

RAF BRIZE NORTON CONTROL ZONE



A guide to transiting through and around Controlled Airspace

**This is an information guide produced by RAF Brize Norton Air Traffic Control Squadron
and should not be used for navigational purposes.**

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RAF BRIZE NORTON CONTROL ZONE (CTR)

What is the Brize Norton Control Zone?

RAF Brize Norton is surrounded by an area of Class D airspace called a Control Zone or CTR. The Control Zone is shown in Figure 1 and extends from ground level up to 3500ft on the RAF Brize Norton QNH. Further diagrams of this can be found in most up-to-date Air Publications. The RAF Brize Norton Control Zone is not to be confused with the Oxford Area of Intense Aerial Activity (Oxford AIAA); the former is controlled airspace which requires a clearance to enter, whereas the latter is an area of airspace within which higher traffic densities may be experienced. It is also important to note that RAF Brize Norton is surrounded by a Control Zone rather than a MATZ.

Why is it there?

The Brize Norton Control Zone exists to allow the protection of large, un-maneuvrable aircraft during the critical stages of recovery and departure. The most common aircraft recovering and departing RAF Brize Norton are as follows;

- A330 'Voyager'
- A400 'Atlas'
- C-17 'Globemaster'
- C130 'Hercules'
- Large civilian airliners

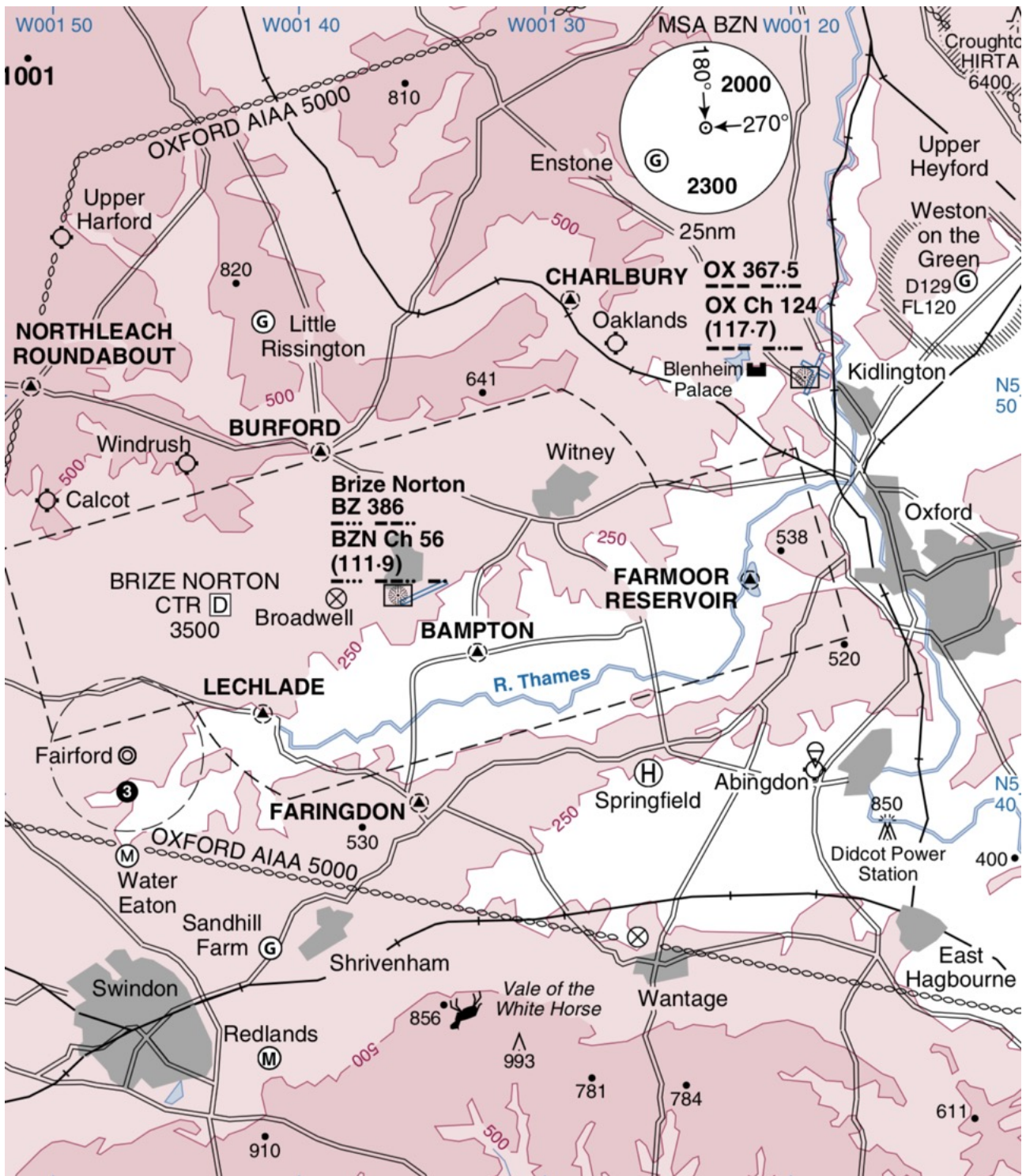
Alongside these large aircraft there is also a large variety of smaller aircraft which regularly depart from and arrive at RAF Brize Norton on a wide range of tasks. Brize Norton can get busy at times and it is not often easy to predict when these times may be; unlike most large civilian airports, scheduled A to B flights make a small proportion of the daily airfield movements at Brize Norton, with the larger proportion being taken by training and operational flights of various natures.

Do I need to speak to anyone to transit the Control Zone?

Yes, the Control Zone is Class D Airspace. If you require a Control Zone transit you **must** call Brize Zone on frequency **119.0** to obtain permission to enter the Class D Airspace. An ideal time to call Brize Zone is approximately **10 to 15 miles before entry** into the Control Zone. The frequency and the controller can be busy at times so you may be asked to standby; it is important to note that a standby instruction does not constitute a clearance to enter the Control Zone nor does being in contact with the Zone controller imply a clearance. The controller will get back to you as soon as possible and when asked to do so, pass your flight details as normal.

If you do not wish to enter the RAF Brize Norton Control Zone you may call Brize Radar on frequency 124.275 where you will be provided with a Lower Airspace Radar Service (LARS). This LARS is subject to availability within the published hours (0900-1700hrs local time) and the LARS controller's capacity.

Figure 1 The RAF Brize Norton Control Zone as shown in the UK MIL AIP



How do I transit the Class D airspace?

When you request to transit the RAF Brize Norton Control Zone you should pass your details when requested to do so by the controller which should include specifying whether you require a VFR or an IFR Control Zone transit. This is important information that must be given for the controller to enable your transit.

a. Visual Flight Rules (VFR) Zone transits:

Under VFR you will be given a Control Zone transit and instructed to maintain visual meteorological conditions (VMC) when entering the Control Zone. If the weather does not permit you to maintain VMC you must inform the controller and you will be given a revised clearance, usually in the form of a descent to remain beneath the cloud. You may have to turn around and exit the Control Zone if unable to maintain VMC within.

Inside the Control Zone you will be passed traffic information on other aircraft of which may be flying either VFR or IFR (Instrument Flight Rules). You may be asked to "report visual" with the other aircraft and once you have visual contact you will be expected to maintain visual separation, usually to sequence behind that traffic.

b. Instrument Flight Rules (IFR) Zone transits:

Under IFR, Control Zone transits will be separated from all other IFR traffic by 1000ft vertically or 3nm laterally. You will be given radar derived traffic information and VFR traffic within the Control Zone is expected to see and avoid you.

c. Clearance to transit:

After passing your details the controller will at some point give you your clearance to enter the Brize Norton Control Zone, which you are obliged to read back. This may include an altitude and a routing/direction instruction, often given via selected Visual Reporting Points (VRPs), which you **MUST** adhere to whilst inside the Control Zone. If the traffic state within the CTR changes during your transit you may be given a revised clearance. If so you are to adhere to this new clearance. If you are in any doubt, ask the controller to confirm the details of your clearance.

What happens when I enter the Control Zone?

On entering the RAF Brize Norton Control Zone you will be informed that you are entering controlled airspace and the type of service will be changed to Radar Control Service. If you are transiting VFR you will also be instructed to remain VMC.

What happens when I leave the Control Zone?

You will be informed when you are leaving Control Zone and the service you were under before entering the Control Zone will be re-applied, i.e. Deconfliction Service, Traffic Service, or Basic Service. If your flight continues away from the RAF Brize Norton Control Zone and the controller is busy, you will be free-called to an en-route frequency.

What are the most commonly used reporting points at Brize Norton?

These are the most commonly used reporting points by RAF Brize Norton controllers. Some of these reporting sites are shown in Figure 1. Controllers are also familiar with many more landing sites, villages and towns in the local area.

Reporting Point	Bearing and Range from RAF Brize Norton
Burford VRP	334° 3.8nm
Little Rissington Airfield	333° 7.9nm
Northleach Roundabout VRP	303° 10.6nm
RAF Fairford	246° 8.6nm
South Cerney Airfield	258° 13.1nm
Kemble Airfield	258° 18.1nm
Lechlade VRP	232° 5.2nm
Faringdon VRP	184° 5.8nm
Bampton VRP	142° 2.2nm
Abingdon Airfield	116° 11.2nm
Farmoor Reservoir VRP	093° 8.6nm
London Oxford Airport	067° 11.2nm
RAF Weston-on-the-Green	065° 15.7nm
Upper Heyford Disused Airfield	052° 16.4nm
Enstone Airfield	032° 12.1nm
Charlbury VRP	021° 11.2nm

Are there specific routings that I can expect to be given?

Yes, RAF Brize Norton has several standard routes to ensure separation of aircraft. RAF Brize Norton procedures dictate that the Zone controller has to coordinate an altitude and routing with the RAF Brize Norton Airspace Manager (Brize Approach) for each aircraft that requires entry into the Control Zone. Wherever possible, the controllers will endeavour to facilitate Control Zone transits with as little restriction or routing changes as possible. This can be a difficult task when one or both parties are busy. In order to cut down on the amount of liaison required between controllers, a standing agreement is in place where the Zone controller can authorise a Control Zone transit with no direct coordination with the Brize Approach controller under the following circumstances:

a. “Whisky 8 Echo”

On this profile you will be told to squawk 3706 and transit **no closer than 8 miles** to the east or west of RAF Brize Norton Airfield and **not above 1800'** on the RAF Brize Norton QNH. This routing is located directly beneath the approach and climb out lanes of our only runway (07/25). By imposing these routings, vertical separation from inbound and outbound aircraft on the extended centreline is maintained. It is likely that, whilst transiting the Control Zone on either of these routes, pilots may see aircraft 500' above as these aircraft intercept the final approach tracks to Brize Norton.

These routings will take you over some VRPs, depending on whether you are transiting east or west of the airfield. A good marker for transiting 8 miles to the west of RAF Brize Norton is to fly between the overhead of RAF Fairford and the Northleach Roundabout VRP. To transit 8 miles to the east of RAF Brize Norton, a good marker is to fly a route between the eastern edge Farmoor Reservoir VRP and Charlbury VRP.

b. Not above 1300' QNH through the overhead.

If you are transiting low-level and close to Brize Norton Airfield you may be asked to re-route through the RAF Brize Norton overhead to deconflict with instrument traffic. This will be usually to transit in a north/south direction via Burford and Faringdon VRPs on a squawk of 3707 and **not above 1300'** on the RAF Brize Norton QNH. On this transit you will be passed to the RAF Brize Norton Tower controller if there is anything to affect your transit in the visual circuit at RAF Brize Norton.

Additionally, the following 'standard transits' are generally easier to coordinate between controllers and may lead to less delay between requesting and obtaining clearance as well as a lower likelihood of a change to routing or altitude:

c. Maintaining 3300' QNH

The RAF Brize Norton radar pattern is frequently busy at and below 2800' QNH with large multi-engine aircraft. This can restrict some Control Zone transits so you are most likely to receive a transit in your chosen direction at 3300' or above on the RAF Brize Norton QNH.

d. 2300' QNH, 1 mile in the approach lane

This route is designed to separate traffic transiting the Control Zone from aircraft on short finals inbound to RAF Brize Norton as well as departing traffic. It is extremely important to fly 1nm from the runway threshold in the approach lane. Flying too far away may cause conflict with inbound aircraft and flying too close may cause conflict with aircraft should the aircraft execute a Missed Approach Procedure or carry out an overshoot from their approach. You may be given radar vectors from the controller to facilitate an accurate crossing.

VRPs Explained

Controllers may ask you to report passing various points along your route. If you are given specific routing instructions, the controller will endeavour to make your route as expeditious as possible and will try to keep your track as close as possible to your original route.

Your pre-flight planning will hopefully highlight towns and villages that you will over-fly and therefore you should not be surprised by any places the controller may ask you to report. The following descriptions and photographs should help you to locate and identify Reporting Points in and around the RAF Brize Norton Control Zone.

Burford VRP. This village is located on the northern edge of the RAF Brize Norton Control Zone and can be identified by its long and wide high street running north/south through the middle. There is a church at the northern edge of the village and a golf course to the south. This photograph looks south towards RAF Brize Norton.



Little Rissington Airfield. This is an airfield usually active with winch launched gliding. It can also be active at anytime with parachuting so it is advisable to enquire whether this airfield is active before over flight.



Northleach Roundabout VRP. This VRP is easily located by finding where the A429 from Stow-on-the-Wold to Cirencester running north/south intersects with the A40 running east/west from Oxford to Cheltenham. The roundabout is situated to the north west of Northleach town. This photograph looks south towards Cirencester.



RAF Fairford. This airfield has one of the longest runways in the country. It is easily identifiable by the large number of concrete hard standings, American style touchdown zone markings and distinctive apron layout to the south of the runway. This photograph looks west towards South Cerney.



South Cerney Airfield. South Cerney is occasionally used by Hercules to practise airborne parachute delivery of stores and equipment. This activity is generally subject to a NOTAM and will involve Hercules aircraft operating low level (usually 1500' and below) within 5 miles of the airfield. This airfield is located west of the A419 from Cirencester to Swindon and this photograph looks south.



Kemble Airfield. This airfield is mainly used by private pilots and is most easily identified by the number of retired airliners that are parked around the airfield as well as the large two-tone runway. This photograph looks north.



Lechlade VRP. This VRP is located within the RAF Brize Norton Control Zone and can be identified by its location next to the river Thames and close to the Cotswold Water Park, a series of lakes to the west of the town. This photograph looks west towards RAF Fairford.



Faringdon VRP. This VRP is 1nm south of the Brize Norton Control Zone and is located on the A420 from Oxford to Swindon. There is a line of 5 wind turbines a few miles to the west of the town, just visible in the top left corner of this picture. This picture looks west.



Bampton VRP. This VRP is a small village located 2nm south of the RW25 threshold at RAF Brize Norton. This photograph looks north west towards RAF Brize Norton.



Abingdon Airfield. This airfield is mainly used as a training area for rotary traffic from RAF Benson and can be active up to 2500' on the Cotswold QNH. This photograph looks south towards Didcot Power Station.



Farmoor Reservoir VRP. This VRP is an ideal marker when requested to route 8 miles to the east of the RAF Brize Norton overhead. When requested to route 8 miles east via Farmoor reservoir you are required to route over the eastern edge of the reservoir. Overhead or west of the reservoir is inside 8 miles from the RAF Brize Norton overhead. This is what you would see when flying towards the reservoir in a northerly direction.



London Oxford Airport. This airfield is extremely busy with both light aircraft and business jets and can have multiple aircraft holding in the overhead up to FL80. It is advisable to speak to Oxford Approach if you require to transit through or above the Oxford ATZ or through the busy instrument approach path to Oxford's runway 19. This photograph looks towards the south west.



RAF Weston-on-the-Green. This airfield is located within D129 Danger Area and is active, on a daily basis, with military parachuting up to FL120. It is **mandatory** to avoid the danger area when it is notified as active. This photograph looks down the M40 towards the southeast.



Upper Heyford Disused Airfield. This is a large disused USAF base located 2nm west of J10 of the M40. It can usually be identified by the vehicles now stored on the old manoeuvring areas to the south of the runway as well as the distinctive large number of hardened aircraft shelters to the north of the runway. This photograph looks northeast towards the aerals of RAF Croughton.



Enstone Airfield. This airfield can be identified by its large southeast to northwest asphalt runway. This photograph looks northwest towards the Cotswolds.



Charlbury VRP. This VRP is located 3nm northeast of the Brize Norton Control Zone. The village lies on the River Evenlode and has a railway line running through the south-eastern edge. It is identifiable by its location half a mile east of a large manor house. This photograph looks east, over the manor house, towards RAF Weston-on-the-Green.



RAF Brize Norton. RAF Brize Norton can be identified by its close proximity to the town of Carterton as well as its large apron to the northeast of the airfield. This photograph looks north towards Carterton.



Hints and tips for transiting close to or inside Restricted or Controlled Airspace

1. Check NOTAMs on the AIS website before flying and learn to use an efficient method like 'narrow route brief' features if possible. In any case, double check on any temporary airspace restrictions using the free phone number 0500 354802.
2. If you plan to route through controlled airspace, have a back up plan to avoid it if necessary. Make a decision checkpoint on where to take this avoidance route if a clearance is not possible – it is much easier to route around a block of airspace from a few miles away rather than to divert successfully when against the boundary.
3. If you do have to fly very close to a boundary, consider calling ATC responsible for that airspace or a nearby LARS unit. Even when you are totally accurate, you will be a minor distraction to a busy controller who is not sure exactly what you are doing.
4. Workload rises rapidly in less than ideal weather – and so do infringements. If the weather starts to deteriorate, consider your options early and if necessary divert or turn back in good time.
5. Check the links on www.flyontrack.co.uk which has airspace guides written by local ATC for most of the CTRs in the UK giving tips, photos and preferred routings.
6. Airspace infringements happen in good weather too, especially with a strong 'across track' wind blowing towards a controlled airspace boundary. It does not take much loss of concentration while you admire the wonders of flying in good weather to accidentally drift over the line.
7. Beware of GPS; it is a great navigational tool but pressing GOTO or NRST and simply following the line can lead you into a whole world of trouble if the track line goes straight through controlled airspace and you fail to notice.
8. The instruction to 'Standby' means just that; it is not an ATC clearance or even a precursor to one. Even if given a squawk or any other sort of service, this does not mean you can enter controlled airspace. Only cross the airspace boundary if the controller issues a specific clearance to do so, otherwise consider your plan 'B'.
9. If you want to transit controlled airspace think about what you need to ask in advance and call the appropriate ATC unit at around 10 nautical miles or 5 minutes flying time from the boundary. This gives the controller time to plan ahead. Think about your routing and the active runway alignment. You are much more likely to get a crossing approved perpendicular to the runway than along it.
10. Be aware that ATC might be busy when you call, even if you hear no-one. Just because the frequency does not sound busy may not mean that the controller is not tied up on another frequency or a landline.
11. Think before you press the transmit switch. Using the correct radio phraseology helps controllers to help you – and sounds more professional (you are much more likely to get a crossing if you sound as if you know what you are doing). A free knee board insert is available from the CAA or Flyontrack which will help you form any request for a zone crossing by giving you a template to slot your words into.
12. Your route through controlled airspace may appear simple on your chart, but be prepared for a clearance that does not exactly match your planned route. Tell the controller the moment anything is not clear, or if you are unsure of exactly where you are, even if not planning to cross controlled airspace, do not delay in calling ATC if uncertain of your position. Overcoming your embarrassment might prevent an infringement, which may in turn prevent an airprox (or worse).

13. If you have a transponder with mode 'C', use the ALT (altitude reporting) setting at all times in flight unless instructed otherwise by an ATC unit. Do not fly with the transponder set only to 'ON' as ATC will be unable to see if you have other traffic at the same level as you.

14. Don't forget that ATC is there to help (no, really they are) so do not be afraid to talk to them for a service.

If you require any further information regarding transits in or around the Brize Norton Control Zone you can contact RAF Brize Norton Air Traffic Control Squadron on telephone number 01993 897785 or 01993 845123. This number will connect you directly to the Air Traffic Control who will be happy to discuss any questions that you may have.