

Silver Distance 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) a first 50k flight from Booker.

If you haven't already read it, you should also take a look at the document **Planning Gliding Badge Flights from Booker**.

For Silver Distance you need to fly **at least 50kms* from your aerotow release point** and from the start of your take off run at Booker. You will need to have in mind somewhere safe to land that is on track and also about 50k from Booker. One point to note here is that there is nothing you can do about your **start point and start height** for the 50k badge claim after you have released from tow.

*** Plus any allowance for 1% rule ref Appendix 1.**

There is a lot of information here (in order to provide a few examples). On the day of your attempt make sure you have a **single simple task** and approach in mind.

Tasks, Declarations and Waypoint navigation. For the Silver Distance you can set a task on any nav device with any turnpoints that you like. This can be just an approximate route to help you navigate the task, or it can be a start and finish point 50Kms or more apart that describe your 50Kms attempt. At some point, ideally, the task should take you at least 50k (measured in a straight line) from both your aerotow release point and the start of your takeoff roll (you could use the West boundary of Booker airfield, BF1-Booker Finish 1, as approximate takeoff location). If you make a declaration, on most Nav devices, the active task will be entered in to the declaration, this won't affect your 50Kms claim.

NOTE; You can make a "GoTo" waypoint navigation entry whilst you are flying, or a change in task whilst in flight, and this will not affect or change your declaration.

If you are not so comfortable using the moving map then you could draw an arc on your chart that marks, say, 55K from Booker and navigate to ensure you record a GPS point outside the arc, or you can just fly around Enstone and then land there.

Where do you go - release point, route and destination options.

Typically, from Booker, you will fly a route that allows for a landing at Enstone, Membury, Bicester or Lasham. It is also feasible to land a little further away from Booker (Edgehill, Turweston) if this is appropriate on the day.

For destinations that are within +5 Kms of 50Kms it is easy to make simple mistakes around the tow release point, or in your circuit at the destination, that knock the distance below 50Kms (see Appendix 6).

Low risk example on an easy soaring day.

Release overhead Booker airfield between 2400 and 2600 Feet. This will keep you close to your takeoff point and to your home airfield for a low stress start, it also gives the tuggie some guidance and leeway. Starting close to your takeoff location makes distance calculations simple for destinations from the South round to West and North. Towing this high makes it easy to avoid local airspace and the power circuit. The tug pilot will also know

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where this is, but if they get it slightly wrong and you need to release early then you will almost certainly be well East of the Hamble Valley.

In order to be able put the 1% rule to one side, even if you release at 2600Ft you will only need to arrive at your destination "GPS fix" 960 feet above Booker. In reality, even if it is an airfield, you should be aiming to reach this end point above 1200 Feet for a circuit (you will be well inside the 1% rule). If your target GPS fix destination is not an airfield, try and arrive at the height needed to get back to the airfield high key area. On a good day it should be easy to arrive at 2500Ft, or climb up above that near your destination.

*If an IGC approved recording device is available you are strongly recommended to use it. If you are using an uncalibrated IGC FR or a (cheapo) Position Recorder you will need to add at least 328 feet to your GPS height loss so if you have a **2600 Ft** aerotow you need to arrive at your destination GPS fix (if exactly 50 Kms away) **above 1288 Feet** (2600-1640+328).*

So if you tow to 2600 Ft or less and arrive above 1400Ft you can use a PR (FlyWithCE) or an uncalibrated FR.

See appendices for a list of route examples. **Choose and obtain a briefing for one option and study your map well before flight.**

Once in the air.

Tow release/Start Point. Your tow release, and hence 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.

Release overhead 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 did release from tow further away from Booker, for instance over the Hamble Valley about 6 Kms to the West of Booker and your task is roughly to the west then you will need to register a destination GPS logger point at least 56kms from Booker. If you glide straight in to Enstone, Membury or Lasham from this release point you may not get the silver distance. This is risky but not a problem if you have planned for it and you don't forget the plan in the excitement of getting to the destination. You can just fly 7 kms (in the right direction) beyond the destination airfield before landing.

Leaving the home airfield. Once you have released from tow you can climb anywhere as high as airspace permits, 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

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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!

Have I gone far enough, an easy way to check, if you know your gear.

An easy and obvious way to check whether you have gone far enough once you are safely soaring within sight and gliding range of your chosen destination airfield. Assuming you released close to Booker, you can use your nav device in Waypoint mode to enter a GoTo Booker (BF1) and check that you are, say 52Kms or more away.

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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.

km	ft	km	ft	km	ft	km	ft	km	ft
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 2 Sample route options from Booker.

NOTE; Some of these destinations have controlled airspace or danger areas on the direct route. It is important to choose a route or set heights that enable these areas to be safely navigated.

Option 1. An easy option to understand and execute – if you remember the plan.

This option ensures that you fly 50k BUT as these destinations are very close to the 50Kms distance you need to remember to arrive with enough height to fly safely around your destination airfield and then do a circuit. This plan would work for a flight to Enstone. Release overhead Booker airfield between 2400 and 2600 Feet, fly to Enstone via Bicester which would be a safe landing spot if you weren't progressing too well. Arrive on the North West side of Enstone airfield at 1600Ft or higher, do a circuit and land. This would guarantee a Silver Distance.

If you glide to a land out before your planned destination, and have taken a high tow, you will probably not get the badge, but this should not be a consideration!

Option 2. The old way, If you have done lots of soaring and are feeling confident.

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If you are confident of your abilities, and the weather, and you have studied the route, then simply tow to 1500 Ft or less, close to the SW corner of Booker (or Just East of Rockwell End), find a thermal, climb avoiding the airspace and power ATZ, fly to Enstone and land. You will have done a 50k within the 1% height loss rule. You do not need to worry about your arrival height because you released so low. Just don't blame the OO if you tow slightly too high and forget, or to the wrong place, or bust airspace, or you have to take a really weak 1 knot climb to 4000 ft before setting off. This choice needs good soaring skills and allows very little room for error at tow release. You will probably not be able to work out the impact of releasing higher, or in a different location, while you are in the air.

If it is a very good day, cloudbase is high and thermals reliable and you have found it easy to stay high you may be able to climb high (4,500 Ft) in the vicinity of Islip and glide over Kidlington ATZ directly to Enstone arriving at 1200Ft at Enstone, but with this plan you may face difficulties if the good climb doesn't materialise when you need it.

If you land out somewhere other than your planned destination, but more than 50K away, you might still get the badge! This should not be a consideration though.

Option 3. Turn a waypoint (From BGA list or random lat/long) just beyond your chosen airfield.

So, for example, you could **release from tow overhead Booker** at 2,600 Feet, set and follow BO4, BIE -Bicester East, DED-Deddington (min Ht 3000 ft for easy return to Bicester), BOO-Booker Airfield. You would plan to land at Bicester and only return to Booker if briefed and you have ample soaring time remaining.

You could follow a similar approach flying to the South, going around Lasham West (or Candover Church) near Lasham at about 2000 feet and then landing at Lasham.

Your target GPS fix destination is not an airfield but you should be able to arrive there with enough height to get safely to a nearby airfield circuit high key area. On a good day it should be easy to top up somewhere near your destination and if you are worried about getting low you can go directly to the airfield..

This would also be a good option if you think there is a possibility of soaring back to Booker. If you arrive at your 50Kms GPS fix with plenty of height you would have minimum distance to soar home compared to other options.

Option 4. An easy option to understand, nothing special to plan for, land at a gliding club.

Tow to 2600 Ft (or less) anywhere East of the Hambleden valley. Arrive at 1,200ft circuit Height (or higher) anywhere in the circuit at Edgehill (63Km) routing via Bicester. Easy to climb away at Booker and you will probably hit the Silver C distance requirements before you get to Edgehill, even if you get to Edgehill a little low. This would probably be an option to consider if Enstone was busy. It would also be feasible to take a higher tow at Booker. You would, however, have a significantly longer task if you were planning to return to Booker, so you should plan to land at Edgehill.

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Appendix 3. 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.

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/UCt9pwhi3tbnNcfgKGQ2BRIw/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.

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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.**

Aerotow retrieve possible.

Radio – 129.980 shared gliding air ground

Turweston.

Appendix 4. Waypoint Distances (2023 BGA List).

Waypoint or airfield.	Location	Distance from 06 takeoff run	Distance from BF1	Max safe release distance from airfield
CAC	Candover Church W of Lasham	53	53.5	2 Kms
DED	Deddington – 15Kms NW of Bicester. 10 Kms NE Enstone.	54.2	54.8	3 Kms
MEM	Membury airfield	53.3	53.7	2 Kms
ENS	Enstone airfield centre	55.3	55.9	4 Kms

The Max safe release distance is measured approximately from the airfield boundary and is to clarify what release “overhead the airfield” means. If you accidentally release further from Booker than this you will need to fly beyond the turnpoint by a similar amount.

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](#)

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Appendix 6 Example of how the best laid plans can go wrong.

Here is an extremely unlucky example. You launch to a normal Booker release spot just south of Frieth at 2000 Ft, fly to Enstone via Bicester and arrive to the South of Enstone at 3000 feet, easy peasy, loads of height and no height loss at all, talk to Enstone on the radio and agree to do a left hand circuit airbrake down and land on Westerly runway 24. Oh no, the OO says you failed for TWO reasons! You didn't realise that the tow was a little further towards Stokenchurch than normal and it was not 50K when you arrived just to the south of Enstone, you airbraked down and when you were eventually 50Kms from Booker you were on finals at 300 Ft so your height loss was too large.

Appendix 7. Flying back to Booker and the 100Kms Diploma.

Flying back to Booker.

These options would only be considered if the pilot had plenty of soaring and local navigation experience before attempting the first 50k. Each of these options adds an additional level of complexity and risk to the FAI Silver Badge requirement. You would need to brief for these options before flight if they were to be considered. The first 50Kms flight is intended to demonstrate that the pilot can cope with an XC flight, so until the 50Kms is completed it is not clear whether the pilot would be able to easily complete over 100Kms.

In some cases it may be feasible to fly back to Booker rather than plan a remote landing and retrieve. You would need to consider your tiredness, hydration and concentration on a return flight as well as wind direction, time of day, likely thermal availability and landout options near the home airfield on the route home. The option that should be primarily planned for is to land at or near your destination.

Nothing special needs to be done on any return route and it will not matter if you land out, the 50k still stands. The flight will be disqualified if you fly in to airspace though.

A further enhancement would be to declare the flight as an out and return that meets the BGA 100Kms Diploma requirements. Not everybody claims these diplomas, but they are a useful stepping stone from the 50kms flight as they introduce additional requirements. Normally the diploma is gained on a further planned cross country flight.

This could be an option if the pilot already has plenty experience using a moving map, making flight declarations and perhaps has already demonstrated good soaring and navigational skills. It could also be considered if the pilot had already made a couple of failed 50Kms attempts on poor days and the next attempt is on a very good long soaring day.

To comply with the 100Km Diploma rules you would need to **declare** and fly a **closed course** with a 1 Km Start Line and a 1Km finish line, but note that the Silver Distance rules do not change – aerotow release is always the start for a Silver Distance and your remote 50Kms fix still needs to comply with the 1% rule.

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For Example BF1-Booker Finish 1, DED-Deddington, BF1-Booker Finish 1, or BF1-Booker Finish 1, CAC-Candover Church, BF1-Booker Finish 1 would be examples of 100Km Closed courses, and if you released from tow over Booker you would also get Silver Distance. The remote turnpoint should be set as a 90 degree sector to guarantee that you go around the course.

The additional workload, complexity, and time consumption of making an accurate declaration, going through a Start/Finish line and successfully rounding a remote turnpoint (for the Silver Badge your 50Kms fix can be anywhere) is easy to underestimate. This is a much more challenging flight, especially when the pilot is coping with all the other demands of doing a first 50Kms flight.

Silver distance can be completed as part of any other soaring performance, so you can also claim for silver distance if you declare a 100Km triangle like BIC DCB (or do a club or competition task without assistance) **AND** at one of the TPs you glide a bit further than you declared such that you reach a fix that is 50Kms from your launch and release positions.

You can claim for multiple awards on the same claim form with one payment.