



City of Richmond

Report to Committee

To: Parks, Recreation and Cultural Services
Committee

Date: June 29, 2015

From: Mike Redpath
Senior Manager, Parks

File: 11-7000-01/2015-Vol
01

Re: **Public Parks and School Grounds Regulation Bylaw No. 8771 Referral – June 2015**

Staff Recommendation

1. That Manoah Steves Park be designated for model aircraft use under the code of conduct outlined in Attachment 1, in the staff report titled “Public Parks and School Grounds Regulation Bylaw No. 8771 Referral – June 2015,” dated June 29, 2015, from the Senior Manager, Parks; and
2. That Garry Point Park be designated for permit only – recreational power kite usage through the development and implementation of a permit system as detailed in the staff report titled “Public Parks and School Grounds Regulation Bylaw No. 8771 Referral – June 2015,” dated June 29, 2015, from the Senior Manager, Parks.

Mike Redpath
Senior Manager, Parks
(604-247-4942)

Att. 2

REPORT CONCURRENCE		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Risk Management Community Bylaws	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	INITIALS: 	APPROVED BY CAO

Staff Report

Origin

At the April 27, 2015, Council meeting, staff received the following referral:

That staff make comments on the viability of regulations for the use and area for those items listed in section 3.1.1.(c) of the Public Parks and School Grounds Regulation Bylaw No. 8771 and report back.

Staff was also directed to address the definition of various types of unmanned aerial vehicles as part of Resolution R15/8-3.

Analysis

Background

As part of the Public Parks and School Grounds Bylaw 8771, Council approved changes to update regulations regarding the use of model aircraft, unmanned aerial vehicles and power kites to align with current technology, address citizen and staff concerns, ensure public safety, and provide a valuable enforcement tool to protect and maintain public parks and school grounds for the enjoyment of the community.

While the previous bylaw restricted the use of gas powered planes to designated areas, the new bylaw extends this restriction to include all types of radio-controlled, fixed-line-controlled, and power-launched model aircraft, unmanned aerial vehicles (UAVs), and power or traction kites whereby the kite provides significant pull or propels the individual on land or air.

There is an area in Richmond designated for use by fixed-line gas powered model aircraft through the Pacific Aeromodellers Club at 12851 Rice Mill Road. There is currently no other designated area for non-fixed-line model aircraft, UAVs, or power kites.

Staff have explored best practices in other municipalities and consulted with community groups and local residents to develop these recommendations regarding designating areas for model aircraft, UAVs, and power kites.

Model Aircraft

A model aircraft is defined by Transport Canada as an “aircraft with a total weight not exceeding 35 kg (77lbs) that is mechanically driven or launched into flight for recreational purposes and that is not designed to carry persons or other living creatures” (Transport Canada Advisory Circular – Attachment 2).

Unmanned Aerial Vehicles

A UAV is defined by Transport Canada as a “power-driven aircraft, other than a model aircraft, that is designed to fly without a human operator onboard” (Transport Canada Advisory Circular – Attachment 2).

Transport Canada does not provide a definition for drone. In common usage, a drone is often used interchangeably with UAV and can often have a military connotation. UAVs also include multi-rotor-aircraft.

The terms “model aircraft,” “unmanned aerial vehicle” and “drone” are often used interchangeably and the definitions can be unclear. Transport Canada’s definition distinguishes UAVs from model aircraft by their use. Model aircraft are only used for recreational purposes, while UAVs can be used for both recreational and commercial purposes. Unlike model aircraft, UAVs are capable of being flown autonomously (without continuous human control) using GPS and can be flown beyond the line of site of the pilot to complete a route by either using GPS or an on-board camera (know as first person view).

For the purposes of this report, the term model aircraft will be used to describe aircraft that are designed to be flown within line of site of the operator and for recreational purposes. UAVs will be used to describe aircraft that are capable of and designed for being flown autonomously and/or beyond visual line of site of the operator.

Model Aircraft

Staff recommend establishing a designated field for members of the Richmond RC Flyers Club to fly electric (battery) powered model aircraft at Manoah Steves Park under the code of conduct outlined in Attachment 1. While other locations were considered, this is the preferred location due to the field’s size, location, the support of the school district, controlled ingress and egress use allowing for effective signage, and a history of use without conflict with the neighbouring school, sports groups who use the field and local residents.

Many municipalities in the region restrict the use of model aircraft to designated locations and times in conjunction with a local flying club. This has proven to be a successful model in Richmond with fixed-line model aircraft as well as in Victoria, Burnaby and North Vancouver with non-fixed line model aircraft. Transport Canada staff have also indicated their support for this approach as it allows residents to engage in the pursuit of their hobby in a safe and responsible manner.

Staff recommend designating the use of this field under the following conditions:

- Flyers must be members of the Model Aeronautics Association of Canada (MAAC) and members or guests of the Richmond RC Flyers Club. Proof of \$5 million insurance must be provided to the club. (When flying on an approved field, MAAC members are provided with \$7.5 million of insurance coverage.)
- Flyers must comply with the Richmond RC Flyers Club Code of Conduct (Attachment 1).
- Permanent signage will be installed in the park at all ingress/egress routes indicating that the field is used by model aircraft.
- Parks Programs staff will meet with a designated representative from the RC Flyers Club on an ongoing basis (a minimum of once per year) to review the program and discuss issues of mutual concern.

UAVs

Staff have contacted community members who operate UAV's and will continue to work with them to consider locations and codes of conduct for designation in the future. Any potential options that emerge will be brought to Council for consideration.

Power Kites

The North American Power Kiting Association (NAPKA) aims to support power kite activities throughout North America. The organization's mission is "to develop and promote the following segments of wind powered traction kiting in North America, (kite buggies, all-terrain bikes/landboards, dirt surfers, and kite skates) by working with the public and local authorities to keep and or open new areas for our pilots to participate in their activities safely."

NAPKA recommends the creation of local clubs to work with local governments to designate appropriate areas, ensure safety through codes of conduct, and deal with issues as they arise. While there are a number of individuals who engage in power kiting at Garry Point Park, there is currently not a local club.

Staff have contacted community members who engage in power kiting and will continue to work with them to develop a Code of Conduct, appropriate times, and a permit system for power kiting at Garry Point Park. The Code of Conduct and permit system will insure that power kite operators have committed to operating their vehicles in a safe manner that respects other park users and that appropriate insurance coverage is in place. Staff will prepare a memo for Council outlining the proposed Code of Conduct, designated location, and times in fall 2015.

Financial Impact

There is no financial impact as a result of this report.

Conclusion

The use of model aircraft in an organized and controlled manner at Manoah Steves Park will offer model aircraft enthusiasts the opportunity to continue to pursue their hobby in way that does not impact the enjoyment or safety of other park users.

Staff will continue to liaise with recreational UAV and power kite operators to consider options for designated areas and codes of conduct and report back to Council.



Marie Fenwick
Manager, Parks Programs
(604-244-1275)

- Att. 1: Richmond RC Flyers Club Code of Conduct
- 2: Transport Canada Advisory Circular

Richmond RC Flyers Club Code of Conduct (to be posted at Manoah Steves Park)

Welcome to Manoah Steves Park

This park is approved for model aircraft use by members and guests of the Richmond RC Flyers Club by the City of Richmond and School District 38.

Airfield Code of Conduct

1. Only electric (battery powered) model aircraft as defined by Transport Canada are permitted. Unmanned Air Vehicles (UAVs) are not permitted.
2. All model aircraft operators shall be able to prove membership to the Model Aeronautics Association of Canada (MAAC).
3. Model aircraft shall only be operated in accordance with the MAAC safety code.
4. Model aircraft shall only be flown when Manoah Steves School is out of session. Model Aircraft are permitted on weekends, holidays and during school vacation. Model aircraft are permitted after 5PM on school days.
5. Model aircraft shall only be flown when no organized sporting events or organized public functions are in progress.
6. No aircraft operator shall operate a model aircraft in a careless, reckless or otherwise dangerous manner that may pose a hazard to persons or property.
7. No aircraft operator shall operate a model aircraft while under the influence of alcohol or judgement impairing drugs.
8. No aircraft operator shall fly a model aircraft in a manner that may be hazardous to full-scale aircraft.
9. A maximum of three aircraft are permitted in the air at one time.

For more information on the Richmond RC Flyers Club and upcoming events and programs please contact: ManoahFlyers@gmail.com.

For more information on model aircraft regulations and safety codes please visit Transport Canada's website at www.tc.gc.ca and MAAC's website at www.maac.gc.ca.

To report misuse or concerns please contact the City of Richmond at parks@richmond.ca or at 604-244-1208.



Advisory Circular

Subject: General Safety Practices – Model Aircraft and Unmanned Air Vehicle Systems

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TABLE OF CONTENTS

1.0	INTRODUCTION.....	2
1.1	Purpose	2
1.2	Terminology.....	2
1.3	Applicability	2
1.4	Description of Changes.....	2
2.0	REFERENCES AND LEGAL REQUIREMENTS	2
2.1	References	2
2.2	Legal Requirements	2
2.3	Cancelled Documents	3
2.4	Definitions.....	3
3.0	BACKGROUND	3
4.0	MODEL AIRCRAFT	4
4.1.	General.....	4
4.2	Safety Considerations for Model Aircraft	4
4.3	Penalties for Model Aircraft.....	5
5.0	UNMANNED AIR VEHICLE (UAV) SYSTEMS	5
5.1	General.....	5
5.2	Penalties Relating to the Use of UAV Systems	6
5.3	Reporting.....	6
6.0	INFORMATION MANAGEMENT.....	6
7.0	DOCUMENT HISTORY	6
8.0	CONTACT OFFICE	6

1.0 INTRODUCTION

1.1 Purpose

- (1) An Advisory Circular provides information and guidance with regards to a specific issue or law. In this case, it provides general guidance and safety practices for operators of model aircraft and unmanned air vehicle (UAV) systems.

1.2 Terminology

- (1) While media and manufacturers may use different terms when describing a remotely controlled aircraft, the aviation industry and its regulations use the term UAV system.

1.3 Applicability

This document applies to members of the public who own and operate a model aircraft for recreational purposes or a UAV system for any purpose. Refer to section 3 to determine the type of aircraft you are operating.

1.4 Description of Changes

Not applicable.

2.0 REFERENCES AND LEGAL REQUIREMENTS

2.1 References

- (1) This Advisory Circular should be used in conjunction with the Advisory Circular on Guidance Material for Operating an Unmanned Air Vehicle System Under an Exemption <http://www.tc.gc.ca/eng/civilaviation/opssvs/managementservices-referencecentre-acs-600-menu-495.htm> and the Staff Instruction on the Review and Processing of an Application for the Operation of an Unmanned Air Vehicle System.

2.2 Legal Requirements

- (1) The aviation laws that govern the use of model aircraft and UAV systems operated in Canadian airspace are the:
- (a) *Aeronautics Act; and*
 - (b) *Canadian Aviation Regulations.*
- (2) In addition, it is your responsibility, as an operator, to comply with all other Canadian laws that might apply such as the:
- (a) *Canadian Transportation Accident Investigation and Safety Board Act;*
 - (b) *Charter of Rights and Freedoms,*
 - (c) *Criminal Code of Canada;*
 - (d) *Customs Act;*
 - (e) *Environmental Protection Act;*

- (f) *National Parks Aircraft Access Regulations;*
- (g) *Personal Information Protection and Electronic Document Act;*
- (h) *Privacy Act;*
- (i) *Radiocommunication Act;*
- (j) *Transportation of Dangerous Goods Act; and*
- (k) *Trespass Act.*

2.3 Cancelled Documents

- (1) The publication of a new issue of an Advisory Circular on General Safety Practices for Model Aircraft and Unmanned Air Vehicles renders this document null and void.

2.4 Definitions

The following definitions are used in this document:

- (a) **Model Aircraft** – means an aircraft with a total weight not exceeding 35 kg (77 lbs) that is mechanically driven or launched into flight for recreational purposes and that is not designed to carry persons or other living creatures.
- (b) **Maximum Take-off Weight** – means the weight of the aircraft at the time of the operation, including the weight of any payload (e.g. a camera) and fuel.
- (c) **Unmanned Air Vehicle** – means a power-driven aircraft, other than a model aircraft, that is designed to fly without a human operator onboard.

3.0 BACKGROUND

- (1) Greater numbers of people in Canada are flying aircraft that, by design, are flown without a pilot on board and controlled through devices such as a remote control, tablet, smart phone, etc.
- (2) For everyone's safety, aviation is governed by strict rules similar to when operating a car or a boat.
- (3) While UAV systems are legitimate airspace users, they must integrate into Canada's national airspace in a safe manner. This will ensure the safety of other airspace users and people and property on the ground.
- (4) To determine what type of aircraft you are operating , and if the guidance that applies to you, use the definitions above and the information below:
 - (i) A model aircraft has no pilot onboard and is used by hobbyists for recreational purposes. If your aircraft and planned operation meets this category refer to section 4.0 for more details,

or
 - (ii) A UAV system is used for non-recreational and commercial purposes and is controlled remotely, either directly or through onboard computers. If your aircraft and operation meets this category, refer to section 5.0 for more information.

4.0 MODEL AIRCRAFT

4.1. General

- (1) Model aircraft are excluded from the vast majority of *Canadian Aviation Regulations* (CARs) that are applied to other aircraft. However, for a large model aircraft with a maximum take-off weight of over 35 kg (77 lbs), you require a special flight operations certificate (SFOC) to operate as described in section 5.0 below.
- (2) If your aircraft has a maximum take-off weight of less than 35 kg (77 lbs) and is used for purposes other than recreation, it is not considered a model aircraft. It is a UAV system and again is subject to section 5.0 and requires an SFOC.
- (3) You should use your model aircraft for recreational purposes only (e.g. hobby and personal enjoyment). If you are using it for other purposes (i.e. flight training, inspection or academia purposes, etc), section 5.0 below is applicable as is the requirement for an SFOC.
- (4) For model aircraft weighing less than 35 kg (77 lbs) and used for recreational purposes, the best practices in section 4.2 below provides guidance for the safe operation of your model aircraft.
- (5) The [Model Aeronautics Association of Canada \(MAAC\)](#) represents 12,000 members and is the preeminent national body for model aviation in Canada. The MAAC supports and promotes recreational and competitive model flying, both locally and internationally and works with all levels of government.
- (6) The regulations regarding model aircraft are clear:
 - (a) No person shall fly a model aircraft or a kite or launch a model rocket or a rocket of a type used in a fireworks display into cloud or in a manner that is or is likely to be hazardous to aviation safety (*Canadian Aviation Regulations*, Section 602.45).

4.2 Safety Considerations for Model Aircraft

Before your Flight

- (a) Inspect that your model aircraft is ready for flight.
 - (i) This means that the aircraft, control station components (hardware, software and firmware) and control links are in a fit for flight condition.
- (b) Seek permission from the property owner on which you intend to operate your model aircraft
- (c) Know the classification of the airspace you want to fly in. It would be inappropriate and unsafe for you to operate in airspace with heavy aircraft traffic, such as around airports.
- (d) Confirm that there is no radio frequency interference (from a nearby radar site for example) that will interfere with the control of your aircraft.
- (e) Have an emergency plan just in case.
 - (i) This means know the people and equipment available that could help you respond to an incident, accident, medical emergency, you have a fly-away or if your model aircraft becomes uncontrollable.

During your Flight

- (a) Operate the aircraft safely.
- (b) Always be able to see the aircraft with your own eyes. This means that you should not use an on-board camera, first person view device or other similar devices.
- (c) Always give way to manned aircraft (e.g. hot air balloons, gliders, ultra-light aeroplanes including powered parachutes, aeroplanes and helicopters).
- (d) Fly only during daylight and in good weather (e.g. not in clouds or fog).
- (e) Avoid restricted airspace (e.g. forest fire areas, prisons or military airspace)
- (f) Remain at least 9 km (5 nautical miles) from any aerodromes and heliports.
- (g) Maintain below a safe altitude (300 feet (90 metres)) and a safe horizontal distance (minimum 100 feet (30 metres)) from people, structures or buildings.
- (h) Do not fly in populated areas or overfly assemblies of people (e.g. sporting events, concerts, etc).
- (i) Do not fly where or when you could interfere with any first responders (fire department, police, etc) as they conduct their duties.
- (j) Respect the privacy of others.
- (k) Do not operate with any dangerous goods or lasers on the aircraft.

4.3 Penalties for Model Aircraft

- (1) Violations of the model aircraft regulation are handled by the courts or judicial action. Endangering the safety of aircraft is a serious offence under the *Aeronautics Act* and is punishable by a fine.
- (2) The *Criminal Code of Canada* describes several offences involving the dangerous operation of aircraft and endangering the safety of other aircraft. Committing such offences is punishable by monetary penalties and/or jail time including imprisonment for life.
- (3) Other penalties may apply against other regulations outlined in section 2.0.

5.0 UNMANNED AIR VEHICLE (UAV) SYSTEMS

5.1 General

- (1) There are different mechanisms to allow you to operate a UAV system.
 - (a) If your UAV has a maximum take-off weight not exceeding 2 kg (4.4 lbs), you may be eligible to operate under a regulatory exemption.
 - (b) If your UAV has a maximum take-off weight exceeding 2 kg (4.4 lbs), but not exceeding 25 kg (55 lbs), you may be eligible to operate under a separate regulatory exemption.
 - (c) Or if your proposed operation does not meet the conditions above and cannot be conducted under an exemption, you must apply for a special flight operations certificate.

5.2 Penalties Relating to the Use of UAV Systems

- (1) Penalties may be assessed in the amount of \$5,000 for an individual and \$25,000 for a corporation for operating without a special flight operations certificate when one is required.
- (2) Penalties may be assessed in the amount of \$3,000 for an individual and \$15,000 for a corporation for failure to comply with the conditions of a special flight operations certificate.
- (3) The *Criminal Code of Canada* describes several offences involving the dangerous operation of aircraft and endangering the safety of other aircraft. Committing such offences is punishable by monetary penalties and/or jail time including imprisonment for life.
- (4) Other penalties may apply against other regulations outlined in section 2.0.

5.3 Reporting

- (1) The reporting requirements for UAV accidents or incidents will be included in the special flight operations certificate.
- (2) The [Civil Aviation Issues Reporting System](#) provides you with a means to raise issues (concerns, complaints and suggestions for improvement) to Transport Canada. It is a tool to anonymously report any suspicious aviation activity, such as illegal or unsafe use of any aircraft.
- (3) The more specific the details about a perceived contravention, the easier it is for Transport Canada's enforcement officials to process the report.
- (4) If you suspect someone has committed a criminal offence, please contact your local police department.

6.0 INFORMATION MANAGEMENT

Not applicable.

7.0 DOCUMENT HISTORY

Not applicable.

8.0 CONTACT OFFICE

Transport Canada Civil Aviation Communications Centre:

Phone: 1-800-305-2059
Email: services@tc.gc.ca

(original signed by)

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