

Planning Gliding Badge Flights from Booker.

Guidance notes.

These notes are not intended to replace cross country training, field landing checks etc. They just provide some guidance for doing (and perhaps OOing) early badge flights from Booker.

It is assumed that someone attempting a higher level flight, diploma or record would already be familiar with this information.

Early badge flights have very simple definitions and very few words are needed describe what is required. Like many gliding challenges it is very easy to fail on a seemingly unimportant technicality; or by forgetting what is required in the excitement of nearing your destination. Everybody wants you to succeed, so you should get plenty of assistance.

There is a lot of information. On the day of your attempt make sure you have a single simple task and approach in mind.

Preparation.

Make sure that you are current, during your local flying look at the fields so you are familiar with crop state, pick out fields that might be large enough to land in. Practice local tasks like flying from BF1-Booker Finish 1 to STC-Stokenchurch and back several times in the most efficient way and without busting airspace, without going in the power ATZ, staying within gliding range of Booker (20kms a lap). Record and download your flights using an IGC logger (you can optionally save these to OLC if you have an account). Practice using your nav device, use Turnpoint (TP) sectors and consider the effect of setting circles or sectors for a flight. Practice flying in the vicinity of the BGA Turnpoints BF1- Booker Finish 1, BO4 – Turville Windmill, and Rockwell End (BO5) without going in to airspace, keep a good lookout! These waypoints are very close to the London TMA.

Print the BGA Badge claim form a few days beforehand so you have an idea of what you will need to do after the flight and keep it with your kit or in the car. The flight details needed on the form will be checked by the OO with reference to the IGC file downloaded from your logger.

Your flight must be recorded by an IGC recognised logger (either PR or FR). The LX7007 in the ASW19 - **319** - incorporates an IGC Flight Recorder (FR). The club Oudies are also IGC approved FRs. You will need a spare microSD or SD card for this, often the card capacity has to be less than 32GB to work in older devices. If you want your own device other FRs are available. IGC approved FRs tend to be expensive (LXNav Nano approx. £500). A PR (Position Recorder) is a cheaper option but can only be used up to FAI Gold badges. In the UK this usually means a PR device called FlywithCE (approx. £100). However, because a PR does not have a sensitive pressure altimeter a fairly disadvantageous (100 metre) height loss penalty is applied when using a PR.

You do not need your own IGC recognised logger, but can use it if you have one. If using a club logger with default pilot name (BookerGC) the OO may need to provide a separate statement to confirm that you were the pilot.

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IGC logger Calibration. Ignore this before the flight, this can be checked after successful completion of the flight. The IGC Flight Recorder you use should have a calibration certificate that is dated less than 5 years prior to the flight or 2 months after. If the calibration certificate is out of date, then GPS altitude can optionally be used. If GPS altitude is used 100 metres (328 feet) will be added to your height loss based on GPS Altitude at release and finish fix, so finishing high, or climbing at your destination, could also save you the cost of a logger calibration!

Doing it in a Turbo !

You should discuss your IGC recording system with an OO well before your flight if you are planning to do your badge flight in a glider that has a motor.

The evening before.

If you are using a **club IGC Oudie** for the first time it may be worth signing this out the day before and making sure that it is fully charged and that you understand a little about how it is setup. Put your essential kit, maps, water, sandwiches etc in the car the evening before.

With help from the Duty Instructor, consider whether other activities may be in progress at any possible landout airfield(s). Do this the day before the flight. There will often be events or competitions that make it inappropriate to fly in to airfields or to use them as alternates.

Make sure that you can read the frequencies for your airfield options on the chart, or make a note on the chart. Make sure you know how to change frequencies in the club gliders, practice this on the ground first. Try retuning to 130.105 to listen out, then back to 126.555 during a local flight. NOTE: Do **not** let using the radio during the flight interfere with planning and safely executing your flight.

On the day.

Retrieve kit. Make sure it is going to be OK to take the glider XC. If you are rigging it from the trailer in the morning then put all the accessories and trestles back in the trailer, close the lid but **leave the rear flap open as a signal that the glider is out flying**. If the glider was in the hangar have a quick look to check that the trailer has all the bits in – don't forget if it doesn't you will be the one waiting in a field for a very long time while someone goes back for the missing bits!

NOTAMs. You should check NOTAMs for your route and discuss the significance of any that you see with the duty instructor. This can be checked the day before but should also be checked on the morning you propose to fly. Most instructors will be happy to look at this the evening before if you let them know.

If it is your first attempt, or you are **flying a club glider**, you must let the duty instructor know what you have planned; it may also help to **notify your OO** if the Duty instructor is not one!

Ensure your name and glider details are on the Booker **launchpoint log sheet** and add a comment that you are attempting a Silver/Gold Distance and the task details.

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Tasks, Declarations and Waypoint navigation.

NOTE; You can make a “GoTo” waypoint navigation entry at any time, this will not affect or change your declaration.

Making a declaration. The BGA do not require an electronic FR or PR declaration for a 50kms Silver Distance flight, but for others (that round a turnpoint) they do. This is clarified by a note on the BGA claim form. If you do, however, set your name and glider type and make a declaration this will help ensure you are associated with the flight, it will certainly not prevent your claim succeeding. There is no requirement to declare or navigate to any waypoints during a Silver 50Kms and if your declaration does include any you do not need to go to them.

Launch release location Most badge or record attempts need some pre-flight comms with the tug pilot to make life easy. Many flights will use the **Aerotow Release Point as your start point from which distances are measured**, so it is certainly of significance. The easiest option in many respects is to release overhead the airfield. It is possible to do 50k from any of the normal Booker aerotow release points, but only if you have prepared and understand how much further around your destination airfield you might need to go.

Wind Direction. Make sure you know the forecast wind direction at flying height and mark it on your chart.

Mobile phone. Don't forget your fully charged phone and the phone number of someone that will come and get you.

Choose and obtain a briefing for one route option and study your map well before flight.

Once in the air.

Tow release/Start Point. Your tow release, (for distance flights this is also the start point), will be checked by the OO in the recorded data. It is not normally necessary to do anything special to make this release point stand out, normally you will fly a little slower off tow and your climb rate will reduce with the loss of 180HP and you will probably soon circle. However, **if you release from tow whilst in a very strong climb (or in good Wave)** you may want to ensure that you turn steeply or fly out of the lift, for a few seconds, and back in to make the release point obvious.

For a distance flight, if the days operational arrangements allow, you can release overhead or close to Booker; or as close to the airfield as you can safely manage.

If you hit a great climb while you are on tow **avoid the urge to release early** unless you are sure you are within a couple of Kms of the airfield.

If you do release from tow further away from Booker, for instance over the Hambleden Valley about 6 Kms to the West of Booker you need to understand how this might affect a distance task.

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Leaving the home airfield. Once you have released from tow you can climb anywhere as high as airspace permits and set ff whenever you are ready, always consider stopping climbs a couple of hundred feet before any airspace, don't forget, the penalty for touching airspace is disqualification. If you are familiar with the local airspace you will already know where you can go to 5,000Ft, and where not.

Don't go into airspace. This includes the time where you are flying before and after the task. It is extremely easy for the OO to check this, it is an immediate fail!

Climb high after starting and before leaving the local area. If you can't get close to cloudbase, or up to the airspace, before leaving the local area perhaps it is not the best day for your attempt. Don't forget these badge flights are not generally scored for speed. If cloudbase is high, stay high on task, arrive high at your destination.

Take care when your route needs a change in track. If you are following a route that needs a change in track of more than about 30 degrees (for instance to go around airspace or to get to a landable airfield) it is easy to become disoriented and for the flow of the flight to break down a little, beware of the following, especially if you are doing this relatively low down (hint; be high).

The view of the sky, clouds and cloud shadows ahead will change when you change direction.

The relative wind component will change.

The position of the sun will change.

Your moving map will look different.

Fly around or very high over the top of any airfield ATZ that you meet en-route unless you are landing there or are confident talking to them on the radio.

Landouts.

If you have to land out before getting to your destination airfield you should be concentrating on the landout. Do not try and plan the task or the landout so that you can landout early and still claim your badge.

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Appendices.

Appendix 1. The 1% rule, understand it so that you can plan to fly a task that enables you to ignore it.

If you arrive at your destination (GPS fix) 500 Metres (1640 Ft - 1% of 50Kms) or more below your aerotow release height you will need to go a little further or climb higher, this rule is there to prevent people from towing very high at the start and then just descending in a glide for 50Kms. Of course, you can still climb very high immediately after releasing from tow and before leaving the home airfield. For first attempts you should plan for a successful flight with a height loss at your destination GPS fix of less than 500 metres and a distance that is a couple of Km over 50 so that you don't need to think at all about this rule.

Aerotow Ht above Booker Height needed **if altimeter reads zero** on arrival. Consider that **you can forget about this IF** you release from tow below 3000 Ft and arrive at your destination above 1500 feet, which doesn't seem an unreasonable plan! Arriving low just makes the sums difficult.

TABLE A Maximum barometric height losses for distances less than 100 km									
<i>km</i>	<i>ft</i>	<i>km</i>	<i>ft</i>	<i>km</i>	<i>ft</i>	<i>km</i>	<i>ft</i>	<i>km</i>	<i>ft</i>
50	1640	60	1968	70	2296	80	2624	90	2952
52	1706	62	2034	72	2362	82	2690	92	3018
54	1771	64	2099	74	2427	84	2755	94	3083
56	1837	66	2165	76	2493	86	2821	96	3149
58	1902	68	2230	78	2559	88	2887	98	3215

Appendix. Landable airfield briefing details.

Bicester.

Bicester Aerodrome Co. 01869 254841

Bicester Soaring Group. – No phone number!

<https://www.bicesteraero.com/>

You need to fly significantly beyond Bicester to get a silver distance fix.

Aerotow retrieve usually possible.

Some events may make the airfield unusable, check NOTAMS and website.

Radio 118.390

Enstone.

Land on the shorter grass runway to the south of the hard runway (opposite side from airfield buildings).

Avoid crossing from grass to tarmac to grass areas on the landing run.

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Motor glider and power movements, no gliding.

Radio 129.880

Enstone Aerodrome 01608 677208

<https://www.enstoneaerodrome.co.uk/about-the-club/>

Membury.

Membury not recommended because the landing runways now have solar panels either side, the pilot would need to accurately fly a (crosswind?) approach and landing.

Microlight and model aircraft flying on some parts of the airfield.

Paramotors (Simon) 07983 428453

Radio 120.375

Lasham.

Large, easy to spot airfield with a lot of grass areas to land on.

Can have jet airliner movements – can be checked beforehand on the day by viewing the Lasham briefing. ([Lasham on-line briefing](#).)

<https://www.youtube.com/channel/Uct9pwhi3tbmNcfgKGQ2BRIw/videos>

3500 Ft airspace around Henley blocks direct route from Booker and increases task length, however, it is possible to locally soar to 5000 ft to navigate around this. It is more of a problem if you plan to fly back to Booker.

You need to **fly 5kms beyond Lasham airfield** to get a Silver Distance logger fix.

A moving map route like BOO-Booker, HNT-Huntercombe, CAC-Candover Church.

LA5-Lasham Finish North (69Kms) would work.

A very large number of gliders operate from Lasham.

They operate a winch, do not overfly the runway.

Probably not suitable if a large competition is in progress at Lasham.

Aerotow retrieve possible.

Radio 131.030

Edgehill.

You would probably only consider Edgehill (70Kms via Bicester) if Enstone was not available, or if you were confident you could reach it.

You would be advised to land at Edgehill as it would be a significantly longer task to consider soaring back to Booker.

Not always flying on weekdays, but site generally accessible.

Mostly a glider only operation, some non-radio gliders.

Edgehill operates a winch. Do not fly over below 2500Ft AGL.

Edgehill can be difficult to find without a moving map.

Surrounding countryside is hilly, like Booker, stay high.

Land centrally on the grass runway areas and avoid crossing tarmac.

Edgehill is **ABOVE Booker- Beware altimeter in circuit.**

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Aerotow retrieve possible.

Radio – 129.980 shared gliding air ground

Appendix 5. Websites and forms.

[IGC Sporting Code for Gliding](#) although hopefully everything you need is in this document so you don't need to read it !

[BGA Claim Form](#)