Updated pages for the BMAA Microlight Instructor and Examiner Guide from December 2018
Details of the changes made to the individual Sections of the Guide are listed in Section 1.3
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Section 1.2 INTRODUCTION

The ‘Microlight Instructor and Examiner Guide’ is a guide for the training, testing and administrating of the NPPL (A) Microlight syllabus, Microlight Instructor Ratings and Microlight Examiner Authorities.

It has been compiled to provide as much information as possible to help standardise and improve teaching and training methods for microlight flying. It is also a source of information for the different administrative procedures.

The ‘Microlight Instructor and Examiner Guide’ is maintained and compiled by members of the Panel of Examiners together with the staff of the BMAA.

The first BMAA Guide to ‘Training on Microlight Aircraft’ was written in 1981 by Ann Welch O.B.E the then President of the BMAA. At that time the BMAA issued a ‘Pilot Certificate of Competence’ for flying microlight aircraft after completion of the BMAA Syllabus for the training.

In 1982 the CAA regulated microlight licensing and introduced the Private Pilot’s Licence for microlights (the PPL (A) licence with a Group D rating). The CAA delegated the BMAA the task of producing the training syllabus for the PPL microlight licence and also with the task of administrating the training.

The ‘Microlight Instructor and Examiner Guide’ was first issued in 1992 after extensive work by the then Chairman of the Panel of Examiners, Julian Doswell. Since then there have been changes in the Guide to up-date the content with current thinking, procedures and the way Ratings and Authorities are processed and administered.

This Edition of the Guide has also been reorganised for the additional content and structured into new sections to consolidate the content and for ease of reading.

In addition to the Guide, Instructor Bulletins are issued when needed to provide supplementary information to Instructors and Examiners and notice of amendments to the Guide.

Listings for reference to the current Edition of the Guide, any amendments to the Guide and any Instructor Bulletins issued can be found in the ‘Information Library’ on the BMAA web site.

When Instructor Bulletins are issued they are sent by email to Instructors and Examiners who are on the BMAA LIAC mailing list. All instructors are encouraged to advise the BMAA of their contact detail so they can be added to this list and be kept informed.

The ‘Microlight Instructor and Examiner Guide’ is a guide, not a training manual.

One of the attractions of microlight flying is that we have many varied types of aircraft within the microlight class of aircraft. The Guide cannot take into account every different type and model of microlight aircraft and instructors and examiners should interpret the information in this Guide in context for the type they are instructing or examining on.

If there is any doubt on how to interpret the contents of the Guide, advice should be sought from the Panel of Examiners or BMAA LIAC.

The Panel of Examiners and the BMAA continue to look for ways to improve training standards without unnecessary or additional legislation. Comments and suggestions are welcome to help achieve this aim and to continue to improve this Guide.

Fiona Luckhurst
Chairman Microlight Panel of Examiners
May 2013
Section 2.1 THE BMAA

GENERAL

The British Microlight Aircraft Association (BMAA) is a members’ organisation established to enable and promote microlight flying in the UK. The Association is managed by a Board of Directors, the BMAA Council, and employed staff.

The Civil Aviation Authority is responsible for the regulation of aircraft use within the UK.

The CAA has agreed that the BMAA may carry out some administration tasks on its behalf. This includes: Pilot licensing, Instructor administration, Examiner administration, Flying Instructor Course administration. In addition the CAA accepts recommendations from the BMAA for the above Rating issues and Appointments.

These tasks are carried out by The BMAA Licensing and Instructor Administration Centre (LIAC) and records are maintained at the BMAA Registered Office. The address is:

BMAA LIAC
Bullring
Deddington
Banbury
Oxon OX15 0TT Phone: 01869-338888 Fax: 01869-337116 Email: general@bmaa.org

The records kept are in respect of:

Restricted Flying Instructors
Flying Instructors
Revalidation Examiners
Ground Examiners
Flying Examiners
Flying Instructor Course Instructors
Flying Instructor Examiners
Flying Instructor Course Schools

The BMAA Training Committee assists the BMAA in maintaining Pilot Licensing standards and makes recommendations to the BMAA Council on pilot licensing, testing and examination issues. The Training Committee consists of microlight Instructors and a representative from the microlight Panel of Examiners.

WEB SITE

The web site of the BMAA (www.bmaa.org) details comprehensive information for microlight flying including information for pilot licensing and for instructors and examiners.

SHOP

Among other study materials the following can be obtained from the BMAA shop:

NPPL M Syllabus
Fi(R) M Syllabus
The BMAA Instructor and Examiner Guide.
Section 2.3 SOURCES OF INFORMATION

BRITISH MICROLIGHT AIRCRAFT ASSOCIATION

BMAA (LIAC)
The Bullring
Deddington
Banbury
Oxon OX15 0TT

Phone: 01869 338888, Fax: 01869 337116
Email: general@bmaa.org

Web site www.bmaa.org

Specific information for Instructors and Examiners can be found on the BMAA website in the menu Information Library. This information includes:

- The current Instructor and Examiner Guide edition and Amendment issue number
- Current Instructor and Examiner Bulletin issue number
- Instructor and Examiner application forms and, where applicable, test booking forms
- FIC Instructor and FIE lists and contact details
- Current Fees.

Details of Pilot Licensing including any credits against training and licence allowances available, the NPPL M syllabus, Licence application forms and Medical Forms can also be found in the Information Library.

CIVIL AVIATION AUTHORITY

Civil Aviation Authority
Aviation House
Gatwick Airport South
West Sussex RH6 0YR

Phone: 03300221500
Email: fclweb@caa.co.uk

www.caa.co.uk

Users to the CAA web site can subscribe to an email service which alerts the user to new or amended publications.

NATIONALPRIVATEPILOTS LICENCE.CO.UK

This web site provides information on the NPPL (A) including syllabi, applications and licence allowances.
www.nationalprivatepilotslicence.co.uk

NATS Aeronautical Information Service

The National Air Traffic Services is the UK’s air navigation service provider. Registration is required to use the site, it is free of charge.
www.ais.org.uk
Section 3.1 NPPL LICENSING and ADMINISTRATION

1 INTRODUCTION

1.1 It is a statutory requirement of the Air Navigation Order that prior to the issue or renewal of a flight crew licence the Authority is satisfied that the pilot concerned is fit to hold the licence applied for and that he has completed successfully all the requirements necessary for the grant or renewal of that licence.

1.2 The privileges of the licence can only be exercised once it is received and signed by the Holder.

1.3 The CAA require the application form (NPPL Form 102M) to be checked by the BMAA LIAC and, where applicable, a recommendation on Form NPPL 103M to be sent to the CAA complete with the current fee. The Pilot’s Logbook and current Medical Certificate, if applicable, are returned to the applicant.

2 REFERENCES: ANO (CAP 393), CAP 804, BMAA and NPPL web site.

2.1 The requirements for the grant of the NPPL M are set out in the BMAA NPPL Microlight Syllabus.

2.2 The ANO lays down the basic licence privileges for the NPPL and the aircraft rating privileges.

2.3 The CAA website publishes the medical requirements.

3 LICENCE ISSUE WITHOUT OPERATIONAL LIMITATIONS REQUIREMENTS

3.1 Minimum total 25 hours including:

3.1.1 At least 10 hours as PIC/Solo including 3 hours solo navigational flying training.

3.1.2 At least 5 hours Navigational flying training, dual and solo, to include:

- two solo cross country flights of a minimum 40 NM each over different routes, to different destinations, which are not less than 15 NM from the point of departure, direct track;

or

- one solo cross country flight of a minimum of 100 NM with two out landing which must be at least 15 NM from each other and the original take-off place measured in a direct line.

3.1.3 The balance of 25 hours should be dual training or solo flying.

3.2 There is a validity period on the solo and navigational flying training to qualify for the Licence issue. The qualifying solo and navigational flight training hours must have been flown within the 24 months preceding the date the BMAA receives the application.
4 LICENCE ISSUED WITH OPERATIONAL LIMITATIONS REQUIREMENTS

4.1 An overall experience of at least 15 hours, this total to include 7 hours PIC/Solo time.

4.2 The qualifying solo hours must have been flown within the 24 months preceding the date the BMAA receives the application.

4.3 The Operational Limitations at initial issue are:

1) The pilot may not carry any passenger
2) The pilot may not fly with a cloud base less than 1000 feet above ground level or with less than 10 kilometres visibility
3) The pilot may not fly further than 8 nautical miles from take-off.

5 EXAMINATIONS - Licence Issue With & Without Operational Requirements

5.1 The written ground examinations are valid within the 24 months period preceding the date the Licence application is received by the BMAA.

5.2 Aeroplanes Part 2 (oral) examination must be passed within 9 months preceding the date the Licence application is received by the BMAA. This exam is normally done at the time of the GST. The Oral examination can only be conducted by the holder of a current Flying Examiner authority valid for Microlight aircraft.

6 GENERAL SKILL TEST - Licence Issue With & Without Operational Requirements

6.1 All parts of the GST must be passed within a 28 day period and within the 9 months preceding the date the application is received by the BMAA. The GST is taken after completion of the exercises in the syllabus. The test is conducted by a current Flying Examiner and all parts of the NPPL Microlight Application Form must be completed as required.

7 REMOVAL OF OPERATIONAL LIMITATIONS

7.1 To remove Limitation 1 the holder must have completed at least 25 hours of total flying in microlights and at least 10 hours solo flying in microlights. The holder’s experience is certified in their logbook by a Flight Examiner and the Limitation ceases to apply from that time.

7.2 To remove Limitations 2 & 3 the holder must have completed at least 25 hours of total flying in microlights and at least 10 hours solo flying in microlights. The holder must have completed the navigation training requirements specified in flight Exercise 18 within the 24 month period immediately prior to applying to have the Limitations removed. Application to have Limitations
2& 3 removed must be made on the NPPL Microlight Application Form 102M and sent to the BMAA LIAC together with the current fee and accompanying documents.

8 NPPL APPLICATION FORM 102 M

8.1 Having checked all details as stated the complete application including form NPPL 102M, Medical certificate, Logbook, Proof of Identity and the fee should be sent to the BMAA LIAC.

8.2 The responsibility for ensuring the Form 102 M has been completed accurately is the responsibility of the Instructor/ Flying School

9 THE NPPL APPLICATION FORM 102 M CHECK LIST

9.1 The checklist is used by the BMAA LIAC to check applications and the Form 102M and details the content required for a successful application for NPPL with and without operational limitations and for removal of operational limitations. The checklist is available from the BMAA and NPPL websites.

10 FEES

10.1 The current fee is shown in Appendix 'A' and this is normally revised by 31st March each year.

11 PROOF OF IDENTITY

11.1 Copies of proof of identity must be in colour.

11.2 Copies of identification for the issue or amendment of a NPPL are to be certified, and signed, by the Flying Instructor 'I certify that this is a true copy of the identification provided'.

11.3 Acceptable identification: copy of passport showing photo, copy of birth certificate and copy of photo driving licence showing photo.

12 12. DOCUMENTS TO ACCOMPANY FORM 102 M

- Personal Flying Logbook
- Proof of Identity
- Medical Certificate (this must be the original document not a copy), or a copy of the Pilot's Medical Declaration application form.
- Fee. As set out in Appendix 'A'.
- NPPL M Licence if the application is for the removal of Operation Limitations.
Section 3.5 LOGBOOKS, TRAINING ENTRIES AND CERTIFICATION

1 INTRODUCTION

1.1 It is a legal requirement under the Air Navigation Order (ANO) that the pilot of an aircraft registered in the United Kingdom must keep a personal flying logbook and record certain items in it. The legal requirement also applies to any person flying for the purpose of qualifying for the grant or renewal of a licence.

2 PARTICULARS TO BE RECORDED

2.1 The name and address of the holder of the logbook

2.2 Particulars of the holder's licence (if any) to act as a member of the flight crew of an aircraft

2.3 The name and address of his aviation employer (if any).

2.4 Particulars of each flight during which the holder of the logbook acted either as a member of the flight crew of an aircraft or for the purpose of qualifying for the grant or renewal of a licence under the Order, as the case may be, shall be recorded in the logbook at the end of each flight or as soon thereafter as is reasonably practicable, including:

2.5 The date, the places at which the holder embarked on and disembarked from the aircraft and the time spent during the course of a flight when he was acting in either capacity

- The type and registration marks of the aircraft
- The capacity in which the holder acted in flight
- Particulars of any special conditions under which the flight was conducted
- Particulars of any test / examination undertaken whilst in flight
- In the case of duplicated entries 'dittos' should be avoided and entries made in full.

3 FLIGHT TRAINING ENTRIES

3.1 STUDENT'S LOGBOOK

3.1.1 The student's logbook must include in the remarks column the training exercises taught during each flight. It is considered best practice for the instructor to sign against each logbook entry at the time when the entry is made. Alongside their first signature should be their CAA reference number.

3.1.2 The logbook is the property of the student and should be retained by them as it forms their personal training record.

3.1.3 At the end of training and prior to applying for a NPPL the Student's logbook must include all the exercises from the NPPL Microlight Syllabus as appropriate for the application.
3.2 Although some exercises are not flight exercises they form part of the syllabus and without this detail in the logbook it is not possible to confirm that the course has been completed.

3.3 NPPL (A) M Ex 18. For a training flight to be a Navigational flight exercise (Ex 18) and the flying time allowed towards the Navigation requirements in the NPPL Syllabus it must be pre-planned and flown along the pre-determined route.

3.3.1 Ex 18 should be entered in the logbook remarks section together with details of the turning points and/or the destinations that were pre planned.

3.3.2 In the case of a qualifying cross country (QXC) flight the total distance of the flight should be entered.

3.3.3 All out landings must be logged correctly as a separate flight. Therefore it is usual for the QXC to be logged as at least two flights because there is a compulsory out landing, and most training flights will return to the airfield of first departure.

3.3.4 The logbook entries for Ex 18 apply to both Dual and Solo navigation training flights.

3.4 NPPL (A) M Ex 16c. Ex 16c covers the principle of operating at minimum level and is applicable to training for the NPPL both with and without operational limitations. It should not be logged as navigation flight training. Ex 18c is the practical use of operating at minimum levels during a navigation exercise, Ex 18b, and flight time spent completing Ex 18c should be logged with Ex 18b and included in the total flight time allocated towards the Ex 18 navigation requirements.

3.5 INSTRUCTOR’S LOGBOOK

3.5.1 The instructor’s logbook should, at the minimum, indicate in the remarks column the name of the student under training. It is beneficial to include the exercises flown with the student, especially when student records are held by a Flying School and not by the instructor himself.

3.6 DUAL TRAINING FLIGHTS

3.6.1 Otherwise known as training flights are completed not only for the grant of a licence or rating but may be for Control Type conversion, Differences Training, refresher flying, flight with an instructor for licence revalidation or new area familiarisation.

3.6.2 When the dual flight is being flown for the purpose of gaining, or revalidating a licence or rating it must be conducted by a current FI (R) or FI.

3.6.3 For all Dual Training Flights the name of the instructor must appear as Captain in the logbook as the pilot in command of the flight. The holder’s operating capacity should then be logged as PUT and the flight time entered in the dual column. In the remarks column there should be an indication of content, what exercises were covered on the flight together with cross country turning points if the flight was a cross country flight.

3.7 STUDENT PILOT IN COMMAND FLIGHTS

3.7.1 Otherwise known as solo flights i.e. the pilot does not have an instructor with him in the aeroplane or anyone else before licence issue.

3.7.2 The pilot should enter his own name or “self” into the captain column. The holder’s operating capacity column should read P1 or PIC and the flight time should be entered into the PIC column. The remarks column should indicate the content of the flight.
3.7.3 Before a student completes his first solo flight, the flight must be authorised by a FI who will assess the student's ability. The first solo flight cannot be authorised by a FI (R).

3.7.4 The successful GST flight is logged as PI/S by the student. The captain's name should be that of the examiner. This flight time can be counted towards the minimum requirements for the licence application, but does not constitute PIC experience time for the minimum solo requirements.

4 CERTIFICATION OF LOGBOOKS

4.1 There are certain conditions when an examiner or an instructor may need to certify logbooks.

4.2 NPPL APPLICATION

4.2.1 At the end of a course of training for the licence the Chief Flying Instructor (or his representative) should annotate the logbook with words similar to "Logbook entries from........ to........ certified correct." followed by the signature of the Chief Flying Instructor, the letters CFI, the name of the Flying club and date.

4.3 REMOVING OPERATIONAL LIMITATIONS

4.3.1 Limitation 2 only. Flight Examiner to certify in holder's logbook the qualifying hours to remove the Limitation that restricts passenger carrying.

4.3.2 Limitation 2 (if not already removed), 3 and 4. CFI to certify logbook entries qualifying for removal of Operational Limitations prior to application being sent to the BMAA LIAC. Note: Limitations 3 and 4 are not removed until a new licence document has been issued by the CAA and signed by the holder.

4.4 GENERAL SKILLS TESTS

4.4.1 The candidate’s logbook must be completed and entries must include details of the flight, the result of the test and be signed by the flight examiner, including the examiner's authorisation number.

4.5 DIFFERENCES TRAINING

4.5.1 Differences training to be recorded in the holder’s personal flying logbook and endorsed and signed by the instructor conducting the training. The instructor must specify the Control Type (e.g. Flexwing to Fixed Wing) or other aspect to which the training relates.

4.5.2 Example logbook entry "Differences Training Flexwing to Fixed Wing completed By A.N.Instructor A.N.Instructor CAA No 123456A".

4.6 THE FLIGHT INSTRUCTOR (RESTRICTED) COURSE COMPLETION

4.6.1 At the end of FI (R) course the FIC Instructor should annotate the logbook with words similar to "FIC Logbook entries from........ to........ certified correct." followed by the signature of the FIC Instructor, the name of the approved Flight Training Organisation and date.
Section 4.2 GUIDANCE TO INSTRUCTORS ON THE INTERPRETATION AND PRESENTATION OF THE NPPL MICROLIGHT SYLLABUS

1. INTRODUCTION

1.1 The 'Panel' of Microlight Flying Instructor Examiners felt it necessary to provide a series of recommendations for flying instructors concerning the interpretation and presentation of the syllabus. To achieve this aim it was decided to review each exercise in the syllabus and provide advice in the areas where it was felt clarification was required.

1.2 The 'Panel' has used its collective experience as instructors and examiners to produce a series of guidelines which are primarily directed at instructors giving NPPL M instruction. The guidance given, however, is applicable to the presentation of exercises at any level and in particular provides an indication of what is expected, from an instructor, during an Instructor Test.

1.3 The following guidance applies to both Flexwing and Fixed Wing aircraft, in areas where differences exist between the two types a distinction is made and appropriate relevant information is included.

2. GENERAL GUIDANCE FOR INSTRUCTION - NORMAL OPERATING PROCEDURES

2.1 The following guidelines are included to assist in the standardisation of the operation of microlight aircraft in the training environment.

2.2 SYLLABUS

2.2.1 It is a requirement that all training for the issue of NPPL is conducted in accordance with a syllabus approved by the CAA. The "BMAA Syllabus of Training for the National Private Pilot's Licence for Microlights" is recognised by the CAA. It is recommended that every student is in possession of a personal copy of the syllabus.

2.2.2 When components of flying exercises and ground school elements are completed it is beneficial to both the student and instructor to note this on the syllabus using the boxes adjacent to those subjects. This is not an alternative to the student's training records.

2.3 AIRCRAFT FLIGHT MANUALS

2.3.1 It is the aim of this guide to promote correct and, where possible, standardised interpretation of the flying exercises included in the syllabus. Although each type of aircraft has differences in the subtleties of its handling characteristics, the principle of teaching standardised handling techniques is of vital importance.

2.3.2 The majority of microlight aircraft used in the instructional role are certified to a common airworthiness specification and therefore are required to display conventional handling characteristics.

2.3.3 The aircraft flight manual constitutes a part of the aircraft certification and as such the aircraft must be operated in accordance with this document. Instructors should be mindful, however, that the handling sections of flight manuals are not necessarily prepared for the flying training environment. Individual manuals cover aircraft handling in varying degrees of depth and accuracy, in some cases over simplification and inconsistent use of terminology.
make them of only limited use.

2.3.4 Instructors should aim, wherever possible, to teach standardised handling techniques and not interpret imprecise or incomplete flight manuals as specifying alternative techniques.

2.3.5 In cases where a manual unequivocally indicates a 'non-standard' handling technique it must, of course, be taught to the student. Instructors must, however, explain the requirement for the use of a 'non-standard' technique in relation to the particular aircraft type. In order to ensure that the student is equipped to fly other types of aircraft, details of the standard handling technique must be provided by the instructor.

2.4 CARRIAGE OF CHARTS

2.4.1 The pilot should ensure that a current aeronautical chart, covering the expected area of operation, is available on every flight. The chart may be an electronic one in a GPS enabled moving map device, in which case a paper back-up copy should also be available.

2.5 TRAINING RECORDS

2.5.1 It is a requirement that training records are maintained in respect of a student's flying and ground training. It should be possible, by examination of the records, to confirm that the syllabus has been satisfactorily completed. Training records are to be kept for two years following completion of training or the date of last entry.

2.5.2 Student's logbooks should be completed as detailed in Section 3.5 subsection 3.1 (STUDENT'S LOGBOOK)

2.6 MAXIMUM FLIGHT TIMES FOR INSTRUCTORS

2.6.1 There is a maximum applied to the number of instructional hours that may be flown in a specified period of time by an instructor. Instructors are limited to 100 hours in 28 days and 900 hours in 12 months. Full details are in the ANO 'Flight times – responsibilities of flight crew'.

2.7 FLYING ORDER BOOK

2.7.1 The Flying Order Book is a valuable means of disseminating operational and administrative information within a Flying Training Organisation (FTO). Guidance on the compilation and content of a Flying Order Book is provided in Appendix B.

2.8 INTEGRATION OF FLIGHT AND GROUND TRAINING

2.8.1 Flight and ground training should be integrated where practical so that one supports the other.

2.9 CHECKS

2.9.1 The use of relevant checks at the appropriate phase of flight is a valuable and necessary aspect of the safe operation of microlight aircraft. Checks can be conducted in accordance with either a written checklist or mnemonic.
2.9.2 Whilst there is a considerable scope for the precise content of individual checks, there is a clear requirement for checks at specific phases during a flight. Checks which should be included are:

- PRE-START
- POST-START
- TAXI
- POWER
- PRE-TAKE-OFF
- DURING AND POST TAKE-OFF
- PRE-STALLING/SPINNING/ADVANCED MANOEUVRING
- ENROUTE
- AIRFIELD APPROACH
- PRE-LANDING
- ENGINE SHUTDOWN
- EMERGENCY SHUTDOWN

2.9.3 Individual aircraft manuals should give guidance on the content of checks appropriate to the specific type. A suggested checklist is provided in Appendix C of the Guide.

2.10 ALTIMETER SETTING PROCEDURES

2.10.1 The altimeter should be set as follows:

1) When the aircraft is to be operated within the airfield circuit pattern (or ATZ, if applicable) the altimeter should be set to QFE.
2) When the aircraft is leaving the airfield circuit pattern (or ATZ, if applicable) the altimeter should be set to QNH. It is normally desirable to set the altimeter to QNH prior to take-off.
3) When the aircraft is approaching the airfield the altimeter will be set to QFE prior to joining the circuit pattern.
4) If desired, training organisations may choose to conduct all operations with the altimeter set to QNH.

2.11 RECOMMENDED MINIMUM HEIGHTS FOR STALLING AND ADVANCED MANOEUVRING EXERCISES

2.11.1 The minimum height (vertical distance above surface level) at which it is safe to cover these exercises is primarily dictated by the characteristics of the type of aircraft being flown. The following values are intended to give guidance on the minimum heights at which recovery should be completed and the aircraft established in normal flight:

1) 1000ft for manoeuvres in straight or turning flight in types which do not exhibit a significant wing drop during a stall.
2) 2000ft for types which exhibit a significant wing drop at the stall.
3) 3000ft for incipient or developed spin manoeuvres in aircraft approved for spin manoeuvres.

2.11.2 The instructor may demonstrate a stall below these heights if required.
2.12 **NPPL (M) COURSE REQUIREMENTS**

2.12.1 FTO’s providing FI(R) Courses must meet minimum requirements in order to obtain approval. Many of these requirements are also relevant and appropriate for a FTO providing NPPL Courses. In order to provide guidance to all FTOs and instructors the “Minimum Requirements for Approval of FI(R) Courses” document can be found in the Instructor Training Section, Section 8.

3. **CONTENT AND PLANNING OF A DETAIL OF FLIGHT INSTRUCTION**

3.1 **PRE-FLIGHT BRIEFING**

3.1.1 **GENERAL**

3.1.1.1 A logical well-structured pre-flight briefing (PFB) invariably results in the flight sequence displaying similar qualities. Conversely, a PFB which fails to address the important aspects of the exercise in sufficient depth and accuracy will produce a flight sequence which is of significantly reduced impact and value to the student. The briefing not only prepares the student for the flight exercises but also the instructor.

3.1.1.2 The use of a chalk/white board to present the overall structure of the briefing and the use of diagrams and models, where possible, is of great importance.

3.1.1.3 It may be appropriate to present parts of some of the briefings alongside the aircraft.

3.1.2 **CONTENT OF THE PFB**

3.1.2.1 It is important that the correct emphasis is given to particular elements of the briefing in order that the student has a clear impression of the relative importance of the various aspects of the exercise.

3.1.2.2 The inclusion of theory in the PFB should be considered with great care. The correct place for the associated principle of flight elements to an exercise should be during ground school. As a general guide the theory element of the PFB should be limited to the minimum required for the student's appreciation of the flying exercise. Ideally the instructor will only need to confirm that the student has the appropriate level of theoretical knowledge to complete the exercise. Above all the PFB is a period of ground instruction essentially concerned with the practicalities of the air sequence about to be flown.

3.1.2.3 There is no precise recommended length of time for a PFB although the instructor must consider that if overlong the student may become mentally overloaded before the flight and if too short there may be insufficient time for the required information to be presented.

3.1.2.4 The use of notes, by the instructor, during the presentation of the PFB is encouraged.

3.1.2.5 The following lesson plan is offered as a general guide to the form which the PFB should take and the elements which should be covered:

1) **TITLE**: The name of the exercise should be clearly stated and be referenced to the previous exercise covered.
2) **AIM.** The aim of the exercise should be positively stated and fully explained.

3) **THEORY.** It should be established that the student's knowledge of the relevant theory is adequate to continue with the exercise.

4) **METHOD.** A full description of the air sequence and precise details of aircraft handling techniques and procedures to be employed.

5) **AIRMANSHP.** Any airmanship considerations being introduced for the first time or requiring re-emphasis should be discussed in this section.

6) **SUMMARY.** This should include the actual order of events, student participation, aircraft to be used and any unserviceability, operational and weather considerations, common problems that the student may experience and any other details relating to the conduct of the flight.

### 3.2 THE FLIGHT EXERCISES

#### 3.2.1 CONDUCTING THE FLIGHT EXERCISE

3.2.1.1 The instructor should aim to allow the student to fly the aircraft as much as is usefully possible. Whenever the instructor is flying the aircraft the student should be encouraged to 'follow through' on the controls by gently resting his hands and feet on the controls. A formal method of passing control of the aircraft between instructor and student should be used at all times.

3.2.1.2 The instructor should ensure that each element within the exercise is covered as follows:

#### 3.2.2 DEMONSTRATION

3.2.2.1 The instructor will fly the aircraft whilst describing the control inputs and the effect these have on the aircraft. The instructor should aim to precisely synchronise his 'patter' with the flight sequence.

3.2.2.2 The following terms should be used to describe the movement of the primary controls during the giving of flight instruction.

3.2.2.3 Flexwing Aircraft

1) Pitch control - “bar back” to lower the nose or “bar forward” to raise the nose.

2) Roll control - It is very difficult to arrive at a single standard term to describe this control input which is appropriate for all situations. Using the word “right” to describe a control input which results in a roll to the left, e.g. “move the bar to the right” is potentially confusing and is not acceptable. To avoid this problem, more suitable examples of terminology to describe initiating a roll to the left would be “pull the left wing down” or “pull the bar from the left”.

3) Power control - “increase power” to increase the throttle setting or “reduce power” to decrease the throttle setting.
3.2.2.4 Fixed wing Aircraft

1) Pitch control - “stick forward” to lower the nose or “stick back” to raise the nose.

2) Roll control - “stick left” to lower the left wing and roll to the left or “stick right” to lower the right wing and roll to the right.

3) Yaw control - “Left rudder” to yaw the nose of the aircraft to the left or “right rudder” to yaw the nose to the right.

4) Power control - “increase power” to increase the throttle setting or “reduce power” to decrease the throttle setting.

3.2.3 ASSISTED PRACTICE

3.2.3.1 The student will take control of the aircraft and will repeat the manoeuvre whilst the instructor provides sufficient verbal guidance for the successful completion of the sequence. The instructor should aim to correct the student by use of verbal inputs rather than by taking control. The instructor should only take control to ensure that either his or the aircraft's limits are not exceeded or that the student's confidence is not undermined.

3.2.4 STUDENT PRACTICE

3.2.4.1 The student should repeat the manoeuvre without any (or only minimal) input from the instructor. The instructor should assess the student's performance and thus his understanding of the exercise. Minor errors are best addressed by further student practice. If major faults occur the instructor should take control whilst he provides detailed advice to the student. In the event of significant errors consideration should be given to re-demonstrating the manoeuvre prior to further student practice.

3.2.5 POST FLIGHT DEBRIEFINGS

3.2.5.1 It is important for the instructor to complete a detail of flight instruction with a positive review of the student's performance. During the debriefing the student should be encouraged to analyse his own performance. The debriefing should be completed in a positive manner and should target the aspects of the student's performance which require most urgent correction. The debriefing should result in the student being cognisant of his strong and weak areas. In addition the student should be provided with advice on how to improve the weak areas.

3.2.5.2 Debriefing should include an indication of the content of the next lesson and advice on preparation.

4. INTERPRETATION OF THE FLIGHT EXERCISES

4.1 AIR EXPERIENCE - EX 1

4.1.1 Some aircraft types provide reduced ease of control or limited access to the secondary controls from the seat normally occupied by the instructor. When operating such types it is reasonable for the student to be seated in the instructor’s position for this exercise. All other exercises in the syllabus, however, should be flown with the student occupying the 'first pilot's seat'.
4.2 AIRCRAFT FAMILIARISATION & PREPARATION FOR FLIGHT - EX 2 and 3

4.2.1 These exercises include a considerable number of elements, many of which are not essential to a student at the very start of his flying training. The depth to which the instructor elects to cover these exercises during the first session will depend primarily upon the student’s previous flying experience.

4.2.2 It is necessary, however, to cover all the elements within the early sessions. The instructor must ensure, in all cases, that before the first flight the following items are covered:

1) explanation of the aircraft
2) operation of the flying and engine controls
3) emergency drills and safety procedures
4) student comfort

4.3 EFFECTS OF CONTROLS - EX 4

4.3.1 Although the stated aim of this exercise is for the student to understand how each control affects the aircraft in flight, instructors are reminded that this exercise should be flown to the standard pattern, with demonstration, assisted practice and student practice of each element.

4.3.2 On more complex aircraft consideration should be given to covering this exercise in more than one session.

4.3.3 The following aspects of this exercise should be stressed:

1) Both the primary and secondary effects of each control should be clearly demonstrated.

2) The tendency for the aircraft to continue to roll whilst the control is displaced from its central position should be highlighted.

3) The long term effect of a movement of the pitch control is a change in airspeed, whilst the first effect will be a change in attitude affecting height or rate of climb or descent.

4) The long term effect of a change in power is a change in height, whilst the first effect will be a change in airspeed.

5) The use of the horizon to assess aircraft attitude should be emphasised and over reliance on instruments should be discouraged, although they should be included in the student’s visual scan.

4.4 TAXIING - EX 5

4.4.1 When describing the use of the nose wheel steering control of Flexwing aircraft instructors should ensure that the terminology used is clear and not open to misunderstanding. If the student is being instructed to turn the aircraft to the right the words used should not direct the student to "push the left foot forward", as the instruction includes the word left yet the aircraft turns to the right. An alternative would be “turn the wheel to the right to turn right”.

4.4.2 The elements included in taxiing will normally be covered throughout the first phase of the syllabus at appropriate times. The correct placement of flying controls when taxiing with different wind conditions should be emphasised.

4.4.3 The exercise is not usually completed in a dedicated session of training and cannot be logged as the sole flight exercise.

4.5 **STRAIGHT AND LEVEL FLIGHT - EX 6**

4.5.1 This exercise appears to be relatively simple with the result that some instructors do not fully explore all aspects of it. In common with many of the early 'general handling' exercises in the syllabus it is fairly demanding to teach well.

4.5.2 This exercise should include attaining and maintaining straight (i.e. constant heading) and level (i.e. constant altitude) flight at various airspeeds and at selected power settings. Straight flight should include flight with and without drift by reference to ground features and compass. Level flight should include flight at speeds above and below any fixed trim speed. Flight at speeds below fixed trim (hands off trim) should not be confused with flight at Critically Slow Airspeed Ex 10a. Where an aircraft is fitted with an in-flight trim control it should be used. This exercise also provides the opportunity to practice using the hand throttle where fitted to Flexwing aircraft.

4.5.3 **Difference between Fixed Wing aircraft and Flexwing aircraft**

4.5.3.1 Pitch inputs change attitude on both Fixed Wing aircraft and Flexwing aircraft, but with Flexwing aircraft the nose attitude in relation to the horizon remains nearly constant with different airspeeds, in a Fixed Wing aircraft the nose attitude in relation to the horizon changes with different airspeed.

4.5.4 In order to achieve the aim it is ultimately necessary for the student to have complete control of the aircraft. During the effects of controls exercise and to a limited extent during the first part of this exercise, the instructor will take charge of one or more of the aircraft controls in order to allow the student to concentrate on one aspect at a time. Instructors should not find it necessary, however, to use this technique in subsequent exercises. The student should have complete control of the aircraft at any time he is flying the aircraft, this ensures the maximum possible practice in co-ordinating the use of all the aircraft controls simultaneously.

4.5.5 A valuable technique to ensure that the student has fully understood this exercise is for the instructor to 'disturb' the aircraft and for the student to 'return' the aircraft to the required condition.

4.6 **BASIC CLIMBING AND DESCENDING - EX 7**

4.6.1 These exercises are usually combined in order to maximise the value of the time spent in the air. Many of the principles are common to both exercises.

4.6.2 The correct emphasis should be placed on power and attitude combining to produce the required aircraft performance. It must be appreciated that the term 'attitude' does not relate directly to stick or bar position or pressure but to the attitude of the aircraft in relation to the natural horizon.
4.6.3 When operating aircraft which are not equipped with in-flight adjustable pitch trim devices, the 'T' for trim in the acronym 'PAT' or 'APT' should be interpreted as meaning adjust.

4.6.4 During the descending exercise it is suggested that the transition from a glide to a full power climb is covered in preparation for the missed approach procedure. The transition from a climb to a descent should also be covered.

4.7 PERFORMANCE CLIMBING AND DESCENDING - EX 8

4.7.1 The principles concerning operating the aircraft at maximum angle of climb speed and maximum rate of climb speed must be fully understood. It should be appreciated that many microlight aircraft have only a small difference between the two speeds and that there are dangers associated with operating the aircraft at the maximum angle of climb speed near to the ground.

4.7.2 This exercise provides the opportunity to practice using flaps where fitted to Fixed Wing aircraft. Not all microlight aircraft are equipped with aerodynamic devices (e.g. flaps or airbrakes) to control the rate and/or angle of descent of the aircraft. A useful technique to degrade the glide angle during a power off descent, however, is to significantly lower the nose of the aircraft for a limited period. Many Flexwing aircraft and some Fixed Wing aircraft will allow a considerable degradation of the glide angle for only a small increase of airspeed. This technique can be invaluable during the latter stages of a landing approach, without power, in order to achieve an accurate touch down point.

4.7.3 During the descending exercise it is suggested that the transition from a glide to a full power climb is covered in preparation for the missed approach procedure. The transition from a climb to a descent should also be covered. The transition from a descent using flaps to full power climb should be practised in the case of Fixed Wing aircraft fitted with flaps.

4.8 LEVEL TURNS UP TO 30° OF BANK - EX 9A

4.8.1 This exercise consists of two primary aspects:

- Handling skills required to co-ordinate the aircraft controls.
- Judgement and anticipation to achieve the heading change.

4.8.2 Instructors may find it useful to allow students to initially practice continuous turns (subject to wake turbulence considerations). This technique allows the student to fully appreciate the co-ordination required between all controls to maintain a constant turn and highlights any mistakes.

4.8.3 The concept of turning on to predetermined headings using ground features and the compass can be introduced once the handling aspects have been covered.

4.8.4 During a co-ordinated level turn the requirement to increase the angle of attack will be accompanied by an increase in drag and consequent reduction in airspeed. In turns at moderate angles of bank (up to 30°) the speed loss may be acceptably small and there may be no practical requirement to increase power - this is dependent on type.

4.8.5 The pitch co-ordination required during medium turns on some microlight aircraft is not significant. In order to clearly demonstrate the need for the pitch co-ordination during the
turn the instructor may demonstrate a turn at greater angles of bank.

4.8.6 The changing perception of the horizon on types with 'side by side' seating, during left and right turns, should be demonstrated.

4.8.7 The concept of using a variable angle of bank to produce the required radius of turn in order to achieve alignment with a ground feature should be introduced. These manoeuvres will prepare the student for turns within the circuit.

4.9 CLIMBING AND DESCENDING TURNS UP TO 30° OF BANK - EX 9B

4.9.1 It is important that the instructor demonstrates the tendency of the aircraft to overbank in a climbing turn and under-bank in a descending turn and the consequent need to “hold off” or “hold on” the bank angle.

4.9.2 The requirement to limit the bank angle to achieve best performance during climbing turns should be stressed. The need to maintain a suitable airspeed during climbing and descending turns should be highlighted.

4.9.3 Sideslipping turns
4.9.3.1 The true sideslipping turn can only be flown on Fixed Wing types. The manoeuvre allows the aircraft to lose height more rapidly during a turn without an increase in airspeed. The side-slipping turn is accomplished by applying rudder in the opposite direction to the turn whilst aileron is used to maintain the angle of bank. During the turn there will be a tendency for the nose of the aircraft to pitch down which should be countered with back pressure on the stick to prevent an undesired increase in airspeed. As the aircraft is out of balance it is important that a safe airspeed is maintained throughout the manoeuvre.

4.10 FLIGHT AT CRITICALLY SLOW AIRSPEED - EX 10A

4.10.1 This exercise is frequently not developed to its full potential. The critically slow airspeed exercise gives the student the opportunity to fly the aircraft at speeds just above the stalling speed for a prolonged period. During the stalling exercise the time spent in this regime of flight is necessarily brief and transitory. In effect the aircraft is approaching the incipient stage of the stall throughout the critically slow airspeed exercise.

4.10.2 During the critically slow airspeed exercise the handling characteristics of the aircraft should be explored at the appropriate speeds through a variety of level, climbing, descending, straight and turning manoeuvres. The use of power and the appropriate co-ordination with pitch control and where applicable, the maintenance of balanced flight, are important aspects of this exercise.

4.10.3 Aircraft which are fitted with variable trim devices to relieve pitch control forces, in flight, should not be trimmed to the selected critically slow airspeed speed. This is likely to create an unrealistic configuration which is unlikely to occur during the 'normal' operation of the aircraft.

4.10.4 Throughout the critically slow airspeed exercise the instructor should point out all the indications present during this regime of flight. These indications may include:

- Angle of Attack. Fixed Wing: High nose attitude for mode of flight
- Position and pressure of the bar/ stick in pitch
- Feel and responsiveness of the flight controls
- Difficulty in maintaining wings level
- Reduction of inherent stability of aircraft
- Feel and sound of the airflow
- Low indicated airspeed

4.10.5 The instructor must stress, that it is not necessary for all of the indications to be experienced when the aircraft is operating in the critically slow airspeed regime. The aircraft can, for example, be flying close to the stall at any attitude with the pitch control in any position.

4.10.6 This exercise should equip the student with the ability to instinctively recognise that the aircraft has entered the critically slow airspeed regime of flight, control the aircraft through the situation and recover without reaching the incipient stall or developed stall with minimum height loss.

4.10.7 The incipient stall is the regime of flight immediately preceding the developed stall. This can be defined, for the purposes of flying instruction, as the occurrence of the first incipient stall symptom and prior to the downward rotation of the nose of the aircraft, due to the stability of the aircraft.

4.10.8 The incipient stall indications will be preceded by the slow flight indications. The indications of the incipient stall are:

- Stall warning (from devices).
- Aerodynamic buffet
- + 2 knots above the stall in the event of no buffet or stall warning

4.10.9 The first recoveries from the incipient stall should normally be accomplished by the use of pitch control only in order to establish the basic principle of the recovery action.

4.11 STALLING - EX 10B

4.11.1 The purpose of this exercise is to teach the student to recognise the indications of an approaching stall and to recover (i.e. regain full control) from the incipient or developed stall with minimum height loss.

4.11.2 The student must be left in no doubt that the reason an aircraft stalls is due to the actual angle of attack exceeding the critical angle at which the wing stalls. Due to the absence of any method of directly measuring angle of attack it is necessary to rely upon the indications accompanying an incipient or developed stall to recognise the condition.

4.11.3 The indications of the developed stall will be preceded by the slow flight and incipient stall indications. The indications of the developed stall can include:

- Height loss
- Downward rotation of the nose of the aircraft
- Wing drop
- Pitch control at the aft limit (Fixed Wing) or forward limit (Flexwing)

4.11.4 The student must appreciate that the recovery from the stall is achieved by reducing the angle of attack of that stalled wing.
4.11.5 The first recoveries from the developed stall should normally be accomplished by the use of pitch control only in order to establish the basic principle of the recovery action. Some types may have benign characteristics such as to not exhibit nose or wing drop when the pitch control reaches its full extent with a standard 1kt/sec rate of speed decay entry to the stall. In such a case the pitch control reaching the stop should be taken as indication of the point of stall, and where recovery actions should be applied. Attempts to manufacture a nose drop by accelerating the approach to the stall with rapid speed loss, or sharp reduction of power near the stall point should not be made.

4.11.6 Recovery action should be:

**FLEXWING AIRCRAFT**
- BAR BACK
- As soon as a safe airspeed is achieved level the wings if required and raise the nose to minimise height loss.

**FIXED WING AIRCRAFT**
- STICK FORWARD
- As soon as a safe airspeed is achieved level the wings if required and raise the nose to minimise height loss.

4.11.7 In addition, this approach will allow the student to develop the correct technique of accurate pitch control to 'un-stall' the wing without allowing excess speed and unnecessary height loss to develop, without the need to co-ordinate the use of power.

4.11.8 During the recovery from all types of stall there must be no attempt to correct a dropping or dropped wing with roll control until the recovery action has been taken and a safe airspeed has been attained. In the case of Fixed Wing aircraft rudder should be applied to prevent further yaw occurring during the recovery. This does not mean pick up the dropping wing using rudder.

4.11.9 Following the recovery technique using pitch control only, power should be introduced as a part of the recovery technique to effect minimum height loss. This should be considered as the 'standard stall recovery' (SSR) technique and should be used in all subsequent recoveries whenever power is available.

4.11.10 The SSR is described below. It should be used for all types of stall entries and will always achieve a safe recovery with minimum height loss. Except where characteristics of a specific type dictate otherwise, the application of power in the SSR should be taken to mean full power.

**SSR - FLEXWING AIRCRAFT**
- SIMULTANEOUSLY: BAR BACK / APPLY FULL POWER
- As soon as a safe airspeed is achieved level the wings if required and raise the nose to minimise height loss.

**SSR - FIXED WING AIRCRAFT**
- SIMULTANEOUSLY: STICK FORWARD / APPLY FULL POWER
• As soon as a safe airspeed is achieved level the wings if required and raise the nose to minimise height loss.

4.11.11 The exact form of words used to describe the SSR must leave the student in no doubt that it is the reduction in the angle of attack (primarily caused by the use of pitch control) which recovers the aircraft from the stall. Increasing the power helps achieve minimum height loss.

4.11.12 To ensure the correct priority is established in the mind of the student greater emphasis should be given to the control input which primarily achieves the reduction in the angle of attack.

4.11.13 An important factor minimising the height loss resulting from a stall recovery is the rate and the amount the bar/stick is moved to achieve the required attitude. The term 'bar back' or 'stick forward' does not imply that the control should be moved to or past the neutral position. The rate and amount that the control should be moved is dependent upon a variety of factors (e.g. the attitude of the aircraft at the moment the recovery is initiated, the proximity of the ground, the pitch stability characteristics of the aircraft type etc.). The control should be moved sufficiently to ensure that the wing is positively 'unstalled', that the required attitude is achieved and that airspeed is starting to increase whilst achieving a minimum height loss.

4.11.14 The nose of the aircraft should be raised as soon as a minimum safe airspeed is achieved. It is usually possible to raise the nose of the aircraft almost immediately after the SSR has been accomplished.

4.11.15 Once the nose of the aircraft has been raised the climbing attitude should be adopted and the climb established. It is most appropriate to recover into the climb as power is already applied and there may be a requirement to regain lost altitude. If power was not available for the recovery the normal gliding attitude should be adopted.

4.11.16 The adoption of a standard stall recovery applied to all types of flight at critically slow airspeed, incipient stall or developed stall conditions ensures that the student will respond to the recognition of any of the slow flight or stall indications with a positive action. The recovery action will ensure that the student promptly corrects the situation (including inappropriate pilot control inputs) and regains control of the aircraft whilst minimising the loss of height.

4.12 SPIN AVOIDANCE - EX 10B

4.12.1 It is not possible to provide flying training for recovery at the incipient stage of the spin in the current generation of microlight aircraft, as none are cleared for spinning. Any attempt to enter the incipient stage of the spin can, by definition, result in the developed stage of the spin being entered inadvertently. Instructors should cover the spin awareness exercise as a discussion item. Individual aircraft may have different recovery procedures; always refer to the Pilot Operator’s Manual.

4.12.2 It is generally accepted that Flexwing aircraft do not exhibit the characteristic of spinning in the conventional sense. This exercise, therefore, is only relevant to Fixed Wing aircraft.

4.12.3 The incipient stage of the spin can best be defined, for training purposes, as an undemanded wing drop. This may be similar to a positive wing drop at the stall. A developed
spin is characterised by the aircraft progressing from the incipient to the autorotative stage of the spin.

4.12.4 It should be appreciated that in any unplanned spin entry situation the element of surprise is likely to limit the ability of the student to respond promptly and correctly. The time available to effect a recovery at the incipient stage of the spin is limited.

4.12.5 If any doubt exists that the aircraft has progressed from the incipient stage to the developed stage of the spin then the standard developed spin recovery should be applied.

4.12.6 It should be noted that many aircraft will increase their spin rotation rate if the incipient recovery is used whilst the aircraft is in a fully developed spin.

4.12.7 RECOVERY AT THE INCIPIENT STAGE OF THE SPIN

- STICK FORWARD
- POWER AS REQUIRED
- (power should not be increased initially if the nose has dropped significantly below the horizon)
- RUDDER TO PREVENT FURTHER YAW
- LEVEL WINGS AND REGAIN BALANCED FLIGHT

4.12.8 RECOVERY AT THE DEVELOPED STAGE OF THE SPIN

- CLOSE THROTTLE
- AILERONS NEUTRAL
- FULL OPPOSITE RUDDER (to direction of rotation)
- PAUSE
- STICK FORWARD UNTIL SPIN STOPS
- CENTRALISE RUDDER
- LEVEL WINGS AND EASE OUT OF DIVE

4.13 TAKE-OFF, LANDING AND CIRCUIT TRAINING - EX 12

4.13.1 GENERAL

4.13.1.1 These exercises are usually combined and the various elements are covered over several sessions. Typically the first session will be concerned with the circuit pattern and normal take-offs and landings. Subsequent sessions will cover the various types of take-off, approach and landing techniques together with non-normal procedures.

4.13.2 NORMAL TAKE-OFFS, LANDINGS, AND THE CIRCUIT

4.13.2.1 The adoption of the appropriate aircraft attitude during the take-off roll is necessary in order to achieve a balance between control, acceleration, undercarriage loads and lift-off speed. In order to reduce the aerodynamic drag of the aircraft the initial attitude should be close to the level flight attitude, which will result in good initial acceleration. As the lift-off speed is approached the appropriate attitude should be progressively adopted to achieve lift-off at the desired airspeed. The attitude during the take-off roll is assessed in the normal way on Fixed Wing aircraft. The attitude of Flexwing types during the ground roll is a function of bar position only; nose attitude will only become a factor after lift-off.
4.13.2.2 The initial climb out is probably the most critical phase flight on the majority of types of microlight aircraft. The combination of low speed and high power to weight ratio results in the possibility of a very high nose attitude being achieved during the climb. The additional factor of a relatively high drag value, resulting in rapid deceleration, and a low nose attitude required to maintain airspeed during the glide can result in a potentially dangerous condition developing following a sudden power loss during the initial climb out. It is imperative that the relationship between airspeed and nose attitude is managed during the initial climb out such that a complete power loss can be safely accommodated. The initial safe airspeed for the climb should be achieved as soon as possible after lift-off. This speed is likely to be greater than both the best angle and best rate speeds, which should only be used above a safe height (i.e. in the region of 200 feet).

4.13.2.3 The shape, size and position of legs of the circuit pattern can be defined with reference to either ground features or the 'angular' relationship between the aircraft and the runway. During the early stages of the exercise the circuit pattern is most simply defined with reference to ground features. It is important, however, that the concept of using the 'angular' relationship between the aircraft and the runway is introduced to students. This will prepare students for planning circuit patterns at unfamiliar airfields.

4.13.2.4 When considering the type of approach technique to use during the early stages of this exercise, the instructor should consider the following aspects:

1) The benefits of a relatively long final approach path in order to allow sufficient time for the student to accurately line up with the runway.
2) The glide approach may be most appropriate if the runway is considerably longer than the minimum required and an accurate touch down point is not necessary. The elimination of the need to co-ordinate power control will reduce the student work load during the latter stages of the approach. On runways requiring an accurate touch down point the use of a powered approach will result in the student being more consistently positioned for a landing attempt.
3) The powered approach may aid the student during the landing phase on types which exhibit a steep power off glide angle and consequently a rapid deceleration during the round out and hold off period. Conversely, types exhibiting a shallow glide angle will require an excessively flat approach path with power applied.

4.13.2.5 The glide approach should be flown as follows:

1) Circuit height should be maintained until the decision is made to reduce power to idle and glide to the aiming point on the runway.
2) If during the approach it is apparent that the aircraft is low, power should be applied, the nose raised and the aircraft flown level or almost level until the correct glide path is intercepted, at which point the nose should be lowered before once again reducing power.
3) If the aircraft is high the track can be modified, speed increased or the aircraft side slipped to correct the situation. If available, flaps and/or airbrakes can be used. If the situation cannot be corrected a missed approach should be initiated.

4.13.2.6 The powered approach should be flown as follows:
1) The downwind leg may be extended to allow for a longer and flatter approach descent path.

2) Power should be used to achieve an accurate touch down point. During the approach airspeed is controlled by attitude and height control effected by power. It must be stressed, however, that any correction to the profile requires the co-ordinated use of both pitch and power and in particular the immediate effect of power and pitch control must be highlighted. It is whilst correcting an approach at low altitude that the importance of modifying the profile by the use of pitch as well as power is of prime importance. The use of power alone will initially accelerate the aircraft along its descending 'inertial track' resulting in a worsening undershoot condition.

3) Power should be smoothly reduced towards idle once the aircraft is over the aiming point on the runway and the initial round out has commenced.

4.14 MISSED APPROACH AND GO-AROUND

4.14.1 This procedure should be covered during one of the sessions. Once the decision to go-around is made the aircraft should be positively placed in a climb at a safe airspeed and attitude by the co-ordinated use of power and pitch control. It is important to stress that the 'conventional' procedure of turning towards the 'dead-side' of the circuit is frequently modified by procedures applicable to individual airfields. The student should be encouraged to consider each situation as a separate case and apply judgement in deciding the most appropriate course of action in attempting to avoid any potential conflicts with other traffic.

4.15 MISSED LANDING AND GO-AROUND

4.15.1 The 'balloon' and 'bounce' recovery procedures should be practised during one of the sessions.

4.15.2 A minor 'balloon' is likely to occur as part of the student's normal progression. It can be corrected by the appropriate use of pitch control and, if required, an increase of power. A significant nose down attitude should not be allowed to develop.

4.15.3 A severe 'balloon' and/or 'bounce' should be covered as a distinct element. The aircraft is effectively in a critically slow airspeed flight condition approaching the incipient stall. The recovery should consist, therefore, of the Standard Stall Recovery. The recovery should primarily avoid ground contact and should result in a gradual increase of airspeed without loss of height. The recovery should be continued into the go-around procedure.

4.16 CIRCUIT JOINING AND LEAVING PROCEDURES

4.16.1 The various types of circuit joining and leaving procedures should be covered.

4.16.2 The importance of not descending 'into' the circuit pattern should be stressed. The aircraft must join the selected leg of the circuit established at the appropriate circuit height.

4.16.3 It is acceptable for aircraft leaving the circuit to climb continuously in the selected direction but consideration should be given to existing and joining circuit traffic.
4.17   EMERGENCY PROCEDURES

4.17.1   GENERAL

4.17.1.1 It is of great importance that during the training of students in circuit emergency procedures the Instructor does not allow the normal standards of safety to be compromised. This principle should be considered at all times, particularly during the engine failure after take-off procedure.

4.17.2   ABANDONED TAKE-OFF

4.17.2.1 Every take-off should be planned with regard to the possibility of abandoning the take-off and stopping the aircraft. It is important that every take-off has a specified ‘abort’ point. The abort point should be a defined point along the take-off run which would allow the aircraft to be brought to a stop in the remaining distance, in the event that the take-off is abandoned. The take-off run available should normally allow for lift-off speed to be achieved before or at the abort point. In all cases the speed and acceleration achieved by the abort point should be sufficient to indicate that lift-off speed will be safely reached within the distance remaining. The abort point should be defined prior to each take-off, taking into account all the factors affecting the take-off. Once the decision to stop the aircraft is made every available means must be used to stop the aircraft in the distance available.

4.17.3   ENGINE FAILURE AFTER TAKE-OFF

4.17.3.1 The engine failure after take-off (EFATO) can be divided into two types of procedure. The failure can occur immediately after lift-off at a very low height (up to approximately 100ft) or at a later point during the climb out (up to approximately 300ft). EFATOs are not considered ‘normal aviation practise’ by the CAA therefore the Instructor must ensure that whilst making every effort to provide realistic and effective flight training the legal requirements of Rule 5 (low flying) of ‘The Rules of the Air’ are observed. In particular the requirement to fly not closer than 500ft to any person, vessel, vehicle or structure which may be a factor during this exercise.

4.17.3.2 The following types of EFATO should be covered:

1) EFATO at 50ft requires a smooth lowering of attitude towards the glide attitude. It is imperative that an excessive nose down attitude is not allowed to develop and that the round out is commenced regardless of the airspeed achieved. To ensure that an undemanded restoration of power is not experienced the throttle should be promptly closed. There will be little opportunity to turn the aircraft and the landing will normally be made ahead on to the runway or an alternative open area.

2) EFATO at 200ft requires the positive adoption of the gliding attitude and the selection of a suitable landing area as close as possible to the take-off path. The requirement to reach a suitable landing area may require the aircraft to be positioned to the left or right of the take-off path. The area selected should normally be within a maximum of 30° either side of the take-off path. Under no circumstances should an attempt be made to turn back to the departing runway. According to the time available the appropriate emergency shutdown checks should be completed and in all cases the throttle should be closed.
3) ENGINE FAILURE IN THE CIRCUIT - the procedure appropriate to any particular situation is primarily dependent upon the stage of the circuit at which the failure occurs. A failure occurring on the crosswind leg while the aircraft is in the climb will be similar to an EFATO at 200ft. If the failure occurs at the late downwind position the situation will be similar to a normal glide approach.

4.17.3.3 While a return to the airfield environment may frequently be the preferred option it should not be allowed to become the automatic reaction. It is imperative that all factors (e.g. position of other traffic, distance from runway, suitability of 'off' airfield areas etc.) are considered prior to a return to the airfield being initiated. Shut down checks should be completed according to the time available, in all cases the throttle should be closed.

4.18 ADVANCED TAKE-OFF AND LANDING TECHNIQUES – EX 13

4.18.1 GENERAL

4.18.1.1 These elements should be presented to the student with caution. These terms should not be misinterpreted as suggesting that by the use of specific techniques it is possible to operate from unsuitable sites. These procedures would be better described as 'performance' techniques and are intended to be used to obtain the best performance from the aircraft in specific circumstances. For example, in the case of a short field approach and landing the terms lowest safe approach speed and lowest possible safe height are used; the most important word in these terms is safe. An alternative description could include the terms without excessive airspeed or height. The use of any of these performance techniques is predicated on the assumption that safety is the prime consideration.

4.18.1.2 In all cases the runway providing the most advantageous combination of length, surface, slope, headwind component and obstructions should be selected in order to provide the greatest possible margins of safety.

4.18.2 SHORT FIELD TAKE-OFF

4.18.2.1 The use of flaps, if available, is likely to be beneficial. The aircraft should be positioned in order to use all of the available runway length. If possible power should be applied with the brakes applied to ensure that full power is available and to a limited extent to achieve the best initial acceleration. If the aircraft starts to move forward with the brakes applied the brakes should be released and the take-off commenced. Alternatively a rolling start may be used and the maximum safe taxy speed maintained throughout the turn to line up with the runway.

4.18.2.2 The aircraft attitude should ensure maximum rate of acceleration throughout the take-off roll. The lift-off should occur at the minimum safe speed and without any tendency to 'hold' the aircraft on the ground longer than necessary. The aircraft should then be accelerated to the minimum safe climbing speed (this may be more than the maximum angle of climb speed).

4.19 SOFT FIELD TAKE-OFF

4.19.1 If available flap should be used. The aircraft should not be brought to a stop at the start of the take-off run, taxying speed should be maintained throughout the turn to line up with the runway. The pitch control should be used to achieve the optimum attitude which produces the maximum amount of lift throughout the take-off roll transferring weight from the wheels to the wing of the aircraft. Lift-off should occur at the minimum safe speed.
after the wheels leave the ground the airspeed should be allowed to increase to a safe speed before adopting a climb attitude.

4.20 **UNDULATING FIELD TAKE-OFF**

4.20.1 The technique is similar to that for a soft field take-off. The principle problem concerns the aircraft coming prematurely airborne. The aircraft should be placed in the optimum take-off attitude. The effects of the undulating field should be reduced by the use of the pitch control to hold the required attitude. If the aircraft becomes airborne at too low an airspeed it must be allowed to settle back on to the ground, at the optimum attitude, and allowed to accelerate.

4.21 **SHORT FIELD APPROACH AND LANDING**

4.21.1 The powered approach will ensure that accurate control of the touch down point is available. Once established on final approach airspeed should be progressively reduced in order to arrive at the aiming point on the field at the slowest safe approach speed. Flap, if available, should be used. An excessively long, low, flat approach will not achieve the best ability to clear obstructions. The aircraft should cross the boundary of the field at the lowest possible safe height and arrive over the aiming point of the runway at, or close to, hold off height. Power should be added if it is necessary to arrest a high rate of descent. The aircraft should be placed on the ground as soon as possible even if slightly fast, it is not appropriate to allow a protracted hold off phase to be entered. If available and required braking should be used (considerable initial retardation is available on Flexwing aircraft by pulling the bar fully back).

4.22 **SOFT FIELD APPROACH AND LANDING**

4.22.1 The touch down should be achieved at the lowest possible groundspeed. Flaps, if available, should be used. The lowest possible touch down speed may, according to type, be achieved with a small amount of power being applied until the main wheels have touched down.

4.23 **CROSSWIND TAKE-OFFS AND LANDINGS**

4.23.1 Accurate and practical assessment of any crosswind component is an important aspect of this exercise.

4.23.2 Crosswind operation with Flexwing aircraft should take into consideration the forces that are transmitted between the 'trike' unit and the wing of the aircraft. These forces should not be transmitted solely through the aircraft structure. The pilot should maintain the correct geometry, in yaw, between wing and 'trike' unit by use of the bar.

4.24 **CROSSWIND TAKE-OFF**

4.24.1 The take-off run should be accomplished with an appropriate amount of roll control applied into the crosswind. In the case of Fixed Wing aircraft the amount of aileron control required at the start of the take-off roll should be overestimated rather than underestimated. In the case of crosswinds approaching the aircraft's limit the take-off roll should commence with almost full aileron deflection. During the take-off roll the ailerons should be used as required to keep the wings level. Rudder should be used to maintain direction throughout the take-off roll. The aircraft should be lifted cleanly off the ground with the wings level. To ensure a
clean lift-off with no possibility of the aircraft touching down again the lift-off speed should be slightly higher than normal. Once airborne the aircraft should be positioned, by use of a balanced turn, onto a heading which compensates for any drift. The climb out should be continued with the aircraft in normal balanced flight.

4.24.2 Similar considerations apply to crosswind take-offs in Flexwing aircraft. The wings should be level or very close to level throughout the take-off roll. At the start of the take-off it is possible to establish a 'neutral' point by lowering the into wind wing very slightly. The take-off should be accomplished with the wing being progressively returned to the level position. In order to maintain the wing in the level position the pilot must apply a positive force to the bar to prevent the wing from lifting.

4.25 CROSSWIND LANDING

4.25.1 The aircraft should be positioned on the extended centre line of the runway at an early stage of the final approach. The aircraft should adopt a heading accounting for any drift. According to type, the use of a powered approach may be beneficial by providing more accurate control during the touch down.

4.25.2 Fixed Wing aircraft can accomplish a crosswind approach and landing by the use of one or a combination of two types of technique:

1) The 'crab' technique involves the aircraft being positioned on the final approach path with the nose of the aircraft heading sufficiently into the wind to compensate for any drift. The aircraft is in balanced flight and maintaining an accurate track towards the runway. Prior to the touch down the aircraft axis should be aligned with the runway using rudder whilst opposite aileron is simultaneously applied to prevent roll.

2) The 'wing-down' technique involves the alignment of the aircraft axis with the runway during the latter stage of the final approach. Rudder is applied to align the aircraft axis with runway whilst opposite aileron is applied to maintain the centre line of the runway. The aircraft is out of balance with the into wind wing low. The aircraft is held in this condition throughout the landing with one main wheel touching down first.

4.25.3 The choice of which technique to use is primarily a matter of personal preference. It is recommended, however, that both techniques are included in the student's training. In crosswinds approaching the aircraft's limits a combination of the two techniques is likely to be most suitable. In addition, in circumstances when the 'crab' method alignment manoeuvre is miss-timed and drift develops the situation will be corrected by the use of the 'wing-down' technique.

4.25.4 Flexwing aircraft can only accomplish the 'crab' method of crosswind approach.

4.25.5 If the axis of the aircraft cannot be aligned with the runway the aircraft must touch down in the 'crabbed' condition. The heading of the aircraft must ensure that the aircraft is tracking along the centre line of the intended landing path. It is important that the main wheels touch down well in advance of the nose wheel. It is the action of the main wheels touching down which causes the 'trike' unit to be aligned with the direction of movement of the aircraft, only then should nose wheel touch down occur.

4.25.6 The aircraft can be turned into line with the runway and travel direction during the round-out phase. The rear wheels will then be aligned with the direction of travel at touch down. The
timing is critical to prevent the aircraft touching down with drift still on or downwind drift developing during the round-out. When the trailing wheels are rolling the nose wheel is lowered.

4.25.7 The landing roll should be completed with roll control being applied to prevent the into wind wing lifting whilst directional control is maintained by the appropriate control.

4.26 **TURBULENT CONDITIONS**

4.26.1 **TAKE-OFF.** When taking off in turbulent conditions a higher lift-off speed will ensure a clean lift-off with sufficient energy and control authority to cope with turbulence or sudden sink encountered near the ground. In aircraft with flaps, depending on type, the use of zero flap can assist in achieving a higher lift-off speed, quicker acceleration once airborne and will avoid the possibility in gusty conditions with a strong wind gradient of inadvertently exceeding Vfe during the climb-out.

4.26.2 **LANDING.** A powered approach at a higher airspeed will minimise the effects of a strong wind gradient and ensure sufficient energy and control authority to cope with turbulence or sudden sink encountered near the ground. The approach angle should be adjusted to ensure that power can continue to be used right through the important last 100’ or so where the effects of wind gradient are felt most strongly. Power should only be reduced to idle just before touch down and the aircraft should be placed on the ground avoiding a prolonged hold off. Use of large amounts of flap should be avoided and depending on type use of less flap can be helpful in enabling the aircraft to be placed on the ground at a higher speed without touching down nose wheel first.

4.27 **TAILWHEEL CONSIDERATIONS**

4.27.1 The procedures used for the various types of take-off, approach and landing remain substantially similar for both nose wheel and tailwheel types.

4.27.2 The need to raise the tail during the take-off roll is the only significant difference in the take-off technique between the two types of undercarriage configuration. The take-off roll should be commenced with the stick held fully back as full power is progressively applied. Once full power has been achieved the tail of the aircraft should be positively raised and the appropriate attitude established.

4.27.3 The two types of landing technique applicable to a tailwheel aircraft should be covered during the student’s training. The precise technique to be used under particular circumstances is a matter of judgement and knowledge of the characteristics of the particular aircraft type. The following outlines the basic techniques and their applications:

1) The ‘3-point’ landing is best suited to ‘normal’ and ‘performance’ landings in conditions of insignificant crosswind component and the absence of strong or gusty winds. The hold off procedure is continued for a longer period than on nose wheel types with the result that the aircraft touches down in the 3-point attitude following the loss of all flying speed. Ideally, the mainwheels and tailwheel touch down simultaneously.

2) The ‘wheel landing’ is most suited for use in strong gusty wind conditions and/or large crosswind components. The aircraft is landed at a relatively level attitude and consequently at a higher airspeed. Once mainwheel touch down has occurred a small forward movement of the stick is usually required to prevent the aircraft becoming airborne again. The stick
should be brought back as airspeed decreases during the landing roll.

4.28 ASSESSMENT AND USE OF 'UNIMPROVED' SITES

4.28.1 A large number of microlight aircraft operate from unimproved sites. The syllabus covers all the individual aspects to be considered when operating from unimproved sites. There is not, however, a separate exercise or element in the syllabus which addresses this area as a distinct subject.

4.28.2 There continues to be an unacceptably large number of accidents and incidents occurring at unimproved sites. These occurrences are either due to pilots attempting to operate from unsuitable sites or using inappropriate techniques at sites offering only small margins for error.

4.28.3 Instructors should stress the following areas to students when covering the relevant exercises and elements, in the context of operation from unimproved sites.

4.28.4 Students should be familiar with the BMAA 'minimum site criteria' document, this can be found in the BMAA Code of Good Practice for Microlight Clubs in Appendix B. Relevant information contained in CAA Safety Sense Leaflets and Pink Aeronautical Information Circulars can be found on the CAA web site. These sources of information provide useful guidance to pilots operating from unimproved sites.

4.28.5 If a new site is being considered it should be inspected from the ground before any attempt is made use it.

4.28.6 Inexperienced pilots should be advised to obtain the opinion of an Instructor prior to the use of an unimproved site.

4.28.7 It should be stressed that any 'factoring' of take-off run and distance required is cumulative and that a combination of unfavourable factors can result in considerable increases.

4.28.8 The relevance of short field operation and precautionary landing procedures should be indicated.

4.28.9 It should be understood that any site which does not allow for normal safety margins is not suitable and should not be used. It must always be possible to:

1) Identify an abort point

2) Safely clear obstacles at the safe climb speed

3) Land in a suitable area following an engine failure during any stage of the circuit pattern

4) Approach at a safe airspeed and execute a safe go-around at any stage of the approach up to the point of touch down.

4.28.10 Weather and site surface conditions are an important factor when considering the suitability of a site. These factors are likely to change constantly and a site may only be suitable subject to a very limited range of conditions existing.
4.28.11 The continued freedom of microlight aircraft to operate from unimproved sites is almost certainly dependent upon the demonstrable ability of pilots to make safe decisions concerning the sites they utilise. It is only by appropriate training that pilots can be expected to make safe decisions.

4.29 ADVANCED TURNING (UP TO 60° BANK ANGLES) - EX 14

4.29.1 GENERAL

4.29.1.1 The advanced turning exercise is intended to improve the student’s co-ordination and ability to handle an aircraft at steeper angles of bank. In addition the exercise enhances the student’s confidence as well as preparing for a situation requiring sudden evasive action.

4.29.1.2 In order to ensure that the student can safely operate the aircraft at steeper angles of bank it is imperative that he is cognisant with the limits of the aircraft and pilot. In particular the student must appreciate the implications of the following elements:

- Maximum certified angle of bank permitted
- Increased load factor
- Increased stalling speed
- Wake turbulence considerations

4.29.1.3 The importance of lookout prior to and during an advanced turn cannot be over stressed. Whilst manoeuvring at steep angles of bank the ability to maintain an adequate lookout is significantly reduced. It follows, therefore, that the lookout procedure adopted prior to the turn should be particularly thorough and ensure that an area of airspace will remain clear of traffic throughout the manoeuvre.

4.29.1.4 Whilst manoeuvring at high angles of bank it is important that the student maintains orientation and knowledge of geographical position.

4.29.1.5 The potential problems of a wake turbulence encounter at steep angle of bank should be fully understood by the student. During an advanced turn the aircraft is flown at a relatively high angle of attack and will be in a condition to produce significant wake turbulence. It follows that if the aircraft completes an almost level 360° turn, it will encounter its own wake turbulence. Once the wake vortex has been produced it will slowly descend. The relatively slow speed of microlight aircraft results in a high rate and small radius of turn. The wake vortex, therefore, will not descend or decay appreciably in the time taken for the aircraft to complete a 360° turn. In order to avoid a possible wake turbulence encounter it is necessary to complete the turn in less than 360° or in a slight climb or in descent.

4.29.1.6 The student must be made aware that if the aircraft is flown through its own wake at its bank limit there is a high possibility that the vortex will induce a roll in the direction of the bank leading to the aircraft limits being exceeded. The rate of roll can be very high and the increased bank leads to a dangerous condition. The problem caused by wake vortex encounter in high banked turns is most significant for Flexwing aircraft. Therefore to avoid the possibility of wake encounter in a Flexwing, at or close to the limits of bank angle, level turns at angles of bank greater than 45° must be limited to a maximum heading change of 270°.
4.29.1.7 Level turns through 360° heading changes, or more, at bank angles not in excess of 45° can be considered normal practice and not restricted.

4.29.1.8 It is important that instructors fully appreciate and communicate to their students the safety considerations applicable to this exercise and yet fully cover the individual elements of the syllabus. It is necessary for the elements of this exercise to be flown at the angles of bank indicated in the syllabus. The syllabus uses the terms up to 45° and 60° of bank. The term “up to” indicates that target angles of bank may be used which allow a degree of over bank before certified roll limits are reached. The target angles of bank used should be within 5° at 45° of bank and 10° at 60° of bank.

4.29.1.9 The impact of the exercise and the principals involved will be severely eroded if considerably reduced angles of bank are used either intentionally or due to over estimation. In the case of aircraft types restricted to a certified maximum bank angle of 45° it is not possible to complete all the elements of this exercise. Consideration should be given to completing the relevant elements on a type allowing all manoeuvres to be completed.

4.29.1.10 Whilst the exercise covers level, climbing and descending turns the level turn will provide the best opportunity for practising advanced co-ordination. It follows, therefore, that the level turn will form the basis of the exercise.

4.30 STEEP LEVEL TURN

4.30.1 A correctly co-ordinated steep turn should be completed at a constant airspeed. Many types of microlight aircraft can safely complete an advanced turn at the normal cruise speed. If it is necessary to fly the manoeuvre at an increased speed the selected speed should be established prior to the entry to the turn and maintained throughout the manoeuvre. In the case of Fixed Wing types the aircraft should, of course, be in balance throughout the turn.

4.30.2 The steep turn should be entered in a similar way to a medium turn. As the angle of bank increases the pitch control should be further used to maintain height whilst power is applied to maintain airspeed. Once the required angle of bank has been attained there may be a significant tendency for the angle of bank to increase; it will, therefore, be necessary for the angle of bank to be ‘held off’ by the use of the roll control.

4.30.3 During the turn the angle of bank continues to be controlled by the roll control whilst attitude is controlled by the pitch control. Power will be used to maintain the selected airspeed without a gain or loss of height. If a significant deviation from the desired manoeuvre occurs it should be appreciated that it will be necessary to co-ordinate the use of all controls to correct the situation.

4.30.4 To exit the turn, as the wings are rolled level, pitch control and power reduction are co-ordinated to maintain the correct attitude and airspeed.

4.30.5 In the case of aircraft types equipped with side by side seating the turn should be demonstrated in each direction prior to student practice. This allows the student to appreciate the significant difference in the perception of the horizon in left and right steep turns.

4.31 CLIMBING AND DESCENDING STEEP TURNS

4.31.1 Climbing and descending steep turns up to 45° angle of bank should be covered. The normal speeds used for the climb and descent are unlikely to provide a sufficient margin above the
stall during a steep turn. It will be necessary to establish and maintain a similar airspeed as used for the steep level turn for these manoeuvres.

4.31.2 The steep climbing turn is of less practical use to the student but serves to illustrate some important principles. The steep climbing turn will usually be commenced from the straight climb at the selected airspeed. It is important that the target airspeed is maintained during the turn and that the consequential reduction in climb rate is accepted. There will usually be a strong tendency for the angle of bank to increase requiring a positive control input to 'hold off' roll. Any relaxation on the controls will allow airspeed and the angle of bank to rapidly increase with the possibility of a spiral dive developing.

4.31.3 The steep descending turn requires careful attention to attitude and speed control throughout the manoeuvre. It is important that the target airspeed is maintained during the turn and the consequential increase in descent rate is accepted. If the nose of the aircraft has been allowed to lower significantly any attempt to recover the manoeuvre by the use of pitch control alone is likely to result in a spiral dive.

4.31.4 A steep descending turn can be a useful manoeuvre for rapid height loss, particularly with high drag types. Steep gliding turns at high airspeed should be practiced as part of this exercise taking care to ensure accurate coordination of airspeed, height loss and attitude control without any tendency to progress to a spiral dive.

4.32 SPIRAL DIVE

4.32.1 The spiral dive is characterised by the aircraft being in a descending turn with a rapidly increasing airspeed and angle of bank. The use of pitch control alone to recover the condition will only serve to tighten the spiral with the possibility of exceeding the aircraft's maximum pitch, roll or structural limits.

4.32.2 The spiral dive will develop most rapidly if power is applied during the entry. A steep level turn in which the nose of the aircraft is allowed to lower is the most likely cause for entering a spiral dive. The Instructor should include a demonstration of the incorrect recovery technique as a part of the exercise. The spiral dive recovery is as follows:

- REDUCE POWER TO IDLE
- LEVEL WINGS
- EASE OUT OF DIVE

4.32.3 The pitch stability characteristics of weight-shift aircraft may produce a very powerful nose up pitching moment immediately the angle of bank is reduced. It is imperative that the aircraft is eased out of the dive smoothly and that an excessively nose up attitude is not allowed to develop following the initial recovery. Many types will require a significant bar back input to counter the inherent tendency to pitch nose up.

4.33 UNUSUAL ATTITUDES - EX 15

4.33.1 GENERAL

4.33.1.1 This exercise should be considered as consisting of two distinct components.

- Unusual attitudes
• Dangerous conditions

4.33.1.2 The instructor will present the unusual attitude part of the exercise as a conventional sequence of flying instruction. The dangerous conditions element of the exercise can be considered as the consequences of mishandling the controls in a recovery from an unusual attitude. By definition it is unsafe to consider dangerous conditions in the context of flying instruction. Dangerous conditions will be addressed, by the instructor, as discussion items only.

4.33.1.3 It is imperative that aircraft limitations are strictly observed whilst covering the elements of this exercise.

4.33.1.4 The presentation of this exercise needs to be considered with great care by the instructor. Whilst it is important that the student is able to recognise and recover from the manoeuvres covered in this exercise, the instructor must ensure that normal levels of safety are not compromised. In addition the student must appreciate that this exercise is designed to cover handling techniques which will allow the aircraft to be recovered to normal flight following inadvertent manoeuvres. This exercise should not lead the student to consider such manoeuvres as normal or attempt to deliberately fly the aircraft in this regime of flight.

4.33.1.5 The following examples illustrate possible situations which could result in the aircraft being placed in an unusual attitude or, in extreme cases, a dangerous condition:

• Deliberately attempting manoeuvres outside the limits of the aircraft and/or the pilot.
• Application of the incorrect recovery technique during a stall at a high nose attitude.
• Severe wake turbulence encounter.
• Severe meteorological turbulence encounter.
• Incorrectly executed turn at high angles of bank.
• Disorientation

4.33.2 UNUSUAL ATTITUDES

4.33.2.1 Throughout this exercise the student should be made aware of the importance of maintaining orientation between the attitude of the aircraft and the natural horizon. Conversely the potential dangers of disorientation should be explained.

4.33.2.2 The instructor should monitor the student for any signs of disorientation and if necessary, modify the student's progress through the exercise accordingly. The flight instruments should be used with caution and with the full knowledge of the instrument errors likely to be present during flight at unusual attitudes. It is the recognition of aircraft attitude and performance which will indicate the required recovery action. The instructor should ensure that the student is not simply reacting to a recognised entry manoeuvre.

4.33.2.3 Unusual attitudes at high and low nose attitudes, with rapidly changing airspeed, should be covered in straight and turning flight.

4.33.2.4 The student should learn to recognise and consider the airspeed, energy state, attitude in relation to the horizon and height when planning and performing the correct recovery procedure.
4.33.2.5 Throughout this exercise the instructor should place the aircraft in the unusual attitude allowing the student to complete the recovery action.

4.33.2.6 The following attitudes should be addressed:

**NOSE ATTITUDE HIGH AND WINGS LEVEL**
Recovery: SIMULTANEOUSLY APPLY FULL POWER AND LOWER THE NOSE

**NOSE ATTITUDE HIGH AND WINGS BANKED**
Recovery: SIMULTANEOUSLY APPLY FULL POWER AND LOWER THE NOSE LEVEL WINGS

**NOSE ATTITUDE LOW AND WINGS LEVEL**
Recovery: REDUCE POWER TO IDLE EASE OUT OF DIVE

**NOSE ATTITUDE LOW AND WINGS BANKED**
Recovery: REDUCE POWER TO IDLE LEVEL WINGS EASE OUT OF DIVE

4.33.2.7 In recovering from unusual attitudes it is important that the student appreciates that the aircraft may be operating very close to its certified limits. It is important that the controls are handled smoothly as well as positively. Any manoeuvring at high airspeeds must be accomplished with great care and consideration for the loads which can be applied to the structure of the aircraft.

4.33.2.8 Flexwing and Fixed Wing aircraft display very different characteristics in terms of stability.

4.33.2.9 Flexwing types inherently display very positive pitch stability qualities during normal manoeuvres. Whilst it requires a considerable degree of mishandling to exceed the Vne, the strong positive pitching moment can result in excessive nose up attitudes being achieved following a high speed manoeuvre. The need to anticipate the powerful nose up tendency and subsequently control the attitude of the aircraft is an important aspect of this exercise. Some types of Flexwing aircraft exhibit a significant degree of roll inertia at high airspeeds, producing the potential for the desired angle of bank being rapidly and significantly exceeded. The recovery from any high speed banked manoeuvre must ensure that high rates of roll are not allowed to develop.

4.33.2.10 Fixed Wing aircraft typically do not exhibit the same powerful tendency to pitch nose up from high speed manoeuvres as Flexwing aircraft. It is possible for excessively high airspeeds to develop rapidly. During any recovery it is imperative that the speed is contained below Vne and at speeds above Va all control inputs are smooth and progressive in order not to produce excessive aircraft loading.
4.33.2.11 Due to the throttle arrangement in a Flexwing aircraft, care needs to be taken to ensure that there is a clear procedure for handover of control when the student is to carry out the recovery.

4.33.2.12 A suitable method is for the student initially to maintain a medium power setting on the foot throttle whilst the Instructor places the aircraft in the required attitude. On the command to recover the student has full control and is in a position to increase or reduce the power as required. It is also advisable, however, to cover subsequently recoveries from unusual attitudes entered with a cruise power setting on the hand throttle.

4.33.3 DANGEROUS CONDITIONS

4.33.3.1 The instructor should stress to the student that the aircraft should never be placed into any attitude that would constitute a dangerous condition. It is only by not exercising good judgement and airmanship that a pilot should ever need to apply any element of this part of the exercise.

4.33.3.2 Whilst considering recovery from any dangerous condition the prime objective is to maintain the integrity of the aircraft whilst returning to a recognisable attitude from which it is possible to make a safe recovery. It is unlikely that it will be possible to maximise aircraft performance (e.g. minimise height loss) whilst attempting to recover the condition.

4.33.3.3 The following aspects should be discussed with the student:

1) If the pilot is able to recognise the attitude of the aircraft then the appropriate unusual attitude recovery technique should be applied, even if the condition of the aircraft is outside anything previously experienced. If the pilot is unable to assess the attitude of the aircraft then the controls should be firmly held in a neutral position until a recognisable condition is established from which the appropriate recovery can be made.

2) In case of Flexwing aircraft it is imperative that all negative aircraft loading is avoided. If any condition of significantly reduced positive loading is encountered it is imperative that every effort is made to maintain the normal geometry between the 'trike' unit and the wing. The only option during such an encounter and the transition back to normal flight is to ensure that a firm grip is maintained on the control bar.

3) It is possible for Flexwing aircraft to achieve an extremely high nose attitude, recovery from which can result in a correspondingly excessively low nose attitude. Recovery by the use of pitch control alone can result in the possibility of the aircraft tucking and being subjected to negative loads. It is possible to recover from an excessively high nose attitude condition by using roll control to place the aircraft into a highly banked 'wing over' manoeuvre from which a safe recovery is possible. Whilst instructors may wish to discuss this potential recovery technique with their students, it is unlikely that an inexperienced pilot will be able to successfully apply this technique.

4.34 FORCED LANDINGS – WITH AND WITHOUT POWER - EX 16A AND 16B

4.34.1 GENERAL

4.34.1.1 The importance of this exercise cannot be over stressed. It is possible that a microlight pilot will have to manage a genuine forced landing during his flying career, possibly whilst still a student completing a solo exercise.
4.34.1.2 The instructor must ensure that whilst making every effort to provide realistic and effective flying training the legal requirements of "The Rules of the Air" are observed. In particular it will be the requirement to fly not closer than 500ft to any person, vessel, vehicle or structure which will be a factor during this exercise.

4.34.1.3 In addition to the legal requirements instructors should also be mindful of the environmental considerations, the potential confliction with military low level operations and the consequences of a genuine power failure when operating below 500ft agl. In order to adequately complete this exercise it is clearly necessary to continue forced landing procedures below 500ft agl. It is largely a matter of geographical location that will dictate which factor or factors are most significant. The instructor should plan to use areas which minimise these factors.

4.34.1.4 A useful instructional technique which can be applied to this exercise allows the Instructor to divide the procedure into two distinct aspects. This method allows a progressive approach to a fairly demanding procedure. In addition, it reduces the flying time required below 500ft agl away from a 'selected' site and therefore minimises exposure to the associated problems.

4.34.1.5 The exercise can be divided into the following components:

1) The ability to complete the basic flight procedure whilst applying judgement and flying the aircraft sufficiently accurately to a position from where a safe landing can be assured. This part of the exercise can be covered over a 'suitable' site, selected by the Instructor. A 'suitable' site could be the base airfield, a disused airfield or any area assessed as providing freedom from legal, environmental or operational constraints.

2) The ability to assess aircraft position, aircraft height and wind velocity, select a potential forced landing site and subsequently apply the appropriate procedure. These aspects can be covered once the student has achieved a satisfactory standard in the first part of the exercise. This part of the exercise should be completed in a variety of locations, providing the opportunity to practise all aspects of the forced landing procedures with a high degree of realism.

3) Whilst practising forced landing procedures the Instructor will be assessing the suitability of a site in relation to legal, environmental and operational considerations. The student should, also, be aware of the various factors affecting the suitability of a chosen site for a simulated forced landing. It is imperative for the student to appreciate, however, that all such considerations apply only during practice procedures.

4) Instructors should be mindful that the primary aim of the exercise is to prepare the student to complete a safe procedure in the event of a genuine requirement for a forced landing.

4.35 FORCED LANDING WITHOUT POWER

4.35.1 A microlight pilot should be prepared, at all times, for the possibility of a power failure and must operate the aircraft accordingly.

4.35.2 Whilst there are different types of pattern which can be flown in order to achieve a forced landing without power, it is important that a formal method is adopted.
4.35.3 Height assessment is to be made by visual judgement and not by use of the altimeter.

4.35.4 A forced landing without power procedure should be based on the following guidelines:

FOLLOWING POWER FAILURE:

- Adopt appropriate attitude for desired gliding speed
- Assess wind velocity
- Pick suitable field or suitable area
- Plan pattern

ACTIVATE PLAN

IF TIME AVAILABLE:

- Investigate reason for failure
- If required, attempt restart

MONITOR PLAN:

- If required, be flexible and modify plan

IN ALL CASES:

- Complete shutdown procedure
- Complete pre landing checks
- Complete emergency actions

COMPLETE PLAN:

- Aircraft established on final approach
- Aircraft at correct approach airspeed
- Desired touch down point assured

4.35.5 There are three distinct types of forced landing pattern which can be applied in the case of engine failure:

BASE LEG METHOD

The aircraft is positioned on a base leg at a height greater than that normally used in the circuit over a pre-determined point from which a conventional base leg and final approach can be flown towards the initial aiming point.

BEAT METHOD

The aircraft is positioned in the area immediately downwind of the chosen landing area. The aircraft should be flown backwards and forwards along a beat line, with all turns towards the field, until sufficient height is lost and a final approach can be established towards the initial aiming point.
CONSTANT ASPECT METHOD

The aircraft is placed into a downwind position from which the initial aiming point is maintained at a constant aspect (or constant sightline angle), by the means of a curved pattern until the aircraft is on final approach.

4.35.6 It is possible for a procedure to combine a number of aspects from the above patterns. The adoption of a particular method is primarily a matter of personal preference considered in the context of the performance of differing aircraft types.

4.35.7 The following notes are applicable to all forced landing patterns without power:

- The initial aiming point should be positioned between approximately one half and one third of the way into the chosen landing site.
- The initial aiming point should be kept in view throughout the procedure.
- The angle of bank should not normally exceed 30° in any manoeuvres completed during the procedure.
- The aircraft should normally be established on final approach at a similar height to that used for a glide approach in the normal airfield circuit pattern.
- Once established on the final approach and the initial aiming point is assured the actual touch down point should be brought towards the threshold by the appropriate technique.

4.35.8 Forced landings without power should be practised from a variety of heights. Whilst the majority of procedures are most likely to be instigated in the 1500 to 2000ft agl height band, students should also experience simulated failures at higher and lower heights. Failures at greater heights require that use is made of the additional time available to select the most suitable site and that the descent plan allows for the procedure to be entered at the correct position and height. Failures at lower heights provide less time for decision making and require that the procedure is entered at the position appropriate to the height.

4.35.9 During all simulated forced landings without power the engine should be warmed at intervals throughout the descent. Power should be smoothly increased to a 'mid' power setting, held for a short period of time and reduced smoothly back to idle.

4.36 FORCED LANDING WITH POWER. (PRECAUTIONARY LANDINGS)

4.36.1 This exercise is of great value to a microlight pilot. The considerations and procedures covered in this exercise not only apply to an unplanned forced landing with power (or precautionary landing) but also to any operation into an unfamiliar 'unimproved' site.

4.36.2 The precautionary landing procedure should be applied at any time when the pilot encounters circumstances during flight which require a timely landing.

4.36.3 The following factors are typical examples:

- Deteriorating weather
- Low fuel state
• Approaching onset of night
• Lack of knowledge of position
• Passenger or Pilot safety or sickness

4.36.4 It should be stressed to students that normally the pilot can avoid a precautionary landing through planning and the application of good airmanship. Should circumstances dictate, however, the early decision to make a precautionary landing should be presented to students as a practical and safe option.

4.36.5 The precautionary landing should not be considered as an emergency procedure. The decision to complete a precautionary landing should be taken as soon as is possible. Delaying a precautionary landing due to, for example, a lowering fuel state can result in a situation developing from one of urgency to emergency.

4.36.6 The precautionary landing procedure should allow for the progressive assessment of a potential landing site as follows:

- Selection of a suitable landing site
- Assessment of suitability of surrounding area for completing inspection circuits
- Assessment of approach and missed approach path
- Assessment of landing site surface, size, shape, slope etc.

4.36.7 A series of inspection circuits should be flown to assess the above factors. It must be stressed that whilst assessing the potential landing site normal safety margins must be observed. In particular the ability to land safely following a power failure during any stage of the inspection procedure must be assured.

4.36.8 Following the selection of a potentially suitable landing site, the precautionary landing procedure should consist of a series of inspection circuits. It may be necessary to modify the following sample procedure according to the factors affecting a particular situation. Whilst assessing the height of the aircraft the altimeter should be used with caution. The pilot should use a combination of visual perception, aircraft altitude and the elevation of surrounding terrain and obstructions.

4.36.9 During the first inspection circuit the aircraft should be positioned at a safe height, not less than normal circuit height judged visually, on one side of the intended landing path. This will allow a clear view of the surface of the site. The aircraft should then complete a circuit pattern during which suitable turn points are established. From the downwind position the final approach and missed approach paths should be assessed for obstructions and the optimum approach and landing paths can be selected.

4.36.10 On the next inspection circuit the aircraft should carry out a practise approach to confirm all aspects of the approach path and landing run suitability at a height of approximately 100ft. In particular the site surface should be assessed during this pass. A missed approach should be initiated once the landing area has been overflown or when safety margins in the missed approach area become a factor. A climb back to circuit height should be established.

4.36.11 The aircraft should be positioned for the appropriate type of approach and landing (i.e. short or soft field) in the area selected during the inspection circuits. The pilot should be prepared to initiate a missed approach in the event of a factor becoming apparent at this late stage of the procedure. Once the aircraft has stopped the engine should be shut-down and the aircraft
secured. No attempt should be made to taxi the aircraft without first inspecting the surface.

4.36.12 The precautionary landing procedure should only be applied during situations where the engine is operating normally. In any situation when the engine is operating at reduced efficiency or its ability to continue running is in doubt, the forced landing without power procedure should be adopted. Whilst the engine may be used to position the aircraft in a suitable location to complete a forced landing procedure, it should be assumed that a complete power failure is imminent. Once the forced landing procedure is commenced the engine will not normally be shut down, but left at idle. The engine should be considered as being unavailable and only used in an otherwise irrecoverable situation.

4.36.13 During this exercise the Instructor must ensure that the legal requirements of ‘The Rules of the Air’ are observed.

4.37 OPERATION AT MINIMUM LEVEL - EX 16C

4.37.1 This exercise is designed to prepare the student for situations where, due to deteriorating weather or the constraints of regulated airspace, he is required to fly at lower altitudes than normal.

4.37.2 For practical training purposes operational at minimum level can be considered to relate to flights operating between 500 and 1000ft agl. This exercise should not be misinterpreted as attempting to equip students with the ability to continue flights in unsuitable conditions. It should prepare them to make considered airmanship decisions in the event of a requirement to descend to low altitude and subsequently operate the aircraft safely.

4.37.3 Whilst considering the effect of deteriorating weather both lowering cloud base and reduced visibility are factors which can occur either in isolation or in combination.

4.37.4 It is beneficial to fly at a slow safe cruising speed when visibility is poor. Where fitted, the use of ‘take off’ flap setting will increase the forward visibility in most aircraft for a given speed.

4.37.5 In the case of flights operating at low level due to the constraints of regulated airspace the planning should take into account all legal requirements. In particular conditions applying to an aircraft flown in accordance with a Permit to Fly must be considered.

4.37.6 Prior to descending to a lower altitude the pilot must assess the elevation of terrain and obstacles, which are likely to be a factor and accordingly establish a minimum altitude at which it is safe to fly.

4.37.7 The following aspects of operation at minimum level should be covered during exercise:

- At lower altitudes the altimeter should be used with caution. The height of the aircraft agl should be assessed by a combination of visual perception, aircraft altitude and the elevation of surrounding terrain and obstructions.

- At lower heights the reduced distance to the visual horizon and the more oblique view of ground features results in map reading becoming more difficult, even in conditions of good visibility.
• The legal requirements of ‘Rules of the Air’ and the conditions of the Permit to Fly must be observed.

• The single most important consideration whilst operating at minimum level is the ability to safely complete a forced landing in the event of a power failure. The time available to manage such a failure at low heights requires that a suitable landing site is within gliding range at all times. In effect the aircraft should be flown from one suitable landing site to the next, even if this requires significant deviation from a straight line track.

• The effect of wind on the track of the aircraft is particularly noticeable at lower heights. The erroneous impressions of the aircraft being out of balance, apparently skidding or slipping during turns and the instinctive confusion of groundspeed with airspeed are all aspects of this exercise. The instructor should aim to demonstrate these effects and stress the need to monitor the aircraft instruments to avoid inappropriate control inputs.

• At low altitudes mechanical turbulence and wind shear effects are more marked.

• The procedures for approaching an airfield at low altitude, joining the circuit and completing a bad weather circuit together with the importance of maintain a good lookout, integrating with existing traffic and the need to keep the airfield in view whilst completing the circuit pattern should be stressed.

• The importance of making a decision not to continue in adverse conditions must be stressed. The option of diverting towards better conditions or completing a forced landing with power procedure should always be available and considered.

4.38 SYSTEMS FAILURES – EX 16E

4.38.1 Systems failures are very distracting and can cause infringements or in extreme cases, loss of control. The emphasis should always be on flying the aircraft and maintaining situational awareness whilst sorting out the problem.

4.38.2 For aircraft fitted with in-flight adjustable pitch trim, simulated trim "runaways" and incorrectly set trim at take-off should be practiced. When set at extremes, some trim systems will cause large control inputs to be required in order to maintain the correct attitude during take-off and initial climb. The student should be allowed to experience these conditions in a carefully controlled simulation. During the initial demonstration by the instructor, the student should be allowed to feel the required control pressure so that they are prepared for it when conducting the subsequent assisted practice. The student must be able to demonstrate the ability to maintain the correct attitude and airspeed during the take-off and climb, regardless of control pressure, whilst correcting the trim.

4.39 FIRST SOLO - EX 17A

4.39.1 The first solo is a significant point in the student's training. The successful completion of the first solo gives the student confidence which is frequently reflected in a subsequent improvement in his performance.

4.39.2 The recognition of the appropriate moment to send a student on his first solo flight is probably the most demanding decision encountered during flying instruction. If the student is sent solo
before he is fit this will result in the student's confidence being undermined as well as the possibility of an accident occurring. If the first solo is postponed the student will tend to become frustrated and his performance will be adversely affected.

4.39.3 The instructor should assess the performance of the student in terms of the following factors:

- The prime consideration is not the student's finesse in flying but overall competence and safety. In particular the ability to recognise and correct errors must be demonstrated.

- The student should have satisfactorily completed all preceding exercises to an acceptable standard. The ability to deal with any relevant emergency procedures must be assured.

- All aspects of aircraft handling must be sound. Whilst there is not a need for the student to be precisely accurate in all respects he must be able to identify and correct any significant departures from the ideal.

- All airmanship consideration must be completed to a high standard consistent with the student's limited experience. In particular a good lookout must be maintained and checks must be faultless without any input from the Instructor.

4.39.4 Once the instructor assesses that the student has achieved the required standard for the first solo flight, the following considerations should be applied prior to authorising the flight:

4.39.5 The instructor must ensure that the student is in possession of a valid medical certificate without any conditions restricting solo flying.

4.39.6 The instructor should ensure that the student is not fatigued due to the preceding detail and that he is not excessively concerned by the prospect of flight.

4.39.7 The actual and forecast weather conditions should be assessed in the context of the student's performance and experience. There should be sufficient day light available for the student to complete the exercise with a contingency for unexpected factors. The student should not need to be concerned with the possible onset of darkness whilst completing the exercise.

4.39.8 The aircraft should be fully serviceable with sufficient fuel for the exercise and contingency for missed approaches and air holding.

4.39.9 Any actual or expected activity on the airfield should be considered. Prior to the student becoming airborne consideration should be given to informing other airfield users of the flight.

4.39.10 The student should be briefed for the exercise immediately before the flight. The briefing should be short and concise. It should prepare the student for the differences in aircraft performance and handling when flown solo, as well as precisely defining what is expected from him.

4.39.11 If required the fitting of approved ballast may be completed.

4.39.12 The first solo flight may consist of up to three take-offs and landings. The student should be briefed to go-around at any stage he feels it is advisable to do so.
4.39.13 It is both normal and desirable for the first solo flight to be completed on the two place aircraft type previously flown for the dual part of the syllabus. If it is necessary for the flight to be completed on a single place aircraft the student must be briefed accordingly. To assist in familiarising the student with the new type, he should spend some time taxying the aircraft in advance of completing the dual session preceding the first solo flight. Even in cases where the first solo is to be completed in the two place aircraft used during dual training, the opportunity of solo taxiing practice can assist in preparing the student for the flight.

4.40 SOLO CIRCUIT, LOCAL AREA & GENERAL FLYING CONSOLIDATION - EX 17B

4.40.1 This period of flying training should be actively briefed, monitored, assessed and de-briefed by the instructor. Every flight should have a specific aim and be authorised by the supervising instructor. The student should be progressively encouraged to accept more responsibility for all aspects of flight planning and aircraft operation.

4.40.2 It is desirable to intersperse this solo exercise with dual flights to introduce new elements and to ensure that the student is maintaining the appropriate standard.

4.40.3 The following elements should be covered during this period of solo flying:

- Review the practice of all types of take-off, circuit, approach and landing.
- Airfield departure and circuit joining procedures.
- Local area familiarisation, use of map and identification of features.
- The use of the magnetic compass as the prime method of heading assessment and maintenance together with the associated errors.
- Review and practice of all general handling skills.
- Review and practice of forced landing procedures at locations selected by the instructor (i.e. the base airfield or other suitable site).

4.40.4 Some stall configurations, spin awareness, unusual attitudes, spiral dive and circuit emergency exercises, simulated engine failures at low level, should not normally be practised solo.

4.41 PILOT NAVIGATION - EX 18

4.41.1 This exercise should consist of a series of flights integrating both dual and solo details. Every flight should be fully planned and prepared in accordance with the elements presented in the syllabus for this exercise. In particular the following aspects should be stressed:

4.41.2 Pre-flight planning should include obtaining and assessing weather and aeronautical information.

4.41.3 Prior to departure a formal procedure should be completed to calculate heading, ground speed and expected elapsed time.
4.41.4 A fuel requirement should be established including a suitable contingency and reserve allowance.

4.41.5 The factors of weight, balance and performance should be considered.

4.41.6 A method of assessing the progress of the flight and a means of correcting any deviations should be prepared.

4.41.7 The solo cross country flights should follow dual details covering the appropriate elements. The first solo cross country should be completed in an area within which the student has previously flown dual. The first solo cross country with an away landing should normally be to an airfield previously visited with an instructor.

4.41.8 Instructors should take care in assessing the suitability of solo cross country routes, weather conditions and the availability of remaining daylight. Prior to authorising the flight the instructor must ensure that the student is fully briefed for all reasonable eventualities. The flight should be authorised by means of the ‘NPPL (M) Qualifying Cross Country Certificates’ a copy of which is included in Appendix C of this Guide.

**4.42 DUAL REVISION FOR GST - EX 19A**

4.42.1 This exercise should ensure that all the preceding elements of the syllabus have been adequately covered and that the student has attained and maintained the appropriate standard. If any areas of the student's performance fail to reach an acceptable standard the instructor should complete further training prior to presenting the student for the GST.

4.42.2 The final detail in this exercise can usefully be structured as a 'mock' GST. This will afford the student the opportunity of experiencing the format of the GST, whilst the instructor can make a final assessment of the student's readiness for the Test.
Section 4.3 DIFFERENCES TRAINING

1 GENERAL

1.1 Holders of Microlight Class ratings are required to undergo differences training as specified in the ANO. Differences training must be given by a flight instructor entitled to instruct on the aeroplane on which the training is being given.

1.2 The circumstances requiring differences training are detailed below.

2 CONTROLS – Fixed Wing / Flexwing

2.1 If the aeroplane has:

- Fixed wing controls and the holder's previous training and experience has only been in an aeroplane with flexwing controls.
- Flexwing controls and the holder's previous training and experience has only been in an aeroplane with fixed wing controls.

2.2 CONTROL TYPE DIFFERENCES TRAINING

2.2.1 The Control Type Differences Training aims to ensure that the candidate has achieved a level of competence in the operation of the alternative control system appropriate to the holder of a NPPL M. Control Type Differences Training covers the aspects of aircraft handling and operation, that are not common to both control types.

2.2.2 The flight training must consist of the following elements:

- All manoeuvres used in normal flight.
- Take-off and landing (including crosswind operation).
- Simulated forced landing without power.
- Slow flight and stall recognition and recovery.
- Unusual attitudes and recoveries.

2.2.3 Ground training must consist of the following elements:

- Rigging and derigging procedures.
- Aircraft limitations.
- Flying controls.

2.2.4 The individual elements of Control Type Differences Training should be based on the guidance given for conducting the relevant parts of the NPPL M GST and the NPPL M Oral Type Examination provided in the Guide.

3 MULTI ENGINE

3.1 If the aeroplane has more than one engine, before exercising the privileges of the microlight class rating the holder must complete appropriate differences training.
4 SEAPLANES

4.1 Where the aeroplane is to be operated from water during take-off and landing the holder must complete appropriate differences training and attain a pass in the Private or Professional Seamanship examination.

5 ADMINISTRATION

5.1 Each lesson forming part of the differences training must be recorded in the holder’s personal flying logbook. It is considered best practice for the instructor to sign against each entry and to write their CAA reference number alongside their first signature.

5.2 Upon completion of the differences training the instructor must write in the holder’s logbook that differences training has been completed and sign against it with their CAA reference number. The control type to which the differences training relates must be specified.

5.3 Example logbook entry “Differences Training Flexwing to Fixed Wing completed By A.N.Instructor A.N.Instructor CAA No 123456A”.

5.4 Also see Section 3.5 paras 4.5.1 and 4.5.2.
## Section 5.1 NPPL M WRITTEN EXAMS

<table>
<thead>
<tr>
<th>Eligibility of candidate</th>
<th>No candidate should be allowed to sit the same paper twice. If a candidate does not succeed in passing in three attempts guidance should be sought from BMAA LIAC.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examiner qualifications</td>
<td>GR</td>
</tr>
<tr>
<td>Guidance for conduct of test</td>
<td><strong>GENERAL</strong>  &lt;br&gt; Examiners are reminded that they must take adequate precautions to ensure that candidates are not able to obtain prior knowledge of the contents of the exam papers. Exam papers should be stored in a secure place to which only the authorised examiner has access.  &lt;br&gt; Any wall maps or notice boards containing extracts from publications relevant to the exam and which might assist the candidate should be removed from the exam room.  &lt;br&gt; The written exam sets must be current at the time of taking the exams.  &lt;br&gt; The set number should be marked clearly on the candidate's answer paper. The time limit printed at the head of each question paper should be strictly observed.  &lt;br&gt; Examiners should be mindful of the candidate's right to appeal against the conduct of the exam.  &lt;br&gt; <strong>BRIEFING</strong>  &lt;br&gt; Candidates are not permitted to bring any reference books or papers into the exam room.  &lt;br&gt; Candidates are required to provide themselves with all necessary writing, drawing and calculating instruments; e.g. dividers, protractors and navigation computers (CRP1 etc.). The use of electronic navigational calculators is permitted.  &lt;br&gt; Candidates should be warned that any infringement of the exam rules might result in disqualification.  &lt;br&gt; Candidates should be in attendance at least ten minutes before the scheduled time for the commencement of each paper.  &lt;br&gt; <strong>INVIGILATION</strong>  &lt;br&gt; The exam should be invigilated throughout either by the authorised examiner or by a responsible person on the staff of the club or school appointed for the purpose by the examiner. Exam papers may only be marked by the examiner and, if invigilation has been delegated, papers should be returned to the examiner immediately after the end of the exam. Answer papers should bear the name in block capitals of both the invigilator and the examiner who marked the paper and also the date of the exam.  &lt;br&gt; Strict discipline and silence should be maintained during the exam. The invigilator should not enter into any discussion with the candidate concerning any part of the exam paper or the interpretation of a question.</td>
</tr>
<tr>
<td><strong>COMPLETION OF TEST</strong></td>
<td></td>
</tr>
<tr>
<td>------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>If a candidate does not answer all the questions correctly the examiner should indicate where weak areas lie but must not discuss the answers to specific questions irrespective of the candidate having passed or failed the examination.</td>
<td></td>
</tr>
</tbody>
</table>

**Content of test**  
NPPL M ground syllabus.

**Standards required**  
The candidate must achieve a mark of at least 75% in order to pass the exam.

**Results**  
Pass or Fail.

**Admin**  
An example of a Ground Exam answer sheet is included in Appendix C of this Guide.

The completed answer sheets must not be given to the student to keep or post.

**PASS**  
In the event of a pass the examiner should complete the relevant certificate in Section 5 of the Licence Application Form 102M and give that form to the candidate, and keep the answer paper for a minimum of three years with the student’s records.  
If the candidate is not one of your own students you may send the answer sheets to the BMAA where they will be stored.

**FAIL**  
In the event of a failure the examiner must complete a Notice of Failure Form SRG 2129. One copy of the Form must be handed to the candidate, one sent to the BMAA LIAC together with the answer paper and the other retained by the examiner for information.

**Validity period**  
Within 24 months preceding the date the licence application is received by the BMAA LIAC.
Section 5.2 NPPL M ORAL EXAM – Aeroplane Technical Part 2 Type Specific

<table>
<thead>
<tr>
<th>Eligibility of candidate</th>
<th>Normally done at the time of the GST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examiner qualifications</td>
<td>FE</td>
</tr>
<tr>
<td>Guidance for conduct of test</td>
<td>Candidates for the oral type exam (i.e. Aeroplane Technical Part 2) are required to demonstrate a satisfactory level of knowledge of the specific microlight aircraft on which the NPPL (M) General Skill Test is taken. A sample assessment sheet is provided in Appendix C of the Guide, it should be completed by the examiner with reference to the guidance in this section. The Aircraft Manual, Permit to Fly, Aircraft and Engine logbook as well as the Aircraft itself should be available during the exam. The duration of the test is not likely to be less than 30 minutes.</td>
</tr>
<tr>
<td>Content of test</td>
<td>The purpose of this section is to provide suitable material on which the examiner should ask questions as a means of assessing the candidate’s knowledge. The exam will cover the following areas, where they are applicable to the specific microlight aircraft. RIGGING AND DE-RIGGING PROCEDURES (assembly &amp; disassembly) It is not necessary for the candidate to demonstrate the complete rigging and derigging procedure to the examiner. The examiner must, however, ensure that the candidate has sufficient knowledge to competently rig and de-rig the aircraft to a ‘road transportable’ state (providing that the aircraft is designed to be dismantled as a part of its normal operation). It should be possible for the examiner to ensure adequate candidate knowledge and understanding in this area by questioning the candidate alongside the aircraft. The examiner has the option to require a demonstration of the procedure if he feels that it is essential. The following areas should be covered: 1. Positioning of aircraft in relation to an appropriate space, surface and any wind. 2. Provision of any tools and/or assistance that may be required. 3. Correct handling and stowage of component parts of the aircraft. 4. Discussion of areas requiring close scrutiny following rigging of the aircraft. In particular any parts of the primary structure and control systems which have been disturbed during the process. PILOT MAINTENANCE The following areas should be covered: Maintenance of aircraft airworthiness documents and required servicing schedules.</td>
</tr>
</tbody>
</table>
Maintenance of records in aircraft and engine logbooks.
Servicing and repair procedures permitted by pilot and subsequent inspection procedure.

**AIRCRAFT LIMITATIONS**
(Including weight, balance, performance, endurance and range).

The candidate must demonstrate knowledge of:

- **Loading**
  - Maximum take-off weight
  - Empty weight
  - Maximum cockpit loading with full fuel load
  - Minimum cockpit loading
  - Provision for fitting of ballast
  - Provision for carrying of baggage
  - Centre of gravity limitations

- **Operation speeds as applicable to type**
  - $V_{ne}$
  - $V_{no}$
  - $V_{ra}$
  - $V_{se}$
  - $V_s$ (with and without flap)
  - $V_e$ (wings level and wings banked)
  - Limitations of aerodynamic loading
  - Handling limitations with maximum fuel and payload

- Maximum limits of angles of aircraft in relation to horizon in:
  - Pitch
  - Roll

- **Flight conditions for which the aeroplane is certified:**
  - Day/Night
  - VFR/IFR
  - Icing

- Weight and Performance - knowledge of take-off distance and landing distance (given specific conditions of weight, temperature and altitude and the Flight Manual or equivalent document).

- Knowledge of range and endurance of aircraft.

**FLYING CONTROLS**

Understanding of type and operation of the following systems as applicable:

- Rudder
- Variable incidence mainplane
- Aileron
- Spoiler
- Elevator (or stabilator)
- Weight shift (billow-shift mechanism)

- Any inter-connection of control system, e.g., rudder/aileron, weight shift/elevator.

Understanding of type and operation of trim systems:
- Trim
Balance
Anti-balance

Understanding of the operation and indications of the flap or air brake system:
   Electric
   Mechanical
   Range of control movement
   Asymmetry - indication and protection

Stall warning system type and indications:
   Mechanical
   Aerodynamic
   Electrical

Understanding of type of and operation of nose wheel steering, including any inter-
connection of nose wheel and rudder.

LANDING GEAR

Understanding of type of shock absorber:
   Leaf spring
   Bungee
   Oleo pneumatic

Recognition of normal ground attitude of aircraft.

Understanding of type and operation of brakes:
   Mechanical
   Hydraulic
   Disc
   Drum

Knowledge of defects (particularly unacceptable) in tyres:
   Normal pressure

Retractable:
   Knowledge of type and understanding of operation of system
   Knowledge of non-normal operation and emergency procedures

ELECTRICAL SYSTEM

Knowledge of system voltage.

Type of generators or alternators.
Understanding of system indications:
   Voltmeters
   Ammeter
   Warning lights

Knowledge of location of batteries.

Approximate length of time power is available from fully charged batteries.

Knowledge of fuses/circuit breakers:
   Location
   Operation
**HEATING/VENTILATING SYSTEM**

Knowledge of type and operating of heating system.
- Normal operation
- Controls

Knowledge of potential dangers:
- Recognition of carbon monoxide
- Precautions to be taken if carbon monoxide is suspected

Knowledge of action in the event of a cabin fire.

**FLIGHT INSTRUMENTS**

Instruments operated by electrical system.

Instruments operated by pitot/static system:
- Position of: Pitot heat
  - Static vents
  - Drains
- Alternate static:
  - Purpose of use of

**ENGINE**

Engine:
- Type (2 or 4 stroke)
- Reduction drive types

Carburettor:
- Type
- Permitted adjustments

Understanding of ignition system and component parts

Understanding of type and importance of engine cooling system

Knowledge of action in event of engine fire.

**ENGINE INDICATIONS**

Detailed knowledge of RPM:
- Maximum normal operating (red line limits)
- Overspeed

Temperature - CHT/EGT.
- Normal
- Maximum

Temperature – water/ coolant.
- Normal
- Maximum

Temperature - oil.
Minimum
Maximum

Pressure - oil.
Minimum
Maximum

Purpose of Magneto check/ignition check:

Significance of:
  Maximum drop
  Difference between magnetos
  Dead cut check.

ENGINE CONTROLS

Understanding of correct use of throttle controls.

Understanding and correct use of mixture control (use of EGT gauge):
  Power and altitude limitations on leaning
  Leaning for maximum power
  Leaning for maximum economy

Understanding of carburettor, heat system and of icing:
  Type of system
  Indication of icing
  Correct use of carburettor heat system

Understanding of use of choke or priming control

Understanding of magnetos or ignition control.

FUEL SYSTEM

Knowledge of grade of fuel

Number and useable capacity of tank(s)

Location/importance of:
  Location of fillers
  Special precautions

Understanding of type and operation of fuel system:
  Gravity
  Pumps - electrical
  engine driven/pressure driven

Airborne fuel management - any tank priority

Use of electric pumps

Knowledge of quantity indication:
  Mechanical
  Electrical
  Effect of aircraft attitude
**Methods and precautions of priming.**

**OIL SYSTEM**

Knowledge of oil system:
- Grade of oil
- Maximum and minimum quantities
- Location/size of tank (or sump)
- Correct fuel to oil ratio

Understanding of lubrication system.

**PROPELLERS**

Understanding of importance of cleanliness/condition of blades
(nick/cuts/delamination, etc)

Understanding of variable pitch control:
- Mechanism
- Use

Understanding of ground adjustable pitch:
- Mechanism
- Use.

<table>
<thead>
<tr>
<th>Standards required</th>
<th>Throughout the Technical Exam Part 2 (Oral) the candidate must demonstrate a level of knowledge and understanding sufficient to ensure the safe operation of the aircraft. The candidate must be able to achieve a pass in every relevant section of the exam.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Results</td>
<td>Pass or Fail</td>
</tr>
<tr>
<td>Admin</td>
<td>On completion of the test the examiner will inform the candidate of the result and complete the assessment sheet accordingly.</td>
</tr>
<tr>
<td>PASS</td>
<td>If the candidate has displayed a satisfactory level of knowledge in all the relevant sections of the test, the examiner will record a ‘pass’ in Section 5 of the application form (FCL 102M) and give the form to the candidate. The assessment sheet is to be retained with the student’s records held by the student’s flight instructor.</td>
</tr>
<tr>
<td>FAIL</td>
<td>If the candidate has failed the test the examiner should ensure that the candidate fully appreciates the areas requiring improvement prior to a re-test. The examiner will present the candidate with a notice of failure (SRG 2129). The completed form should clearly state the reason for the failure. One copy of the form must be handed to the candidate, one set to the BMAA LIAC together with the assessment sheet and the third retained by the examiner for information.</td>
</tr>
<tr>
<td>Validity period</td>
<td>From 9 months preceding the date the licence application is received by the BMAA LIAC.</td>
</tr>
</tbody>
</table>
Section 6.1 MICROLIGHT CLASS RATINGS - REVALIDATION AND RENEWAL

1 AIRCRAFT RATING REVALIDATIONS Revalidation by experience.

1.1 The normal way of revalidating the privileges of a Microlight Class Rating is by experience. A Certificate of Experience or Revalidation may only be completed and signed if the flying logbook presented to the Examiner indicates that the required flight experience has been achieved.

1.2 Experience requirements: There are different minimum flight experience requirements for Microlight Class ratings that are dependent upon the type of licence in which the rating is included and the date that the rating was first issued.

1.2.1 NPPL MICROLIGHT CLASS RATING HOLDERS. For all microlight class ratings issued from the 1st of February 2008, and all those included in any NPPL, the requirements are that within the 24 month period of validity of a Certificate of Revalidation the holder must have completed:

1) A minimum total of 12 hours flight time
2) Of the 12 hours at least 6 must have been flown within the 12 months preceding the expiry date of the current certificate
3) Any 8 of the 12 hours must have been flown as Pilot in Command
4) At least 12 take offs and 12 landings
5) At least one hour of flight training in a microlight aircraft conducted by an instructor entitled to give flight training in a microlight aircraft

1.2.1.1 The requirement for 1 hour of flight training does not require that the training be conducted in one flight, nor in the same aircraft, nor with the same instructor. This is a difference to the revalidation requirement for EASA PPL system.

1.2.1.2 Flight Instructor Tests can be classed as flight training for the purposes of the NPPL revalidation.

1.2.1.3 Where the holder has not completed the required 1 hour of flight training but has completed all other requirements the Certificate may be revalidated but must be endorsed “Single Seat aircraft only”. The holder may then only fly single seat aircraft until the endorsement is removed following the completion of the required minimum of 1 hour of flight training.

1.2.1.4 The Single Seat endorsement does not allow the holder to fly two-seat aircraft solo.

1.2.1.5 The Certificate of Revalidation, gained by experience, can only be signed during the period of validity of the current Certificate. The new certificate will be valid for two years from the end of the month during which the current certificate expires regardless of the date the current certificate is presented to the examiner.

1.2.1.6 Because there is a requirement for at least 6 hours to be flown in the last twelve months of the certificate’s validity an examiner cannot revalidate a certificate in the first twelve month period.

1.2.1.7 All the requirements must have been completed within the currency of the existing Certificate.
1.2.1.8 The Certificate of Revalidation cannot be signed after the expiry of the previous Certificate, nor can experience gained during the validity of a Certificate that has expired be used to qualify for revalidation by experience.

1.2.1.9 If the holder of an expired rating presents his documents to an Examiner for renewal the Examiner cannot complete a renewal by experience, the applicant must renew by test.

1.2.1.10 It is likely that a Certificate will be signed on a day part way through a calendar month. In this case, the Certificate of Revalidation will be valid until the end of the month in which it is issued and then for a further complete 24 months.

1.2.1.11 ADMINISTRATION: The examiner completes a Certificate of Revalidation in the holder's licence.

1.2.1.12 To remove the Single Seat Only restriction the examiner enters the same Rating Revalidation as for the existing Rating omitting the Single Seat Only restriction. The validity date remains the same as for the current rating.

1.2.1.13 HOLDERS OF MORE THAN ONE NPPL CLASS RATING. The holder of more than one NPPL Aeroplane Class rating may use experience gained in aircraft of all NPPL Classes towards the revalidation by experience of any one Class. However, the minimum flight time required to revalidate by experience in any particular Class is 1 hour as Pilot in Command or 1 hour of flying training with an instructor in that Class. Details of experience required for multiple rating holders are published in CAP 393 Schedule 8.

1.2.2 PPL MICROLIGHT CLASS RATING HOLDERS. For Microlight Class ratings issued before 1st February 2008 but EXCLUDING those included in a NPPL the requirements are that within the preceding 13 months and during the validity of an existing Certificate of Experience or Test the holder must have completed at least:

1.2.2.1 5 hours experience as pilot of a microlight, including at least 3 hours as Pilot in Command with up to 2 hours as dual flying instruction as PUT with a qualified flying instructor who has certified that he/she was fit to act as PIC.

1.2.2.2 Note: If more than 13 months have elapsed since the aircraft rating was issued or revalidated a Certificate of Experience may be issued provided that sufficient flying experience was gained during the preceding 13 months and it was within the validity period of the previous certificate.

1.2.2.3 The Certificate of Experience is valid from the date of signing for thirteen months after the last day of the month in which it was signed.

1.2.2.4 ADMINISTRATION: The examiner enters and completes a Certificate of Experience in the holder's logbook.

1.2.2.5 Microlight Class Rating holders. Holders of Microlight Class ratings issued before 1st February 2008 but EXCLUDING those included in a NPPL may opt to adopt the NPPL revalidation requirements, as detailed in 1.2.1, as an alternative to the 13 month system detailed in 1.2.2.
1.2.3 NPPL SSEA & SLMG CLASS RATINGS - REVALIDATION

1.2.3.1 Examiners can only sign certificates for other NPPL class ratings, SSEA & SLMG, if their Examiner Authorities specifically include those classes.

1.2.3.2 Before taking advantage of this scope of the authority an examiner must make sure that they fully understand the requirements for all NPPL Class Rating revalidations and any limitations that an examiner might be subject to. For details refer to The CAA Flight Examiners' Handbook.

2 AIRCRAFT RATING RENEWALS / REVALIDATION BY TEST.

2.1 Pilots who are unable to revalidate by experience are required to complete an aircraft rating renewal by Test. Ratings revalidated by test have the same validity period as those revalidated by experience.

2.2 The examiner should ensure the pilot's eligibility prior to commencing the GST. The examiner must ensure that if refresher training was required that it has been completed and endorsed in the pilot's logbook by the relevant flying Instructor.

2.3 ALL MICROLIGHT CLASS RATINGS. Revalidation by test within the validity period of the current certificate.

- Pass the NPPL (M) GST conducted by a Microlight Examiner

2.3.1 Validity period. A revalidation by test of a Microlight Class rating issued on or after the 1st February 2008, and in any NPPL, completed during the validity period of a current Certificate is valid from the date of test and will remain valid for 24 months after the end of the month in which the test was taken, unless the date of test is within three months of the expiry of the current Certificate in which case the new Certificate will be valid for 24 months from the expiry date of the existing Certificate.

2.3.2 Validity period. A revalidation by test of a Microlight Class rating issued before the 1st February 2008, other than in any NPPL, completed during the validity period of a current Certificate is valid from the date of test and will remain valid for 13 months after the end of the month in which the test was taken.

2.4 ALL MICROLIGHT CLASS RATINGS. Renewal by test for expired ratings. Where the last certificate has expired by less than 5 years, the holder will be required to complete the following:

- Pass the NPPL (M) GST conducted by a Microlight Examiner

2.4.1 ADMINISTRATION: For Microlight Class ratings issued before 1st February 2008 other than in any NPPL the examiner enters a Certificate of Test in the holder's logbook.

2.4.2 ADMINISTRATION: For all Microlight Class ratings issued from the 1st of February 2008 and all those included in any NPPL the examiner completes the Certificate of Revalidation in the holder's licence.
2.5 **ALL MICROLIGHT CLASS RATINGS.** Renewal by test for expired ratings. Where the last certificate has expired by 5 years or more, the holder will be required to complete the following:

- Undergo a course of refresher flight training in a microlight as specified by an instructor qualified to give instruction on a microlight;
- Pass the NPPL (M) GST conducted by a Microlight Examiner
- Pass the Aeroplane Technical Part 2 Oral exam conducted by a Microlight Examiner, the exam to include pilot maintenance and conditions of the Permit to Fly

2.5.1 **ADMINISTRATION:** For Microlight Class ratings issued before 1st February 2008 other than in any NPPL the examiner enters a Certificate of Test in the holder’s log book.

2.5.2 **ADMINISTRATION:** For all Microlight Class ratings issued from the 1st of February 2008 and all those included in any NPPL the examiner completes the Certificate of Revalidation in the holder’s licence.

2.6 **Notes**

2.6.1 A licence holder may not exercise the privileges of a rating until the Certificate has been completed.

2.6.2 A renewal of an expired Microlight Class rating by test is valid from the date of test.
NPPL REVALIDATION BY EXPERIENCE, TESTS FOR ELIGIBILITY

Is the Certificate of revalidation valid on the day?

YES → Can only revalidate by test, not experience.

NO → Is the Valid To date for the Certificate less than 12 months after today's date?

YES → Can only revalidate by test, not experience.

NO → Has the pilot logged at least 6 hours during the second year of validity of the Certificate?

YES → No

NO → Has the pilot logged at least 12 hours of total time, with at least 8 hours as P1, during the validity period of the current Certificate?

YES → If not can only revalidate by test or must fly required time in remaining period of certificate.

NO → Has the pilot logged at least 12 take offs and landings during the validity period of the current Certificate?

YES → If not can only revalidate by test or must fly required take offs and landings in remaining period of certificate.

NO → Has the pilot undertaken at least one hour of instructional flight during the validity period of the existing Certificate?

YES → Examiner Signs Certificate

NO → If not sign certificate and endorse “Single Seat Aircraft Only”
Section 7.2 INSTRUCTOR CERTIFICATE TESTS

1 TYPES OF INSTRUCTOR TESTS

From the introduction of the ANO 2016 all new Instructor Certificates, FI and FI (R), are Control Type restricted (Fixed wing, Flexwing or Powered Parachute). Instructors who have Control Type restrictions on their Instructor Certificates can only instruct on those Control Types. To be able to instruct on other Control Types see 1.3 below. Instructors with no control type restrictions on their Instructor Certificate should test on each control type that they instruct on at least once in every three instructor revalidation tests.

1.1 THE FLIGHT INSTRUCTOR’S (RESTRICTED) CERTIFICATE - INITIAL TEST

1.1.1 The purpose of this test is to assess the candidate’s ability as an Instructor who will give flying instruction to student pilots under the supervision of a Flight Instructor and on the Control Type which is used on the test. The rating is valid for a period of 36 months in addition to the remainder of the month in which the test falls.

1.2 THE FLIGHT INSTRUCTOR’S (RESTRICTED) CERTIFICATE – REVALIDATION

1.2.1 The purpose of this test is to assess the candidate’s continuing ability as an Instructor giving flying instruction to student pilots under the supervision of a Flight Instructor. The new certificate is valid for 36 months.

1.3 THE ADDITIONAL CONTROL TYPE TEST

1.3.1 The purpose of this test is to assess an Instructor’s ability to instruct on an additional Control Type (i.e. Fixed Wing, Flexwing or Powered Parachute Microlight). This test must be conducted by a Microlight Flight Instructor Examiner (FIE). The new control type will be added to the existing Certificate by the CAA and the validity will extend to the end of the existing Certificate.

1.4 THE FLIGHT INSTRUCTOR’S (FI) CERTIFICATE – INITIAL TEST

1.4.1 The purpose of this test is to assess the candidate's ability to instruct without the close supervision given to FI (R)s. The rating is valid for 36 months. The Certificate issued will be Control Type restricted to the Control Type that the instructor has been tested on. The candidate, if successful will also be able to supervise a FI (R) and this should be considered when assessing the result.

1.5 THE FLIGHT INSTRUCTOR’S (FI) CERTIFICATE - REVALIDATION

1.5.1 The purpose of this test is to assess the candidate’s ability to instruct to a good standard.
1.6 TESTS FOR FIC APPROVAL

1.6.1 The purpose of this test is to assess an instructor’s suitability to conduct Flight Instructor Courses. See Section 8.3 of the Guide - FIC Instructor Test.

2 GENERAL

2.1 Examiners are reminded that under the CAA Regulation the candidate has a right of appeal against the conduct of the test. It is most important therefore that all aspects of the administrative procedures and the test itself are conducted in a thoroughly correct manner.

2.2 Copies of the Instructor Form 1 are held by the BMAA LIAC and the originals sent to the CAA. The Form 1 forms part of the individual’s instructor record and are available for perusal by any Microlight Flight Instructor Examiner (FIE) conducting future tests with the agreement of the instructor to whom it refers. Permission is only valid for an individual FIE. If the candidate presents to another FIE, the candidate’s permission must be obtained once again.

2.3 The instructor will contact a Microlight FIE and make the necessary arrangements for the test. A list of FIEs is published on the BMAA web site.

2.4 In planning the timing of an instructor test the candidate should take into account the possibility of the test being postponed due to unsuitable weather, aircraft unserviceability, illness etc. all of which are unavoidable and cannot be anticipated. To provide an adequate reserve of time it is suggested that instructors should initiate the arrangements for a test at least 2 months prior to the expiry of their current Certificate of Test.

2.5 In the case of initial FI (R) tests a FIE should be contacted before the completion of the FI (R) course and a rough/best estimate given for planning the timing of the test.

2.6 It is vital that bookings once made and confirmed as regards date, time and venue are honoured unless the FIE or candidate is prevented because of illness or other unavoidable cause.

2.7 Examiners and candidates should give each other at least 48 hours’ notice when cancelling a test booking. Candidates should also be instructed to contact the examiner on the evening prior, or morning of the test to confirm weather suitability.

2.8 The test must be completed within a period of 31 days. The date of completion of the final part of the test is to be taken as the date of commencements of the period of validity of the rating or the date of continuance or revalidation of the privileges of the rating.

3 INSTRUCTOR REVALIDATION TESTS

3.1 Instructors must note that it is their responsibility to maintain their ratings and that neither the CAA nor the BMAA send reminders.
3.2 AIRFIELD, DOCUMENTATION & EQUIPMENT

3.2.1 The test may be conducted at the examiner's or the candidate's base using an aircraft supplied by either.

3.2.2 A suitable examination room must be available offering privacy during the test.

3.2.3 Prior to the day of the test the examiner must ensure that the candidate is certain as to what items he should provide.

3.2.4 A suitable aircraft must be available. It must be equipped with dual controls and a means of efficient in-flight two way communications.

3.2.5 The following documentation must be available:

- Valid Permit to Fly.
- Current Certificate of Validity
- Valid Certificate of Registration.
- Valid Certificate of Insurance to include cover for the purpose of the test.
- Aircraft and Engine Logbook.
- Owners/Flight manual.

3.2.6 The Examiner or the candidate may provide the above prerequisites of conducting the test.

3.2.7 The candidate must always provide:

- Pilot's Licence
- Current Certificate of Experience or Test/ Revalidation or Renewal.
- Existing Instructor Certificate (where applicable)
- Personal Flying Logbook
- Medical Certificate or Pilot Medical Declaration

3.2.8 The candidate should obtain and complete his personal details on the Instructor Form 1 and take it along on the day of the test. A blank Instructor Form 1 can be downloaded from the BMAA web site.

3.2.9 The candidate should also have any checks and notes normally used by him for pre-flight briefings plus any other training aids or models normally used.
## Section 7.3 FLIGHT INSTRUCTOR TESTS and REVALIDATION TESTS

| Eligibility of candidate | A FI or FI (R) whose instructor rating has not lapsed by 5 years or more. 
If lapsed by 5 years or more then must have completed refresher training with a FIC Instructor and be recommended as suitable for test. 
For an initial FI test consult the FI (R) upgrade to FI test document as well (Section 7.6). |
|---|---|
| Examiner qualifications | Microlight FIE. 
A FIE conducting refresher FIC training should not then conduct the Instructor test with the Instructor taking part in that refresher training. 
A FIE should not, save in exceptional circumstances, conduct more than two consecutive tests on any one candidate. The FIE will consider whether real hardship to the candidate would arise if the request was declined and refer to the Panel of Examiners. |
| Guidance for conduct of test | Prior to starting the test the FIE will ensure the candidate's eligibility for the test. 
The FIE will normally have available to him a copy of the candidate’s previous Instructor Form 1. If the FIE has been unable to obtain a copy of the form he may contact the BMAA LIAC in order to obtain the information over the telephone. The FIE will use the details of the exercises covered and the comments made during the candidate’s previous test, to assist in structuring the planned test. 
The FIE must obtain the candidate’s permission in writing before asking for, or obtaining, information regarding previous tests. 
Although works of reference should be available and/ or accessible online (e.g. CAP 804, ANO: CAP 393 and AICs), the candidate is not expected to need to refer to sources of information (including his own notes) to answer the questions posed by the FIE. However use of notes during the flight briefing, and in flight, is acceptable and the candidate may use reference documents to find unusual detail or demonstrate familiarity with such documents. 
The whole of the test must be completed within 31 days. 
The test will consist of the following elements: 

**A General Briefing by the FIE** 
The FIE will attempt to put the candidate at ease. The FIE will indicate to the candidate that the test is primarily an opportunity to demonstrate the skills that have been acquired through the FI (R) course and subsequent experience gained as an Instructor. It also provides an opportunity for the FIE to "coach" the candidate in areas of current thinking. 

**A Pre-flight Briefing exercise by the candidate** 
The FIE or the candidate may nominate the basic training exercise for the pre-flight briefing. The FIE will indicate to the candidate who will nominate the exercise. Weather conditions will be a prime factor in establishing an appropriate exercise, as this exercise will be subsequently demonstrated by the candidate in the air. |
**The Flight Test**
The flight test should normally last between 1 and 1 1/2 hours depending on the type of test and the exercises to be covered.

In order to complete the flight test in a reasonable time the FIE may elect not to complete the briefed exercise in its entirety in the student role when handed controls by the candidate. In this case FIEs should be careful not to disrupt the flow of the exercise and candidates should not attempt to abbreviate the exercise.

Prior to leaving the aircraft, the FIE might consider it desirable to discuss with the candidate any points related to the operation of the aircraft which he wishes to clarify. It may, for instance, be necessary to establish whether the candidate has a valid reason for operating the aircraft or a part of its equipment in a particular way, which is best discussed whilst remaining in the aircraft.

**Optional debriefing by FIE of the PFB and Flight Test**
The FIE may elect to debrief the candidate on the first two elements of the test whilst these exercises are still fresh in the minds of both the FIE and the candidate. It is unlikely that the FIE will choose to debrief at this stage of the test if the candidate’s performance has been unsatisfactory, as this will unfavourably predispose the candidate to the next element of the test.

**Ground Oral Examination**
This part of the test should normally take between 1 and 2 hours. The exact duration will depend on the type of test being taken and the candidate’s performance. A proportion of the questions should be couched in terms which a student pilot might use but others should be somewhat more searching.

**Result and overall debrief**
It would be impossible to devise a complete and detailed formula by which the FIE can assess whether a candidate has passed or failed the test. Nevertheless, it is essential that the highest possible degree of instructional standardisation should be achieved. FIEs must also remember the privileges and responsibilities of FI (R)s, FIs or FIC instructors and judge the candidate accordingly. If the FIE assesses that the candidate has demonstrated the potential qualities required from an FIC instructor the appropriate recommendation will be made.

Whatever the result of the test the FIE may use the debriefing as an opportunity to assist and/or instruct the candidate in areas where it is necessary.

### Content of test

<table>
<thead>
<tr>
<th><strong>GENERAL BRIEFING BY FIE</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>The FIE will indicate the various elements of the test and discuss any variations in the sequence that may be required due to weather, aircraft availability etc.</td>
</tr>
<tr>
<td>The candidate will be expected to provide and interpret both weather and NOTAM briefings from approved/official sources.</td>
</tr>
<tr>
<td>The FIE will explain that he will be acting as a mock student for parts of the test. The candidate is expected to treat the FIE as a student during those times. If any doubt exists in the mind of the candidate as to what role the</td>
</tr>
</tbody>
</table>
FIE is assuming then the candidate must seek clarification. The FIE will make notes throughout the test in order to assist with the debriefing. This is normal procedure and the candidate should not allow himself to be distracted or discouraged by it.

The candidate will be assessed under five main headings:

1. Flying ability and airmanship.
2. Ability to impart knowledge.
3. Ability to recognise and correct typical student faults.
4. Knowledge of the air exercises and sequences.
5. Knowledge of technical subjects.

The candidate will be judged on the overall impression given and he should not attempt to judge himself on individual errors or shortcomings although he may be asked to evaluate and criticise his own performance during the debriefing at the end of the test.

**PRE FLIGHT BRIEFING EXERCISE**

The PFB will be assessed under the following headings on the Instructor Form 1: Content, Visual Presentation, Technical Accuracy, Clarity of Explanation and Speech, Instructional Technique, Use of Models and Aids and Student Participation.

Content will be assessed against the detail of the exercise as published in the current NPPL Microlight syllabus.

The FIE will clarify the following points to the candidate:

1. The "student" has satisfactorily completed all the exercises in the syllabus preceding the exercise to be briefed.
2. The associated 'long' briefing has been completed.
3. The candidate may use notes for the briefing.

The Instructor will be allowed 15-20 minutes to prepare the briefing.

If possible the completed briefing should be retained for reference for debriefing later.

**THE FLIGHT TEST**

The FIE will indicate to the candidate that the flight test will include elements of several air exercises not just the one on which he gave a briefing. During these additional exercises the candidate may assume that the FIE is acting as a student who has satisfactorily completed the exercises preceding it in the syllabus and has received the appropriate pre-flight briefing. When these exercises are asked for, the candidate can take a few moments to marshal his thoughts, during this time the FIE may take control of the aircraft.

The content of the flight test will be decided by the FIE. It is recommended, however, that the following areas are covered during the flight test irrespective of the subject of the main exercise:

1. At least one of the following exercises: flight at critically slow airspeed, stalling, spin awareness, advanced turning, unusual and dangerous attitudes / conditions.
2. Forced landings without power.
3. Take-off and climb.
4. Approach and landing.

The form and content of the test will be discussed to ensure that the candidate knows exactly what is expected of him in terms of checks, the general area of operation, the approximate altitude for the flight, bearing in mind the weather and any local regulations, and other matters relevant to the flight.

Before the flight, the following points should be clarified by the FIE:

1. Who is to be Commander of the aircraft.
2. Who will be responsible for local navigation and R/T (if applicable).
3. The action to be taken during an actual emergency.
4. The action the candidate is expected to take during any simulated emergencies which the FIE might introduce and the manner in which they will be initiated.

The Flight will be assessed under the following headings on Instructor Form 1: Content of Demonstration, Arrangement of Demonstration, Synchronisation of Patter, Student Participation, Correction of Faults, Aircraft Handling, Positioning and Use of Airspace, General Airmanship.

The FIE will remind the candidate that notes may be made to assist with the debriefing.

OPTIONAL DEBRIEFING OF THE PRE FLIGHT BRIEFING AND FLIGHT PART OF THE TEST

GROUND ORAL EXAMINATION

Before starting the ground test the candidate should be briefed that:

1. Some of the questions will be asked as if from a student and should be answered as such.
2. There will be no trick questions and he should, therefore, answer them all in a straightforward manner.
3. If the candidate does not understand the question, he should say so and the FIE will reword it.
4. The candidate should be encouraged to use any visual aids which he considers to be appropriate to the questions.
5. The FIE will remind the candidate that notes will be taken to assist with the debriefing.

All instructors should consult the relevant part of the 'Syllabus for the Microlight Assistant Flying Instructor Course' in order to review the scope of this part of the test. In addition, the syllabus includes a list of recommended reading material to cover the subjects included in this part of the test.

The following illustrates the types of material with which candidates should be familiar. Candidates should be able to construct fully developed explanations.

The examples are grouped under each of the ground oral headings:

1) TEACHING LEARNING AND ADMINISTRATION
   - Principles of teaching and practical application
     (e.g.: the learning curve, lesson planning, student assessment)

2) LAW, RULES AND PROCEDURES
- Airspace classification, VMC criteria, licence privileges
- Altimeter setting procedures
- Rules of the Air (e.g.: low flying, signals)
- Sources of information (e.g.: ANO: CAP 393, AIC’s, CAP 804)

3) AVIATION NAVIGATION
- Construction of charts
- Techniques of navigation
- Measurement of track and distance
- Chart symbols
- Definition of navigational terms

4) AVIATION METEOROLOGY
- Lapse rates and stability
- Fog formation
- Fronts and air masses
- Types of wind

5) PRINCIPLES OF FLYING
- Stability and control
- Effect of wing loading on stall speed
- Types of drag
- Forces acting during gliding flight

6) AIRFRAMES AND ENGINES
- Design of the propeller
- Operation of Two-stroke and Four-stroke engines
- Classification of forces on aircraft components

7) INSTRUMENTS
- Effect of blockages on flight instruments
- Instrument errors

8) AIRWORTHINESS DOCUMENTATION
- Limitation of a Permit to Fly
- Inspection procedures

9) SPECIFIC TYPE
- Aircraft limitations

10) FIRST AID AND SAFETY EQUIPMENT
- Fire extinguisher types and uses
- Basic first aid procedures

11) HUMAN PERFORMANCE & LIMITATIONS
- Cause and symptoms of hypoxia
- Flying with a common cold

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Standards required

PRE-FLIGHT BRIEFING

The candidate must be able to present a correct, clear and concise pre-flight briefing that prepares the student for the airborne exercise.

FLIGHT

1) For FI Tests and FI Revalidations:
In addition to the requirements applied to an FI (R) the candidate should display a polished standard of aircraft handling combined with accurate and
synchronised ‘patter’. The importance of appropriate student participation and the ability to accurately identify analyse and correct errors must be clearly demonstrated.

The candidate should display a degree of maturity, experience and understanding commensurate with the giving of unsupervised flying instruction.

All aspects of authorising a student’s first solo flight and supervising an FI (R) must be fully appreciated by the candidate.

2) For FI (R) Revalidations:
The candidate should display, at the minimum, a standard equal to that for an initial FI (R) test.

GROUND ORAL

The ground test is designed to determine the candidate’s knowledge of all subjects related to the NPPL M syllabus and, equally as importantly, their ability to impart this knowledge to others.

<table>
<thead>
<tr>
<th>Results</th>
<th>There are three possible results to a FI test. The normal result will be either a pass or a fail. On occasions a partial pass may be awarded.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PASS. If the candidate passes the test the FIE will record on Instructor Form 1 the details and the results of the test and award the candidate with an overall grade. In addition, if appropriate, the FIE will assess the candidate’s suitability for FIC approval, and record his assessment on the Instructor Form 1.</td>
</tr>
<tr>
<td></td>
<td>FAIL. If the candidate fails the test the FIE may recommend further training with a FIC instructor, prior to re-test, if he feels it is necessary. The FIE will record his recommendations on Instructor Form 1, together with the details and the result of the test.</td>
</tr>
<tr>
<td></td>
<td>In the case of a failed test the candidate’s instructor privileges are suspended immediately until such time as a satisfactory test has been completed.</td>
</tr>
<tr>
<td></td>
<td>PARTIAL PASS. A partial pass should only be awarded when a candidate is considered to be able to pass the test but on this occasion failed to do themselves justice on a part of the overall test. The details and the result of the test will be recorded on Instructor Form 1.</td>
</tr>
<tr>
<td></td>
<td>In the case of a Partial Pass the candidate’s instructor privileges are suspended immediately until such time as a satisfactory test has been completed.</td>
</tr>
<tr>
<td></td>
<td>A partial pass may only be awarded for one element of the test (i.e. Pre-Flight Briefing, part of the Flight or Ground Oral). The unsatisfactory element must be repeated in its entirety. Where the partial pass is awarded for one of the ‘Other’ Flight exercises, and not the Main Flight exercise, it would be normal for this exercise to be briefed as a main exercise on the subsequent flight to achieve the test pass.</td>
</tr>
<tr>
<td></td>
<td>The second test to complete a ‘partial’ pass will normally be performed by the same FIE. The whole of the test must be completed within 31 days. If the test is not completed within 31 days the test result becomes a Fail.</td>
</tr>
</tbody>
</table>
The partial pass should be used with discretion.

**DEBRIEFING**

The candidate should be encouraged to analyse and criticise his own performance in all aspects of the test.

The debrief will follow the sequence of the test. The FIE will comment on both the aspects that were completed to a good standard and those that were unsatisfactory.

In the event of a failure or partial pass it is important that the candidate fully appreciates the aspects of his performance that were unsatisfactory. The FIE will clearly indicate what will be required from the candidate during re-test and how he can best prepare for it.

If the FIE debriefs the candidate after the two first parts of the test there will be no need to repeat the points in the final debrief. The FIE will, however, summarise the candidate's performance over the whole of the test during the final debriefing.

The FIE will inform the candidate of the grades, recommendations and written comments he has recorded or intends to record on Instructor Form 1. The FIE will also remind the candidate that the grades and comments recorded on the form may be made available to a FIE prior to the candidate's next instructor test with the candidate's prior written permission.

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**Admin**

The BMAA charge an Instructor Test Fee to cover the cost of administration of the Instructor System. This should be sent to the BMAA LIAC together with the Instructor Form 1. Details of charges are contained in Appendix A of this guide.

The FIE should complete and send the Instructor Form 1 to the BMAA LIAC.

The FIE’s fee (plus travelling expenses, if applicable) must be paid directly to the FIE by the candidate.

**PASS**

In the case of a 'pass' the FIE will take the following action:

**LOGBOOK**

The candidate's logbook must be completed to show the FIE as Captain, the candidate as P1/S, the flight duration entered in the P1 column. The remarks column should show 'FI (R)/FI Test Pass', indicate the exercises examined and be signed by the FIE.

**INSTRUCTOR FORM 1**

The FIE will ensure that the applicable items of the Instructor Form 1 are completed and the FIE will return it to the BMAA LIAC.

**Initial Issue**

If the test was for the initial issue of a FI rating, the applicable box in Instructor Form 1 Section 1 should be ticked. The candidate should be instructed to send his documents and the appropriate fees to BMAA LIAC. See notes on the Instructor Form 1 for details.

The candidate should be reminded that he may not exercise the privileges
of any rating until it has been issued by the CAA.

Revalidations
If the test was for the purpose of Revalidating an existing FI (R)/FI Rating the applicable box in Instructor Form 1 should be ticked.

The FIE should sign the Revalidation Certificate in the candidate's licence.

FAIL
In the event that a candidate has failed the test, they must be given a 'Notice of Failure' form (Form FCL 252 or SRG 2129). The reason for the failure should be given clearly and in detail and the form must be signed by the examiner.

The candidate must be invited to sign the form and their attention must be drawn to their right of appeal. Copies of the form must be sent to the BMAA together with the test report, a copy given to the candidate and the examiner should retain a copy.

In all cases if the candidate refuses to sign the form the examiner should endorse the copies accordingly. If the candidate refuses to accept the copy, the examiner should forward it with the other documents to the BMAA LIAC with an explanatory note.

The candidate should be informed that they may not exercise the privileges of their FI/FI (R) Certificate until they have passed the appropriate test with an FIE.

LOGBOOK
The candidate's logbook must be completed to show the FIE as Captain, the candidate as PUT, the flight duration entered in the Dual column and the remarks column should show 'FI (R)/FI Test Fail' and indicate the exercises examined and be signed by the FIE.

INSTRUCTOR FORM 1
The FIE will ensure that the applicable parts of the Instructor Form 1 are completed and the FIE will return it to the BMAA LIAC.

The BMAA does not charge the Administration fee for a Failed test.

PARTIAL PASS
LOGBOOK
If the flight part of the test is unsuccessful, the candidate's logbook should show the FIE as Captain, the candidate as PUT, the duration of the flight entered in the Dual column. The remarks column should show 'FI (R)/FI Test Partial Pass', indicate the reason for the partial pass, and be signed by the FIE.

If either the Ground Oral or PFB parts of the test are unsuccessful, but the flight was to pass standard, the logbook should show the candidate as P1/S but the FIE should not sign the entry until the whole test has been completed successfully.

INSTRUCTOR FORM 1
The FIE will complete the Instructor Form 1 and indicate where applicable the unsuccessful part of the FI Test.

Until the Test is successfully completed the Instructor cannot exercise the privileges of the Rating to which the test relates.
On **successful completion** of the Test:

**LOGBOOK**
The candidate's logbook should show the FIE as Captain, the candidate as P1/S and the duration of the flight should be entered in the P1 column. The remarks column should show 'FI (R)/FI Test Completed Pass' and be signed by the FIE.

**INSTRUCTOR FORM 1**
The detail of the element of the test that was re-examined should be completed on a new Instructor Form 1. Both Instructor Form 1s should then be sent to the BMAA LIAC together with the administration fee.

FIE should sign the Certificate of Test on the candidate's rating if revalidating an existing Rating.

If the test is **not completed successfully**:

**LOGBOOK**
The candidate's logbook should show the FIE as Captain, the candidate as PUT and the duration of the flight should be entered in the Dual column. The remarks column should show 'FI (R)/FI Test Completed Fail' and be signed by the FIE.

A Form FCL 252 or SRG 2129 must be completed and submitted as for a Failed Test above.

| **Validity period** | The new certificate is valid for 36 months from the end of the month in which the test was taken. If the test is taken within 3 months prior to expiry of the existing certificate then the 36 month period would start from the end of the month which includes the expiry date of the existing certificate. |
### Eligibility of candidate

The Candidate shall:

1. Hold a licence that includes a valid Microlight Class Rating with no operational limitations and have held a valid SEP or Microlight Class Rating for at least 8 months prior to start of the FI (R) course.

2. Prior to starting the FI (R) course have flown at least 100 hours as PIC of aircraft of which at least 40 hours are on microlight aircraft, including 5 hours as PIC on the Control Type to be used for the course.

3. Have successfully completed a FI (R) course conducted by a Microlight FIC Instructor at an approved Flight Training Organisation (FIC School) comprising of not less than 40 hours ground training and 15 hours flight training as specified in the current edition of CAP 804.

4. Present to the examiner an Instructor Form 1 showing that the course has been completed and signed by the FIC Instructor.

5. Present their logbook/s which shall clearly identify the exercises, or parts thereof, flown on each flight which shall be certified as being correct at the end of the course by the FIC Instructor.

### Examiner qualifications

Microlight FIE

The FIE conducting the test shall not have conducted any part of the FIC Course that the candidate has undertaken.

### Guidance for conduct of test

See FLIGHT INSTRUCTOR RATING TEST.

### Content of test

See FLIGHT INSTRUCTOR RATING TEST.

In addition the candidate must appreciate the requirement to be supervised by a FI and the limitations applicable to a FI (R) whilst providing flight instruction.

### Standards required

The candidate must demonstrate thorough knowledge of the NPPL syllabus, the principles of teaching and the technical aspects of the aircraft and its operation.

The candidate must be able to present a correct, clear and concise pre-flight briefing.

The ability to synchronise suitable ‘patter’ with safe and accurate aircraft handling must be demonstrated. All manoeuvres should be completed within the tolerances and requirements described for the Microlight GST.

The candidate should be able to identify, analyse and correct student errors.

Whilst assessing a FI (R) candidate the examiner will take into account the candidate’s lack of experience with ‘genuine’ students. The candidate must
display the ability to give correct and complete flight instruction but will not be expected to produce a polished performance.

Results  
See FLIGHT INSTRUCTOR RATING TEST.

Admin  
The FIE’s fee (plus travelling expenses, if applicable) must be paid directly to the FIE by the candidate.

PASS  
In the case of a ‘pass’ the FIE will take the following action:

LOGBOOK  
The candidate’s logbook must be completed to show the FIE as Captain, the candidate as P1/S, the flight duration entered in the P1 column. The remarks column should show ‘FI (R) Test Pass’, indicate the exercises examined and be signed by the FIE.

INSTRUCTOR FORM 1  
The FIE will ensure that the applicable parts of the Instructor Form 1 are completed. The FIE will specify either “Microlight Flexwing” or “Microlight Fixed Wing” and return the completed form to the BMAA LIAC.

The candidate should be instructed to send his documents and the appropriate fee to BMAA LIAC.

1. The candidate’s Personal Flying Logbook.
2. The candidate’s PPL or NPPL.
3. The candidate’s current medical Certificate or Declaration.
4. The current BMAA fee (see appendix A).
5. The current CAA fee (see appendix A).

The candidate should be reminded that he may not exercise the privileges of any rating until it has been issued by the CAA.

FAIL  
In the event that a candidate has failed the test, they must be given a ‘Notice of Failure’ form (Form FCL 252 or SRG 2129). The reason for the failure should be given clearly and in detail and the form must be signed by the examiner.

The candidate must be invited to sign the form and their attention must be drawn to their right of appeal. Copies of the form must be sent to the BMAA together with the test report, a copy given to the candidate and the examiner should retain a copy.

In all cases if the candidate refuses to sign the form the examiner should endorse the copies accordingly. If the candidate refuses to accept the copy, the examiner should forward it with the other documents to the BMAA LIAC with an explanatory note.

LOGBOOK  
The candidate’s logbook must be completed to show the FIE as Captain, the candidate as PUT, the flight duration entered in the Dual column and the remarks column should show ‘FI (R) Test Fail’ and indicate the exercises examined and be signed by the FIE.

INSTRUCTOR FORM 1  
The FIE will ensure that the applicable parts are completed. The BMAA does not charge the Administration Fee for a Failed test.
### PARTIAL PASS

**LOGBOOK**

If the flight part of the test is unsuccessful, the candidate’s logbook should show the FIE as Captain, the candidate as PUT, the duration of the flight entered in the Dual column. The remarks column should show ‘FI (R)/FI Test Partial Pass’, indicate the reason for the partial pass, and be signed by the FIE.

If either the Ground Oral or PFB parts of the test are unsuccessful, but the flight was to pass standard, the logbook should show the candidate as P1/S but the FIE should not sign the entry until the whole test has been completed successfully.

On **successful completion** of the test:

**LOGBOOK**

The candidate’s logbook should show the FIE as Captain, the candidate as P1/S and the duration of the flight should be entered in the P1 column. The remarks column should show ‘FI (R) Test Completed Pass’ and be signed by the FIE.

**INSTRUCTOR FORM 1**

The detail of the element of the test that was re-examined should be completed on a new Instructor Form 1. Both Instructor Form 1s should then be sent to the BMAA LIAC together with the documents and fees as detailed for a PASS result.

On receipt of applications the BMAA Office checks the documents and copies the Instructor Form 1 which then forms the start of the candidate’s Instructor record. The documents are then forwarded to the CAA who will issue the FI (R) Certificate direct to the candidate.

The candidate should be reminded that they may not exercise the privileges of any rating until it has been issued by the CAA.

If the test is **not completed successfully**:

**LOGBOOK**

The candidate’s logbook should show the FIE as Captain, the candidate as PUT and the duration of the flight should be entered in the Dual column. The remarks column should show ‘FI (R) Test Completed Fail’ and be signed by the FIE.

A Form FCL 252 or SRG 2129 must be completed and submitted as for a Failed Test above.

| Validity period | The Certificate will be valid for 36 months from the end of the month in which the test was taken. |
### Section 7.5 ADDITIONAL CONTROL TYPE TEST

Flight Instructors who are Control Type restricted (Fixed Wing, Flexwing, Powered Parachute) and who wish to instruct on an additional Control Type must pass a test on that control type.

<table>
<thead>
<tr>
<th>Eligibility of candidate</th>
<th>The candidate must hold a current Instructor Certificate and have a minimum of 5 hours PIC on type.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examiner qualifications</td>
<td>Microlight FIE</td>
</tr>
<tr>
<td>Guidance for conduct of test</td>
<td>The purpose of this test is to assess the candidate's ability to give instruction on an additional microlight aircraft Control Type. The candidate will be expected to demonstrate, on the ground and in the air, his knowledge of the principle differences between the two types. The test should consist of the following elements: 1. General briefing by the examiner. 2. Pre-flight briefing 3. Flight Test. 4. Ground Oral Examination 5. Result and debriefing. 6. Administration.</td>
</tr>
<tr>
<td>Content of test</td>
<td><strong>GENERAL BRIEFING BY THE EXAMINER</strong>&lt;br&gt;The briefing will cover the points as laid down for other tests. The examiner will indicate to the candidate that the purpose of the test is to assess his flying ability, technical knowledge and in addition the ability to impart knowledge on the additional control type. <strong>GROUND ORAL EXAMINATION</strong>&lt;br&gt;This part of the test may be conducted with reference to the aircraft or by using a model and 'chalkboard' in a formal classroom environment. A combination of the two approaches is likely to be most suitable. The examiner will concentrate on the principle of flight and technical aspects which are unique to the additional control type. <strong>FLIGHT TEST</strong>&lt;br&gt;The flight test will be conducted with the examiner occupying the seat normally occupied by the student and will be acting as a student for parts of the test. The candidate will be asked to demonstrate a series of exercises to the examiner as if he, the examiner, was a student. The examiner will concentrate on exercises or aspects which are unique to either Fixed Wing, Flexwing or Powered Parachute microlights or where significant differences exist.</td>
</tr>
</tbody>
</table>
### RESULT AND DEBRIEFING

The debrief will follow the lines as outlined for Instructor Tests.

<table>
<thead>
<tr>
<th>Standards required</th>
<th>When assessing the performance of the candidate it is important that the examiner remembers the privileges and responsibilities of the instructor which will be exercised whilst instructing on the additional control type. The examiner should be mindful of the considerable differences which exist between Fixed Wing, Flexwing and Powered Parachute microlights. Although this test is not a ‘full’ Instructor test, the elements which are covered should be assessed in accordance with the guidance provided for Instructor Tests.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Results</td>
<td>Pass or Fail</td>
</tr>
</tbody>
</table>
| Admin | If the candidate is successful the person conducting the test will complete the Instructor Form 2 and the following are sent to the BMAA LIAC:  
1. The completed Instructor Form 2.  
2. The candidate's NPPL/PPL.  
3. The candidate's Instructor Certificate.  
4. The candidate's Personal Flying Logbook.  
5. The current CAA fee (see Appendix A). |
| Validity period | To the end of the existing Instructor Certificate validity period. |
Section 8.1 CONDUCT OF FLYING INSTRUCTOR (RESTRICTED) COURSES

1. COURSE LENGTH

1.1. Courses must be designed to consist of at least the minimum time requirements. The final length of the course, however, will be dictated by the ability of the student to complete the content of the course to a satisfactory standard. As with the course, the subject material which the student uses within the course is progressive in content and each exercise should be completed to a standard which is acceptable in isolation before moving onto further exercises. The time this takes may or may not exceed the minimum time for the course and the student should be made aware of this before starting the course so that if this is not acceptable, due to financial or time constraints for example, the course is not started without hope of a satisfactory conclusion.

2. COURSE STRUCTURE

2.1. The FI(R) course content should obviously start with the Principles of Teaching section completed to a standard whereby the student has the basic tools to embark on the practical sessions involving Briefings, Flying Exercises and Ground Syllabus Lectures. During the early periods of these sections the FIC Instructor will be correcting teaching technique and lesson content, whether that is classroom or flight material. Later, as ability grows and technique improves the student will have the skills to teach the more complex exercises encountered towards the end of the course.

3. USE OF THE SYLLABUS

3.1. The NPPL Syllabus has been designed to lead a NPPL student through the required flying training exercises in a progressive and logical way. It is not the intention of the syllabus to create lesson plans but more to regulate the content of the exercises used in flying training periods. Experienced flying instructors are able to blend exercises together to form useful and efficient flying training sessions. All elements of the exercises covered will be completed despite the flexibility shown by the instructor. The new FI(R) does not have the experience to blend exercises and must be able to follow a logical sequence during a training flight to cover the exercise in a more linear way. As experience grows blending will occur.

3.2. For the purpose of testing, examiners must have a standard to mark against. For Instructor testing the syllabus exercises are taken in isolation, therefore, the student FI(R) must be able to brief and fly exercises in this way. It is the responsibility of the FIC Instructor to construct the course in such a way that this will be the case. Standardisation of exercise content is vital. Instructors should not design their own syllabus and expect their students to be able to pass an Instructor test.

4. THE GROUND SUBJECTS

4.1. The student FI(R) should be led through the entire syllabus for the ground examinations for the NPPL and given the opportunity to practice lecturing the subjects to the FIC Instructor. Most students left to watch tapes or read notes without further one to one
tuition give a very poor showing at their first Instructor test and in some cases the level of knowledge remains low over the following years. A test candidate who cannot read a chart or explain the formation of radiation fog is not only wasting the time of the examiner but his own as well.

5. COURSE RESULTS

5.1. The attitude of the FIC Instructor in viewing the aims of the course and its end result, will dictate the ability of the FI(R) candidate at test. Courses run to a minimum of input and hours have always shown a lower standard of test result than courses where the FIC Instructor aims to produce a high standard of candidate regardless of the time involved. All FIC instructors should strive to produce the best results possible for the future standard of pilot training.

6. CONCLUSION

6.1. It should be the aim of all involved in FI(R) training and testing to communicate and standardise to produce competent Instructors.
Section 8.2 FLYING INSTRUCTOR COURSE INSTRUCTOR (FICI) APPROVALS

Applicants for FIC Instructor approval who meet the qualifying requirements will be invited to attend an interview board and if successful will proceed to the FICI Flying and Ground Test at a later date.

The BMAA offers a preparatory seminar for prospective FEs and FICIs. The seminars have been developed to give applicants an insight into the role and guidance for their preparation for both the selection interview and the position that they are applying for.

Seminars are held periodically throughout the year as demand dictates. It is strongly recommended applicants attend one of these seminars prior to interview and priority for interview will be given to applicants who have attended a seminar.

INTERVIEW

| Eligibility of candidate | The candidate should have been a FI for 3 years, have 600 instructional hours of which 400 should be on microlight aircraft and been assessed as suitable at his last instructor test.

The candidate will have completed a FIC Instructor Approval application form, returned it to the BMAA LIAC together with the fee and been invited for interview.

Candidate to produce the following at the time he attends the interview:

1. NPPL/PPL with current C of E/T or Revalidation/ Renewal
2. Current Medical Certificate
3. Instructor Rating
4. Personal Flying Logbook
5. At least three sets of student records from completed flying training courses
6. A set of briefing notes to be used as a guide for the proposed FI(R) course. |
| Examiner qualifications | The Interview Board would normally consist of at least two Microlight Panel Examiners and representative/s from the Licensing & Training Standards department of the CAA. |
| Guidance for conduct of interview | The interview aims to assess the suitability of the candidate prior to the initial FIC Instructor flying and ground test. |
| Content of interview | In the course of the interview the candidate will be asked to discuss the following subjects:

- The candidate's background, experience and current instructional activities.
- The candidate's reasons for applying for the approval.
- Outline the proposed course structure, content and time management.
- The candidate will be asked to describe various aspects of teaching |
potential instructors and operating an FI(R) Course.

- The abilities and qualities which should be developed in the student instructor.
- The candidate will also be asked to provide detailed explanations concerning the technical aspects of microlight aircraft, operations and the syllabus.

<table>
<thead>
<tr>
<th>Standards required</th>
<th>The candidate must demonstrate to the interview board that he has the appropriate level of knowledge, understanding, motivation and commitment to teach student instructors.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Results</td>
<td>A successful applicant will proceed to an FIC Instructor flying and ground test. The Examiner for the test will normally have been a member of the interview board.</td>
</tr>
<tr>
<td>Admin</td>
<td>The Chairman will note on the Interview Application the recommendations.</td>
</tr>
<tr>
<td>Validity period</td>
<td>A successful candidate will have 12 months to complete the flying and ground test, or until reapplication if unsuccessful at interview.</td>
</tr>
</tbody>
</table>
### Section 8.3 FIC INSTRUCTOR FLIGHT and GROUND TEST

<table>
<thead>
<tr>
<th>Eligibility of candidate</th>
<th>The candidate should have been a FI for a minimum of 3 years, have 600 instructional hours of which 400 should be on microlight aircraft and been assessed as suitable at his last instructor test. Before a candidate presents himself for the test he will have also attended a successful interview with the CAA and Microlight Panel Examiners.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examiner qualifications</td>
<td>Microlight FIE, normally a member of the interview board.</td>
</tr>
<tr>
<td>Guidance for conduct of test</td>
<td>In general terms, the test should follow the lines of the other tests detailed in this document. By virtue of the responsibilities of an FIC Instructor, however, the form of the test will need to be modified and a higher standard must be expected. It is most important that the candidate appreciates that he will be assessed on the presentation of his work as much as on pure technical competence. The subject of the ‘Formal Lecture’ to be delivered by the candidate should be given to the candidate several days before the test to enable him to make the necessary preparation.</td>
</tr>
</tbody>
</table>
| Content of test | 1. GENERAL BRIEFING BY THE EXAMINER

The general briefing should cover all the points laid down for other tests, plus emphasis on the fact that the candidate will be expected to demonstrate an above average ability in all aspects of instruction, including lecture/ classroom technique.

2. FORMAL LECTURE

The candidate will be required to give a formal “chalkboard” lecture on a subject nominated by the examiner. The subject of this lecture should have been given to the candidate before the test. The candidate should be told that he will be assessed on his instructional technique as much as on the technical content of the lecture. Normally the examiner will be able to stop the lecture after about 30 minutes. The examiner will brief the candidate that he should assume he is giving the lecture to a small group of student instructors who will not only wish to make notes as a basis for their own technical notes but who will also be expecting to learn and develop instructional techniques from his presentation. The candidate should be advised that he should use any appropriate lecture aids.

3. PRE-FLIGHT BRIEFING EXERCISES

The pre-flight briefing exercise will differ from the other tests in that the candidate should treat it in the context of briefing an F(R) course student. Not only should it include the flight exercise details but also training on pre-flight briefing techniques.

Additionally, the examiner should give the candidate a brief as though he was...
an FI(R) course student and the candidate should be requested to criticise/debrief the examiner’s performance.

1. A pre-flight briefing exercise by the candidate to a ‘student instructor’
2. A pre-flight briefing by the examiner in the role of student instructor
3. Debrief by the candidate of the ‘student instructor’s’ PFB.

3. FLIGHT TEST

During the test the examiner will assume the role of a student instructor. Accordingly the examiner will occupy the seat normally occupied by the instructor in the ab initio training situation.

The examiner will evaluate not only the candidate’s ability to present the flight exercises but also his ability to correct and analyse the student instructor’s performance. The flight test will be as follows:

1) The candidate will be expected to teach at least one air exercise in a manner appropriate to the needs of a student instructor. The candidate will not only present the sequence in the standard manner but also indicate to the student instructor the best way of presenting the sequence and demonstrating how to overcome particular handling problems associated with that exercise.

2) The examiner will assume the role of a student instructor for one air exercise (normally the same exercise that was used for the pre-flight briefing). The candidate will be expected to correct and analyse the examiner’s performance. The candidate must demonstrate an ability to assess weaknesses and inaccuracies and then re-demonstrate the correct method.

4. OPTIONAL DEBRIEF OF THE FLYING TEST AND PRE-FLIGHT BRIEFING EXERCISE BY THE EXAMINER

5. GROUND ORAL

During the ground oral part of the test the candidate should be aware that presentation is as important as technical knowledge itself and that he will be assessed on both aspects equally. The content of the examiner’s questioning will be pitched at a level of a student FI(R) rather than a NPPL student pilot.

Standards required

In addition to the requirements for a FI the candidate must display a deeper understanding of all aspects of providing flying instruction. The candidate must be able to complete flying exercises to a very high standard. Aircraft handling and the synchronisation of ‘patter’ should be virtually faultless.

The standard of knowledge of the ground subjects and the ability to present explanations must be demonstrated to a high standard.

The prepared lecture delivered by the candidate should display the ability to structure a complete and correct presentation. The lecture should also demonstrate the ability to utilise a variety of training aids in order to provide an example of the principles of teaching.

Results

If successful the examiner will recommend the FI for a FICI approval, the
examiner may also revalidate the FI’s Rating by Certificate of Test.

If the candidate has failed to achieve the standard for a recommendation for FICI approval but is of the standard required to pass a FI revalidation test the examiner may revalidate the FI Rating.

| Admin | LOGBOOK  
Candidate’s logbook should be completed as for other Instructor Rating tests adding the details of the results of the FICI test. |
|-------|----------------------------------------------------------|
|       | INSTRUCTOR FORM 1  
If successful, the completed Instructor Form 1, including section 1 box 4 will be forwarded to the BMAA LIAC, together with the appropriate fee.  
If the test also resulted in the candidates FI rating being revalidated the examiner will sign the candidate’s Certificate of Test and Instructor Form 1 section 1 box 3 should also be completed.  
The examiners fee (plus traveling expenses, if applicable) must be paid directly to the examiner.  
Details of charges are contained in Appendix A of this guide. |

| Validity period | Renewal of a FIC appointment is dependent on the candidate having received a recommendation on the Instructor Revalidation test. In the event of a FIC instructor failing to obtain a recommendation during the appointment period of authorisation, the candidate will be given the opportunity to carry out refresher training and present himself for retesting to obtain the necessary recommendation.  
If the candidate fails to obtain a recommendation on the second test, Licensing & Training Standards Department of the CAA should be contacted to review the case.  
The final outcome may result in revoking the candidate’s authority. |
Section 8.4 FLIGHT INSTRUCTOR COURSE SCHOOL APPROVAL

1. APPLICATION

1.1. An applicant who wishes to run an approved Flight Training Organisation (FTO) to conduct FI(R) courses can obtain an application form for the Approval from the CAA. The completed form, SRG 1143, should be returned to the CAA who will make arrangements for the FTO to be inspected by a Panel Examiner and/or a CAA FTO inspector.

1.2. If after the Inspection of the school it is found to be satisfactory a recommendation will be made and the CAA will issue the school with a letter of approval. The appropriate annual charge must be paid to the CAA.

2. VALIDITY

2.1. The approval is renewed each year after a satisfactory annual inspection and payment of the annual charge to the CAA. Applications must be made to the CAA Office at least 6 weeks in advance of the expiry date.

2.2. Prospective FIC Schools must be able to demonstrate compliance with the ‘Minimum Requirements for the Approval of Courses for the Flight Instructor (Restricted) Rating (Aeroplanes) Microlight’:

3. MINIMUM REQUIREMENTS FOR APPROVAL OF COURSES FOR THE FLIGHT INSTRUCTOR (RESTRICTED) RATING (AEROPLANE) MICROLIGHTS

3.1. INTRODUCTION

3.1.1. The courses are designed solely for the purpose of enabling licence holders to qualify to give instruction in flying to persons seeking to obtain a National Private Pilot's Licence (Microlight).

3.1.2. Courses for the Flight Instructor (Restricted) (FI(R) Rating may only be given at Flight Training Organisations (FTOs) approved for the purpose. The minimum requirements to be met by organisations seeking approval from the CAA to conduct these courses are set out below.

3.1.3. The courses to which these requirements relate are as follows:

- The Course for the Flight Instructor (Restricted) (FI(R) Rating (Aeroplane) Microlight.

- Refresher Training for the renewal of a Flight Instructor (Restricted) (FI(R) or Flight Instructor Rating.
3.2. QUALIFICATIONS OF INSTRUCTIONAL STAFF

3.2.1. Flight Instructor Course (FIC) Instructors.

3.2.1.1. All Flight Instructors shall be currently approved by the Civil Aviation Authority to give Flight Instructor Courses on Microlight Aeroplanes.

3.2.1.2. There shall be one such instructor who shall be known as ‘The Nominated FIC Instructor’. There may also be a ‘Deputy FIC Instructor’ and ‘Other FIC Instructors’ if so required by the applicant.

3.2.1.3. Note: In connection with the privileges associated with various licences as they relate to flight training, attention is drawn to the ANO and CAP 804.

3.2.2. Ground Instructors.

3.2.2.1. When a ground instructor is employed full time or part time, he should normally hold or have held a Flight Instructor Rating or have relevant qualification acceptable to the BMAA and the CAA.

3.3. APPROVED TRAINING

3.3.1. All courses shall be conducted in accordance with BMAA flying and ground training syllabus as approved by the CAA and as published by the BMAA in the document ‘Syllabus of Instruction for the Flight Instructor (Restricted) (Aeroplane) Microlight’.

3.3.2. The flying and ground elements of each course shall be properly integrated so that progress in one complements progress in the other so that the student instructor is given adequate knowledge and competence in respect of the flying and ground tests conducted by the ‘Microlight Panel of Examiners’.

3.3.3. Should it be desired to give the courses or significant parts thereof at a base other than the one at which approved facilities and organisations are provided, it will be necessary to apply to the CAA for further guidance and permission.

3.4. FLYING - CONTROL AND DISCIPLINE

3.4.1. Flying authorisation authority shall be confined to FIC instructors for all flights made for the purposes of the courses.

3.4.2. Flying authorisation sheets, books or similar documents shall be used to record the pertinent pre and post flying details of each flying made for the purposes of each course. The record shall include at least:

- The date.
- The aeroplane registration marks.
- The names of the FIC instructor and student instructor.
• The exercise to be flown or the route and destination aerodrome(s) to be visited.
• The authorising FIC Instructor's initials or signature.
• The initials or signature of the pilot in command both before and after flying.
• The intended duration of the flying.
• The total actual time elapsed of flying.
• Post flying recording of any divergence from the intended exercise.

3.4.3. A local Flying Order Book shall be prepared and shall cover local administrative and operational requirements as they affect the proper conduct of flying for the purposes of the courses. Each order shall be issued and signed by the Nominated Flight Instructor Course Instructor and shall show the date on which it was first issued. Each FIC instructor shall sign as having read all orders at least once per 12 months and also whenever a new order is published. Student instructors shall similarly sign at least once during the period of the particular course and whenever a new order is published.

3.4.4. Note: Where an FTO already has a Flying Order Book issued and dated by the CFI, another Order Book is not required. However, it may be necessary to add orders specific to the needs of instructor training. Such orders shall be issued and signed by the Nominated FIC Instructor and show the date on which they were first issued.

3.5. TRAINING RECORDS AND LOG BOOKS

3.5.1. Adequate training records and progress reports, which shall be kept for at least five years after the completion of the course, shall be maintained for all flying and ground training received by each student. The records shall include at least:
• Each training flight giving the date, the flying time, exercise or parts of exercises practised, the name of the FIC Instructor giving the training. There should also be comments on the student's performance, progress and other factors such as attitude and manner during flying and when applicable, during the course as a whole.
• Progressive totals of hours flown.
• Ground Instruction, giving the subject covered, the date, the time spent and the name of the instructor.
• A course completion certificate shall be signed by the Nominated FIC Instructor on the Instructor Form 1.

3.5.2. Student instructor's logbooks shall, in addition to being kept in accordance with the ANO, clearly identify the exercises of parts thereof flown on each flying made for the purposes of each course and shall be certified as being correct at the end of each course by the Nominated FIC Instructor.
3.5.3. FIC Instructors’ logbooks shall clearly distinguish flying instructor course instructional flying from any other form of flying.

3.6. DUTIES OF THE NOMINATED FIC INSTRUCTOR

3.6.1. The Nominated FIC Instructor shall be required to ensure that all requirements governing the giving of courses of training are implemented as set out above.

3.6.2. In addition, he shall be required to supervise:

- The progress of each student including conducting flying checks as necessary and if applicable.
- The training given by all flying and ground instructors to ensure that at least all minimum standards are met, that it is given in accordance with the requirements set out herein and that the content of the instruction is adequately standardised.

3.6.3. Note: The duties of the Deputy FIC Instructor, when one is appointed, shall be the same as the Nominated FIC Instructor during any absence of the Nominated FIC Instructor. He may be given other duties at the discretion of the Nominated FIC Instructor.

3.7. AEROPLANE - PROVISION, MAINTENANCE AND REQUIREMENTS

3.7.1. At least one aeroplane shall be available and be suitable for the course to be given.

3.7.2. Each aeroplane shall have a valid appropriate airworthiness document and be maintained accordingly.

3.7.3. Of the required aircraft documents at least the current appropriate airworthiness documents for each aeroplane must be readily available at all times for each pilot to see. Similarly, the record of the rectification of defects logged from previous flights must also be readily available for each pilot to see.

3.7.4. No aeroplane shall be used on the course unless it satisfies the following minimum requirements:

- Each aeroplane shall be fitted with an efficient two-way communication system.
- All flying, engine and associated ancillary instruments shall be readily visible to both the FIC instructor and the student instructor when secured in their customary seats.
- Each aeroplane shall be fitted with adequate controls so positioned that both the FIC instructor and the student instructor can readily use them when sitting normally in their customary seats with safety belts or harnesses fastened.
3.7.5. Note: The Nominated FIC Instructor may impose reasonable additional requirements affecting the aeroplane type to be used for all or any of the exercises.

3.8. EQUIPMENT FOR GROUND INSTRUCTION

3.8.1. The minimum equipment to be provided for ground instruction for the Course shall be:

- Model aeroplane with working controls.
- Topographical charts. (Current ICAO 1:500,000 and 1:250,000 charts, relevant to the area to be over flown, shall be available on loan or for sale to Student Instructors).
- Equipment for instruction in visual signal e.g. Aldis lamp, signals square and marshalling signals.
- Such engine, airframe and ancillary equipment diagrams and components as are necessary for practical demonstration purposes.
- Chalkboards or similar equipment.

3.9. REFERENCE PUBLICATIONS

3.9.1. The following publications shall be accessible and/or kept in adequate numbers and be available on loan or for sale to Student Instructors as appropriate and, when applicable, be kept current by amendments in order that adequate coverage of the syllabus is provided:

- The Air Navigation Order, Air Navigation (General) Regulations, the Rules of the Air Regulations, the Civil Aviation Authority Regulations, Permanent Air Navigation (Restriction of Flying) Regulations: (Collectively CAP 393).
- CAP 413 and CAP 804.
- UK Aeronautical Information Publication (AIP) or Pooleys/ Airplan Flying Equipment Flying Guides or any other publication giving details of aerodromes likely to be visited during the course.
- NOTAMS or "Bulletins" provided/ approved by NATS.
- Chart of UK Airspace Restrictions and Hazardous Areas.
- Aeronautical Information Circulars.
- The Flight Manual (or where applicable) the Owner's Manual for the aeroplane with actual or specimen Certificates of Registration, the appropriate airworthiness documents, Radio Licence and Radio Installation Approval (if applicable). A copy of the Flight or Owner's Manual or at least an adequate extract there from and a Check List shall be made available to each student. Extracts from the Manual and Check List produced by the FTO shall not be in conflict with the requirements of the Flight or Owner's Manual.
- The BMAA Syllabus of Instruction for the Assistant Flying Instructor Rating (Aeroplanes) Microlight Course.
- The BMAA Syllabus of Instruction for the National Private Pilot's Licence Microlights.
- The BMAA Microlight Instructor and Examiner Guide.
• Complete set of specimen pre-flight briefings covering all flying exercises in the syllabus.
• ATC Flight Plan.
• Any other recognised works of reference directly related to the flying and ground syllabus, including those listed in the BMAA document 'Syllabus of Instruction for the Flight Instructor (Restricted) Rating (Aeroplane) Microlight'.

3.10. GENERAL ACCOMMODATION REQUIREMENTS

3.10.1. The minimum accommodation to be provided and reserved for the purposes of the courses is a lecture/briefing room of adequate size relative to the maximum student capacity. A quiet room for individual self-study is desirable.

3.11. AERODROME REQUIREMENTS

3.11.1. The aerodrome shall be suitable in every way for the type of aeroplane to be used on the course, bearing in mind the special needs of Student Instructors and the performance of the aeroplane.

3.11.2. The aerodrome must comply with the following minimum criteria:

• There must be a minimum take-off and landing roll of 250 metres available, allowing safe margins of clearance for obstructions on climb out and approach.
• There must be enough clear ground surrounding the field to allow a safe landing to be made following an engine failure at any stage in the circuit.
• The climb out and approach paths should be well clear of congested areas.
• The field should be reasonably level, smooth and well drained. If the field slopes, or is saucer shaped, or if the ground is soft, the field should then be larger than the normal requirement.
• Reasonable access for emergency vehicles must be available and, if not obvious, must be marked.

3.11.3. AIRFIELD EQUIPMENT

• Windsock.
• Fire extinguishers - 1 x 3kg (or 2 x 1.5kg) Multipurpose (ABC).
• First Aid Kit containing at least:
  • 3 emergency dressings BPC 9
  • 3 emergency dressings BPC 12
  • 3 triangular bandages
• 1 pair scissors
• One Harness knife (complete with sheath).
• One person with knowledge of the use and operation of the above equipment.
• Telephone (or location of nearest one, within a reasonable distance, to be posted in an obvious position).

3.12. APPROVAL - CONDITION AND ADMINISTRATION

3.12.1. Applications for approval are to be made on the CAA application form SRG1143 which can be obtained from the CAA web site and returned for processing. Initial approval is for a period of 12 months and is dependent upon a successful inspection of the Course and the FTO's facilities by a 'Microlight Panel Examiner' and/or a CAA inspector. The continuation of approval is dependent upon re application and a further satisfactory inspection every 12 months. The cost of the inspection and approval will be met by the FTO.

3.12.2. All requirements being satisfied, the approval will be granted to the Flying Training Organisation concerned for the giving of Courses under the direction of the Nominated FIC Instructor.

3.12.3. It will be a condition of the approval that, should the Nominated FIC Instructor leave the post, the approval will automatically lapse. The CAA shall be informed of his departure or intended departure. However, provided that a named Deputy FIC Instructor has been in post at that FTO and has been active for at least 90 days before the Nominated FIC Instructor leaves his post, permission may be given for the approval to continue in the Deputy's name pending the appointment of a replacement Nominated FIC Instructor.

3.12.4. Approval may be withdrawn or suspended at the discretion of the CAA if any of the above requirements cease to be met in whole or in part, or if the standards on which the approval was granted are not maintained.
## Section 8.5 Fi(R) COURSE PRE-ENTRY FLIGHT TEST AND WRITTEN EXAM

### 1  Fi(R) COURSE PRE-ENTRY REQUIREMENTS

1.1 Prior to commencing a Fi(R) Course the prospective Fi(R) must pass a flight test and written exam.

1.2 The purpose of the pre-entry tests is to ensure that the candidate has maintained a level of knowledge and ability appropriate to commencing an Fi(R) Course.

1.3 It is recommended that these tests are taken prior to confirming a booking to attend the Fi(R) Course.

### 2  Fi(R) COURSE PRE-ENTRY FLYING TEST

<table>
<thead>
<tr>
<th>Eligibility of candidate</th>
<th>Prior to starting the Fi(R) Course the candidate must show compliance with the following:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. Hold a licence that includes a valid microlight class rating with no operational restrictions.</td>
</tr>
<tr>
<td></td>
<td>2. Hold a valid SEP or microlight rating for at least 8 months.</td>
</tr>
<tr>
<td></td>
<td>3. Have a minimum of 100 hours as PIC of aircraft of which 40 hours are on microlight aircraft including 5 hours as PIC on the control type to be used on the course.</td>
</tr>
</tbody>
</table>

| Examiner qualifications | Microlight FICI / FIE |

<table>
<thead>
<tr>
<th>Guidance for conduct of test</th>
<th>The flying test should be conducted with the candidate seated in the ‘first pilot’ position. The test does not aim to assess the candidate’s ability to fly the aircraft from the instructor’s position.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The flying test should be conducted in the same manner as the NPPL M GST.</td>
</tr>
</tbody>
</table>

| Content of test | The flying test should include the content of the NPPL M GST. |

<table>
<thead>
<tr>
<th>Standards required</th>
<th>The purpose of this flying test is to ensure that the candidate has maintained a suitable standard since qualifying for a NPPL M and has benefited from his experience as a pilot. The candidate must be able to demonstrate ability at least equal to a candidate being examined during the initial GST for the issue of a NPPL M.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The candidate should be able to complete all aspects of a GST with smoothness, accuracy and confidence.</td>
</tr>
</tbody>
</table>

| Results | Pass or fail. |

<table>
<thead>
<tr>
<th>Admin</th>
<th>If successful the FICI will complete Section 5c of Instructor Form 1 and complete an entry in the candidate’s logbook as for a GST.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>If unsuccessful record as a dual training flight in the candidate’s logbook and indicate a failed pre entry test.</td>
</tr>
</tbody>
</table>
Validity period | 6 months immediately preceding the start of the AFIC.

### 3 FI(R) COURSE PRE-ENTRY WRITTEN EXAM

| Eligibility of candidate | Prior to starting the FI(R) Course the candidate must show compliance with the following:
| | 1. Hold a licence that includes a valid microlight class rating with no operational restrictions.
| | 2. Hold a valid SEP or microlight rating for at least 8 months.
| | 3. Have a minimum of 100 hours as PIC of aircraft of which 40 hours are on microlight aircraft including 5 hours as PIC on the control type to be used on the course.

| Examiner qualifications | Microlight FICI / FIE

| Guidance for conduct of test | The written exams should be conducted in accordance with the guidance for the NPPL M written exams.

| Content of test | The pre-entry written exams are written by the Panel of Examiners on behalf of the CAA. The exam is based upon the contents of the NPPL M (Ground Subjects) Syllabus.
| | The purpose of the exam is to ensure that the candidate has maintained a level of knowledge which is appropriate to a student commencing a FI(R) Course.

| Standards required | The candidate must achieve a mark of at least 70% in order to pass the exam.

| Results | Pass or Fail.

| Admin | Complete Section 5b of Instructor Form 1.
| | In all cases, a pass or fail, the answer paper to be retained by the FICI.
| | The completed paper forms part of the AFIC records and should be kept for at least two years following course completion.

| Validity period | 6 months immediately preceding start of AFIC.
Section 8.6 RESTRICTED FLYING INSTRUCTOR SUPERVISION

1. INTRODUCTION

1.1. Flying training given by a Restricted Flight Instructor (F(I)(R)) must be supervised by a Flying Instructor (FI) at all times. This rule exists not only to safeguard the Student Pilot, but to foster the correct approach, attitude and teaching technique in the F(I)(R) himself.

1.2. This section of the guide is designed to assist both the F(I)(R) and his supervising FI in maintaining compliance with this and the other rules laid down in the Air Navigation Order, and also help them to develop the instructional potential of the F(I)(R) to the full.

2. THE F(I)(R) AND HIS LEGAL LIMITATIONS

2.1. The following restrictions are placed on a Microlight F(I)(R) exercising the privileges of his rating:

   a) A F(I)(R) may only give instruction if supervised by a FI who is present during take-off and landing at the aerodrome from which the instruction is to begin and end. ("Present" has been defined as meaning "on the aerodrome or within the circuit").

   b) A F(I)(R) may only give instruction on control type which he is rated, i.e. Flexwing or Fixed Wing.

   c) A F(I)(R) must not give directions to a Student Pilot in respect of his first solo flight.

   d) A F(I)(R) must not give directions to a Student Pilot in respect of his first solo cross country flight. (A "cross country" flight is defined in the ANO and CAP 804 as one where the aircraft flies more than 3 nautical miles from the departure aerodrome).

3. THE SUPERVISING FI

3.1. The supervising FI should be thoroughly conversant with the aircraft type being used by the F(I)(R). He must hold a Flight Instructor’s rating entitling him to instruct on an aircraft of the same control type or class as the aircraft on which instruction is being given. He should have a minimum of 5 hours experience, whilst giving flying instruction, on that control type (Flexwing or Fixed wing).

3.2. This should apply in all cases - including that of an EASA Flying Instructor supervising a microlight F(I)(R).

4. OBJECTIVES

4.1. The newly qualified F(I)(R) will have completed an approved Flight Instructor Course and will have been assessed by a microlight FIE (Panel Examiner) as having reached the required standard to begin teaching student pilots under the supervision of a FI.
4.2. The Flight Instructor Course will have equipped the new FI(R) with the basic knowledge and skills for the task ahead, but of course, he has never actually given instruction to a student pilot at this stage. It is the job of the supervising FI to guide the FI(R) as he sets about putting theory into practice.

4.3. Any misconceptions allowed to develop at this stage of the FI(R)'s career are likely to become a part of the instruction provided by the FI(R), it follows, therefore, that the newly qualified FI(R) must be carefully and actively supervised to ensure proper development.

4.4. During the testing of FI(R)s applying to be upgraded to FIs it has all too frequently been apparent that this supervision has been lacking and, as a result, the FI(R) has not progressed as expected.

4.5. The objective of this period of supervision by a FI is to develop the FI(R)'s abilities to the point where he is capable of assuming the responsibilities and carrying out the duties of a FI unassisted and unsupervised.

5. AREAS OF SUPERVISION

5.1. Broadly, supervision will entail:

   a) Assuming overall responsibility for the safety of all operations involving the FI(R).

   b) Ensuring that at all times the conditions are suitable for both the training exercise being flown and the student pilot being taught.

   c) Selecting students and exercises for the FI(R) to progressively ease him into his new role, starting with the simpler exercises and gradually exposing him to the more demanding areas of instructing.

   d) Ensuring that the progress of the student pilots being taught by the FI(R) is satisfactory.

   e) Monitoring the content of the flight and ground instruction being given by the FI(R).

   f) Maintaining a continuous process of discussion covering assessment of conditions, evaluation of student progress, problem areas, alternative methods, lesson planning etc.

   g) Ensuring that by the time the FI(R) has completed his period under supervision he has gained a good all round understanding of the practicalities of flying training and has had the opportunity to teach all parts of the syllabus. Ideally, if possible, the FI(R) will have taught at least one student from starting training to gaining his licence.

5.2. Specifically, the supervising FI should:

   a) Brief and debrief the FI(R) before and after each instructional session. The extent of the briefing will obviously depend on the level of experience of the FI(R) as he progresses and could vary from a detailed discussion of weather conditions, choice of
location and altitude, student ability, previous problems etc., to a few words to confirm the FI(R)'s intentions. Likewise the de brief.

b) Carry out sufficient check flying with the FI(R) (the FI acting as student) to monitor progress and ensure that all exercises are being taught correctly.

c) Carry out sufficient check flying with student pilots being taught by the FI(R) to ensure that their progress is satisfactory.

d) Sit in on sufficient pre-flight briefings, debriefings and ground lectures given by the FI(R) to student pilots to ensure that their content and quality is satisfactory.

e) Initially the FI will find it necessary to closely supervise the newly qualified FI(R), but as his abilities and experience increase the FI(R) should be allowed to assume more responsibility and encouraged to make his own decisions in preparation for his future role as a fully qualified Flying Instructor.

6. CONCLUSION

6.1. Careful supervision of an FI(R) will take considerable time and effort on the part of the supervising FI, particularly in the early stages. At the end of this period the FI(R)'s knowledge will be greatly expanded and his teaching techniques improved and polished. This will ensure that the FI(R) will be able to provide good instruction based on sound principles refined through experience, which in turn will produce safe pilots.
Section 9.1 EXAMINER APPOINTMENTS

1. REVALIDATION (R) EXAMINER PRIVILEGES AND CRITERIA

1.1. R Examiners can sign Certificates of Experience and Revalidation to maintain a pilot's rating privileges.

1.2. Applicants must show that there is a need for such appointment.

1.3. The normal minimum requirement for appointment is for the applicant to be a Pilot.

1.4. Applicants must answer correctly a series of written questions based upon revalidation scenarios which assess the applicant's knowledge of the revalidation process. The questions are supplied to the applicant by the BMAA LIAC on receipt of the application. When successfully completed the Panel will review the application and make a recommendation to the CAA to issue the Letter of Authority.

1.5. If an applicant is unable to successfully answer the questions within three attempts they may not reapply for a period of six months.

2. GROUND EXAMINER (GR) EXAMINER PRIVILEGES AND CRITERIA

2.1. The GR Examiner Authority contains within it the R Examiner Authority privileges.

2.2. GR Examiners can sign Certificates of Experience and Revalidation to maintain a pilot's rating privileges and, in addition, hold the Ground Examination papers for the grant of the NPPL M.

2.3. Applicants must show that there is a need for such appointment.

2.4. The normal minimum requirement is for the Candidate to be a Flight Instructor.

2.5. If the Applicant does not already hold an R Examiner Authority they must answer correctly a series of written questions based upon revalidation scenarios which assess the applicant's knowledge of the revalidation process. The questions are supplied to the applicant by the BMAA LIAC on receipt of the application. When successfully completed the Panel will review the application and make a recommendation to the CAA to issue the Authority.

2.6. If an applicant is unable to successfully answer the questions within three attempts they may not reapply for a period of six months.
3. FLIGHT EXAMINER (FE) EXAMINER PRIVILEGES AND CRITERIA

3.1. The FE Examiner Authority contains within it the GR Examiner Authority privileges.

3.2. An FE can sign Certificates of Experience and Revalidation to maintain a pilot’s rating privileges and holds the Ground Examination papers for the grant of the NPPL M.

3.3. In addition FEs can conduct the General Skills Tests for the grant, revalidation and renewal of a Microlight NPPL on Control Types specified in their Approval.

3.4. Applicants must show that there is a need for such appointment.

3.5. Minimum requirements are that the Candidate must have been a Flying Instructor for 2 years, have 300 Instructional hours of which 200 should be on microlights.

3.6. If the Applicant does not already hold an R or GR Examiner Authority they must answer correctly a series of written questions based upon revalidation scenarios which assess the applicant’s knowledge of the revalidation process. The questions are supplied to the applicant by the BMAA LIAC on receipt of the application.

3.7. If an applicant is unable to successfully answer the questions within three attempts they may not reapply for a period of six months.

3.8. Applicants must have attended an Examiner Seminar held by the Panel, or completed one-to-one coaching with a Microlight FIE and achieved a recommendation as suitable to undergo an assessment, within the previous 12 months.

3.9. Applicants must have successfully completed a Flight Instructor Test on each control type for which FE privileges are sought before making an application.

3.10. Applicants will undertake a flight and ground oral assessment test with a Microlight FIE. If successful the Panel will recommend to the CAA that the FE Authority be issued.

3.11. Applicants for a FE for multiple control types will be required to complete a flight and oral assessment on one type and only oral assessments on any others.

4. APPLICATIONS AND VALIDITY

4.1. Applications for all Examiner Authorities should be made on an Examiner Authority Application Form available from the BMAA LIAC and the BMAA website and returned to the BMAA LIAC together with the administration and CAA fee where applicable.

4.2. All applications will be considered by the Microlight Panel of Examiners. In the case of a successful application a recommendation will be made to the CAA. The Letter of Authority will be issued by the CAA.

4.3. All Letters of Authority are issued for a period of 3 years.

4.4. All Examiners should be aware that their Authorities are issued in respect of the
organisation specified on their letter of Authority. In order to maintain their Authority within another organisation it is necessary for an application to be made to the CAA, through the BMAA LIAC, for the issue of a new Letter of Authority.

4.5. Examiners must note that it is their responsibility to maintain their Authorities. Reminders are not sent by the CAA or BMAA.

5. RENEWAL AND REVALIDATION

5.1. All Examiners

5.1.1. All examiners must make an application for renewal or revalidation of their Authority using the Microlight Examiner Application Form from the BMAA website.

5.1.2. On receipt of the application the BMAA LIAC will send the applicant a series of written questions based upon revalidation scenarios which assess the applicant’s knowledge of the revalidation process. The Panel cannot make a recommendation for renewal or revalidation of an Examiner Authority until the questions are completed successfully.

5.2. FE Examiners

5.2.1. FE Examiners, if current or expired by less than 3 years, are required to pass an oral assessment with a Microlight FIE to obtain a Panel recommendation for the issue of a new Letter of Authority.

5.2.2. FE Examiners who have expired by 3 years or more must pass a Flight and Ground assessment with a Microlight FIE in order to obtain a Panel recommendation for the issue of a new Letter of Authority. It is not required that these applicants attend a refresher seminar or complete one-to-one training with a FIE but it is recommended that they do so.

5.2.3. In the event of a FE failing to obtain a recommendation the outcome may result in revoking the applicant’s Authority.
Section 9.2 GUIDANCE NOTES FOR THE CONDUCT OF MICROLIGHT FLIGHT EXAMINER (FE) ASSESSMENTS

1. INTRODUCTION

1.1. After recommendations from the CAA the Microlight Panel of Examiners agreed to change the process by which applicants for the grant, revalidation or renewal of a Microlight Flight Examiner (FE) could gain a recommendation from the Microlight Panel of Examiners to support the application.

1.2. The most significant change for an initial application is the replacement of an interview to demonstrate capability with a practical demonstration during which the applicant will carry out a mock GST with a Microlight Flight Instructor Examiner (FIE) acting as the candidate. The FIE will assess the applicant’s performance and base the decision on whether to make a positive recommendation, or not, on that performance.

1.3. For a revalidation, or renewal of an authority that has lapsed by less than three years, the Panel recommendation is based upon an oral assessment carried out by a Microlight FIE.

1.4. For the renewal of an authority that has lapsed by three years or more the applicant must undertake a practical assessment with a Microlight FIE as for an initial application.

2. TERMINOLOGY

2.1. Within this guidance the following terms are used:

2.1.1. Applicant. The person who is seeking a recommendation to support an application for the grant of a Microlight Flight Examiner (FE) Authority.

2.1.2. Candidate. The role taken by the FIE when the applicant is conducting the mock GST.

3. BOOKING AN ASSESSMENT

3.1. The applicant will request an assessment with a Microlight FIE of their choice and make arrangements for date, time, location and aircraft to be used.

3.2. The FIE cannot examine any applicant that they have coached as part of the preparation.

3.3. When arranging an assessment the FIE must establish whether the applicant is to undertake a flight or oral assessment, and which control systems the applicant is applying to be authorised as an examiner for. (Flexwing, Fixed Wing, Powered Parachute). If the applicant is asking to have an additional control system added to an existing FE this should be made clear at this stage.

3.4. The FIE will advise the applicant of all costs involved.
4. ASSESSMENT PROCEDURE FOR THE INITIAL GRANT OF A MICROLIGHT FE AUTHORITY OR RENEWAL OF AN AUTHORITY LAPSED BY 3 YEARS OR MORE.

4.1. DOCUMENT AND AIRCRAFT CHECKS

4.1.1. The FIE will check that the applicant holds a valid pilot’s licence, valid microlight instructor rating, valid aircraft rating and medical documentation as applicable.

4.1.2. The applicant will provide evidence of meeting the minimum requirements of need and experience as specified in the BMAA Instructor and Examiner Guide. Section 9.1 3.4 – 3.8.

4.1.3. An aircraft documents check is to be carried out so that both the FIE and applicant are satisfied that the aircraft to be used meets documentary requirements.

4.1.4. A physical examination of the aircraft is to be carried out so that both the FIE and applicant are satisfied that it is in an airworthy condition.

4.1.5. If any of the above is unsatisfactory the assessment cannot proceed further.

4.2. PRE ASSESSMENT BRIEFING

4.2.1. The FIE will brief the applicant on the following aspects of the assessment:

4.2.1.1. The applicant will treat the FIE throughout as a candidate for an initial NPPL Microlight GST, having completed a course of training.

4.2.1.2. The applicant will carry out a GST with the FIE acting as the NPPL M candidate. The GST will include:

- A pre-GST briefing
- The flight
- A post-flight debriefing with a result
- Conduct of a Ground Oral examination
- Completion of example documents to reflect the result

4.2.1.3. The applicant may use the POH for the aircraft type being used for the test.

4.2.1.4. The applicant must be aware of the role of a FE and not give coaching to the candidate during the test.

4.2.1.5. Following the completion of the assessment the FIE will advise the applicant of the outcome.

4.2.1.6. If the applicant has demonstrated sufficient understanding and ability to act as a Microlight FE, the FIE will confirm that, on behalf of the Panel, a recommendation will be made to the CAA to issue the applicant with a Microlight FE authority.

4.2.1.7. If the FIE does not consider that the applicant has demonstrated sufficient understanding and ability to act as a Microlight FE, the FIE will inform the applicant
that the Panel will not make a recommendation to the CAA for the issue of a FE authority. The FIE will advise the applicant of how they can improve their performance before applying for another assessment.

4.2.1.8. In the event of a failed assessment there is no appeal procedure.

4.3. THE ASSESSMENT

4.3.1. The applicant will carry out the GST sequence and Ground Oral Exam as specified in the FIE’s pre-assessment briefing.

4.3.2. The FIE will expect the following from the applicant before the flight begins:

4.3.2.1. an introduction as the candidate’s examiner;

4.3.2.2. a pre-test document check to assure that the candidate is eligible for the GST;

4.3.2.3. a pre-GST briefing given to the candidate detailing:

- Purpose of the GST
- Possible outcomes
- Appeal procedure
- Responsibilities
- Expected practical sequence
- Key phrases for control handover and responsibilities at all times, and specifically in the event of a real emergency, the unusual attitudes sequence and simulated forced landings
- The procedure for non-critical events, e.g. Communications failure

4.3.3. The FIE will expect the following from the applicant during the flight:

4.3.3.1. That the flight follows the briefed sequence so that the candidate is not confused by change;

4.3.3.2. That the applicant makes all flight manoeuvre requests clearly, so that there is no possibility for misunderstanding;

4.3.3.3. That the applicant uses key phrases as appropriate;

4.3.3.4. That the applicant demonstrates that they understand that their role is as an examiner and does not slip into an instructor role;

4.3.3.5. That the applicant is able to recognise when it is appropriate to intervene either verbally or physically during any part of the flight;

4.3.3.6. That the applicant ensures that safety is never compromised;

4.3.3.7. That the applicant ensures that air law is complied with at all times. E.g. VFR minima, low flying rules.

4.3.4. The FIE will expect the following from the applicant after the flight has been completed:
4.3.4.1. To be informed of the result of the GST at an appropriate time in an appropriate manner;

4.3.4.2. An accurate debrief of the candidate’s performance throughout the GST and how the performance led to the final result;

4.3.4.3. In the event of a Partial Pass or Fail to be advised of options and action to be taken before requesting a re-test;

4.3.4.4. For the actual result, the applicant to accurately complete an entry in the candidate’s personal flying logbook and on the licence application form, Form 102M, as appropriate to the result.

4.3.5. The FIE will expect the following from the applicant during the Ground Oral examination:

4.3.5.1. A complete understanding of the scope of the examination appropriate to the aircraft being used;

4.3.5.2. A clear, unambiguous, questioning technique;

4.3.5.3. A good knowledge of the subjects being examined;

4.3.5.4. An accurate assessment of the candidate’s knowledge to determine a pass or fail;

4.3.5.5. Correct recording of the result as required for a licence application.

4.4. POST ASSESSMENT

4.4.1. Following the assessment the FIE must debrief the applicant on their performance and advise whether or not the applicant will receive a recommendation from the Panel for the CAA to issue a Microlight FE authority.

4.4.2. The FIE will record their assessment on Form BMAA LIAC FE/FA.

4.4.3. In the case of a satisfactory assessment the FIE will notify the BMAA LIAC in writing using Form BMAA LIAC FE/FA and the recommendation will be recorded on the applicant’s application form. When all requirements for the particular application have been met the BMAA will forward the application to the CAA on behalf of the Microlight Panel of Examiners.

4.4.4. Following all satisfactory flight assessments a logbook entry should show the FIE as Captain and the applicant as P1S.

4.4.5. In the case of an assessment where the applicant has not shown satisfactory performance in either the flight or oral aspect of the assessment the examiner may award a Partial Pass. A pass may be awarded if the applicant successfully completes the test within 90 days, otherwise the whole assessment is considered failed.

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1 (FE Flight Assessment record)
4.4.6. Following an unsuccessful assessment or Partial Pass with a failed flight assessment the logbook entry should show the FIE as Captain and the applicant as PUT.

4.4.7. In the case of an unsatisfactory assessment the FIE will notify the BMAA LIAC in writing using Form BMAA LIAC FE/FA and the notification will be attached to the applicant’s application form, but no further action will be taken.

5. ASSESSMENT PROCEDURE FOR THE REVALIDATION OF A MICROLIGHT FE AUTHORITY OR RENEWAL OF AN AUTHORITY LAPSED BY LESS THAN 3 YEARS.

5.1. DOCUMENTATION CHECK

5.1.1. The FIE will check that the applicant holds a valid pilot’s licence, valid microlight instructor rating, valid aircraft rating and medical documentation as applicable. If any of these are not satisfactory the assessment cannot proceed further.

5.2. PRE ASSESSMENT BRIEFING

5.2.1. The FIE will brief the applicant on the following aspects of the assessment:

5.2.1.1. The applicant will be questioned on all aspects of conducting a GST and Ground Oral examination for the grant of a NPPL with a Microlight Class rating.

5.2.1.2. The applicant will be asked to describe in detail aspects of:

- A pre-GST briefing
- The flight sequence and standards of skills to be displayed
- The conduct of a post-flight debriefing and options for a result
- The conduct of the Ground Oral examination
- The completion of example documents to reflect a result

5.3. POST ASSESSMENT

5.3.1. Following the completion of the assessment the FIE will advise the applicant of the outcome.

5.3.2. If the applicant has demonstrated sufficient understanding and ability to act as a Microlight FE, the FIE will confirm that, on behalf of the Panel, a recommendation will be made to the CAA to issue the applicant with a Microlight FE authority.

5.3.3. If the FIE does not consider that the applicant has demonstrated sufficient understanding and ability to act as a Microlight FE, the FIE will inform the applicant that the Panel will not make a recommendation to the CAA for the issue of a FE authority. The FIE will advise the applicant of how they can improve their performance before applying for another assessment.

5.3.4. In the event of an unsuccessful assessment applicants may be required to undertake a flight test as for an initial assessment, rather than another oral assessment, to obtain a recommendation.
5.3.5. In the event of a failed assessment there is no appeal procedure.

5.3.6. The FIE will record their assessment on Form BMAA LIAC FE/OA².

5.3.7. In the case of a satisfactory assessment the FIE will notify the BMAA LIAC in writing using Form BMAA LIAC FE/OA and the recommendation will be recorded on the applicant's application form. When all requirements for the particular application have been met the BMAA will forward the application to the CAA on behalf of the Microlight Panel of Examiners.

5.3.8. In the case of an unsatisfactory assessment the FIE will notify the BMAA LIAC in writing using Form BMAA LIAC FE/OA and the notification will be attached to the applicant's application form, but no further action will be taken.

² (FE Oral Assessment record)
Section 10.1 FIE - FLYING INSTRUCTOR EXAMINER

1 FIE - PRIVILEGES

1.1 A FIE can sign Certificates of Experience/ Revalidation to maintain a pilot’s rating privileges, holds the Ground Examination papers for the grant of the NPPL M and conduct the General Skills Tests for the grant, revalidation and renewal of a NPPL M.

1.2 A FIE Authority contains within it a FE Authority.

1.3 FIEs also hold FIC Instructor Approval as part of their Authority.

1.4 In addition a FIE can conduct tests for the grant or renewal of a Microlight FI (R) or FI rating.

2 FIE – QUALIFYING REQUIREMENTS

2.1 1000 Instructional hours of which 600 should be on Microlights.

2.2 The Candidate shall be a Microlight FIC Instructor.

2.3 This is an Authority issued by the CAA following a successful interview with the Microlight Panel of Examiners and the CAA.

2.4 FIEs must apply to CAA to renew the authority every three years.

3 FIE - INTERVIEW

3.1 Applicants for FIE appointments who meet the qualifying requirements will be invited to attend an interview conducted by the CAA. The interview board will consist of FIEs and a member of the CAA.

3.2 In the course of the interview the applicant will be asked to discuss the following subjects:

1) The applicant’s background, experience and current instructional activities.

2) The applicant’s reasons for applying for the appointment.

3) The applicant will be asked to describe the way in which he would conduct an Instructor Test and the standard that would be required from a successful candidate. The applicant will be required to describe, in detail, the flight manoeuvres and ground aspects covered during an Instructor Test.

3.3 The candidate should demonstrate a deep understanding of all aspects of teaching student instructors together with the high level of integrity and motivation required for
this demanding appointment.

3.4 A successful candidate will participate in a period of coaching. The opportunity of observing Instructor Tests will culminate with the candidate being observed conducting an Instructor Test by an existing FIE.
Section 10.2 ROLE OF THE FLYING INSTRUCTOR EXAMINER/ PANEL EXAMINER

1. Flying Instructor Examiners (FIEs) form a group called the MICROLIGHT PANEL OF EXAMINERS. The Panel advises the CAA and BMAA on instructional and examining matters relating to microlight licensing.

2. A Panel Examiner is a FIE who is also a member of the Panel.

3. FIEs are appointed by the Civil Aviation Authority and are authorised to conduct Tests for the issue and renewal of the Flying Instructor and Assistant Flying Instructor Ratings and to sign Certificates of Test in respect of these ratings. On occasions an examiner may be called upon to conduct tests to assess an Instructor's suitability to conduct Flying Instructor Courses.

4. The authority to conduct these tests derives from The Air Navigation Order. During these tests the examiner is administering a part of the ANO in the interest of microlight aviation. The importance of thorough testing conducted to a common standard cannot be overstated. By ensuring the application of appropriate standards during instructor testing it assures not only the quality of the instructor, but also the likely quality of his students. The flying training system can be viewed as a pyramid, if proper standards are applied at the top good quality instruction and flying should flow downwards and outwards towards the base.

5. The qualities of tact, detachment and impartiality expected from the examiner are beyond the ordinary; especially when examining a friend or colleague. The examiner must always insist upon the proper standards of flying and airmanship and apply them inflexibly and without favour.

6. The terms of the examiner's authorisation do not require an examiner to conduct a test on a particular candidate, nor, unless directed by the CAA, may a candidate be required to undergo a test with a particular examiner. In the interests of standardisation, an examiner should not, save in exceptional circumstances, conduct more than two consecutive tests on any one candidate. If a request for a third test is made by the candidate, the examiner will consider whether real hardship to the candidate would arise if the request was declined. The final decision rests with the examiner.

7. A FIE conducting an FI(R) course should not conduct the initial instructor test with the student taking part in that course. This principle should also be extended to a FIE testing an instructor with whom he has been conducting refresher FIC training.

8. All tests should be conducted in accordance with the guidance given in this document.

9. Authorisation to conduct tests will normally remain valid until revoked. Should an examiner's licence or instructor rating become invalid for any reason, this authorisation shall immediately cease to be in force.

10. Each examiner is required to conduct a minimum of four tests during each and every yearly period in order to maintain his authority. An examiner who does not comply with this requirement must report the circumstances to the Chairman of the Microlight Panel of Examiners, so that continued validation of the appointment may be considered.

11. Examiners will be required to attend meetings in order to ensure continued testing of instructors to a common standard and identify areas requiring attention in flight.
training. Examiners are not normally expected to miss more than one consecutive 'Panel' meeting. Examiners will also be invited to attend interview 'boards' for the purpose of interviewing candidates for FICI and FIE appointments and approvals. Examiners are also responsible for inspecting FIC schools. Examiners are expected to make themselves available for these additional tasks.

12. The Panel of Examiners is responsible for considering applications made for the grant or renewal of Microlight Examiner Authorities and subsequently making a recommendation to the CAA for their issue. The procedure for examiner application consideration is detailed in Section 9.1 and 9.2 of this guide.
APPENDIX A

CURRENT FEES AND CHARGES AS AT 1st JANUARY 2019

All Examiner fees are payable directly to the Examiner and are recommended only. Where applicable Examiner fees will attract VAT at the standard rate.

CAA and BMAA charges are mandatory and should be sent to BMAA LIAC with the applicant’s documents.

Please note if paying by cheque. CAA cheques must be made to “Civil Aviation Authority”. BMAA Cheques may be made out to “BMAA”.

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| **INSTRUCTOR RATINGS** |     |      |          |
| Initial FI (R) Issue | £124 | £45.50 | £285 |
| Additional Control Type Test | £91 | £13.00 | £142 |
| Initial FI Issue | £91 | £45.50 | £285 |
| All Revalidations | NIL | £45.50 | £285 |

| **EXAMINER AUTHORITIES** |     |      |          |
| ‘R' Examiner | NIL | £56.50 | n/a |
| ‘GR’ Examiner | £124.50 | £56.50 | n/a |
| Flight Examiner (3 Years) | £174.00 | £56.50 | (see below *) |
| * FE Flight Assessment (Initial/Renewal) | | | £285 |
| * FE Oral Assessment (Revalidation) | | | £75 |
| FIE (3 Years) | £267.67 | £56.50 | n/a |

| **INTERVIEWS** |     |      |          |
| FIC Instructor Interview | NIL | £130.00 | n/a |

| **SCHOOL INSPECTIONS** |     |      |          |
| AFIC FTO (Initial) | £poa | NIL | £110 |
| AFIC FTO (Annual) | £poa | NIL | £110 |

| **TRAVEL** |     |      |          |
| Travel Per Mile | n/a | n/a | 45p |
| Travel Per Hour | n/a | n/a | £28.50 |