



Dumfries Model Flying Club

Government Legislation covering Model Flying

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The Overview

In common with many aspects of life, model flying is subject to Government Legislation which is administered in the United Kingdom by the UK Civil Aviation Authority (CAA). Regulations relating to the flying of model aircraft are contained within a wider "umbrella" set of regulations and restrictions relating to all forms of Unmanned Aerial Systems (UAS) and these are documented in CAA publication [CAP722](#).

[CAP722 Regulations and Restrictions](#) make a distinction between people who "Operate" a UAS and those who pilot or "Fly" a UAS, whilst acknowledging that in most cases this will be the same person. The Operator is the person who owns the UAS and authorises its use, and all operators have a legal responsibility to be registered annually with the CAA for a small annual fee. Upon registering, the UAS Operator is issued with an Operator ID which must be clearly displayed on every UAS they operate. It is permissible to display the Operator ID inside the model provided it can be accessed without the use of tools.

The minimum age for Operators of all forms of UAS (including model aircraft) is 18 years old. The pilot (Flyer) of unmanned aerial vehicles must be able to demonstrate at least a basic level of competence in terms of an understanding of the regulations and restrictions which apply, and this will normally be via successful completion of the free CAA online competency test, thereby obtaining a Flyer ID which is valid for five years and which the flyer must be able to produce if challenged when flying.

The CAA have also published supplementary document [CAP722F](#), to CAP722 which covers the aspects of CAP722 which are specifically relevant to model aircraft flying. [CAP722F](#) describes the how the current regulatory framework applies to the operation of model aircraft. It sets out CAA policy for model aircraft operations, describes the boundaries between operations which require an authorisation and those that do not, and provides guidance to model aircraft associations when applying for an Article 16 authorisation on behalf of their members.

Unlike CAP658 which was withdrawn in January 2021, [CAP722F](#) is not intended to provide operational guidance on the flying of model aircraft. The CAA's view is that operational guidance should be contained within model aircraft association handbooks and other such documentation.

The CAA recognises four Model Flying Associations in the United Kingdom. These are the British Model Flying Association (BMFA), the Scottish Aeromodellers Association (SAA), the Large Model Association (LMA) and the association representing model flyers who utilise First Person View technology (FPVUK). It is the CAA's wish to delegate much of the day-to-day operational management of model flying to these Associations, but this is subject to their willingness and ability to comply with various conditions relating to their internal operating rules and practices, Achievement Scheme rules and practices, and member documentation. When these conditions are met, the CAA may grant certain concessions to each Association in the form of an Article 16, which permits its members to fly their models within a more generous regime of regulations and restrictions. Each of the four associations above must apply for its own Article 16 and the benefits it accords apply only to members of that specific association. This is so that each model flying association is individually responsible and accountable for its ongoing compliance with the conditions upon which their concessions were granted.

If an Article 16 has not been granted or is revoked by the CAA for any reason, the members of that association are denied the special concessions applicable to Article 16 and must fly within the Open Category rules and restrictions of CAP722. At the date of publication of this document the BMFA, LMA and FPVUK had been granted an Article 16, but SAA had not. **Therefore SAA members must fly under the Open Category of CAP722 until a new Article 16 is granted to SAA.** This means that they may not fly models above 400ft altitude and the SAA Bronze Achievement Certificate is not currently acceptable as an alternative to the CAA Flyer ID. SAA members MUST therefore complete the free CAA online competency test and obtain a Flyer ID if they haven't already done so, as failure to do so means they are flying illegally and therefore will not be covered by SAA insurance. It is also the case that at present the BMFA are unable to recognise the SAA Bronze Achievement as equivalent to the BMFA "A" Certificate.

Dumfries Model Flying Club, located as it is close to the border between Scotland and England, is affiliated to both the [SAA](#) and the [BMFA](#), and members of the Club may be members of either model flying association. However, it is their membership of their Model Flying Association which determines whether or which Article 16 is applicable to them. Currently therefore BMFA members of DMFC enjoy BMFA Article 16 concessions which are not available to SAA members of the Club, and as stated above SAA members must currently fly within the rules and restrictions of the Open Category of CAP722. This is a regrettable situation and one which it is understood that SAA is seeking to resolve as quickly as possible.

BMFA MEMBERS

The British Model Flying Association ([BMFA](#)) is the largest of the UK model flying associations so its members have the benefit of a large association employing full-time staff and a showcase central model flying centre. They also receive a bi-monthly full-colour magazine sent by post, and there is a comprehensive online membership portal where they can join or renew their membership. On the same portal they can also complete their CAA registration or renewal for the CAA Operator ID, complete a CAA compliant basic competence test and obtain a Flyer ID, and confirm their agreement to the [BMFA Article 16](#), which is a condition of use of its concessions.

BMFA have been issued with their own [BMFA Article 16 Document](#), and provided their members have confirmed their agreement to its conditions via the BMFA membership portal they can enjoy the full benefit of these concessions. The BMFA also publishes a useful [Guide to Article 16](#) to help members understand the rules and implications of the document, and even a [Quick-Start Chart](#) to keep with member's flying kit to use as a quick reference guide, and a help if challenged when flying.

BMFA members also benefit from being able to refer incidents online to BMFA who provide immediate guidance as to whether the occurrence should be reported to AAIB and/or CAA.

SAA MEMBERS

Between January 2020 and May 2021, the CAA had issued a single Article 16 which applied to all four UK model flying associations. However in May 2021 the CAA decided to issue each of the four associations with their own individual Article 16 subject to certain conditions. This was to take account of the different purposes and activities of each association and also their prevailing regime of membership rules, practices and documentary guidance to their members. Although all the other associations were able to bring their membership documentation into line with CAA policy, the [SAA](#) failed to meet the CAA deadline, and consequently their Article 16 was revoked.

The implications of this revocation for [SAA](#) members are explained above, but the most significant implication is that SAA members must have a Flyer ID (obtained by completing the free CAA online competency test) and may not fly models above 400ft altitude. It may also be necessary for SAA members to renew their CAA Operator registration directly via the CAA website.

CAA/AAIB Mandatory Reporting Requirements

CAA Publication CAP722 is the overriding document relating to the legal operation of all forms of unmanned aerial system (UAS), including all types of model aircraft. Article 16 of this document grants specific concessions to BMFA members to permit their members to continue to operate much as they have done for some time, and it hoped that SAA members will soon have a new Article 16 granting them similar concessions. However, although Article 16 grants valuable benefits to the model flying community, it is nevertheless strictly subject to compliance with the standard Mandatory Reporting Rules of CAP722. Although the requirement to report serious occurrences predates CAP722 by many years, it is understood that both CAA and the AAIB are now placing greater emphasis on this obligation, and have made it a specific condition for granting the special benefits of Article 16. There is therefore a legal obligation for members to report serious defined OCCURRENCES (Accidents or Incidents) to the AAIB and/or CAA. (Remember this is not new, but it has now attracted more significant importance and emphasis, and wider scope).

The following must be reported to the AAIB and/or CAA:-

Serious Incidents or Other Occurrences which involve any of the following:

- Manned aircraft
- Operating above 400ft
- Operating less than 50m from uninvolved people
- All instances where aircraft have flown beyond visual line of sight. (VLOS)

The last of these also relates to FPV flying in which there is a legal requirement for a competent observer to stand with the pilot to monitor the flight path of the model in relation to other aircraft, persons, vehicles, vessels and structures for the purpose of avoiding collisions, and to advise the remote pilot accordingly. The model must not be flown beyond the unaided visual line of sight of the observer.

The primary concern of AAIB and CAA is the safety of manned aircraft and uninvolved persons. It is therefore important to understand that there is a legal obligation to report certain occurrences or incidents even where there is no actual injury or damage to property, but where the occurrence COULD HAVE posed a danger to uninvolved people, or manned aircraft. Obviously a model flown beyond VLOS would fall into this category, but any loss of control of a flying model for whatever reason might also have this potential, depending on the individual circumstances. CAP722 lists a range of occurrences which must be reported if only luck prevented a more serious outcome than was actually the case.

- Loss of control over the aircraft
- Aircraft operated outside the legal limitations imposed by BMFA Article 16 (BMFA members) or CAP722 Open Regulations (SAA members)
- Aircraft operated in an unairworthy or unflightworthy condition
- Critical battery failure or malfunction (whether in the model or the transmitter)
- Power plant failure
- Aircraft structural failure (eg. part of the aircraft detaches in flight)
- Transmitter programming errors, including incorrect model memory selected or failsafe not set correctly
- Flight or "arrival" within close proximity of uninvolved persons, buildings, property or roads
- Any occurrence where the safety of the aircraft, operator, third parties or property is compromised whereby potential for harm or damage is likely to occur (or only prevented through luck)

The above list is not exhaustive, but it should be evident from this that a heavy landing on the runway, even if there was some damage to the model, would not be reportable, whereas a model crashing out of control on or near the road, or in the pits, or close to a bystander, should most certainly be reported.

CAA publication [CAP722F](#) includes a flowchart to help determine whether an occurrence is reportable.

Clearly the location of our flying field in a relatively remote rural area is intended to significantly reduce the likelihood of compromising the safety of uninvolved people, but situations could still occur which would need to be reported. It should be evident that the airworthiness of all models, and transmitter issues such as range-checking, model memory, correct control surface settings and failsafe settings are the responsibility of the pilot and that the consequences of lapses in any of these could have a serious outcome. If there is any doubt whatsoever, the assistance of a fellow-member should be sought before flying the model. Remember also that correctly setting a failsafe to cut the power in event of signal loss is itself a legal requirement.

The CAA and AAIB make it clear that the purpose is not to apportion blame or liability or impose disciplinary sanctions, but to determine causes with a view to promoting action to prevent recurrence. The aim is to enable the aeromodelling community to learn from and benefit from any lessons that may be drawn, and thereby help to avoid other incidents arising from similar causes or circumstances.

It is very important that all members take these mandatory reporting requirements seriously and do not wilfully or inadvertently put their colleagues into the invidious position of being obliged to report incidents where fellow members are in breach of any of these conditions and/or have failed to report potentially serious incidents in which they were involved. It is recommended that any member who observes what they think is a reportable occurrence should raise the issue with the person involved and remind them of their obligation to report it themselves. All such incidents must also be recorded in the Club's own Incident Book which is retained in the Clubroom at all times.

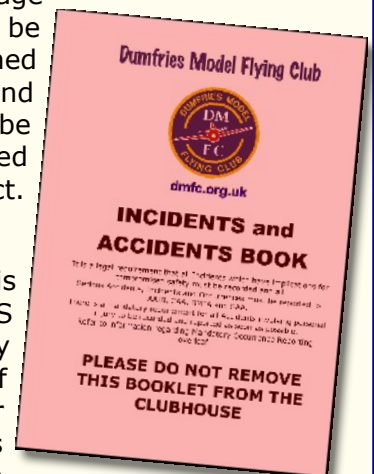
In the event that an occurrence results in personal injury or death, or damage to property, the contact details of everyone on site at the time should be recorded and as much photographic evidence as possible should be obtained by those present, to support the report. In addition, any model and equipment, including the transmitter implicated in the incident should be impounded and not be in any way repaired, altered or otherwise tampered with pending any enquiry which the AAIB or CAA may wish to conduct. Guidance notes are included in the Club Incident and Accidents Book.

Inevitably there will be situations arise where it is unclear whether there is a reporting obligation or not. In such instances the incident should ALWAYS be recorded in the Club Incident Book and the BMFA has very sensibly added a portal to their website where BMFA members can post details of possibly notifiable incidents and obtain advice from BMFA as to whether or not the specific incident should be reported to AAIB and/or CAA. This has been seen and agreed by CAA/AAIB and should be a useful facility to aid compliance with the legal obligations without overloading the reporting processes with occurrences of a relatively minor nature. Unfortunately the SAA has no equivalent online facility, but SAA members should refer incidents to the SAA who will advise as to whether they should be reported. Forms to do this are downloadable from the SAA website.

It is inevitable that other model flying clubs will become more stringent in their reporting procedures and that as a result, Clubs who do not do so will become apparent to the authorities. As a small club in a remote area we would not expect to have a high number of reportable incidents but it behoves all our members to take these obligations seriously. If there is any doubt whether a particular case should be reported, the members involved should record the incident in the Club Incident book and seek advice from the Club Chairman or Safety Officer. However any such advice offered will be without prejudice, and in no way removes, replaces or negates the legal obligations of the individual to comply with the law in such matters, and where possible, reference to the BMFA Incident Reporting system or SAA is strongly recommended.

The BMFA Guidance on Mandatory Reporting is available here:-

<https://bmfa.org/News/News-Page/ArticleID/2733/BMFA-Article-16-Mandatory-Occurrence-reporting-Guidance>



Both within the club and on the main UK model flying forum, it is clear that Occurrence Reporting is an emotive issue, so in an effort to diffuse the emotions and allay fears, albeit without prejudice to the text of CAP722, here are a few things which should help to put minds at rest.

For many decades the AAIB has published a Monthly Bulletin of Air Accidents and near misses. They do not name the pilots involved, and the emphasis is entirely on determining cause. They actually make quite interesting reading, and you can read them online here:-

<https://www.gov.uk/government/collections/air-accident-monthly-bulletins>

Deciding whether occurrences should be reported is really just a matter of applying common sense. Some obviously dangerous occurrences MUST be reported, but the vast majority of incidents will be relatively minor. However because every incident and set of circumstances is different, there is clearly a sliding scale of potential seriousness, so some should be reported and others may not need to be. Both BMFA (online) and SAA (via email) will provide guidance to their members in cases of doubt.

BMFA are naturally reluctant to give specific scenario examples, as individual Club Flying sites and their associated risks vary enormously. However since DMFC has only one flying site and its layout and safety rules are clearly defined, it is reasonable to here provide some examples of occurrences that should definitely be reported and others which may not need to be.

BMFA have made it clear that heavy landings on the runway (including minor undershoots and overshoots) which only damage the model (and perhaps the pilot's pride) are not reportable. Any model crash within the No Fly Zone (NFZ) should be recorded in the Club Incident Book, but may not necessarily be reportable to BMFA/SAA unless personal safety was compromised (see list below). A brief flight incursion into the NFZ at a reasonable height would not need to be recorded or reported, but any incident where anyone has to duck, dive or dodge to avoid being struck by a model should be recorded and reported.

Most crashes in the outfield due to pilot error would not normally need to be recorded or reported unless the nature of the crash indicated a potential and repeatable danger to persons or third party property. Certain kinds of pilot error (eg. loss of orientation) are much more likely to occur at a distance over the outfield and much less likely closer to the flightline. The rural location where we fly provides a considerable natural mitigation against serious danger from certain incidents which might be reportable if they occurred at other locations.

Accidents and Incidents which **must always** be recorded and reported to BMFA or SAA are as follows:-

- **Any accident involving injury or damage to property**
- **Any accident or near miss involving a manned aircraft**
- **Any flight beyond visual line of sight from the flightline**
- **Any overflight of the road or car park or any buildings**
- **Any incident in which a model lands or crashes in or near the pits, on the fairway behind the pits, in the car park, on the road, or close to any bystander or uninvolved person, and any flight in which bystanders must duck, dive or dodge to avoid being struck by a model**
- **Any incident in which there is total loss of control of the aircraft**

The Pareto Principle - sometimes called the 80/20 Rule - applies here as in almost every aspect of life. See https://en.wikipedia.org/wiki/Pareto_principle

This says that approximately 80% of consequences result from 20% of possible causes. In a model flying club 80% of crashes will involve the same 20% of members. Anyone who crashes models very frequently should seek advice, as all crashes involve some degree of potential for harm, as well as being disheartening and often expensive. Clearly flyers new to the hobby present greater risk when they are first let off the buddy-lead, but there are also other members who crash far more often than

would reasonably be expected. Another factor is the natural desire we all have to develop our flying and/or modelling skills, which means "pushing the envelope" of our talents.

Maiden flights of new models always introduce an element of unpredictability, so it is wise to choose a calm day for maiden flights and always ask other members to stand well away from the flightline until initial trimming and test-stalling is completed.

It really all boils down to using our common sense, but also being open and honest when life, limb or property are endangered by a model of which we are the Operator and/or Pilot.

Summary of Useful Links

[BMFA Website Home Page](#) (provides access to various announcements and other relevant data)

[SAA Website Home Page](#) (provides access to various announcements and other relevant data)

[CAA Website](#) including UAS Operator Registration and online competency test

[CAA Document CAP722](#) - Legislation relating to all UAS operation in UK Airspace

[CAA Document CAP722F](#) - Extract of CAP722 specific to model aircraft flying

[BMFA Article 16 document](#) - Article 16 specific to BMFA members only

[BMFA Guide to Article 16](#)

[BMFA Quick-Start Guide to Article 16](#)

[BMFA Guide to CAA/AAIB mandatory occurrence reporting](#)

[AAIB Air Accident Monthly Bulletins](#)