



This document contains information and suggestions that while not mandatory are never-the-less important advice for all MAAC members. To ensure that you have the latest version always check the MAAC [Web Site](#).

1.0 Title. MAP01-T-5 – Flying From full scale Aerodromes

2.0 Purpose. To provide MAAC Clubs and members a plain language step by step guide for RPAS operation from a full-scale aerodrome. Refer to the MAAC [Transport Canada exemption](#), [MAAC Safety Code](#), [MSD03](#) and [MPPD06](#) for additional required actions.

3.0 Definitions [Glossary of Terms](#).

“From a full-scale Aerodrome” – for the purposes of this document, flying “from” a full-scale aerodrome includes any of the following:

- Anywhere on the aerodrome property used for aircraft or airside vehicle movements, such as runways, taxiways, aprons, or aircraft parking areas.
- Anywhere on the aerodrome property, as determined by the confines or aerodrome fencing or survey markers or
- Anywhere “off-airport” but in the immediate vicinity of arrival or departure paths of full-scale aircraft, where model aircraft operations would reasonably be considered a potential hazard.

NOTE – MAAC insurance and Policy requirements do not differentiate between “airport”, “aerodrome/water aerodrome” or “farmers’ flying field” for full-scale aviation operations. While the Exemption is only concerned with “*aerodromes or water aerodromes listed in the Canada Flight Supplement (CFS)*”, for the purposes of this document, “aerodrome” means **any** place where full-scale aviation operates – regardless of size, location or official designations. This applies equally to water aerodromes, or frozen water-body surfaces.

4.0 [Contents](#)

The following are the minimum suggested guidelines Clubs and individual members should consider prior to operating model aircraft from a full-scale aerodrome:

- A. Conduct an airspace assessment.
- B. Determine proximity of other aerodromes
- C. Familiarize yourself with relevant Aviation terms.
- D. Conduct a Hazard Identification and Risk Assessment (HIRA)
- E. Obtain landowner permission – preferably in writing.
- F. Obtain aerodrome operator permission – preferably in writing.

- G. Publish information packages and rules or guidelines.
- H. Review the safety assessment and rule effectiveness yearly
- I. Consult available resources and links.

A. Conduct an Airspace assessment

Per the Exemption, you are required to determine whether your **flying area** is in controlled airspace. **Do not skip this step.** Permission from an airport/aerodrome operator to fly at their location does not meet exemption requirements.

Per [MPPD06](#), Clubs or individuals flying from full-scale aerodromes are required to supply MAAC with the pilot station coordinates and **flying area** dimensions. Please read [MAP01 Outdoor Flying Field Guidelines](#), and [MAP01-T-1 – Flying Field Requirements](#) for further guidance. It is expected the exact location of the pilot stations may not be known until after discussion with the aerodrome operator. However, this information is required at some point none the less. Knowing your expected/desired **flying area** dimensions regardless of the anchor point will likely be very useful when entering talks/discussion with the aerodrome operator.

B. Determine Proximity of other Aerodromes

Per the Exemption, the second required step is to determine the proximity of your **flying area** to other aerodromes/water aerodromes published in the Canada Flight Supplement. **Do not skip this step.** Permission from an airport/aerodrome operator to fly at their location does not meet exemption requirements.

If your flying area is in uncontrolled airspace and there is another aerodrome/water aerodrome within 3nm of your flying area, **you/Clubs** have sole responsibility to “*create procedures to ensure that RPAS operations do not conflict with or pose a hazard to full scale aircraft in the vicinity*”. Please read [MAP01 Outdoor Flying Field Guidelines](#), and [MAP01-T-1 – Flying Field Requirements](#) for further guidance. Knowing the locations of any adjacent aerodromes and procedures you have developed to “*ensure safety*” will likely be very useful when entering talks/discussion with the aerodrome operator.

C. Familiarize yourself with relevant Aviation terms.

The main purpose of this tutorial is to provide information on how a MAAC Club or member with no or little aviation experience can more safely operate near full-scale aircraft. While the aerodrome operator will most certainly have final say on rules and procedures, it is an extremely good idea to be prepared for those discussions beforehand. What follows are aviation safety items you should consider or be conversant with before meeting the aerodrome operator for the first time.

Flying field vs Aerodrome vs Airport

The hierarchy of full-scale aviation locations is as follows:

- A. Flying field – is a non-registered location. Can be as informal as a temporary ice runway, or more permanent such as a farmer’s private strip. Flying fields are not

published anywhere but most known flying fields will appear on aviation maps. Local knowledge is required to find **all** flying fields.

- B. Aerodrome/Water aerodrome – is a flying field that has been registered and meets the minimum requirements. Registered aerodromes/water aerodromes will appear in the CFS/CWAS and on aviation maps (printed or electronic-based).
- C. Airport – is a certified aerodrome that meets additional requirements. Airports are listed in the CFS, aviation maps and in the Canadian Airport Charts (CAC).

The certification status of a location is totally irrelevant to MAAC TC Exemption compliance. However, the status may be important when having discussions with various parties about any land-use/aerodrome type agreement, as Airports usually require more stringent agreements and protocols from MAAC Clubs – each will be a case by case situation

Controlled vs uncontrolled Aerodrome/Airport

The **surface movements** of airplanes and vehicles at aerodromes can be controlled or uncontrolled. Either controlled or uncontrolled aerodromes can have passenger airline service. IFR or VFR aircraft can use either type as well. There are various levels of control, however these are not especially important to MAAC operations.

A **controlled aerodrome/airport** will always be controlled by an ATC unit called “Tower” – not to be confused with a physical “tower-cab” like structure at the aerodrome/airport. In fact, the actual ATC “Tower” may not even be in a physical tower-cab. Controlled aerodromes/airports must reside in controlled airspace. All Canadian controlled aerodromes are listed at the end of this document. In addition to permission to operate on the aerodrome/airport surface, permission for MAAC to operate **in the air** is also required.

At **uncontrolled aerodromes/airports, with a published Mandatory Frequency (MF)** a secondary non-control service may be provided called “AAS - Airport Advisory Service”. This is provided by a Flight Service Specialist (FSS) from what might look like a “control tower-cab” when in fact it is not an actual control “Tower”. AAS uncontrolled aerodrome/airports normally reside in controlled airspace. If located in controlled airspace permission for MAAC to operate **in the air** is also required. Note the FSS is not the controlling agency for the air portion. If that doesn't make sense see [MAP01-T-2 – Airspace](#). At some uncontrolled AAS aerodromes there may be control of vehicles on the ground (VCS - Vehicle control service). MAAC operations at these locations may require special agreements or permissions from the FSS before accessing or driving their cars to certain spots on the aerodrome property. All Canadian AAS aerodromes with on-site FSS are listed at the end of this document.

Lastly, at some uncontrolled aerodromes/airports without on-site FSS, there may be a lower level of advisory service provided called RAAS – Remote Aerodrome Advisory Service. The FSS provide all the same general type advisories as at an AAS aerodrome but from a remote location. Since the FSS is not on-site they cannot provide vehicle control service, nor can they see aircraft or MAAC RPAS operations.

What time is it? Zulu Time?

All of aviation uses one common time system called various names – Universal Time Coordinated (UTC), Greenwich Mean time (GMT), or sometimes referred to as “Zulu Time”. The letter Z is the universal shorthand for the above and is phonetically pronounced “Zulu” – hence Zulu time. All those terms mean the same thing and the relevant conversions are indicated in table 1.2 from the [TC- AIM](#).

Table 1.2–Time Zone Local Times

Time Zone	To Obtain Local Time
Newfoundland	UTC minus 3 1/2 hours (2 1/2 DT)
Atlantic	UTC minus 4 hours (3 DT)
Eastern	UTC minus 5 hours (4 DT)
Central	UTC minus 6 hours (5 DT)
Mountain	UTC minus 7 hours (6 DT)
Pacific	UTC minus 8 hours (7 DT)

Publications

CFS – Canada Flight Supplement

A publication that lists all registered land-based aerodromes and airports in Canada, by region. The CFS does not list uncertified aerodromes such as a “farmers” field. These are updated on a rotating 56-day period the same as all aviation documents. The use of expired documents is not advised.

If individual members wish their own copy, the CFS is available for a fee [here](#).

The CFS has entries which can be useful to warn full scale pilots of your RPAS operations.

CANADA FLIGHT SUPPLEMENT / GPH 205 Effective 0901Z 26 March 2020 to 0901Z 21 May 2020

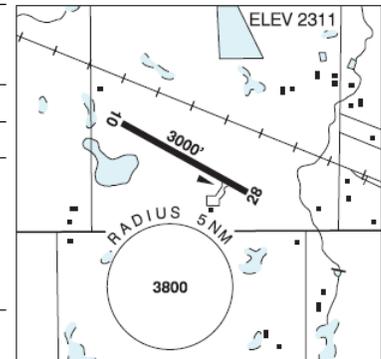
ALBERTA

AERODROME/FACILITY DIRECTORY

TOFIELD AB

CEV7

REF	N53 22 16 W112 41 48 Adj W 15°E (2012) UTC-7(6) Elev 2311' VTA A5015
OPR	Town of Tofield 780-662-3269 Reg
PF	A-1 C-2,3,4,5
FLT PLN	NOTAM FILE CYEG
FIC	Edmonton 780-890-8386 or Edmonton 866-WXBRIEF (Toll free within Canada) or 866-541-4102 (Toll free within Canada & USA)
ACC	Edmonton IFR 888-358-7526
SERVICES	
FUEL	100LL
RWY DATA	Rwy 10(103°)/28(283°) 3000x75 asphalt
RCR	Opr Ltd win maint
COMM	
ATF	ffc 123.2 5NM 5400 ASL
PRO	Rgt hand circuits Rwy 10 (CAR 602.96).
CAUTION	Model acft activity Apr 1-Sep 30.



In the Tofield example under “**CAUTION**”, pilots are warned of “*Model acft activity Apr01 – Sept 30*”. The notice can be more or less descriptive as required. Sometimes the notice contains a max altitude or other defining information:

CAUTION	Rdo ctl acft opr fr rwy to 500 AGL wknds Mar-Nov.
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MAAC Clubs wishing to include their RPAS information when operating near aerodromes / airports can do so by contacting the **OPR** as listed in the CFS. (only the Aerodrome/airport operator has authority to amend CFS entries).

MAP01-T-5 - Flying From Full Scale Aerodromes

This information can often be a part of the agreement with the aerodrome operator. In the CSP6 example the **OPR** is Paul Fréchette – 514-953-2203.

CWAS – Canada Water Aerodrome Supplement

A publication that lists all certified water-based aerodromes and airports in Canada. These are updated on a rotating 56 day period. The use of expired documents is not advised.

CANADA FLIGHT SUPPLEMENT / GPH 205 Effective 0901Z 26 March 2020 to 0901Z 21 May 2020

QUEBEC

AERODROME/FACILITY DIRECTORY

MONTRÉAL / AÉROPARC ÎLE PERROT QC

CSP6

REF	N45 22 34 W73 54 26 1.2SE 15°W UTC-5(4) Elev 100' VTA A5002	
OPR	Paul Fréchette 514-953-2203 Reg PPR	
PF	C-1,2,3,4,5,6	
FLT PLN	(bil) NOTAM FILE CYUL	
FIC	Québec 866-GOMÉTÉO or 866-WXBRIEF (Toll free within Canada) or 866-541-4105 (Toll free within Canada & USA)	
RWY DATA	Rwy 07(067°)/25(247°) 2600x60 turf/snow	
RCR	Opr Ltd win maint	
COMM	TWR Montréal 119.9 (CZ bdry at less than 2NM NE of Thld 25) ATF tfc 123.2 2NM outside class C airspace VFR ADV Montréal Tml 134.15	
PRO	Rwy 25 preferential for take-off, Rwy 07 preferential for ldg. Touch & go not permitted. Rgt hand circuits Rwy 07 (CAR 602.96).	
CAUTION	Rwy: Rough rwy. Rwy soft when wet. Model acft: Rdo controlled model acft adj NW. P-line: Cross apch to Rwy 07 unmarked. Wildlife: Cultivated fields at both ends of rwy, extv bird activity Apr-Oct.	

If individual members wish their own copy, the CWAS is available for a fee [here](#).

All the above CFS provisions apply equally to CWAS entries.

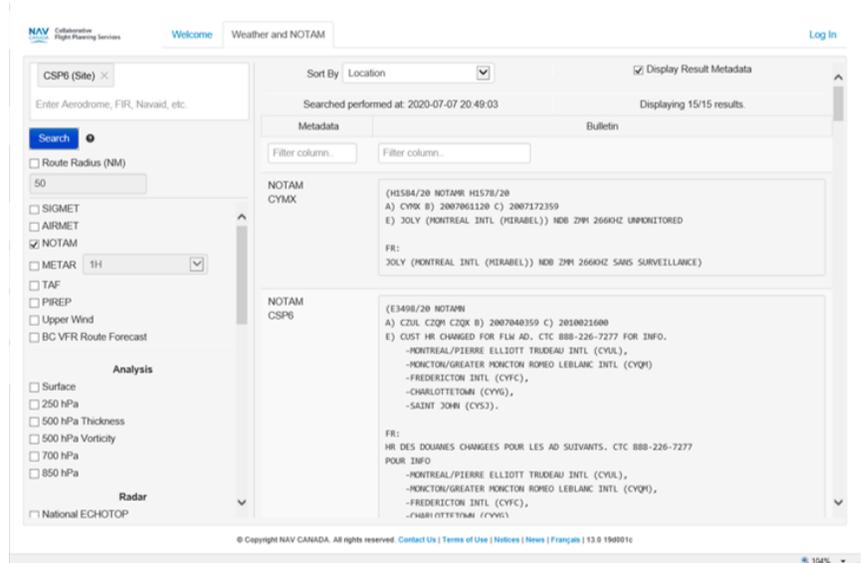
CAC – Canadian Airport Charts (FREE!)

If an aerodrome is an airport, the CFS equivalent information is available for **free** on the CAC.

The CAC is available [here](#).

NOTAMS

NOTAM is an acronym which means “Notice to Airmen” and is exactly what it means. The aerodrome operator may refer to this aviation communication tool in the agreement with MAAC Clubs. NOTAMS are most often used for temporary issues such as aviation equipment outages; changes to something that couldn’t make the normal notification cut-offs, or sometimes short duration events such as airshows. A full explanation on how to read NOTAMS is beyond the space limitations of this document;; however the [TC-AIM](#) contains an excellent primer on how to read NOTAM shorthand, date time formats and other useful information. NOTAMS are available for free [here](#).



To obtain the relevant NOTAMS for your aerodrome you need to know and enter the unique four letter/number aviation identifier. This information is available in the CFS, or via a Google search. In the Aeroparc Ile Perrot example CSP6 was the unique identifier used.

Communications

VHF Radio operation

Aviation uses the VHF (Very High Frequency) band as assigned by Industry Canada, and in compliance with international standards. For the most part MAAC Clubs or members will **not** need to possess a Restricted Radio operators’ certificate. However, if one is required the process is outlined [here](#).

Quite often when MAAC operations occur “near” or on an aerodrome/airport, the aerodrome/airport operator will want the MAAC Club/individual to establish or monitor some form of communication with the full-scale pilots or aerodrome operator. These options vary widely and will always be location specific, however below are some generic examples of normal communication requirements:

- MAAC RPAS operation at controlled airport – agreement will require MAAC to provide the cell phone number of operator and agreement to phone ATC for specific issues (daily commencement, stop flying, lost link or fly-away procedures, etc). VHF communication is highly unlikely.
- MAAC RPAS at uncontrolled airport, in controlled airspace – agreement will require MAAC to provide cell phone number of operator and agreement to call ATC for specific issues (commencement and cessation, fly-away procedures) and possibly a requirement for the MAAC operator to monitor a specific aviation VHF frequency for aircraft intentions.

- MAAC RPAS at uncontrolled aerodrome in uncontrolled airspace – the most common agreements require the MAAC operator monitor to VHF communications. In extremely rare cases there may be a need for the MAAC operator to transmit their intentions on aviation VHF radio frequencies. A restricted Radio Operators certificate is required by law, before broadcasting on aviation frequencies.

ATC/ATF/MF – Air Traffic Control, Aerodrome Traffic Frequency and Mandatory Frequency

An **ATC frequency** is one that has been assigned to an Air Traffic Control unit. If the particular ATC unit is not open 24/7, the Canadian Flight Supplement (CFS) will list who monitors the frequency during off hours – normally becoming an ATF or MF. MAAC members will not normally be required to communicate on ATC frequencies. Purchasing VHF equipment to monitor ATC frequencies is not really required unless part of a specific agreement. Making unauthorized broadcasts on an ATC frequency is a serious criminal offense.

An **Aerodrome Traffic Frequency (ATF)** is established at uncontrolled aerodromes or locations where there is enough VFR traffic that safety concerns warrant all aircraft being on the same frequency and communicating their intentions. MAAC members may be directed/asked to monitor the ATF for the aerodrome/area they fly from. In this case the Club/individual may need to use/purchase an aviation VHF receive-only radio (\$200-\$300CDN).

A **Mandatory Frequency (MF)** is like an ATF except its use is **mandatory for all** radio equipped aircraft. A MF will usually be established at uncontrolled AAS aerodromes, in controlled airspace and with a significant amount of IFR and VFR traffic mix. MAAC members may be directed/asked to monitor the ATF for the aerodrome they fly from.

ATC, ATF or MF frequencies will be listed in the **COMM** section of the CFS entry for the aerodrome. For Altona, there is an **ATF** frequency of 123.2.

ROONLY/NORDO

Regardless of where we operate, airplanes can fly around without having radio communications with anyone – including ATC!

ROONLY means “receiver only” and that means the Pilot can hear other pilots and ATC but cannot respond via the radio. **NORDO** means no radio and as the name implies – no radio communication possible. While there are very specific rules for pilots to follow in each instance dependent upon the airspace classification, for the MAAC pilot there is only one rule we need to remember:

CANADA FLIGHT SUPPLEMENT / GPH 205 Effective 0901Z 26 March 2020 to 0901Z 21 May 2020

MANITOBA

AERODROME/FACILITY DIRECTORY

ALTONA MUNI MB

CJL6

REF	N49 05 40 W97 32 02 1.5SE 4°E (2015) UTC-6(5) Elev 806' A5007 LO3	
OPR	Altona Flying Club 204-327-5866/204-324-7759 or Town of Altona 204-324-8190/6468 or Rural Muni of Rhineland 204-324-5357 Reg	
PF	B-1 C-2,4,5	
FLT PLN	NOTAM FILE CYDN	
FIC	Winnipeg 866-WXBRIEF (Toll free within Canada) or 866-541-4103 (Toll free within Canada & USA)	
SERVICES		
FUEL	100LL O/R 204-324-5278/7759	
S	4,5,6	
RWY DATA	Rwy 17(176°)/35(356°) 3248x75 asphalt Thld 35 displ 138'. Rwy 08(086°)/26(266°) 2000x80 turf	
RCR	Opr or 204-324-7510 Rwy 08/26 no win maint. Rwy 17/35 ltd win maint.	
LIGHTING	17-(TE LO), 35-(TE LO) ARCAL-123.2 type J	
COMM		
ATF	tfc 123.2 5NM 3900 ASL	
CAUTION	Ocsl model acct activity at aprt. Deep ditch runs North/South W of Thld 08.	

MSD03 – All Model Aircraft

5.6 The member shall retain ultimate responsibility, at all times and in all circumstances, for collision avoidance from full-scale aircraft.

Traffic Patterns

Regardless of permissions, procedures, or monitoring an aviation frequency, the MAAC pilot is always responsible to avoid collisions with full scale aircraft. Knowing where to look and what to expect can substantially reduce the risk of an “unexpected” encounter. Where our MAAC RPAS operations are conducted relative to various full-scale components also matters. What follows is a condensed version of excellent information available in the Transport Canada Aeronautical Information Manual ([TC-AIM](#))

Runway Numbering and Taxiway letters

Runway numbers are assigned to each runway based on the cardinal magnetic direction of takeoff – rounded off to 2 numbers. For instance, a runway pointing due east on the magnetic compass has a magnetic heading of 090 degrees. Rounded off that runway number would be RWY 09. RWY18 would have a takeoff heading of due south, or 180 degrees. There is no 00 runway – straight north is represented by heading 360 so that would be RWY36. In cases where there are 2 or more parallel runways, the runway number will be appended by a letter representing L for the left parallel, R for the right parallel, and C if there are 3 parallel runways. The CFS entry for every aerodrome will have a picture of the airport layout as well as a text-based description. MAAC Clubs wanting to fly from an aerodrome should know the layout extremely well – perhaps include the diagram prominently in Club flying rules.

Taxiways use letters instead of numbers to avoid confusion. These generally start at the letter A and progress up through the alphabet but there is no actual naming convention. Once again MAAC Clubs operating from aerodromes should know the taxiways names/letters and where they are. This is an important piece of information when a pilot broadcasts his intentions:

“Pitt Meadows Traffic, this is Alpha Bravo Charlie taxiing out from apron one for runway two six right via Bravo and Delta. Conflicting traffic please advise.”

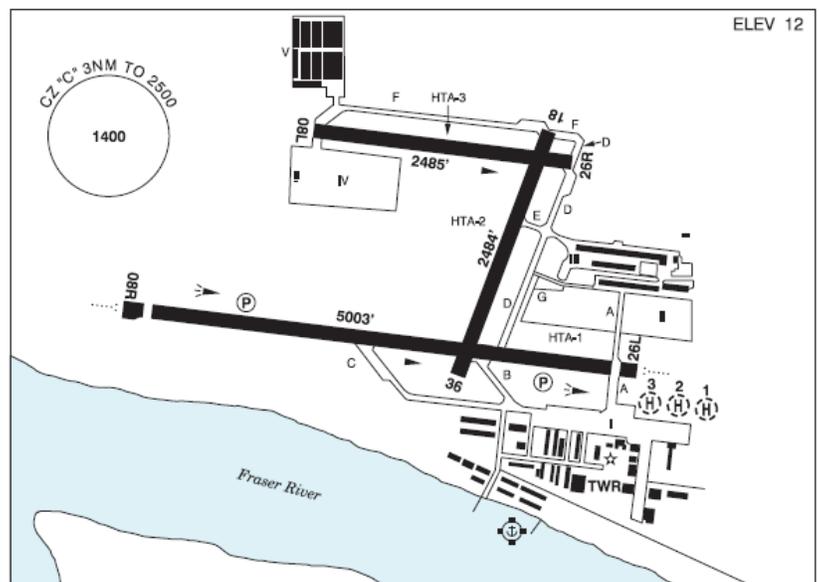
CANADA FLIGHT SUPPLEMENT / GPH 205 Effective 0901Z 26 March 2020 to 0901Z 21 May 2020

BRITISH COLUMBIA

AERODROME / FACILITY DIRECTORY

PITT MEADOWS BC

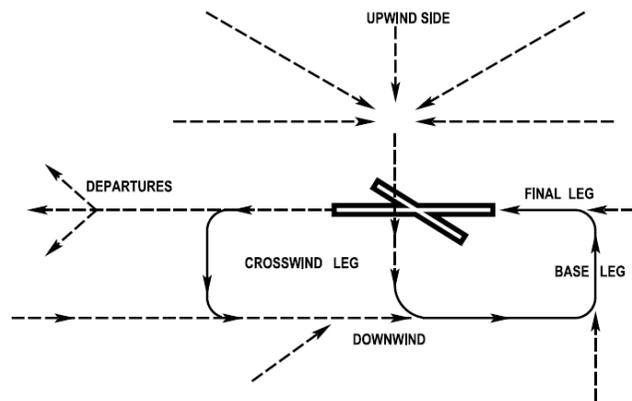
CYPK



Aerodrome Traffic Patterns

All locations used by full scale aviation will have some form of established “traffic pattern”. The pattern will often include procedures for entry into the “circuit”, departure procedures, overflight restrictions and other particulars. The “circuit” is one part of the traffic pattern that sets aircraft up for landing but also repetitive take-offs and landings. The CFS entry for each aerodrome will list any restrictions or differences from a standard left-hand traffic circuit, in the **PRO** section.

Figure 4.1—Standard Left-Hand Traffic Circuit



PRO

Rwy 25 preferential for take-off, Rwy 07 preferential for ldg. Touch & go not permitted. Rgt hand circuits Rwy 07 (CAR 602.96).

Departures vs Arrivals

Departures are probably the easiest aircraft for MAAC pilots to avoid as airplanes are generally quite noisy and can be heard starting up and taxiing out. Unlike cars, you really can't just hop in an airplane and go. Most airplanes require some form of pre-flight check, engine warm up and other pre-flight checks and set ups. Just because you hear an engine start, doesn't mean departure is imminent. That being said, here are some tips on how departures work in general

- Piston powered airplanes generally need to do a “run-up” somewhere near the runway, just before taking off. That can be a good cue to get your RPAS out of the way and soon.
- Turbo-props and jet powered aircraft do not need to do run-ups. When their engines start expect a departure relatively soon thereafter.
- At controlled aerodromes, pilots need permission to move. Any agreement with a MAAC Club is likely going to relegate us to an area/altitude where we permanently don't get in the way.
- At uncontrolled aerodromes the pilot should broadcast their intentions just before the aircraft starts moving – they are free to move at their discretion. This should give you at least a minute to “de-conflict” your RPAS from their departure – but things can happen quick.
- The pilot should broadcast the intended departure runway, on the ATF or MF. This will normally be the into wind runway but not always. Quite a few Turboprops and Jets can takeoff with 10-15 knot tailwinds or crosswinds.
- A NORDO or RONLY aircraft will not make any broadcast – do not rely on radio monitoring as the sole means of maintaining situational awareness.
- For MAAC purposes, there really isn't much difference between an IFR and VFR departure. The process is mostly the same.

Arrivals can be somewhat trickier to spot and avoid – especially between IFR and VFR aircraft. Approach and landing are probably the highest concentration phase of flight for full

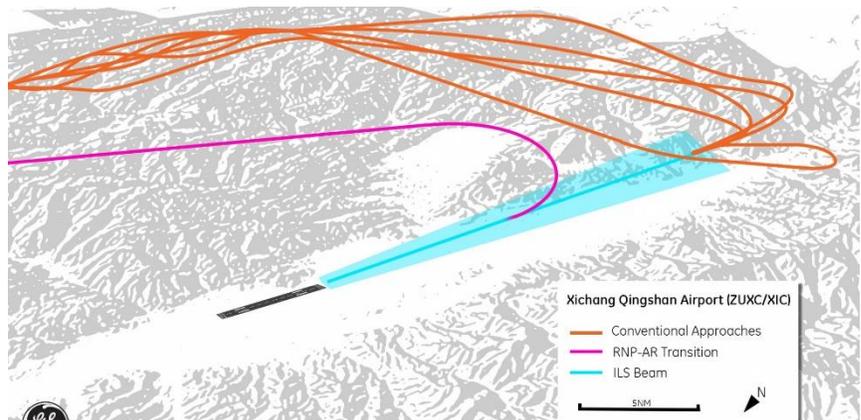
scale pilots – they don't really need/want to be looking out for RPAS – so try to leave extra room/time for arrivals.

VFR Arrivals – will generally join the circuit in the manner described and depicted in the [TC-AIM](#). The expected procedure is to:

- Broadcast their position and intentions before entering the ATF of MF zone. This is normally done at least 5nm away from the aerodrome and provides a few minutes notice of their arrival.
- Approach the aerodrome from the upwind side and overfly the aerodrome, 500' above the established circuit altitude (which is usually 1000' AGL) to join downwind. They may make an additional broadcast when joining the downwind – or not.
- Normal protocol is one last broadcast when turning final or shortly thereafter.
- A NORDO or RONLY aircraft will not make any broadcast – do not rely on radio monitoring as the sole means of maintaining situational awareness.
- NOTE - The overhead upwind side procedure is rarely followed in practice. The more common procedure is to join downwind on the downwind side. It is also not uncommon for VFR aircraft to join straight into base leg or even conduct a straight in on final – the latter being somewhat “illegal”. Regardless of expected procedures, MAAC RPAS pilots need to be constantly listening and watching for full scale aircraft.

IFR Arrivals – IFR aircraft are flown in a far more regimented fashion than VFR. This is especially true if the aerodrome is located in controlled airspace.

Even at uncontrolled aerodromes IFR aircraft are expected to follow the “established traffic pattern” but are not prevented from conducting a straight in approach to landing. In practice 90% of IFR aircraft will enter the airport environment directly on the final approach leg – or



commonly called “straight in” approach. The remaining 10% will enter the airport environment on a relatively new procedure called a “RNP Approach” or “curved approach”. This looks like a VFR circuit but has a continuous turn to final and is tighter or closer to the runway than the more traditional IFR approach procedure.

At aerodromes with an ATF, inbound IFR aircraft might not make their presence known on the frequency until very close to landing – perhaps as close as 5nm final or a few minutes from touchdown. This can catch you off guard and provide minimal time to de-conflict your operation.

At aerodromes with a MF, an inbound IFR aircraft might make its initial contact a substantial distance out – as much as 25nm away and including an estimated time of arrival (in Zulu time). The trick here is to remember that they are still coming and “de-conflict” your aircraft from any potential arrival path. The next call might be as with the ATF – short final a few minutes from touchdown.

In both cases know the active runway, the expected direction of approach and always be prepared to get out of the way – quickly. Again the Transport Canada Aeronautical Information Manual ([TC-AIM](#)) has an entire section devoted to explaining VFR and IFR arrival and departure procedures. Clubs may want to make this required reading for their pilots.

Where the MAAC RPAS operation is conducted relative to the aerodrome features are too complex to list here. Ensure any discussion with the aerodrome operator considers exactly where and how high (flying area) you intend to operate.

Weather limitations

There are weather limitations on all categories of full-scale aircraft operations. There are also implied weather operations on MAAC RPAS operations via the exemption – namely we must be line of sight with our RPAS at all times. That does not prevent us from operating in reduced visibility or when low cloud cover is present. However, if we do so that presents some unique challenges to our normal collision avoidance procedure of “see and avoid” full-scale aircraft – ESPECIALLY when operating near aerodromes. The following chart lists VFR weather minimums Clubs need to be aware of.

Table 2.2–VFR Weather Minima*

AIRSPACE		FLIGHT VISIBILITY	DISTANCE FROM CLOUD	DISTANCE AGL
Control Zones		not less than 3 mi.**	horizontally: 1 mi. vertically: 500 ft	vertically: 500 ft
Other Controlled Airspace		not less than 3 mi.	horizontally: 1 mi. vertically: 500 ft	–
Uncontrolled Airspace	1 000 ft AGL or above	not less than 1 mi. (day) 3 mi. (night)	horizontally: 2 000 ft vertically: 500 ft	–
	below 1 000 ft AGL – all aircraft except helicopters	not less than 2 mi. (day) 3 mi. (night) (see Note 1)	clear of cloud	–
	below 1 000 ft AGL – helicopter	not less than 1 mi. (day) 3 mi. (night) (see Note 2)	clear of cloud	–

* See CAR 602, Division VI – Visual Flight Rules

** Ground visibility when reported

From the chart we see a VFR aircraft landing at an uncontrolled aerodrome only needs to be able to see 2 miles. A helicopter can reduce that to 1 mile. One mile is roughly 5000’ which isn’t much greater than some of our larger flying areas. This does not provide the MAAC operation much time to get out of the way.

Most IFR aircraft can land or take off with visibilities as low as 1200’ – well within our flying area dimensions. By the time we see them, it would be very difficult to get out of the way. An IFR aircraft descending out of the cloud into the MAAC flying area is nearly instantaneous and poses a very high risk of an unintended encounter.

Because you are operating in “their house”, MAAC Clubs should ensure Club pilots are aware of the extra risks involved and ensure additional layers of protection from unexpected full-scale

weather related encounters. Clubs may wish to enforce weather limits on their operations equal to or **greater than the minimum VFR weather**.

A suggested best practice or norm would be no MAAC RPAS flying if the cloud ceiling is less than 1000' AGL (or 500' above your flying area), or the visibility is less than 3nm – whichever occurs first.

D. Conduct a Hazard Identification and Risk Assessment (HIRA)

After completing the previous steps and **before meeting** with the aerodrome operator, the MAAC Club or individual should take a last step back and examine the **entire** environment they intend to request to operate in. Members should refer to the tutorial titled [MAP01-07 Hazard Identification and Risk Assessment](#) for the full details. Here is a summation of the key points:

1. Have we met our Exemption requirements? Are we knowledgeable of who needs to approve what? Do we have agreements in place and copies to provide? Do we have contact points – names, emails and phone numbers to provide the aerodrome operator?
2. Have we given the expected location a good look for MAAC Safety Code items? Do we have an idea of where on or near the aerodrome we want to operate? Are we flying over MSD03 prohibited items – people property or “things”. Can we meet flight line set back distances? Is your Zone Director aware of your proposed location, do they have any advice or issues?
3. For all identified risks to safety, do you have a reasonable course of action to mitigate those risks to the lowest level possible?
4. Common sense assessment. Lastly, take yet another step back and ask yourselves if flying model aircraft from your proposed location is really worth the added risk and procedures. Is your desired site truly suited to MAAC RPAS operation or should you look elsewhere? Some aerodromes are used so infrequently that owners are happy to have us, if only to make the place look lived in. Other locations not so much....the busier the aerodrome the greater the risk. Obviously at some level MAAC operations would not even be entertained. Where do you fall?

E. Obtain Landowner permission – preferably in writing

If you are flying from a buddy's private strip, then “landowner” and “aerodrome operator” are likely one in the same. However, if you are flying from more formal or structured locations like a municipal aerodrome, quite often the “landowner” and “airport operator” are not the same entity. This can be a “chicken egg” type search – who to contact first to find the other. If you are not sure, the simplest starting point is finding the published “aerodrome operator” as listed in any documents and simply asking them – they will know. For any CFS published aerodrome, you will find the operator name and contact information are listed under “**OPR**”.

Why does it matter? The MAAC Club registration process and form makes a clear distinction that insurance is normally supplied to the Landowner – not the land operator. This has been the case with farms that are sub-let to other farmers to manage – insured third party is the

original landowner. In all cases the aerodrome landowner or operator should know who is required to be the named entity on any insurance submission.

F. Obtain Aerodrome operator permission – preferably in writing

Once you have determined the landowner and operator, it is recommended to enter into some form of operational agreement with the aerodrome operator, preferably in writing. Some aerodrome operators have a standard “end user” agreement to complete while others may have nothing. While not a MAAC responsibility to manage, the following are suggested items Clubs or individuals may wish to include in any agreement:

- Legal name of Aerodrome operator, and Club
- Date of commencement of agreement, and renewal or expected termination date
- Contact information for both parties
- Description of area approved for Club/individual use (a reference to Club determined **flying area** may prove handy)
- Rules or procedures mandated by Aerodrome Operator
 - NOTAM procedures if applicable
 - Weather limits
 - Access points
 - Frequency monitoring
 - Fly away procedures
 - Accident reporting
 - Other relevant processes
- Conditions for renewal or termination
- Signature space and dates

As noted in step one, if your aerodrome is uncontrolled but in controlled airspace, you will need permission from the airspace controlling agency that may or may not care that you are operating from an uncontrolled aerodrome. If, however your aerodrome is a controlled aerodrome, you will also need to enter into an agreement with the ATC facility responsible. Here too you may find issues with who will sign off first – some aerodrome operators will not sign agreements until they are sure we have permission from the airspace controlling agency. Some controlling agencies, such as NAV CANADA are risk averse and reluctant to authorize airspace access, especially when from an aerodrome, until we can prove we have the aerodrome operator’s permission. In all cases patience and persistence are required – aviation can be a complex bureaucratic enterprise at times.

G. Publish Information Package and Rules or Guidelines

The purpose of all MAAC processes and procedures is not bureaucratic – the purpose is continued safety! MAAC obtained the [TC Exemption](#) because of our unblemished safety record – let’s keep it that way.

All the procedures and rules in the world are useless if nobody knows about them. Clubs and individuals flying from a full-scale aerodrome have an added privilege and consequent responsibility to follow the rules. Key to ensuring safety is ensuring everyone knows the rules. Clubs should consider adding the following to general Club rules and procedures:

- **Clear well written** information packages to be given to every club member, club visitor or any other involved party prior to flying activities. [TC-AIM](#) excerpts are very informative.
- **Having a Club “checkout”** or new member briefings on the aerodrome specific procedures. These should be thorough and explain in detail any and all procedures required. A written test is also advised.
- **Enhanced MAAC procedure** usage such as mandatory spotters, additional limits on number of aircraft airborne.
- **A minimum equipment list** – items you deem required and if not present, flying operations do not commence or cease (no ad-hoc winging it “just this once”). Items may include the VHF radio, extra fire suppression tools etc.
- **Clear Club procedures** or protocol for reporting and addressing any observed transgressions – in real time. Hurt feelings must take a back seat to safety. Consider adopting formal threat/safety challenge protocols such as “if you see it – say it” processes.
- **Club feedback mechanism** for issues observed or improvement ideas

H. Review Safety Assessment Annually

Once a Club or individual has obtained the required permissions and established a MAAC RPAS operation from a full-scale aerodrome, it is extremely important to review the operation at least annually for areas where safety can be improved. Clubs should use this tutorial to review all the items that were required to obtain the location, to ensure they are still valid. Clubs and individuals flying from a full-scale aerodrome have an added privilege and consequent responsibility to follow the rules and ensure the highest levels of safety reasonably possible.

I. Available resources

The following are resources that any Club or individual wanting to establish a MAAC operation from a full-scale aerodrome can use.

Zone Director
Safety committee
MAAC TC Committee
[TC- AIM](#)

2020 Canadian Air Traffic Control Tower List

ATC TOWER NAMES	ICAO IDENTIFIER	FIR	CFS #	24 HOURS
Abbotsford Tower	CYXX	VANCOUVER	2	NO
Boundary Bay Tower	CZBB	VANCOUVER	2	NO
Calgary Tower	CYYC	EDMONTON	3	YES
Edmonton Tower	CYEG	EDMONTON	3	YES
Fort McMurray Tower	CYMM	EDMONTON	3	NO
Fredericton Tower	CYFC	MONCTON	7	NO
Gander Tower	CYQX	GANDER	7	NO
Halifax Tower	CYHZ	MONCTON	7	YES
Hamilton Tower	CYHM	MONCTON	4	YES
Kelowna Tower	CYLW	VANCOUVER	4	NO
Langley Tower	CYNJ	VANCOUVER	2	NO
London Tower	CYXU	MONTREAL	4	NO
Mirabel Tower	CYMX	MONTREAL	5	YES
Moncton Tower	CYQM	MONCTON	7	NO
Montreal Tower	CYUL	MONTREAL	5	YES
Oshawa Tower	CYOO	TORONTO	4	NO
Ottawa Tower	CYOW	MONTREAL	4	YES
Pitt Meadows Tower	CYPK	VANCOUVER	2	NO
Prince George Tower	CYXS	VANCOUVER	2	NO
Quebec Tower	CYQB	MONTREAL	5	YES
Red Deer (TBD)	CYQF	EDMONTON	3	NO
Regina Tower	CYQR	WINNIPEG	3	NO
Saskatoon Tower	CYXE	WINNIPEG	3	NO
Sault Ste Marie Tower	CYAM	TORONTO	4	NO
Springbank Tower	CYBW	EDMONTON	3	NO
St. Andrews Tower	CYAV	WINNIPEG	3	NO
St. Honore Tower	CYRC	MONTREAL	5	NO
St. Hubert Tower	CYHU	MONTREAL	5	NO
St. Jean Tower	CYJN	MONTREAL	5	NO
St. John's Tower	CYYT	GANDER	7	YES
Thunder Bay Tower	CYQT	WINNIPEG	4	NO
Toronto City Centre Tower	CYTZ	TORONTO	4	NO
Toronto Tower	CYYZ	TORONTO	4	YES
Vancouver Harbour Tower	CYHC	VANCOUVER	2	NO
Vancouver Tower	CYVR	VANCOUVER	2	YES
Victoria Tower	CYYJ	VANCOUVER	2	NO
Villeneuve	CZVL	EDMONTON	3	NO

MAP01-T-5 - Flying From Full Scale Aerodromes

ATC TOWER NAMES	ICAO IDENTIFIER	FIR	CFS #	24 HOURS
Waterloo Tower	CYKF	TORONTO	4	NO
Whitehorse Tower	CYXY	EDMONTON	1	NO
Windsor Tower	CYQG	TORONTO	4	NO
Winnipeg Tower	CYWG	WINNIPEG	3	YES
Yellowknife Tower	CYZF	EDMONTON	1	YES

2020 Canadian Flight Service Station AAS list

FSS COMMON NAME	ICAO IDENTIFIER	FIR	CFS #	CO-LOCATED WITH ATC TOWER
Brandon	CYBR	WINNIPEG	3	
Campbell River	CYBL	VANCOUVER	2	
Castlegar	CYCG	VANCOUVER	2	
Charlottetown	CYYG	MONCTON	7	
Churchill	CYYQ	WINNIPEG	3	
Cranbrook	CYXC	VANCOUVER	2	
Deer Lake	CYDF	GANDER	7	
Fort Nelson	CYNE	EDMONTON	3	
Fort St John	CYXJ	EDMONTON	3	
Gander*	CYQX	GANDER		YES
Grande Prairie	CYQU	EDMONTON	3	
High Level	CYOJ	EDMONTON	3	
Iles-de-la-Madeleine	CYGR	MONCTON	7	
Inuvik	CYEV	EDMONTON	1	
Iqaluit	CYFB	MONTREAL	1	
Kamloops	CYKA	VANCOUVER	2	
Kenora	CYQK	WINNIPEG	4	
Kingston	CYBK	TORONTO	4	
Kuujuaq	CYVP	MONTREAL	5	
La Grande Riviere	CYGL	MONTREAL	5	
La Ronge	CYVC	WINNIPEG	3	
Lethbridge	CYQL	EDMONTON	3	
Lloydminster	CYLL	EDMONTON	3	
Medicine Hat	CYXH	EDMONTON	3	
Mirabel*	CYMX	MONTREAL	5	YES
Mont-Joli	CYYY	MONTREAL	5	
Nanaimo	CYCD	VANCOUVER	2	
Norman Wells	CYVQ	EDMONTON	1	
North Bay	CYYB	TORONTO	4	
Ottawa Gatineau	CYND	MONTREAL	5	

MAP01-T-5 - Flying From Full Scale Aerodromes

FSS COMMON NAME	ICAO IDENTIFIER	FIR	CFS #	CO-LOCATED WITH ATC TOWER
Peace River	CYPE	EDMONTON	3	
Penticton	CYDC	VANCOUVER	2	
Port Hardy	CYZT	VANCOUVER	2	
Prince Albert	CYPA	WINNIPEG	3	
Rankin Inlet	CYRT	EDMONTON	1	
Red Deer	CYQF	EDMONTON	3	
Regina*	CYQR	WINNIPEG	3	YES
Rouyn	CYUY	MONTREAL	5	
Saint John	CYSJ	MONCTON	7	
Saskatoon*	CYXE	WINNIPEG	3	YES
Sept-Iles	CYZV	MONTREAL	5	
Sioux Lookout	CYXL	WINNIPEG	4	
Smithers	CYYD	VANCOUVER	2	
St Catharines	CYSN	TORONTO	4	
Sudbury	CYSB	TORONTO	4	
Terrace	CYZXT	VANCOUVER	2	
Thompson	CYTH	WINNIPEG	3	
Thunder Bay*	CYQT	WINNIPEG	4	YES
Timmins	CYTS	TORONTO	4	
Val-D'or	CYVO	MONTREAL	5	
Victoria Harbour	CYWH	VANCOUVER	2	
Wabush	CYWK	MONTREAL	7	
Whitecourt	CYZU	EDMONTON	3	
Williams Lake	CYWL	VANCOUVER	2	
Yellowknife*	CYKF	EDMONTON	1	YES

5.0 Current Version.

Version 1, Approved July 27, 2020

NOTE: Hard copies of this document may become outdated through revision, cancellation or replacement with another document. To ensure that you have the latest version approved by the Board of Directors, always check the MAAC web site under Resources – Documents – MAAC Safety Code.