BGA DECLARED TRAINING ORGANISATION

TMG EXTENSION COURSE PROGRAMME

VJUNE2021-1

COURSE CANDIDATE DETAILS (prior to starting the course)

Course Candidate Name	
Gliding Club	
Phone number	
Email	
Confirm SPL held Note: a LAPL(S) is deemed to be an SPL	
PIC hours and launches in sailplanes excluding TMG	
PIC hours and take-offs & landings in aeroplanes excluding TMG	
PIC hours and take-offs & landings in TMGs	
Medical expiry date	
SPL privileges and certificates held, eg self-launch, FI(S), etc. Note: a LAPL(S) is deemed to be an SPL	

CONTENTS

PART 1 - INTRODUCTION AND GENERAL INFORMATION

The BGA Declared Training Organisation (DTO) exists to support the Part-SFCL compliant training needs of BGA clubs.

The BGA DTO central supporting function is based in its BGA office site (described here as the BGA DTO office) and a delivers flight training from a number of BGA club sites (described here as BGA DTO sites).

a) BGA Declared Training Organisation Representatives Statement

The DTO will comply with Commission Regulation (EU) 2018/1119.

All training aircraft used will hold a valid certificate of airworthiness and comply with Commission Regulation (EU) No1321/2014.

The DTO has developed a safety policy in accordance with DTO.GEN.210(a)(1)(ii) according to which all training activities are carried out. The safety policy is described in the BGA Safety Management System manual.

All training activities are carried out in accordance with the DTO training programme(s).

Changes to this declaration or of cessation of training activities will be notified to the Competent Authority in accordance with DTO.GEN.115(d).

Pete Stratten
BGA DTO Representative

b) Sites

BGA club sites delivering a BGA DTO course programme must be authorised and listed by the BGA DTO office.

The BGA club site must be suitable for the training being carried out as assessed by the Local Head of Training.

The course instructor(s) and student(s) must have access to a dry, warm and light briefing and rest facility.

c) Personnel

The BGA DTO representative, based at the BGA DTO office, is Mr Pete Stratten. The representative's responsibilities include;

- Ensuring the DTO has the resources necessary to remain compliant
- Promoting safety
- Maintaining timely and effective dialogue with the Competent Authority

The BGA DTO Head of Training, nominally based at the BGA DTO office, is Mr Derek Smith. The Head of Training is responsible for ensuring that the training is carried out;

- in compliance with Part-SFCL
- within the scope of the DTO declaration
- in accordance with the relevant training programme

A Local Head of Training (normally the BGA club CFI) is to be authorised and listed by the BGA DTO office. The Local Head of Training is responsible for;

- Ensuring the site complies with the BGA DTO requirements including adhering to the BGA safety management system and associated policies and procedures
- Ensuring that the training provided complies with Part-SFCL and the course programme
- Ensuring sufficient resources are available to complete the training programme

- Local authorisation of the instructors via a published list (example Appendix 3)

Instructors delivering the flight training for this course programme must hold;

- a valid Flight Instructor (Sailplanes) certificate with TMG instructing privileges. Please note that instructors whose certificate restricts them to 'Sailplane only' exercises MAY NOT deliver this course programme.

d) Aircraft

The Local Head of Training is to list all TMG types and their registrations that are used at the site for training and supply the information and any updates to the BGA DTO office. The BGA DTO office will ensure the Declaration is updated as required.

e) Annual Review and Report

A BGA DTO management meeting will take place at least annually to at least review performance and any training safety and standards issues identified by the SMS and through examiner, instructor and student feedback. The meeting will include at least the DTO Representative, DTO Head of Training and the BGA Training Standards Manager.

The BGA DTO will collate an annual report into its activities.

The annual review and activity report will be submitted to the Competent Authority.

f) Application to Carry out Training as a BGA DTO site

Having confirmed the requirements have been met, the local Head of Training is to submit a completed BGA DTO site application form (Appendix 2). DTO training can take place at the site on receipt of confirmation from the BGA office.

PART 2 – SAFETY POLICY

All training carried out at BGA club sites should adhere to the BGA Safety Management System (SMS) including incident and accident reporting requirements. The BGA office is responsible for publication of the SMS and associated requirements.

https://members.gliding.co.uk/library/safety/bga-safety-management-system-manual/

https://members.gliding.co.uk/reporting-an-occurrence/

The course programme introduces the student pilot to new safety critical information related to towing. It is important that additional threats associated with sailplane training, as identified in the flying training programme below, are fully understood by the instructor and student.

The student pilot should be encouraged to report safety related issues experienced during training.

PART 3 - THE TMG EXTENSION COURSE PROGRAMME

a) TMG Extension Training

The TMG extension course will be carried out in accordance with this programme.

b) Regulations and Publications

This programme complies with Regulation (EU) No 2020/358. References in the format 'SFCL.xxx' are from this regulation.

Reference is made to the BGA Safety Management System (available on the BGA member website)

c) Prerequisites

Pilots training for the TMG extension under this programme are required to hold an SPL (a LAPL(S) is deemed to be an SPL).

d) Course Records

Course records must be retained by the BGA DTO site throughout the course and for 3 years after course completion or the latest training flight in accordance with this programme. The records must include:

- Training programme (this document);
- Brief details of Theoretical Knowledge training, eg;
    - Books, packages or web sites used for TK self-study;
    - Any face to face TK training;
- Flight training received, and progress made by the student pilot. Including:
    - flying exercises 'ticked off' as each is done, and
    - flight details recorded in a conventional log book (paper or digital), and
    - narrative, in a few words, of each flight with advice for next training, either in the student's log book or separate record, and
- Course completion and reviews; there are four of these milestones:
    - Pre-solo Review
    - TK Training Completion
    - Pre-qualifying cross-country review
    - Course Completion
- Student's licence and medical details (convenient simply to file a copy of each)

e) Course Content

The TMG Extension course has 2 sections:

- Theoretical Knowledge (TK), detailed at Section 3A
- Flying Training, detailed at Section 3B.

f) Course Assessment

Instructors should continuously assess student progress. Completion standards give guidance for the standards expected. The Local Head of Training (LHoT) should maintain a broad overview of student progress and give advice where necessary.

g) Exercise and Course Completion

On satisfactory completion of each exercise, the student pilot and the FI(S) should certify the training record (Appendix 1).

Following successful completion of the course, a course completion certificate (Appendix 4) should be completed and certified by the Local Head of Training.

h) Radio Licence

Whilst not a requirement, the BGA recommends that TMG extension holders qualify to hold a Flight Radio Telephony Operators Licence (FRTOL)

i) Skill Test Preparation checklist

Ahead of the TMG Extension Test, the candidate should have with them:

- ID – government issued, eg driving licence
- Up to date pilot log book
- Completed training record
- Course completion certificate including recommendation for Skill Test
- Their SPL
- Their medical certificate
- A current aeronautical chart

j) Brief for New TMG Extension Holders

- A TMG Extension comes with specific privileges – see SFCL.115 and SFCL.150, and recency requirements – see SFCL.160.
- The BGA recommends that TMG Extension holders operate under the guidance of their club CFI and instructors with the aim of constant improvement.
- TMG Extension holders should ensure for themselves that they have completed appropriate differences or familiarisation training.

PART 3A – THEORETICAL KNOWLEDGE TRAINING

The student pilot should be encouraged to self-study with face to face training as needed.
Instructors should advise the student so that his/her TK keeps pace with and supports the flying training and prepares him/her for the TK elements of the Skill Test.

There are a variety of aids available to help this self-study, both hard copy and on line.

The theoretical knowledge syllabus as specified in AMC1 SFCL.150(b) should cover the revision or explanation of:

(1) Principles of flight:
- (i) operating limitations (addition TMG);
- (ii) propellers;
- (iii) flight mechanics.

(2) Operational procedures for TMG:
- (i) special operational procedures and hazards;
- (ii) emergency procedures.

(3) Flight performance and planning:
- (i) mass and balance considerations;
- (ii) loading;
- (iii) CG calculation;
- (iv) load and trim sheet;
- (v) performance of TMGs;
- (vi) flight planning for VFR flights;
- (vii) fuel planning;
- (viii) pre-flight preparation;
- (ix) ICAO flight plan;
- (x) flight monitoring and in-flight re-planning.

(4) Aircraft general knowledge:
- (i) system designs, loads, stresses, maintenance;
- (ii) airframe;
- (iii) landing gear, wheels, tyres, brakes;
- (iv) fuel system;
- (v) electrics;
- (vi) piston engines;
- (vii) propellers;
- (viii) instrument and indication systems.

(5) Navigation:
- (i) dead reckoning navigation (addition powered flying elements);
- (ii) in-flight navigation (addition powered flying elements);
- (iii) basic radio propagation theory;
- (iv) radio aids (basics);
- (v) radar (basics);
- (vi) GNSS (generally known as GPS).

PART 3B – FLYING TRAINING

(1) The numbering of exercises should be used primarily as an exercise reference list and as a broad instructional sequencing guide; therefore the demonstrations and practices need not necessarily be given in the order listed.

(2) The flying exercises should cover the revision or explanation of the following exercises.

(3) Exercise notes suggest Threat & Error Management items, issues that are either introduced by the exercise or otherwise worth highlighting. This course programme does not, cannot, list all the relevant T&EM for every circumstance.

Exercise 1: Familiarisation with the TMG
T&E: Unexpected actions by a student unfamiliar with TMG **M**: Avoid rushing anything; careful student monitoring **T&E**: Propeller hazards **M**: Brief, from the very start, to treat the propeller as live at all times.
□ (A) characteristics of the TMG; □ (B) cockpit layout; □ (C) systems; □ (D) checklists, drills and controls.
Exercise 1e: Emergency drills
T&E: Undesired operation of emergency-only controls such as canopy jettison **M:** Touch drills .. otherwise, this exercise is all about **'**M'
□ (A) action if fire on the ground and in the air; □ (B) engine cabin and electrical system fire; □ (C) systems failure; □ (D) escape drills, location and use of emergency equipment and exits.
Exercise 2: Preparation for and action after flight:
T&EM: This exercise will start with the student's very first flight and continue through to course completion. T&EM elements will be those of the associated exercises)

□ (A) NOTAM & weather check (reinforce normal gliding checks for larger operating area)
□ (B) serviceability documents;
□ (C) equipment required, maps, etc.;
□ (D) external checks;
□ (E) internal checks;
□ (F) harness and seat or rudder panel adjustments;
□ (G) starting and warm-up checks;
□ (H) power checks;
□ (I) running down system checks and switching off the engine;
□ (J) parking, security and picketing (for example tie down);
□ (K) booking out & in procedure, authorisation sheet and serviceability documents.

Exercise 3: Taxiing

T&E: Collision with people or other objects on the ground **M:** Lookout; careful speed control; ability to operate wheel brake

□ (A) pre-taxi checks;
□ (B) starting, control of speed and stopping;
□ (C) engine handling;
□ (D) control of direction and turning;
□ (E) turning in confined spaces;
□ (F) parking area procedure and precautions;
□ (G) effects of wind and use of flying controls;
□ (H) effects of ground surface;
□ (I) freedom of rudder movement;
□ (J) marshalling signals;
□ (K) instrument checks;
□ (L) air traffic control procedures (if applicable).

Exercise 3e: Emergencies: brake and steering failure

T&E: Undesired operation of emergency-only controls such as canopy jettison **M:** Touch drills
.. otherwise, this exercise is all about **'**M'

Exercise 4: Straight and level

T&E: Collision **M:** Maintain lookout as a priority over instrument indications; effective electronic conspicuity (EC) use

- (A) at normal cruising power, attaining and maintaining straight and level flight;
- (B) flight at critically high air speeds;
- (C) demonstration of inherent stability;
- (D) control in pitch, including use of trim;
- (E) lateral level, direction and balance and trim;
- (F) at selected air speeds (use of power);
- (G) during speed and configuration changes;
- (H) use of instruments for precision;
- (I) changeable pitch propeller (if appropriate)

Exercise 5: Climbing

T&E: Collision **M**: Maintain lookout as a priority over instrument indications; effective EC use

- (A) entry, maintaining the normal and max rate climb and levelling off;
- (B) levelling off at selected altitudes;
- (C) en-route climb (cruise climb);
- (D) climbing with flap down (if appropriate);
- (E) recovery to normal climb;
- (F) maximum angle of climb;
- (G) use of instruments for precision;
- (H) airbrake miss-use.

Exercise 6: Descending

T&E: Collision **M**: Maintain lookout as a priority over instrument indications; effective EC use

- (A) entry, maintaining and levelling off;
- (B) levelling off at selected altitudes;
- (C) glide, powered and cruise descent (including effect of power and air speed);
- (D) side slipping (on suitable types);

□ (E) use of instruments for precision flight;
□ (F) spoiler/ airbrake differences (as appropriate).

Exercise 7: Turning

T&E: Collision **M**: Maintain lookout as a priority over instrument indications; effective EC use

□ (A) entry and maintaining medium level turns;
□ (B) resuming straight flight;
□ (C) faults in the turn (incorrect pitch, bank and balance);
□ (D) climbing turns;
□ (E) descending turns;
□ (F) slipping turns (on suitable types);
□ (G) turns onto selected headings (gyro or magnetic) and tracks (GPS);
□ (H) use of instruments for precision.

Exercise 8a: Slow flight

T&E: Collision **M**: Maintain lookout as a priority over instrument indications; effective EC use

Note: the objective is to improve the pilot's ability to recognise inadvertent flight at critically low speeds and provide practice in maintaining the TMG in balance while returning to normal air speed.

□ (A) safety checks (HASSELL);
□ (B) introduction to slow flight;
□ (C) controlled flight down to critically slow air speed;
□ (D) application of full power with correct attitude and balance to achieve normal climb speed.

Exercise 8b: Stalling

T&E: Collision while control effectiveness is degraded **M**: Maintain lookout as a priority; HASSELL checks; effective EC use

□ (A) airmanship;
□ (B) safety checks;
□ (C) symptoms;
□ (D) recognition;

□ (E) clean stall and recovery without power and with power;
□ (F) recovery when a wing drops;
□ (G) approach to stall in the approach and in the landing configurations: with and without power, with and without airbrakes/ spoilers, recovery at the incipient stage;
□ (H) spin avoidance.

Exercise 9: Take-off and climb to downwind position

T&E: Collision **M**: Maintain lookout as a priority; listen; effective EC use

□ (A) pre-take-off checks;
□ (B) into wind take-off;
□ (C) safeguarding the nose wheel/ prop. clearance (as applicable);
□ (D) crosswind take-off;
□ (E) drills during and after take-off;
□ (F) short take-off and soft field procedure or techniques including performance calculations;
□ (G) noise abatement procedures;
□ (H) avoid wet wings;
□ (I) radio use;
□ (J) decision making: continue or reject the take off.

Exercise 10: Circuit, approach and landing

T&E: Collision **M**: Maintain lookout as a priority; listen; effective EC use

□ (A) circuit procedures, downwind and base leg;
□ (B) normal sailplane approach and landing (engine stopped or idling);
□ (C) safeguarding the nose wheel (if applicable);
□ (D) effect of wind on approach and touchdown speeds;
□ (E) use of airbrakes or spoilers and flaps (if applicable), slats;
□ (F) crosswind approach and landing;
□ (G) powered approach (followed by go-around or normal sailplane landing);
□ (H) short landing and soft field procedures or techniques;
□ (I) flapless approach and landing (if applicable);
□ (J) wheel landing (if appropriate);
□ (K) missed approach and go-around;

□ (L) noise abatement procedures;
□ (M) carb heat use (if appropriate);
□ (N) radio use.

Exercise 9/10e: Circuit emergencies

T&E: Collision; limited engine failure options **M**: Maintain lookout as a priority; effective EC use; enough height for adequate options

□ (A) abandoned take-off;
□ (B) engine failure after take-off;
□ (C) go-around for unstable approach, or mis-landing, or any other reason;
□ (D) PIO recovery
□ (E) missed approach
(BGA views go-arounds and missed approaches as routine, not emergencies).

Exercise 11: Advanced turning

T&E: Collision **M**: Maintain lookout as a priority, particularly in direction of turn; effective EC use. HASSELL checks before stalling or unusual attitudes

□ (A) steep turns (about 45 °) level at nominated speed;
□ (B) steep turns (about 45 °) gliding/ descending at nominated speed;
□ (C) stalling in the turn and recovery;
□ (D) recoveries from unusual attitudes, including spiral dives.

Exercise 12: Stopping and restarting the engine

T&E: Collision while preoccupied with engine handling. Engine damage **M**: Maintain lookout as a priority; effective EC use. Follow manufacturer's procedures – checklist recommended

□ (A) engine cooling procedures;
□ (B) switching off procedure in-flight;
□ (C) sailplane operating procedures;
□ (D) restarting procedure
□ (E) consideration of failure to start options.

Exercise 13: Forced landing without power

T&E: Collision; limited engine failure options. Transgression of noise or regulatory requirements (not a hazard) **M**: Maintain lookout as a priority; effective EC use; enough height for adequate options

- (A) forced landing procedure;
- (B) choice of landing area, provision for change of plan;
- (C) gliding distance;
- (D) descent plan;
- (E) key positions;
- (F) engine failure checks;
- (G) appropriate radio & EC use;
- (H) base leg;
- (I) final approach;
- (J) landing;
- (K) actions after landing.

Exercise 14: Precautionary landing

T&E: Collision; limited engine failure options. Transgression of noise or regulatory requirements (not a hazard) **M**: Maintain lookout as a priority; effective EC use; enough height for adequate options

- (A) full procedure away from aerodrome to break-off height;
- (B) occasions necessitating;
- (C) in-flight conditions;
- (D) landing area selection:

(a) normal aerodrome;
(b) disused aerodrome;
(c) ordinary field.

- (E) circuit and approach;
- (F) actions after landing.

Exercise 15a: Navigation
Exercise 15c: Radio navigation (basics):

T&E: Collision; airspace transgressions **M**: Maintain lookout as a priority; effective EC use, effective use of GPS moving map

In compliance with CAA policy that GPS use should be encouraged, the BGA encourages this sequence for any navigation:
Pre-flight:
Prepare headings and times for cross checking with GPS and map.
Mental rules of thumb are often adequate for this; 'wiz-wheel' use is not required.

Before start (assuming fixed GPS)
Enter route & cross check; check up to date airspace; check adequate power supply

Before take-off:
Confirm sensible indications

In-flight:
Without compromising lookout, sensible, effective use of GPS throughout, except when GPS failure being taught/ practiced
Appropriate cross checking with map and prepared headings/ times

NB – complete at least 1hr flight time of DR training

- (A) Flight planning
  - (a) weather forecast and actuals;
  - (b) map selection and preparation:
    - (1) choice of route;
    - (2) airspace structure;
    - (3) safety altitudes.
  - (c) calculations:
    - (1) magnetic headings and times en-route;
    - (2) fuel required (consumption & reserves);
    - (3) mass and balance;
    - (4) mass and performance.
  - (d) flight information:
    - (1) NOTAMs, etc.;
    - (2) radio frequencies;
    - (3) selection of alternate aerodromes.
  - (e) TMG documentation;

(f) notification of the flight:
(1) pre-flight administrative procedures;
(2) flight plan form (if required).

 (B) Departure:
(a) organisation of cockpit workload;
(b) departure procedures:
(1) altimeter settings;
(2) ATC liaison in regulated airspace (if required);
(3) setting heading procedure;
(4) noting of ETAs;
(5) effective EC use.

 (C) En-route:
(a) maintenance of altitude and heading;
(b) revisions of ETA and heading both with GPS and Dead Reckoning;
(c) log keeping;
(d) use of radio or compliance with ATC procedures;
(e) minimum weather conditions for continuation of flight;
(f) in-flight decisions;
(g) transiting controlled or regulated airspace;
(h) diversion procedures;
(i) uncertainty of position procedure;
(j) lost procedure;
(k) carb. heat use (if appropriate);
(l) fuel management
(m) turn point procedures (eg FREDA).

 (D) Arrival, aerodrome joining procedure:
(a) ATC liaison in regulated airspace;
(b) altimeter setting;
(c) entering the traffic pattern;
(d) circuit procedures;
(e) parking;
(f) security of TMG;
(g) refuelling;
(h) closing of flight plan, if appropriate;
(i) post-flight administrative procedures.

Radio navigation
 (A) Use of GNSS(GPS) or VOR/NDB;
(a) selection of waypoints;
(b) to or from indications or orientation;
(c) error messages.
 (B) Use of VHF/DF(if available):
(a) availability, AIP and frequencies;
(b) R/T procedures and ATC liaison;
(c) obtaining a QDM and homing.
 (C) Use of en-route or terminal radar (if available):
(a) availability and AIP;
(b) procedures and ATC liaison;
(c) pilot's responsibilities.
 (D) Secondary surveillance radar for conspicuity;

Exercise 15b: Navigation problems at lower levels and in reduced visibility

T&E: Collision; airspace infringement
M: Options to be considered in preference to descending or flying in reduced visibility
1. Turn back
2. Training fix
3 Practice PAN

Maintain lookout as a priority; effective EC use
Lost procedure

 (A) actions before descending;
 (B) hazards (for example obstacles and terrain);
 (C) difficulties of map reading;
 (D) effects of wind and turbulence;
 (E) vertical situational awareness (avoidance of controlled flight into terrain);
 (F) avoidance of noise sensitive areas;
 (G) joining the circuit;
 (H) bad weather circuit and landing.

PART 3C - COMPLETION STANDARDS

Throughout, the student should be able to demonstrate the ability to operate the TMG within its limitations, and

- complete all manoeuvres with smoothness and accuracy, and
- exercise good judgement and airmanship, and
- apply aeronautical knowledge and regulations as currently apply, and
- maintain control of the TMG at all times in a manner that the successful outcome of a procedure or manoeuvre in never seriously in doubt.

Pre-flight documentation, NOTAM and weather briefing
Actions after flight

Able to:

- confirm that insurance, ARC and personal medical are valid.
- obtain appropriate NOTAM and weather briefings, identify threats (if any) and propose suitable management.
- demonstrate that the airspace information on board (either hard copy or GPS database) is up to date and covers the intended operating area.
- comply with local procedures for authorisation, booking out and booking in

Mass, balance and performance calculation

Able to confirm that TMG mass, balance and performance will be within POH limits.

TMG Inspection and servicing

Able to carry out Daily Inspection in accordance with the POH and confirm that all servicing requirements have been met.

Engine starting and after starting procedures

Complete an appropriate passenger emergency procedure briefing.
Actions in accordance with POH and local procedures

Taxiing and airfield (aerodrome) procedures, pre-take-off procedures

- While giving priority to lookout, able to taxi the TMG with good speed control and actions appropriate to the operating environment.
- Demonstrate (touch drills only) correct actions for brake or steering failure
- Taxi and prepare TMG for take-off in accordance with POH.
- Assess wind and its effect on the take off.

Take-off and after take-off checks

While giving priority to lookout, including effective use of EC, take off and conduct after take-off checks in accordance with the POH and local procedures. Maintain directional control and drift correction.

Airfield departure procedures
Airfield arrival procedures
ATC liaison - compliance

While giving priority to lookout, including effective use of EC, comply with local procedures.

Straight and Level flight, with speed changes
Climbing
i Best rate of climb
ii Climbing turns
iii Levelling off
Medium (about 30^{O} bank) turns, lookout procedure and collision avoidance
Descending
i With and without power
ii Descending turns (steep gliding turns)
iii Levelling off

While giving priority to lookout, including effective use of EC, able to climb, descend, turn and fly the TMG straight and level in trim at nominated speeds and heights/ altitudes with no gross slip/skid errors.

Limits **after appropriate allowances**:

Height/ altitude	+/- 150’
Heading	+/- 10^{O}
Speed	+/- 15kt

Circuit Emergencies

While giving priority to lookout, take appropriate actions for these emergency and routine situations
(A) abandoned take-off;
(B) engine failure after take-off;
(C) go-around for unstable approach, or mis-landing, or any other reason;
(D) PIO recovery

(E) missed approach
Note: Go-arounds and missed approaches should be considered routine and pilots encouraged to fly them

Steep (about 45º bank) turns (including recognition and recovery from a spiral dive)

While giving priority to lookout, including effective use of EC, able to enter and maintain turn with about 45^{O} angle of bank through at least 360^{O} at nominated speed +/- 15kts.
Exit heading towards a nominated feature.
Avoid, recognise and recover from unusual attitudes and spiral dives

Flight at critically low airspeed (with and without flaps, if appropriate)
Stalling
i Clean stall and recover with power
ii Approach to stall descending turn with bank angle 20^{O}, approach configuration
iii Approach to stall in landing configuration (if different to approach)

While giving priority to lookout, including effective use of EC, able to:
- carry out appropriate safety checks (HASSELL)
- fly the TMG effectively and safely at low speed,
- recognise the signs of both an approaching stall and full stall in all normal configurations,
- promptly carry out appropriate recoveries as directed, with no gross loss of height.

Local area navigation

While giving priority to lookout, including effective use of EC, able to effectively use and cross check between three separate sources:
- GPS
- Local knowledge
- Map reading

Maintain awareness of orientation and local airspace structure

Stopping and restarting the engine

While giving priority to lookout, including effective use of EC, able to:
- stop and restart engine in accordance with POH;
- effectively deal with a failure to start.

Flight plan, dead reckoning and map reading
Maintenance of altitude, heading and speed

Orientation, airspace structure, timing and revision of ETAs and log keeping
Diversion to alternate aerodrome (planning and implementation)
Flight management (checks, fuel systems and carburettor icing etc)
ATC liaison - compliance

FI(S) or FE(S) to nominate a route that broadly replicates the challenges faced by a student during a cross-country flight of at least 150 km (80 NM), during which 1 full stop landing at an aerodrome different from the aerodrome of departure shall be performed;

Able to produce a plan for the route that is cross checked between GPS and a different method (mental routines or calculating device) (GPS planning may be done in the cockpit).

When airborne, while giving priority to lookout, including effective use of EC, able to:

- effectively use and cross check between three separate sources:
  - GPS, and
  - Dead Reckoning (heading, speed & time), and
  - Map reading

- when GPS not available, effectively use and cross check between Dead Reckoning (heading, speed & time), and map reading

- maintain awareness of orientation and airspace structure

- monitor timing and produce approximate revisions to ETAs

- either:
  - maintain a log on either the map or separate paper, or
  - demonstrate the ability to download and view the log from a flight logging device

- maintain appropriate flight management of:
  - en-route checks (eg FREDA)
  - fuel system and consumption
  - carburettor heating (if available)
  - any other POH requirements

- comply with appropriate ATC liaison requirements

- When being directed to an alternate airfield by the FI(S) or FE(S):
  While giving priority to lookout, including effective use of EC, able to:

- produce an approximate plan, using either mental routines or GPS, and
- implement the plan.

Navigation problems at lower levels and in reduced visibility

Able to:
- carry out adequate lookout, including effective use of EC;
- demonstrate awareness of threats/ errors and effective management to avoid them;
- effectively use and cross check between GPS, Dead Reckoning & map reading.

Radio navigation (basics)

Able to:
- use GPS while cross checking with map reading and Dead Reckoning
- depending on availability, use VHF/DF and en-route or terminal radar to cross check against GPS, map reading and Dead Reckoning
- use transponder to enhance EC

Collision Avoidance (Lookout Procedures)

- Not a separate event; integral to every aspect of flying
- Effective use of EC includes FLARM and transponder use (where fitted) throughout the flight.

Precision landing (short field landing), crosswind, if suitable conditions available
Flapless landing
Approach to landing with idle power
Touch and go

Each approach and landing:
- Assess the wind and consider its effect on the TMG,
- Speed tolerance: +10/-5 kts

Precision landing
Able to touch down close to a point nominated by the FI(S) or FE(S):
- after an approach with good speed control (any speed errors brought back within published limits smoothly and promptly), and
- with fully held off landing, or intentional wheeler landing if appropriate.

Crosswind
(Must be included in training, but part of Skill Test only if suitable conditions available)

Able to control the glider's lateral flight path and ground track, within available control authority, while conducting an otherwise normal landing in a modest cross wind.
Flapless (if applicable)
Able to land without flaps extended after an approach with adequate speed control
Idle Power (only if other approaches have not been with idle power)
Adequate speed control and achievement of landing point.
Touch and go
Normal touch down followed by normal take off.

Go around from low height

Act promptly from either a timely decision as necessary or as directed.
Transition smoothly from approach to after take-off climb, with associated checks.

Simulated engine failure after take-off

Transition promptly to approach attitude and then control speed within approach tolerance.
Decide and fly a plan
Only if time permits: carry out engine failure drills
FI(S) or FE(S) to initiate the go-around

Simulated forced landing
Simulated precautionary landing

For each:
- Carry out adequate lookout, including effective use of EC.
- Transition promptly to gliding, then control speed within normal tolerances;
- Decide and fly a plan, including correct flight path adjustments to achieve a normal circuit and approach and deal correctly with those that are too high or too low;
- Only if time permits: carry out engine failure or restarting drills.

FI(S) or FE(S) to initiate the go-around

Simulated emergencies

While giving priority to lookout, including effective use of EC, and flying the TMG, able to:
- analyse the situation
- decide and fly a plan.
- execute appropriate drills.

Abnormal and emergency procedures – oral questions

Able to demonstrate understanding of:

- threat and error management in abnormal situations
- enough knowledge of TMG and operating environment to achieve a safe outcome

PART 3D - REVIEW CERTIFICATES

Pre-solo Review □ Relevant Completion Standards met, and □ Understand relevant parts of site Ops Manual/ Handbook, and □ Understands relevant rules of the air, and □ Valid medical, and □ Over 16, and □ Parent/ guardian authorisation if under 18.	FI(S) TMG sign:	name:
	Student sign:	
	Date:	
TK Training Complete Able to achieve at least 75% in all 9 subjects.	FI(S) TMG or FI(A) sign:	name:
	Student sign:	
	Date:	
Pre-Qualifying Cross Country Review □ All Completion Standards met, and □ Understand relevant parts of site Ops Manual/ Handbook, and □ Emergencies refreshed, and □ Pre-solo review complete, and □ Student understands that authorisation for the flight must be carried during the QXC	LHoT,(or FI(S) TMG appointed to do this review) sign:	
	Student sign:	
	Date:	

Appendix 1 - Record of course theoretical knowledge and flying experience **Sheet of**

Date	No. of flights	Aircraft type	Ex no's flown or TK covered	Instructor name	Confirmed Satisfactory Student and FI Signatures

Appendix 2 – Record of course flying experience FI observations **Sheet of**

Date	Comment and FI name and signature

Appendix 3 – Example instructor authorisation list

MUCH SOARING GLIDING CLUB INSTRUCTOR AUTHORISATION LIST

The following instructors are authorised to carry out training at the Much Soaring GC BGA DTO site as listed below;

Name	Instructor Rating Held	Instruction Authorised by the Local Head of Training
Chuck Yeager	FI(S)	TMG extension training

Signature: *Amy Johnson* Date: *1st April 2019*

Name: *Amy Johnson*

Local Head of Training

Appendix 4 – BGA DTO Course Completion Certificate

I certify that (name) …….has completed the course of training for

(title)……...……on (date)……..

At (BGA DTO site name)……DTO reference……

The course consisted of……flying hours and……take-offs and landings / launches

The aircraft type(s) used during the course…..…….

I certify that (name)…….. is ready to be tested by an examiner.

Signature of Local Head of Training…… Name……

This course competition certificate should be completed and handed to the pilot who completed the course. A copy should be retained by the BGA site DTO.