	RP1	Control on ground, launch, hover and landing	1 The following: (a) start engines/ motors and ready aircraft for lift-off; (b) lift-off to height of 2 m, hover for 10 seconds, land; (c) conduct a cross- or tail-wind landing.	1 The following: (a) controlled ascent and descent with minimal drift throughout exercise; (b) stable hover; (c) the aircraft lands accurately.
			2 Without GPS hold (a) lift-off to height of 2 m and establish stable hover; (b) fly straight out for 10 m (over cone); (c) re-establish hover, return tail first; (d) re-establish hover and land on lift-off spot; (e) repeat above with "GPS hold" on.	2 The following: (a) controlled ascent and descent with minimal drift (including height) throughout; (b) stable hover; (c) straight line out and back; (d) land accurately in take-off spot.

Item	Unit code	Unit of competency	Item/manoeuvre	Accuracy/tolerance
7	RP2	Transition to and from vertical flight	***1 Manual transitional flight (if relevant to the type of RPA)*** (a) accurately and safely transition the RPA from vertical flight to horizontal flight; (b) accurately and safely transition the RPA from horizontal flight to vertical flight.	1 The following: (a) the RPA remains at a safe distance from people and obstacles during all manoeuvres; (b) airspeeds maintained within manufacturer's limits for the transitions where applicable.
			2 Automated transitional flight Demonstrate automated transitions to and from vertical flight.	2 The following: (a) the RPA remains at a safe distance from people and obstacles during all manoeuvres; (b) airspeeds maintained within manufacturer's limits for the transitions where applicable.
8	RP3	Climb, cruise & descent	1 Climb the aircraft at best rate or angle climb speed, level off, fly horizontal to a distance of 300 m, fly back towards starting point and descend to nominated height.	1 The following: (a) maintains correct airspeeds and tracks accurately; (b) accurately orientates the aircraft at a distance for return flight.

Item	Unit code	Unit of competency	Item/manoeuvre	Accuracy/tolerance
			2 Complete standard turns both left and right.	2 The following: (a) turns should be straight and level with minimal variation in height; (b) turns should be of an equal radius, independent of wind direction.
			3 Complete steep turns in different directions.	3 The following: (a) turns should be straight and level with minimal variation in height; (b) turns should be of a constant radius, independent of wind direction.
9	RP4	Advanced manoeuvres	***1 Inward and outward figure of 8*** Fly at nominated height away from pilot and turn left or right 90 degrees, then fly 30 m at a constant height and turn left or right 180 degrees, and fly back past pilot for a further 30 m, then turn in the opposite direction and fly back to centre point opposite pilot and repeat.	1 The following: (a) accurate altitude control; (b) equal circle size and crossover point directly in front of pilot.

Item	Unit code	Unit of competency	Item/manoeuvre	Accuracy/tolerance
			2 Demonstrate the use of all available flight modes.	2 The following: Familiar with all modes and demonstrates competent ability to use them.
			3 Simulate a typical complex task the applicant will be performing when qualified, using appropriate control method/s and radio procedures, where applicable. [Assume full crew/team availability and that the examiner is an informed participant requiring briefing if applicable.]	3 The following: (a) maintains safe distance from obstacles; (b) other relevant tolerances at examiner's discretion; (c) conducts suitable team briefing, including intent of operation, emergency plans, any other specific relevant tasking for team members.
10	RP5	Manage abnormal situations at altitude and near the ground	1 Demonstrate/ simulate the use of all available fail-safe equipment and modes.	1 The following: (a) familiar with fail-safe features and how to use them effectively in flight; (b) ensures safe outcome from abnormal/ emergency scenarios.
			2 Recover from aerodynamic stall in different configurations.	2 The following: (a) correct recovery technique used; (b) returns to safe level flight.

Item	Unit code	Unit of competency	Item/manoeuvre	Accuracy/tolerance
			3 The following: (a) recover the RPA from abnormal transition to horizontal and vertical flight manually; (b) recover the RPA from abnormal transition to horizontal and vertical flight in automated mode.	3 The following: (a) implements recovery plan in a timely way; (b) demonstrates dexterity in controlling the aircraft; (c) where available, initiates and completes recovery action through fail-safe procedures.
			4 Glide approach/ simulated "dead stick" The manoeuvre must: (a) simulate zero power landing by bringing throttle to idle on command; (b) land/recover the aircraft without using engine/motor power from circuit height at a position over the landing area.	4 The following: (a) uses elevators to maintain slight nose-down attitude; (b) manoeuvres the aircraft to a suitable position to land in the landing/ recovery area; (c) maintains safe control of the aircraft; (d) completes pre-landing/recovery checks; (e) lands safely and without damage to the aircraft.

Schedule 6 Flight Test Standards

Remote pilot licence — (RePL)

Appendix 5 RePL upgrades

Liquid-fuel system flight test

1. Flight test requirements

1.1 An applicant for a RePL with liquid-fuel system privileges must demonstrate all of the competencies in the units of competency mentioned in clause 3, by operating an RPA in the category the applicant wishes to operate.

1.2 For subclause 1.1, an examiner must pass the applicant only if the applicant demonstrates accurately, correctly and in a timely way, the practical competencies and responds to any knowledge questions to the examiner's satisfaction.

1.3 The flight test for liquid-fuel systems may be combined into a flight test for a RePL in any category of RPA.

2. Knowledge requirements

The applicant may be required to demonstrate their knowledge to the examiner of the privileges and limitations of the endorsement and of the following topics:

(a) the components of a liquid-fuel system fitted to the RPA;

(b) the way the type of liquid-fuel system fitted to the flight test RPA works;

(c) the operation of systems associated with the type of liquid-fuel system fitted to the flight test RPA;

(d) the differences between 2 and 4-stroke piston engines (where applicable);

(e) the effect of increasing altitude and temperature on engine performance;

(f) mixture leaning procedures and effects (where applicable);

(g) abnormal and emergency procedures (for example, partial or complete loss of power);

(h) the effects and limitations of turbo- and super-charging of piston engines (where applicable);

(i) the effects of fuel burn on weight and balance;

(j) general engine handling applicable to the type of liquid-fuel system fitted to the flight test RPA.

3. Practical flight standards

The applicant is required to demonstrate the following actions or procedures:

(a) conducts all relevant fuel checks before flight;

(b) confirms required amount of fuel is on board to complete the flight safely with a reasonable reserve;

(c) manages engine handling, temperatures and oil pressures while on ground and in flight;

(d) manages fuel competently while in flight;

(e) adjusts mixture in flight to achieve stated fuel burn rates or optimal engine performance;

(f) refuels aircraft safely and does relevant post-fuelling checks;

(g) completes flight technical log accurately;

(h) takes timely, appropriate action to remedy actual or simulated engine problems;

(i) competently, and within a reasonable time, makes required fuel calculations to complete an amendment to the original planned flight.