

ACCIDENT INVESTIGATION

Introduction

Serious accidents may require a full accident report to amplify and supplement the details provided in the BGA accident form and its appendices.

Many serious accidents will trigger a BGA investigation in which case the club role is supportive.

The following structure for an accident report is based on that used by the AAIB. If the club is carrying out the investigation those sections which do not apply to the particular accident should be omitted.

Ideally, one person should complete the entire final report. This will usually be the Club Safety Officer. They will be responsible for the whole process which will include

- Conducting any necessary investigations and interviews
- Liaising with the BGA as necessary
- Gathering together all supporting documents and other material
- Completing the report form and forwarding it to the BGA
- Writing the investigator's report, and sending that to the BGA.

The following are essential points to be observed during this process:

- If possible, walk the ground yourself and try to determine exactly what happened
- As soon as possible speak to everyone who can usefully contribute to the report and its conclusions in any way and make sure they understand what it is you want from them. Obtain oral statements initially, followed as soon as possible by written ones.

Before starting to complete the form:

- Gather all available and applicable material together (reports, witness statements, photographs etc)
- Examine all material. If necessary, conduct follow-up interviews to clarify discrepancies and provide supplementary written information.

Format

Some of this information will already be recorded on the BGA Accident/Incident Report Form. However, it helps to have all the information pertinent to the investigation in one document.

The report must not contain the names of anyone involved except members of the investigating team.

1 Title

The final report should begin with a title comprising;

- The place and date of the accident.
- The aircraft manufacturer
- Model and serial number
- Registration and BGA number
- Fin number

2 Synopsis

Following the title should be a synopsis describing briefly all the relevant information regarding:

- Identification of the authority and composition of the team investigating the accident
- Organisation of the investigation
- The authority releasing the report
- The date of publication.

3 Body of the Report

The body of the final report consists of the following main headings:

I Factual Information

i. History of the Flight

A brief narrative giving the following information:

- a. Intention of the flight and the point and time of departure.
- b. Flight preparation, description of the flight and events leading to the accident including reconstruction of the significant portion of the flight path (if appropriate)
- c. Location and time of the accident, whether full daylight or otherwise, if relevant.

ii. Injuries to Persons

Degree of injury to P1, P2 or others.

iii. Damage to Aircraft

Brief statement of the damage sustained by the aircraft in the accident (destroyed, substantially damaged, slightly damaged, no damage).

iv. Other Damage

Brief description of the damage sustained by objects other than the aircraft.

v. Personnel Information

- a. Pertinent information concerning pilots and pupils including; age, validity of licences / certificates, medicals pertaining thereto, instructor ratings, recent checks and flying experience (total, on type and instructing - if pertinent).
- b. Pertinent information regarding other involved personnel such as passengers,
- c. Winch operators, tug pilots, maintenance etc.

Note that names must not be divulged.

- vi. Aircraft Information**
- a. Brief statement on airworthiness and maintenance of the aircraft (indication of any deficiencies known prior or during the flight to be included if having any bearing on the accident).
 - b. Brief statement on performance, if relevant, and whether mass and centre of gravity were within prescribed limits at the time of the accident (if not, and whether any bearing on the accident - give details.)
- vii. Meteorological Information**
Brief statement of any meteorological conditions which may have a bearing on the accident.
- viii. Aids to Navigation**
If relevant - to be included.
- ix. Communications**
If relevant - to be included.
- x. Site Information**
Pertinent information associated with the gliding site or field where the accident occurred
- xi. Flight Recorders**
Loggers and hand-held GPS receivers can contain information useful to investigators, even if quite badly damaged. Include here any information gleaned from such sources.
- xii. Wreckage and Impact Information**
General information on the site of the accident and the distribution pattern of the wreckage, suspect material failures or component malfunctions.

Details concerning the location and state of the different pieces of the wreckage are not normally required unless it is necessary to indicate a break-up of the aircraft prior to impact. Diagrams, charts, photographs and videos may be included in this section, but are preferably attached as appendices.
- xiii. Medical and Pathological Information**
Brief description of the results of the investigation undertaken and pertinent data available therefrom.

Note. If a full medical report is available then this should be attached as an appendix.
- xiv. Fire**
If fire occurred, provide information on the nature of the occurrence, and of the firefighting equipment used and its effectiveness.
- xv. Survival Aspects**
Brief description of search, evacuation and rescue, location of crew in relation to injuries sustained, availability of parachutes (and operation if used - including ballistic parachutes), energy absorbing cushions and failure of structures such as seats or seat belt attachments.
- xvi. Tests and Research**
Brief statements regarding the results of tests and research.
- xvii. Organisational and Management Information**
Pertinent information regarding the organisations and their management involved in influencing the operation of the aircraft. e.g. flight line organisation, tug management, maintenance etc.

xviii. Additional Information

Relevant information not already included in i to xv above.

xix. Useful or Effective Investigation Techniques

When useful or effective investigation techniques have been used during the investigation, briefly indicate the reason for using them and refer here to the main features as well as describing the results under the appropriate headings i to xvi.

II Analysis

Analyse, as appropriate, only the information documented in the **Factual Information** section above and that which is relevant to the determination of conclusions and causes.

III Conclusions

i. Findings

List the findings of the investigation in a logical and flowing sequence.

- a. It is normal to start with an assessment of the pilot, e.g. ‘the pilot was medically fit and qualified to carry out the flight.’
- b. Then the glider, e.g. ‘the glider was below maximum permissible weight and within centre of gravity limits.’
- c. Proceed to list what you found out during the conduct of the investigation. Do not be afraid if this list is long and detailed, but avoid making any individual finding too long and complicated.

ii. Causes

List the causal factors as you have found them again in a logical and flowing sequence. The list of causes should include both the immediate and the deeper systemic causes.

Good examples of the content of ‘findings and causes’ can be found in any of the AAIB ‘Yellow’ accident reports.

IV Safety Recommendations.

If appropriate, briefly state any recommendations made for the purpose of accident prevention and any resultant corrective action. Recommendations are neither required nor generally expected.

V Appendices.

Include, as appropriate, any pertinent information considered necessary for the understanding of the report.

Further Guidance.

If required, you can seek assistance from the BGA Senior Accident Investigator, Chris Heames, Tel. 07850 744927