BGA Advanced Gliding – Suggested Syllabus

1. Requirements

1a. General

The large variation in club fleets, locations and opportunities makes it impractible for a single syllabus for all. As a result, this syllabus is more a guide which is intentionally flexible and clubs and their pilots, including non instructors, are encouraged to take and do what they can. Many aspects of advanced gliding can and are learnt in solo aircraft and as a result the notes accompanying this syllabus are written so that this can be done. In order to simplify the requirements all 4 sections are included here. Intro to the need and difficulties, syllabus, reading or lecture notes and finally some pre-flight briefing guides with diagrams.

1b. Training Record
Flight training, including exercises flown, number of launches and flight time shall be recorded in a clear format and authenticated by the instructor in charge. A training progress record card supported by a pilot logbook is an acceptable format.
A club record of training is also published as an appendix to this syllabus.

1c. Instructors
Flight instruction may only be provided by a BGA/EASA rated gliding instructor. Coaching by non-instructors is commonplace. The associated issues should be considered very carefully.

2. Advanced Gliding Training Syllabus BGA

2a. Theoretical Knowledge.
Both the flight of gliders and the weather are simply a subject of physics. As such an appropriate level of theoretical knowledge must be demonstrated in at least the following subjects

Subject	**Detail**
2b. Aircraft Knowledge	Principles of operation of glider vario and navigation instruments Operating limitations of gliders Flying with flaps Relevant operational information described in the flight manual or other relevant documents
2c. Flight Performance & Planning	Effects of carrying additional ballast on performance and decisions on when to dump it including launching 'heavy' Lateral and longitudinal mass and balance considerations Identifying good and bad areas from a topographical map Maximum performance preparation and data knowledge
2d. Meteorology	Calculating from simple principles cloud base, thermal strength, with changing weather conditions in the absence of detailed weather forecasting
2e. Navigation	Practical aspects of visual air navigation techniques with regard to navigating via best energy lines to maintain or achieve planned track and route
2f. Operational Procedures	Sporting Code. Advantageous route planning (topography, weather, landable sites)
2g. Principles of Soaring	Principles of thermal centreing

3a. Advanced Gliding Flight Training Experience

	Objective	Specific details
1	Making the best use of spare height after a winch or aero-tow launch	Pre launch decision to make best use from launch height
2	Judging distances	Interpolating from known distances and calculating gliding range to thermals
3	To be able to interpret what the air is doing in a thermal.	Recognising the indications crossing through a thermal, vario, ASI, feel and string
4	Bubble thermals	Recognising bubble thermals by cloud activity, calculating there life and connecting with them
5	Lapse rates	Increased/decreased ROC, requirement to turn tighter in stronger thermals
6	Column thermals and stronger thermals	Recognising the development of column thermals and connecting with them
7	Cloud appreciation	Identifying strongest clouds and strongest areas from abeam and below
8	Blue days	Identifying thermal sources on a blue day and finding the thermals including wisps
9	Inversions	Climbing to the inversion and recognising it, wisps
10	Hot spots	Size. Shape, colour, slope, sun angle, wind breaks etc.
11	Thermal triggers	Ground features – physical barriers, cold barriers
12	Centreing	Different techniques
13	Cloud shadow effects	Following sun/cloud shadow boundaries
14	Types of sink	Identifying the thermal sink v cloud evaporation – sink slugs
15	Rain/storms and reverse thermals	Working on the edge of rain or snow showers
16	Streeting	Identifying the type of street and working them
17	Turning tightly	Achieving minimum radius turns
18	Atkinson's string theory	Responding to the string to centre in thermals
19	Sea breeze	Running the sea breezes
20	Dolphin	Pros and cons including anti dolphin

21	Mass or span	Theory
22	C of G	Flying at different C of G positions (fin ballast)
23	Final glides	However these are flown, nothing marginal!
24	Electronic Navigation	Electronic vario and nav aids
25	Speed to fly head/tail winds	Stable air mini task. 6km out and return
26	Fixed Turn point tasks	Turning for certificate claims (sector) and ½ km barrels
27	Enhanced turning point tasks	Practical use of enhanced TP options
28	Assigned Area tasks	Practical flexibility of good weather tasks
29	Self Tasking	Preparing your own Cross Countries
30	Pairs flying	Thorough briefings to satisfy aims.