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Date: 13 March 2024

Dear Stakeholder,

AIRSPACE CHANGE PROPOSAL - ACP-2023-033[1]

CAP 1616 DESIGN PRINCIPLES – STAKEHOLDER ENGAGEMENT

Oxford Aviation Services Limited (OASL), the operator of London Oxford Airport proposes to modernise its air navigation procedures and associated infrastructure. To progress this, we are required to commence a formal Airspace Change Proposal (ACP) process which is regulated and overseen by the United Kingdom (UK) Civil Aviation Authority (CAA).

The purpose of this document is to advise you of an important initial step in our ACP, explained in more detail below. A Glossary is at Annex A and an abstract of our Statement of Need is at Annex B. Please study its contents and respond if you wish. We welcome all feedback as this will help us to ensure that we take everyone's points of view into account as we develop potential solutions to the issues we have set out in this document.

We are looking to consult with stakeholders in the area within the diagram to the right, predominantly within the yellow area which is approximately 20 miles from the airport. In addition, consultation will take place with other aviation stakeholders in a wider area.

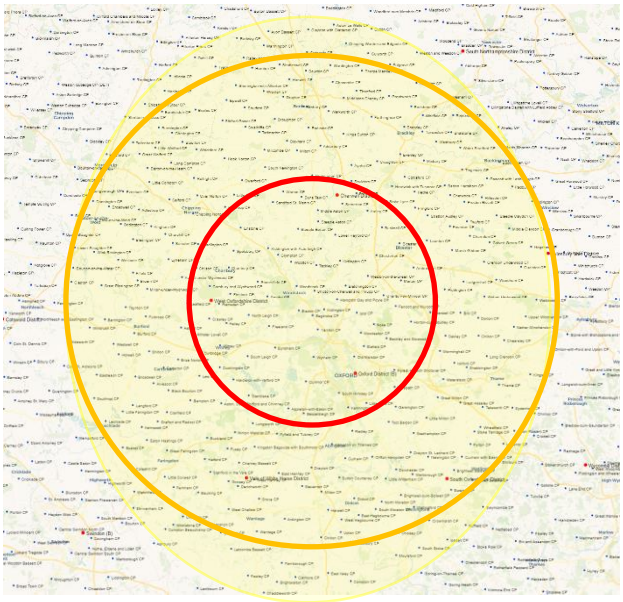


Figure 1 Main Consultation Area (the Red Ring is a 10-mile radius, and the Amber Ring is a 20-mile radius).

If now, or at any point, you no longer consider yourself a Stakeholder in this change process, please advise us. If you can identify someone who has taken over that role or would have an interest, please kindly forward this document with a request that they identify themselves to, us, the Airspace Change Sponsor.

[1] Link to CAA Portal

Introduction

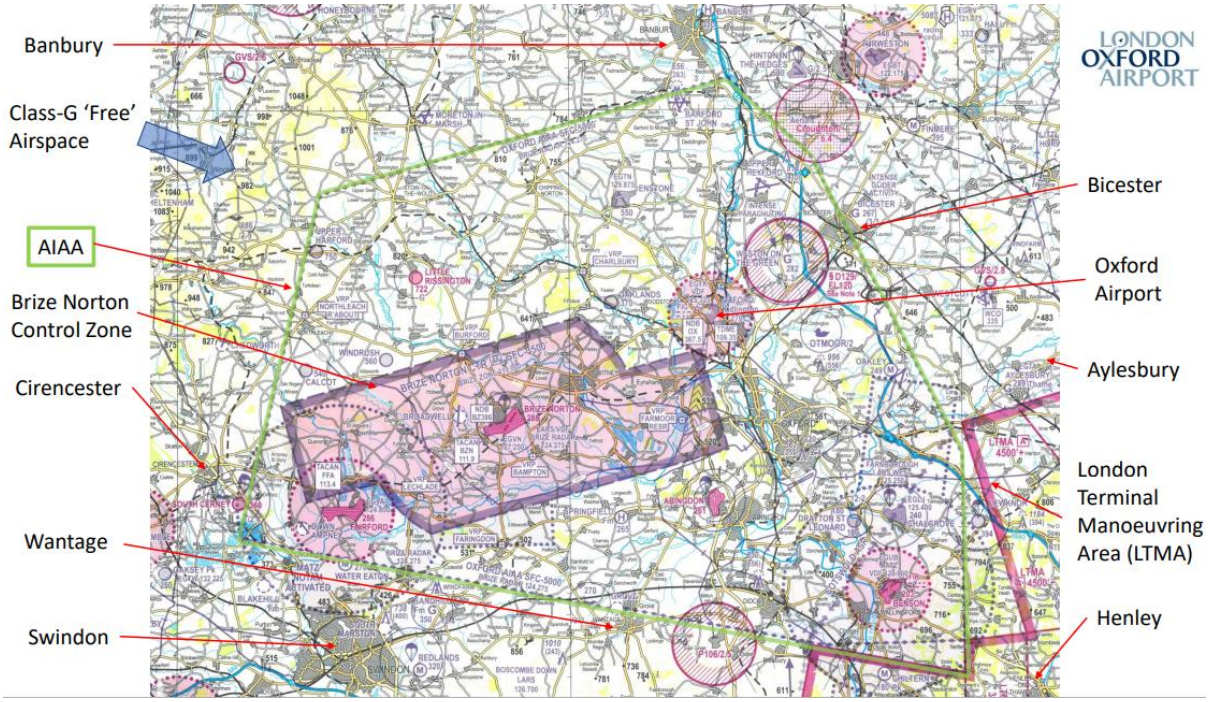
OASL operates London Oxford Airport.

London Oxford Airport (OXF/EGTK - Kidlington) is the primary regional and business aviation airport in the Thames Valley area and is the only civilian airport operating with Radar Surveillance between the larger airports of London Heathrow and Birmingham. A history of the airport can be found here: History of the Airport.

London Oxford Airport is in the heart of one of Europe's fastest growing regions. The airport lies midway between the capital and the UK industrial heartland of the Midlands. The businesses based at the airport offer ad-hoc air charter, air taxis, the sale of aircraft and helicopters, their support, management, modification, and maintenance.

Current-Day Scenario

London Oxford Airport owns and operates no aircraft itself, but plays host to pilot training schools, aircraft maintenance companies, business aircraft and air taxi operators, with aircraft from two seats to 150 seats. In essence the airport provides facilities, a runway and air traffic services during its opening hours. The airport is open from 06:30 to 22:30 Local Time, seven days a week, and can operate between 06:00 to midnight Local Time where an opening extension has been agreed. Under a Section 106 of the Town and Country Planning Act 1990 agreement, the airport may not open between midnight and 05:59 Local Time for planned movements, see extract from the Section 106 at Annex C. Since 2012, there have been 468 different aircraft types visiting London Oxford Airport. Noise abatement procedures can be found at the following link: Noise Abatement Procedures. The local airspace configuration and some of the other airfield locations are indicated in the diagram below:



Owing to the proximity of Royal Air Force (RAF) Brize Norton to London Oxford Airport, there is an operational agreement in place allowing London Oxford Airport traffic to enter the RAF

Brize Norton Control Zone for the purpose of arrivals to Runway 01 and, where necessary, for departures from Runway 19. RAF Brize Norton and OASL work in close cooperation with each other in order to manage access to the airspace effectively.

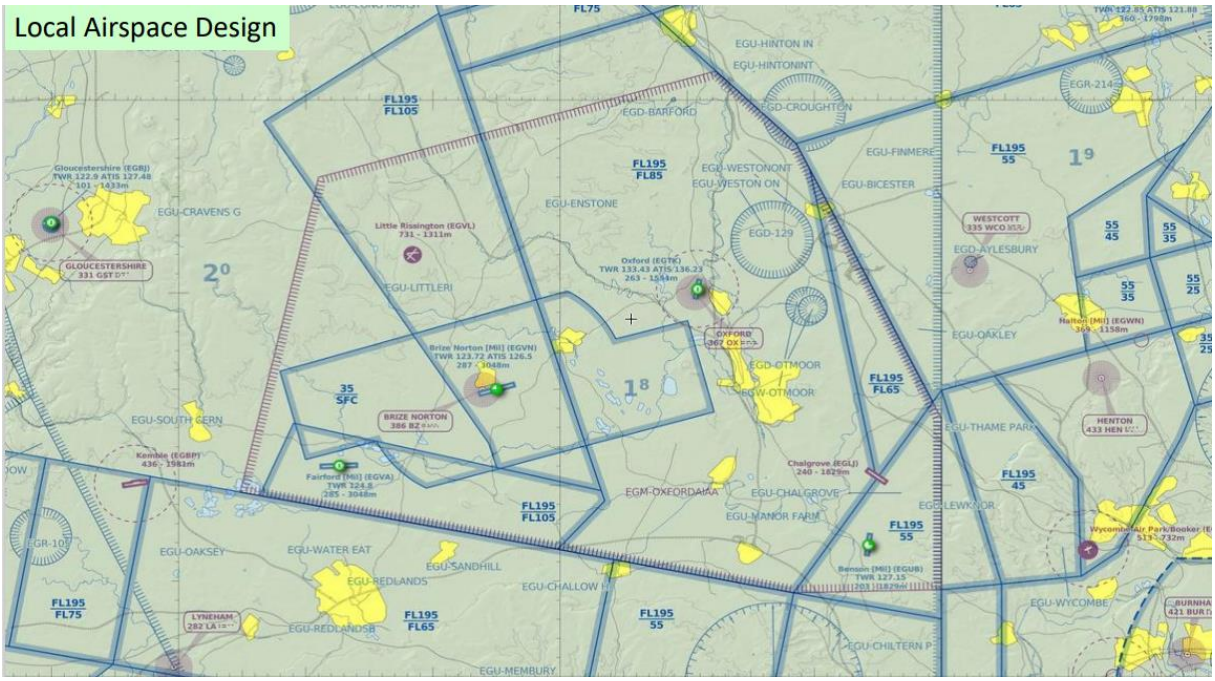
CAP1616 requires the following information to be included as part of the 'current-day' scenario:

- **Airspace Design:** Airspace within the UK is based on an ICAO classification system, see Annex D. London Oxford Airport lies within uncontrolled Class G airspace, where aircraft are not subject to mandatory compliance with air traffic control (ATC) instructions, aircraft can enter, leave, and transit the airspace without ATC permission. Those aircraft under a service agree to follow a set of flight rules.

    - **Current Structures.**

        - **Aerodrome Traffic Zone (ATZ).** London Oxford Airport has a Class G ATZ of radius 2 nautical miles (NM), centred at 515013N 0011912W on the longest notified runway (01/19) with an upper limit of 2000ft above ground level (AGL) and a lower limit of the surface. All aircraft require the permission of OASL to enter during the airport's opening hours. This airspace structure is currently the only airspace structure the airport manages other than an Unmanned Aircraft Systems (UAS) Flight Restriction Zone (FRZ) (EGRU117A OXFORD /EGRU117B OXFORD Runway 01/EGRU117C OXFORD Runway 19). The shape of FRZ is constructed by using the airfield's existing ATZ and two Runway Protection Zones with a shape five kilometres by one kilometre starting from the point known as the 'threshold' at the end of each of the airfield's runways. Both zones extend upwards to a height of 2,000 feet above the airfield. An Aerodromes FRZ and RPZ(s) are contiguous irrespective of how mapping tools may portray them. It is illegal to fly any UAS (also known as a drone) at any time within these restricted zones unless you have permission from air traffic control at the airport or, if air traffic control is not operational, from the airport itself (the UK Integrated Aeronautical Information Package (IAIP) Section ENR 1.1 contains information for UAS operators and aerodromes in relation to requesting and granting permission for any unmanned aircraft flight within an FRZ/RPZ).

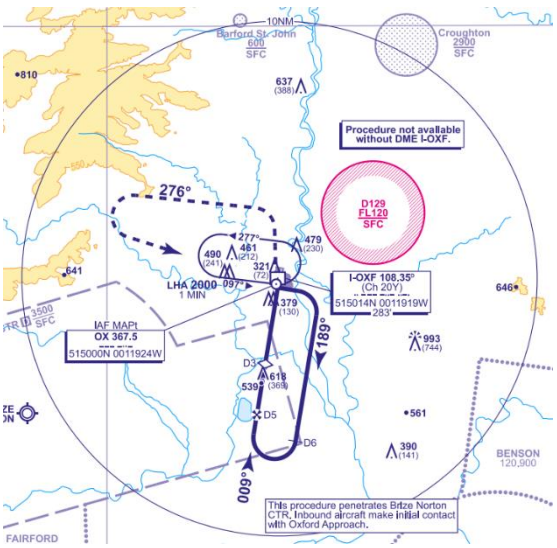
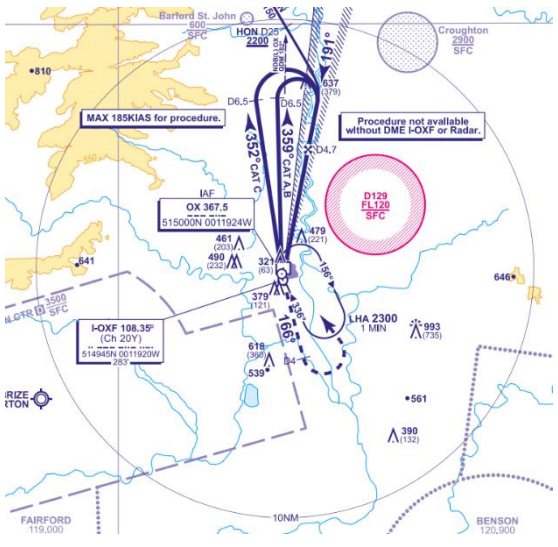
        - **Other Airspace Structures.** There are other airspace structures in the vicinity of London Oxford Airport that are not the responsibility of the airport; these include RAF Brize Norton Control Zone (Class D), D129 Weston on the Green (Parachuting Area and a gliding site at weekends when D129 is not active), RAF Benson Military Air Traffic Zone, Hinton-in-the Hedges (a Parachuting area), and Little Rissington ATZ. There are also smaller airfields that do not have any associated airspace such as Bicester, Enstone, and Turweston. Activity in the locations within this paragraph can influence the routings of aircraft; some pilots do not wish to contact the operating authority and would sooner route around these airspace structures rather than request a transit through this airspace.



In addition, NATS En Route operates within controlled airspace that lies above London Oxford Airport which is described later in this document.

- **Routes.** There are no defined routes from/to London Oxford Airport other than the IAPs that are published on the AIP Website. The London Oxford Airport's circuit patten is described below and can be found here: [Circuit Pattern]

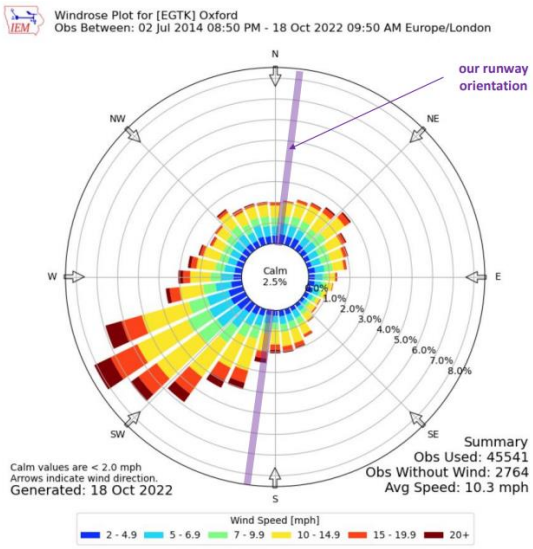
- **Instrument Flight Procedures.** The Airport has Instrument Approaches to both runways, an Instrument Landing System (ILS) and Non-Directional Beacon (NDB) to Runway 19 and an NDB only approach to Runway 01. Two of the Instrument Approach Charts (IAC) are depicted below:

Oxford NDB(L) RWY01 IAC	Oxford ILS/DME/NDB(L) RWY19 IAC
	

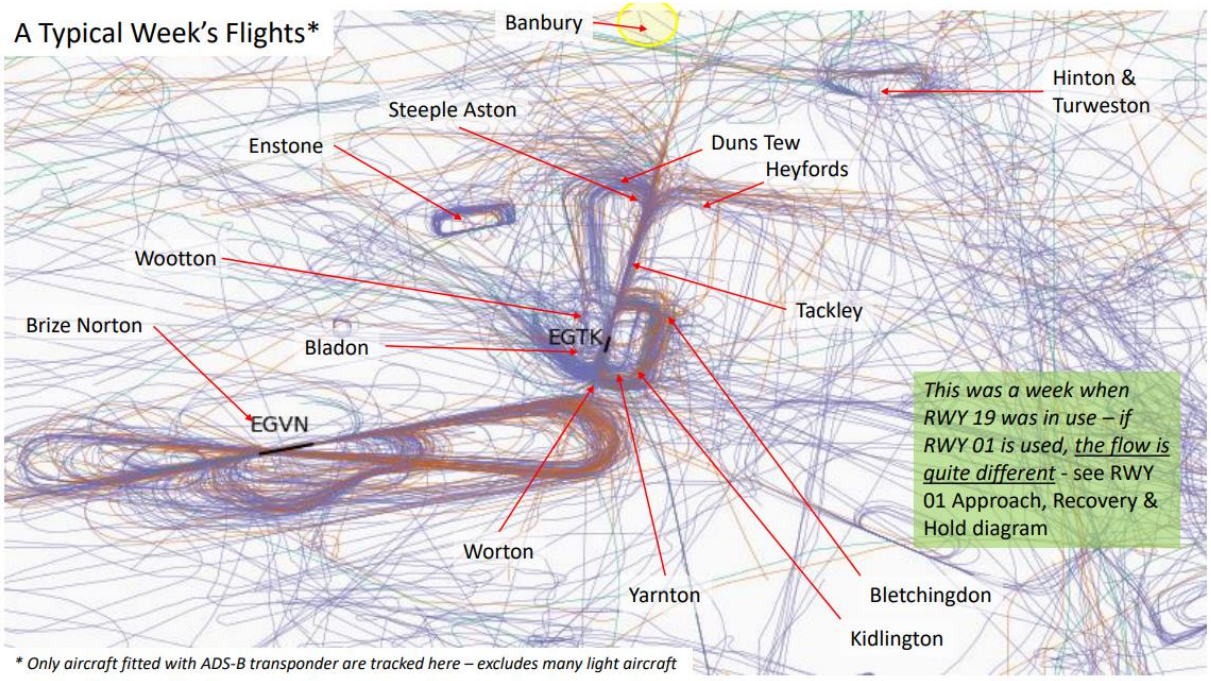
During the published hours of radar (07:30 to 20:00 Local Time), most aircraft are sequenced by our air traffic control officers using heading and level changes utilising UK Flight Information Services to establish on the final approach track on a stabilised approach between 6-8 NMs from the start of the runway in use; these tend to be random tracks based on where the aircraft is arriving from, there are no Standard Arrival Routes (STARS) or Standard Instrument Departures (SIDS). Some training aircraft will undertake the full procedures depicted above during radar hours and these procedures are used outside of radar hours when the Unit operates without radar. There is an instrument hold in the overhead of London Oxford Airport; the lowest holding level at the 'OX' radio beacon in either holding pattern for Runway 01 or Runway 19 is 3500' above sea level with other London Oxford Airport aircraft restricted, when necessary, to 2,500ft above sea level beneath the hold. Many modern aircraft are no longer required to be equipped with the automatic direction finder necessary to carry out NDB approaches as this is older technology. Therefore, some aircraft are not equipped to conduct an Instrument Approach to Runway 01 which typically is used about 30% of the time due to prevailing winds. In addition, fewer pilots are in current practice to fly NDB approaches. The trend has been for more pilots to accept an ILS approach to Runway 19 despite the possibility of a tailwind. Although aircraft can still land safely it brings added workload on the flightdeck and the possibility of reduced margins in terms of the landing distance required. It is, therefore, normally considered best practice to arrange to land into the prevailing wind. If an aircraft is not able to complete and approach once established on the final approach track owing to weather and/or pilot or controller intervention, the pilot would normally initiate a missed approach as detailed within the IACs. This would normally involve a climb to 2,500ft and a turn back into the hold unless bespoke missed approach instructions have been previously provided by air traffic control.

- **Flight Behaviours/Patterns.** London Oxford Airport is located within an 'Area of Intense Aerial Activity' (AIAA). The airport's primary aim is to ensure the safety of the airspace for all users, first and foremost. However, the volume of aircraft is not controlled by the airport, it is demand-led and often seasonal and weather-dependent, and the state of the economy. It is always the case that the fairer the weather, the higher the volume of traffic.

- **Wind Direction.** Wind direction is key to which runway is being used and, therefore, the aircraft's route on arrival or departure and how noise might be carried on a given day in the local area. The diagram shows the average annual trends for wind direction at Oxford and strength of those winds 70% or so of the time traffic will fly in



from the north and depart to the south. On-airport noise is heard more by the village of Thrupp than Bladon due to the prevailing wind direction.



- **Local Area.** The diagram below shows the typical patterns flown in the airspace when Runway 19 is in use at London Oxford Airport, the diagram would be different if Runway 01 was in use:

- **IFR Training Routes.** There are IFR training routes primarily by General Aviation training organisations that cross the Oxford AIAA. This training involves both London Oxford Airport-based training organisations and those based at other airports, including Gloucestershire Airport and Cranfield Airport. Most of these aircraft crossing the Oxford AIAA, particularly in the vicinity of London Oxford Airport, will request and Air Traffic Service from OASL. These aircraft will either complete a navigational exercise either including an Instrument Approach at London Oxford Airport or will cross the airspace enroute to another facility. London Oxford Airport-based training organisations will conduct both Instrument Approaches at London Oxford Airport and/or will conduct a navigational exercise following beacons which may include joining the controlled airspace structure, working NATS En Route, or will remain with OASL and/or be handed over to another Air Traffic Service Provider.

- **Controlled Airspace.** Diagrams showing the Upper and Lower controlled airspace above London Oxford Airport are depicted below within "Overflight and Operational Diagrams". Some of London Oxford Airport's commercial aircraft join and leave the controlled airspace structure at the following points (other points may be used):

  - DTY

- IXURA
- KENET
- BADIM
- WCO
- SILVA
- CONKO

Aircraft may be vectored in a way that the required joining level is achieved, this may mean that a direct route is not always possible, often due to having to avoid unknown aircraft, that are not communicating with OASL or transponding, causing increased flight time, fuel usage, CO2 and noise.

- **Local Agreements.** By local agreement as a good neighbour, subject to traffic conditions and weather, aircraft being radar vectored are normally not be descended below the following altitudes above sea level:

  - 3000 ft within 1 NM of the overhead of Enstone Airfield.
  - 3000 ft within 1 NM of Turweston Airfield.
  - 3500 ft within 2 NM of the overhead of Weston-on-the-Green gliding site when promulgated as active.
  - Aircraft being radar vectored shall not be vectored within 3 NM of Hinton-in-the-Hedges when notified as active with para-dropping.

- **Airspace Usage Survey and Analysis.** London Oxford Airport lies within the Oxford AIAA, a very busy area of Class G airspace used mainly by General Aviation, including light aircraft and gliders, that operate from many light landing strips and airfields located within and around the area, see the London Oxford Airport brief on local airspace, including overflight routes, at this link: Local Airspace to London

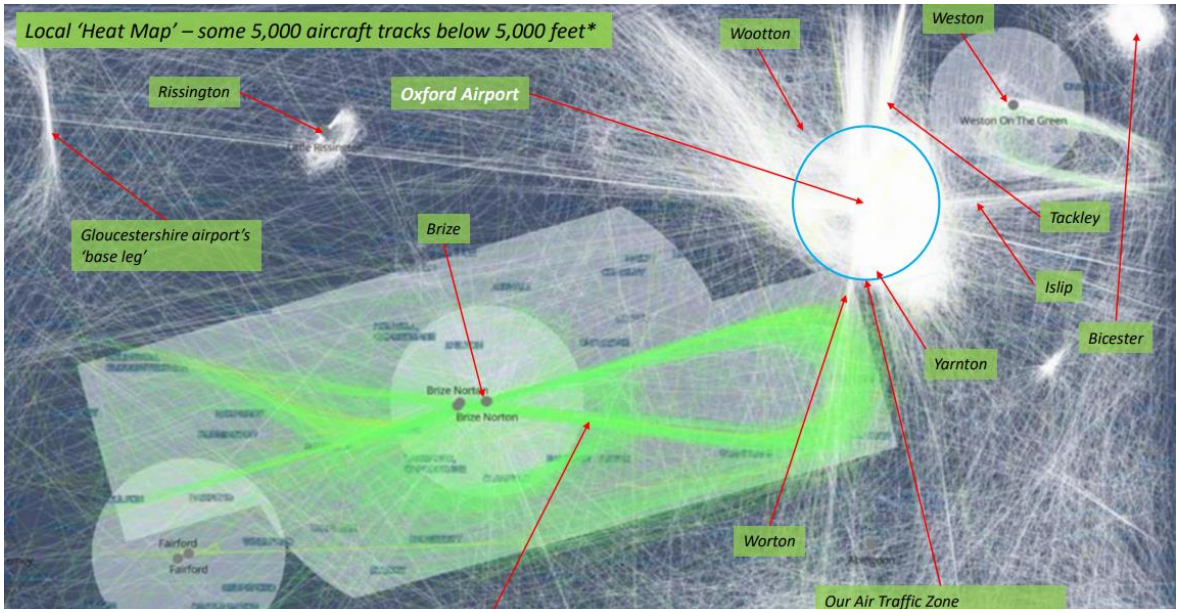


Figure 3 Taken from CAP2359 "Brize Norton CTR / Fairford MATZ / D129 with Military (Green) & Non-Commercial (White) traffic movements, from the CAA's Airspace Analyser Tool." Source CAA.

Oxford Airport. The CAA conducted an Airspace Classification Review - Cotswold Report in 2021 (CAP 2235) in 2021 and published its final report Airspace Classification Review - Cotswold Region Final Findings Report 2022 (CAP2359) in 2022; the findings relating to Oxford can be found at paragraphs 147 to 154 within the report. The diagram above, taken from CAP2359 (paragraph 119) shows 5000 (the maximum the system can display) of the 41643 tracks picked up by the CAA's analyser tool, operating within the year 2019 and at or below FL50. Note that the bright white area to the north-east of the Brize Norton Control Zone is London Oxford Airport and that the airport's movements post Covid-19 have increased since this was produced. CAP2359 also included a Figure (paragraph 152) showing glider tracks crossing the region within the same report, see below:

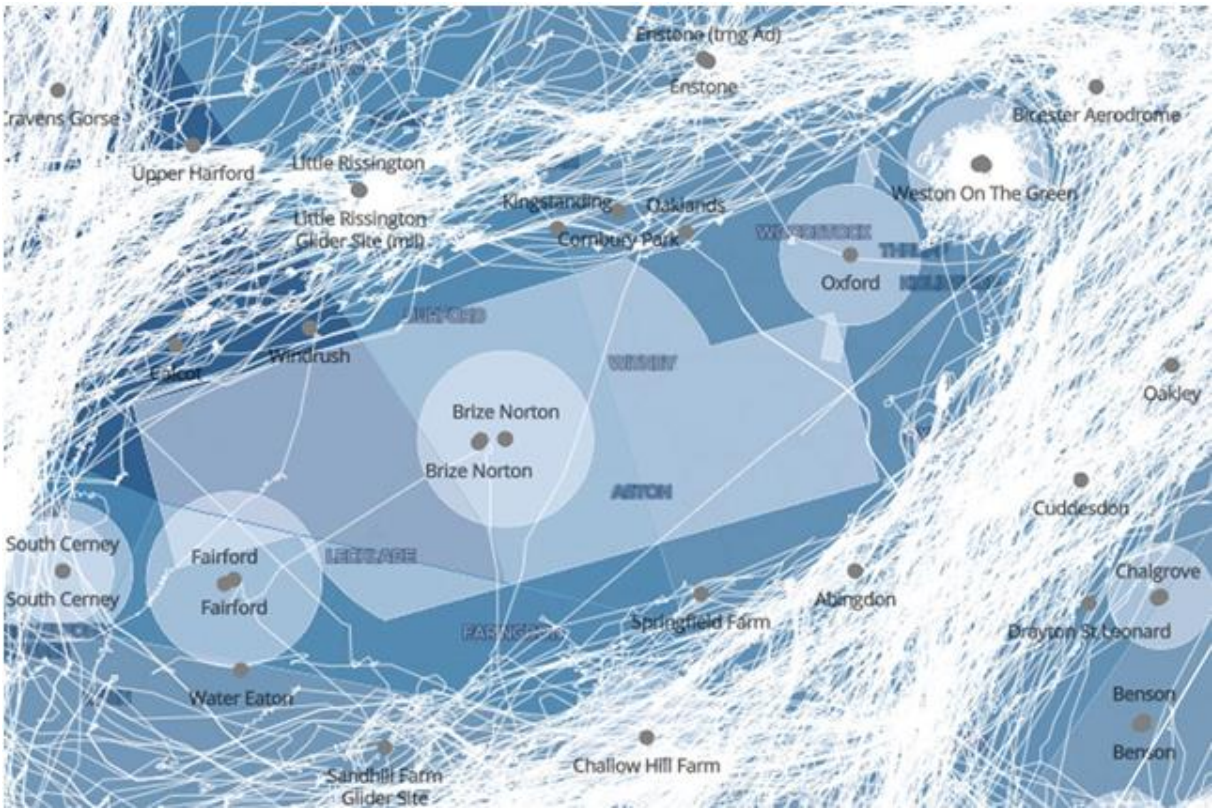


Figure 4. Taken from CAP2359: "Oxford ATZ and surrounding area with glider tracks selected under 5000ft (21st - 29th August 2021) from the CAA's Airspace Analyser Tool." Source CAA.

The avoidance of other aircraft within Class G is the responsibility of the pilot but this is greatly assisted by the employment of electronic conspicuity devices and participation in Air Traffic Control services. Multiple daily Instrument Flight Rule departures and arrivals must be sequenced by vectoring and/or level changes through this busy airspace by a team of highly skilled Air Traffic Control Officers (ATCOs) using the current UK Flight Information Service[2] rules and relying upon a modern air traffic control radar system. As there are no Standard Instrument Departures or Standard Arrival Routes, all routings joining or leaving controlled airspace are directed to/from the airways joining points by the most efficient route. All the routes are random as the controllers must vector the aircraft away from unknown aircraft making the operation not efficient but maintaining a high level of safety utilising the rules available to the controllers; aircraft are routed from any direction

[2] The UK Flight Information Services (CAP 774) details the suite of air traffic services (ATS) which (excluding aerodrome services) are the only services provided in class G airspace within the UK Flight Information Region.

and level below controlled airspace. Most aircraft operate between 1,000ft and 3,000ft, with numbers of aircraft reducing steadily above 3000ft. Choke points to the operation are the 0.4NM gap between D129 Weston on the Green Parachute area and the London Oxford Airport Aerodrome Traffic Zone (ATZ) and the area to the north of the airport between Enstone and Hinton in the Hedges which crosses the instrument approach routings. A survey of unknown aircraft was conducted by air traffic control staff between August and October 2023; this found that in 304 hours surveyed between the hours of 0800-1800, 779 unknown and non-communicating aircraft crossed the Runway 19 final approach track within the ILS approach area (an average of 2.6 per hour), 46% of which were non-transponding[3]. The peak rate was 36 per hour (92% of which were non-transponding) during an organised gliding competition in which the planned route crossed the Oxford instrument procedures. The main potential safety risk is that of a mid-air collision owing to the number of unknown aircraft that transit the area without contacting Air Traffic Control at London Oxford Airport (these pilots are operating legally under the rules of Class G, they do not have to speak to the Air Traffic Services unit at the airport). There have been many airborne conflicts within this airspace that have resulted in 81 safety events since June 2018 of which 63 were subject to Mandatory Occurrence Reporting, with 41 Air Proximity (AIRPROX)[4] and 22 Traffic Collision Avoidance System Resolution Advisory (TCAS RA)[5] events.

- **Current Airspace Users.** The Class G airspace surrounding London Oxford Airport lies within the main General Aviation transit routes, for aircraft that do not wish to join controlled airspace, from the South/South East of England to the North East/North West of England and vice-versa, and helicopters routing from/to the London Heliport at Battersea. This airspace is affected by official events such as London flypasts, aircraft can hold and/or route through the airspace, the Royal International Air Tattoo, which is held at RAF Fairford, the Cheltenham Festival, the Silverston F1 event, including the lead up and the racing weekend, and numerous helicopters transiting the overhead above the airport. The London Oxford Airport operation lies within this airspace and any type of aviation activity can take place within the Class G airspace from gliding to micro lights, to Sports General Aviation, Business Aviation and flying training into/from other airports or training flights across the airspace, and military flying through the area. These activities do not have to contact the OASL and air traffic control and London Oxford Airport is not responsible for them. The current operation at London Oxford Airport consists of:

    - A mixture of Business Aviation (business jet and turbo prop) aircraft from Cessna Citation Jet size up to Boeing B737 BBJ, Airbus A319, or Embraer E195 size.

    - Helicopter traffic (many arriving for maintenance at Airbus Helicopters located at the airport).

[3] In air navigation, a transponder is an automated transceiver in an aircraft that either emits a coded identifying signal in response to an interrogating received signal or transmits a signal automatically. Non-transponding means that no signal is being emitted.
[4] An AIRPROX is a situation in which, in the opinion of a pilot or air traffic services personnel, the distance between aircraft as well as their relative positions and speed have been such that the safety of the aircraft involved may have been compromised.
[5] TCAS RA is an indication given to the flight crew recommending: a) a manoeuvre intended to provide separation from all threats; or b) a manoeuvre restriction intended to maintain existing separation.

- Flying training for Commercial Pilot's Licence (CPL).
- Flying training for Private Pilot's Licence (PPL).
- Flying clubs and other general/private aviation flying activity

These activities are conducted under both Instrument Flight Rules (IFR) and Visual Flight Rules (VFR) in the local area, primarily within 20NM, not all aircraft are under a service from London Oxford Airport and these aircraft often fly beyond this airspace.

- Some of the other structures and airspace users include:
    - **RAF Brize Norton.** RAF Brize Norton lies to the south and south west of London Oxford Airport and has a Class D Control Zone from ground level to 3,500ft above sea level. RAF Brize Norton is the home to the RAF's transport fleet and operates large military aircraft including the C17, A400, and the A330. Other military aircraft operate from the base at times and also there are some General Aviation civilian flights, both large and small aircraft. RAF Brize Norton provides a Lower Airspace Radar Service generally within 30 NM of Brize Norton below other controlled airspace from 0900 to 1700 Local Time subject to controller capacity. RAF Brize Norton and London Oxford Airport operate extremely closely together under a Local Operating Agreement as all London Oxford Airport's IFR approaches to runway 01 have to transit through this Class D airspace and also some departures from runway 19.
    - **RAF Benson.** RAF Benson lies to the south east of London Oxford Airport and has a Military Air Traffic Zone, which also includes an ATZ. RAF Benson operates Puma and Chinook Helicopters and Tutor aircraft.
    - **Cranfield Airport.** Cranfield has and ATZ and ATC. It is a Procedural unit without no radar but can be busy with General Aviation.
    - **Gloucestershire Airport.** Gloucestershire Airport has an ATZ has ATC. It is a Procedural unit without no radar but is busy with General Aviation, particularly the lighter end.
    - **Weston on the Green (D129).** Weston on the Green has para jumping activity and gliding at the weekends.
    - **Other Surrounding Airfields.** There are several civilian smaller airfields in the vicinity that operate General Aviation aircraft and/or glider aircraft. A description of them and their activity, which can change and London Oxford Airport has no control over, include:
        - **Enstone Airfield.** Enstone Airfield is a General Aviation aerodrome that has safety-com operations. It can have intense CCT operations and some flying training activity. SOHO Farm-

House, an exclusive members club, its situated on the North-Eastern corner of the aerodrome and attracts significant helicopter activity.

- **Turweston Aerodrome.** Turweston Aerodrome is a General Aviation aerodrome that is managed by FISO operation. It can have intense CCT and flying operations on good weather days and is also the base to some helicopter operations. It is situated just to the East of Hinton-In-The-Hedges aerodrome and its associated Parachuting Operation.

- **Silverstone.** Silverstone has helicopter operations, not just for the F1 motor racing. The location is a magnet for General Aviation traffic as a navigation point.

- **RAF Little Rissington.** RAF Little Rissington acts as a satellite airfield for RAF Syerston and is the home to 637 VGS. The site is also used by nearby RAF Brize Norton as a parachute training area and by Joint Helicopter Command for helicopter training. Little Rissington has an ATZ that is active on Sat, Sun and Bank Holidays, 2NM from the surface to 2000ft.

- **Hinton-in-the-Hedges.** Hinton in the Hedges is a small private airfield that hosts a significant Parachute School that routinely conducts Free-Fall skydiving activity from FL120. Other GA aircraft are based there, including some gliding activity.

- **Upper Heyford.** Upper Heyford is a disused USAF Military aerodrome that has ad-hoc flying use, normally associated with the location being used for filming purposes.

- **Bicester Aerodrome.** Bicester Aerodrome is in the process of changing use from a busy gliding operation into a centre for Vintage Motoring activities. Gliding operations have ceased but some General Aviation aircraft still utilise its grass runways. Bicester has just been announced as one of the locations for a Vertiport for eVTOL aircraft.

- **Sywell Aerodrome.** Sywell Aerodrome is a General Aviation aerodrome which can get very busy. Lots of their traffic operates within the Oxford AIAA.

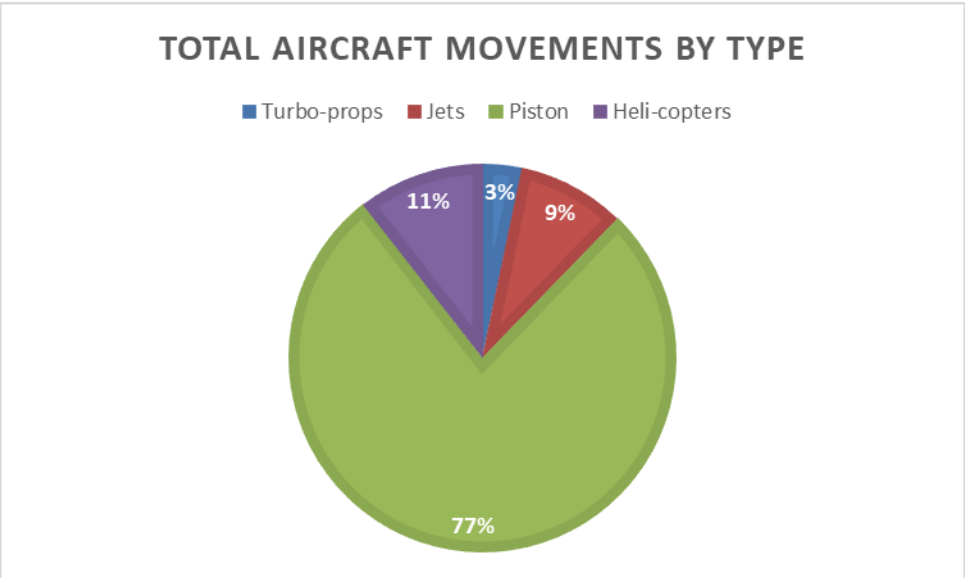
- **Dalton Barracks.** Dalton Barracks is a disused former RAF Airfield that is now occupied by the Army. It has occasional activity with all types of aircraft.

- **Chalgrove Airfield.** Chalgrove Airfield is a former RAF airfield that was closed in 1946. The airfield is primarily used by Martin

Baker for testing Ejection seats and has a Beach King-Air shuttle to its sister operation in Ireland.

- **Oakley Aerodrome.** Oakley Aerodrome is a site of microlight activity, mainly at weekends.
- **Oaklands Farm Strip.** Oaklands Farm strip is utilised for Micro-light and vintage aircraft; predominantly non-radio and non EC equipped.
- **Cornbury Park.** Cornbury Park is a private landing site.
- **Kingstanding.** Kingstanding is a private landing site.
- **Shotteswell.** Shotteswell is a private landing site.
- **Edge Hill.** Edge-Hill is a gliding Site located at Shenington Airfield.
- **Finmere.** Finmere is a gliding site near Milton Keynes.
- **Princess Risborough.** Princess Risborough is a gliding site.
- **Other Minor Airfields.** Lastly, there are other minor airfields of Wycombe Air Park, Halton Airport, Elstree Aerodrome, and Denham Aerodrome whose General Aviation traffic calls OASL frequently for a service to the south east of London Oxford Airport.

- **Aircraft Types.** There have been over 468 different aircraft types that have operated from London Oxford Airport since 2012. Most aircraft operated from the airport are light piston-engine General Aviation aircraft. The percentage of aircraft movements by type since 2012 is:



- **Frequency/Number of Movements.** The movements into and from London Oxford Airport between 2018-2023 were as follows:

London Oxford Airport Movement Totals						
Month	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Jan	2,012	3,115	4,109	1,677	6,138	3,605
Feb	2,508	3,072	3,524	4,069	4,668	4,904
Mar	2,735	3,382	4,013	5,521	6,660	4,373
Apr	3,123	3,681	478	6,621	6,909	5,277
May	3,618	4,201	1,344	6,448	7,273	5,856
Jun	4,459	3,684	3,830	6,157	7,917	6,391
Jul	4,366	5,428	5,699	6,672	7,629	5,825
Aug	4,239	4,911	4,676	7,171	6,384	5,759
Sep	3,924	4,798	5,509	6,789	6,624	5,105
Oct	3,368	4,912	4,453	5,383	5,646	4,551
Nov	2,860	3,634	4,668	5,700	4,626	4,280
Dec	2,362	3,138	3,622	3,736	3,306	2,502
Total	**39,574**	**47,956**	**45,925**	**65,944**	**73,780**	**58,428**
% Change		+21.18%	-4.24%	+43.59%	+11.88%	-20.81%[6]

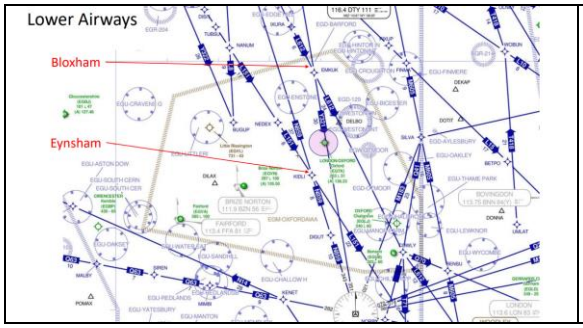
In addition to the above movements, air traffic control also provides a service to aircraft transiting the vicinity of Oxford. Whilst the Lower Airspace Radar Service unit is RAF Brize Norton, the Unit encourages aircraft to contact Oxford where their flight could affect the airport's flight paths. London Oxford Airport has started to record transit aircraft from March 2022, see table 'Transit Aircraft'.

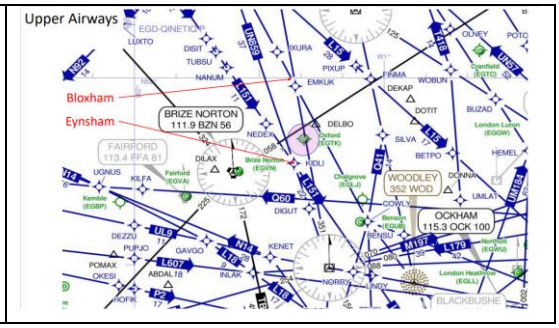
Transit Aircraft		
Month	**2022**	**2023**
Jan	No Data	524
Feb	No Data	552
Mar	801	581
Apr	958	833
May	894	1017
Jun	1042	1165
Jul	1175	924
Aug	1049	977
Sep	823	943
Oct	756	703
Nov	570	555
Dec	337	294
Total	**8,405**	**9,068**
% Change		+7.3%

- **Typical Altitudes.** Owing to the random nature that aircraft depart and arrive, typical altitudes depend on the weather for aircraft flying under VFR and for IFR aircraft it is dependent on the airways joining level, if joining airways, or the requested transit level otherwise. VFR aircraft would normally operate in the band 1,000ft to 3,000ft with transit or training IFR aircraft operating 1,500ft to 5,000ft. This is all heavily weather and background traffic dependent owing to the nature of the Class G airspace. There is currently no specific level band.

[6] Following a progressive increase in traffic over the years 2021 to 2022 inclusive, the decrease in 2023 was expected because a major flying training unit at London Oxford Airport had relocated several of its DA40 training aircraft to a fair-weather base in Spain. In addition, 2023 saw an increase in the number of days with rain and/or strong wind that contributed to the reduced numbers.

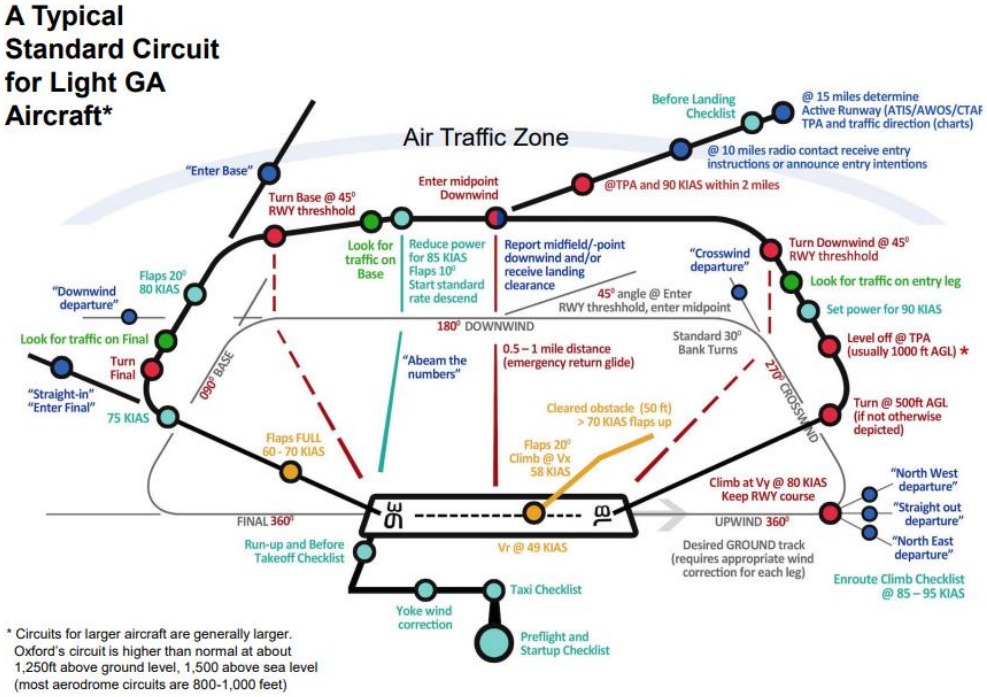
- **Overflight and Operational Diagrams.** Controlled airspace lies above London Oxford Airport that contain both Lower and Upper Airways; this airspace is controlled by NATS En Route:



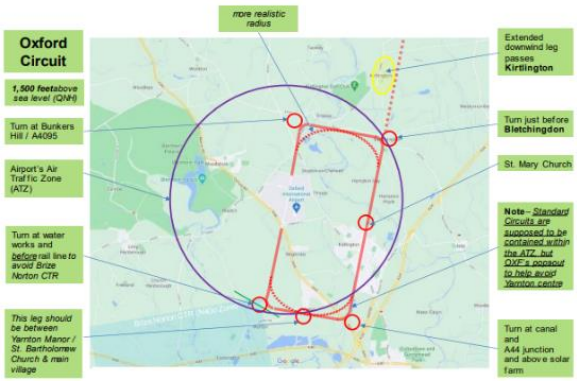


Other overflights beneath controlled airspace would be provided by RAF Brize Norton, the Lower Airspace Service provider, OASL, or NATS En Route Flight Information Services. Where a pilot does not want a service, they are allowed to operate independently.

At London Oxford Airport, a typical standard circuit for light GA aircraft is as depicted within the diagram below:

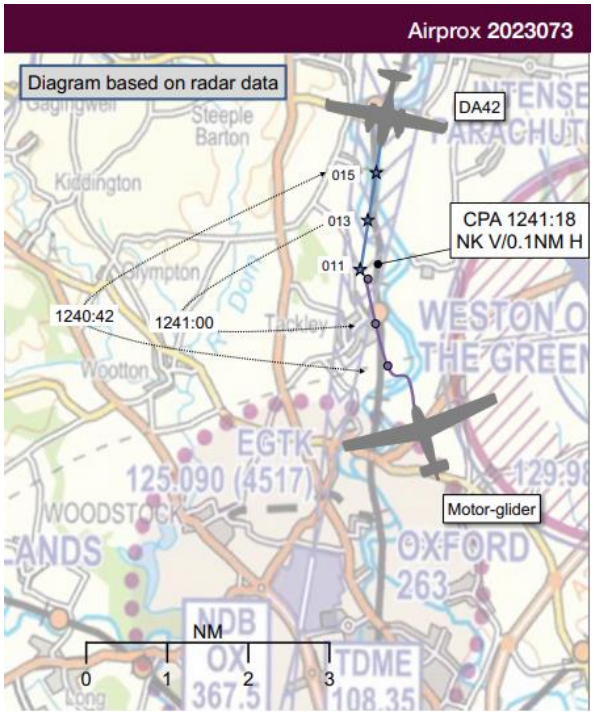


The visual circuit is located to the east of the airport and is above Kiddlington. Owing to the size and type of the aircraft being flown at Oxford, the ATZ does not always contain the aircraft, especially where they must extend further owing to other traffic ahead of them.



The Instrument Approach routes are detailed above within “Instrument Flight Procedures”.

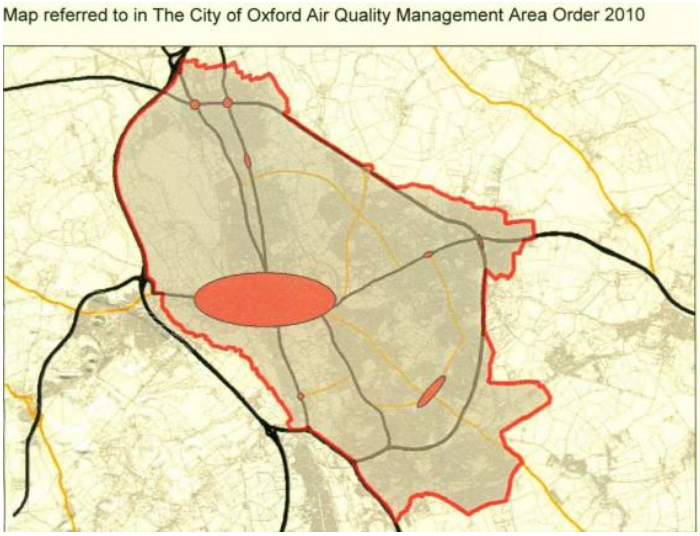
- **Operational Efficiency, Complexity, Delays and Choke Points.** The operation at London Oxford Airport is as efficient as it can be, given the Class G airspace that surround the airport. Class G airspace is available for everyone to use safely following the rules and applying good airmanship. As such there are aircraft that do not contact air traffic control and route, as they legally can, across the climb out and recovery lanes and operate close to London Oxford Airport – often without operating their transponder - without contacting air traffic control, see image to the right showing an example of an aircraft at about 10NM being vectored onto the ILS but having to avoid the two aircraft not in contact with OASL at 6NM finals heading into Enstone, with the southerly one commencing a left hand orbit. Air traffic control must call these unknown aircraft to aircraft provided with an air traffic service that may affect their routing and under a Duty of Care, provide information, including vectors and levels where necessary, to reduce the chance of a mid-air collision occurring. This makes the service less efficient as more track miles are flown by aircraft causing delays that uses more fuel and produces more noise and CO2 emissions. This situation is not unique to one area, it can happen at any location, but specific points are avoidance of Enstone airfield traffic, and aircraft routing around D129. There is an extant choke point between the London Oxford Airport ATZ and D129 Western on the Green where there is a gap of 0.4NM and aircraft route through this gap which interferes both with the visual circuit and the climb out path for Runway 01 and the final approach for Runway 19, there have been numerous safety reports raised due to this choke point which was featured within the AIRPROX Insight Magazine October 2023 Edition which can be found here: Insight October 2023, which was based on Airprox 2023073 which can be found here: AIRPROX REPORT No 2023073.



- **Any Potential Safety Risk.** The highest safety risk is a mid-air collision. There could be several safety events that would occur every day if it were not for the skill of the air traffic controllers and the UK’s Flight Information Service (CAP774) rules that allow controllers to vector, sequence and allocate levels to aircraft within Class G. Notwithstanding, there have been AIRPROX and TCAS RA events that have occurred despite the interventions of the air traffic controllers.

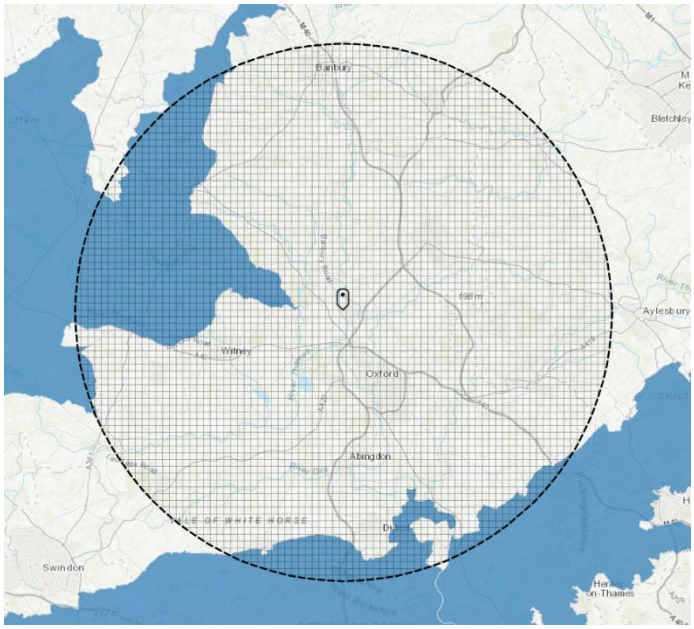
- **Local Features below 7,000 feet:**

  - **Designated areas such as Air Quality Management Areas (AQMA).** The City of Oxford has an AQMA, although the AQMA plan does not specifically mention aviation, this AQMA relates to nitrogen dioxide only. The area lies about 2.8 miles south of London Oxford Airport and is just to the east of the climb out for Runway 19 and the Approach for Runway 01. The visual circuit routinely routes across the northern part of this area but not lower than 1000ft.



  - **National Parks.** There are no national parks within the London Oxford Airport ATZ and none known within the area within which OASL operates.

  - **Areas of Outstanding Natural Beauty (AONB).** The eastern part of the Cotswolds is covered within 18km of London Oxford Airport. The next closest AONB are the Chilterns and the North Wessex Downs, the northern most edges of both are just inside the 18km radius from the airport.



  - **National Scenic Areas (NSA).** There are no NSAs within the London Oxford Airport ATZ and none known within the area within which OASL operates.

  - **Designated Quiet Areas.** There are no known DQAs within London Oxford Airport ATZ and none known within the area within which OASL operates.

- **European sites overflown below 3,000 feet:**

  - **Special Areas of Conservation (SAC) and possible SACs.** There are only two designated SACs close to Oxford inside of 10 miles, see Figure 5 (there are only the two same SACs inside 18km from the Threshold of Runway 01): Oxford Meadows (UK0012845) and Cothill Fen (UK0012889) – which is also a Special Site of Scientific Interest; both SACs are outside of the ATZ and are overflown, a situation that will not change. Oxford Meadows is 4 miles to the south-south-east of the airport and can be overflown by traffic in the visual circuit (both runways) and aircraft departing or executing a missed approach from Runway 19. Cothill Fen is 6.8 miles to the south of the airport, just to the east of the final approach track to Runway 01, and all inbound aircraft to Runway 01 and outbound aircraft from Runway 19 to the south fly close to this SAC. Other SACs are Aston Rowant (UK0030082), Hackpen Hill (UK0030162), Little Wittenham (UK0030162) which are between 15-20 miles from London Oxford Airport and Hartslock Wood (UK0030164) which is about 24 miles from London Oxford Airport. There are no known potential SACs within the area.

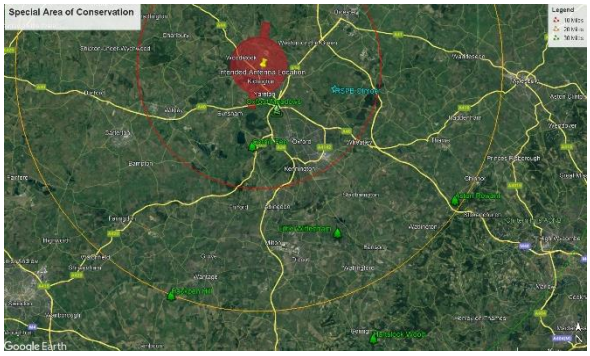


Figure 5 SACs close to London Oxford Airport

  - **Special Protection Areas (SPA[7]) and potential SPAs.** There are no SPAs within the ATZ. The closest SPA is the Upper Nene Valley Gravel Pits SPA and Ramsar site[8] (the south-western extremity of which is over 33 miles (54km) away from the airport. Although it is not unknown for aircraft to manoeuvre over this area, the aircraft are normally under a Basic Service and are not radar monitored by OASL unless they ask for a surveillance service, normally on recovery back to London Oxford Airport. There are no other known sites within the area within which OASL operates. Although not an SPA, there is one Royal Society for the Protection of Birds (RSPB) site 6.5 miles (11 km) from London Oxford Airport; this area is regularly overflown by London Oxford Airport traffic today, primarily by aircraft operating VFR who would be adhering to the CAA's vertical level rules above the ground; aircraft flying an Instrument Approach would normally not be below 1,800 feet in this area.

  - **Ramsar[9] sites (wetlands of international importance) and proposed Ramsar sites.** There are no Ramsar sites or proposed Ramsar sites within the ATZ. The closest Ramsar site is the Upper Nene Valley Gravel Pits SPA and Ramsar site (the south-western extremity of which is over 33 miles (54km) away from the airport. Although it is not unknown for aircraft to manoeuvre over this area, the aircraft are normally under a Basic Service

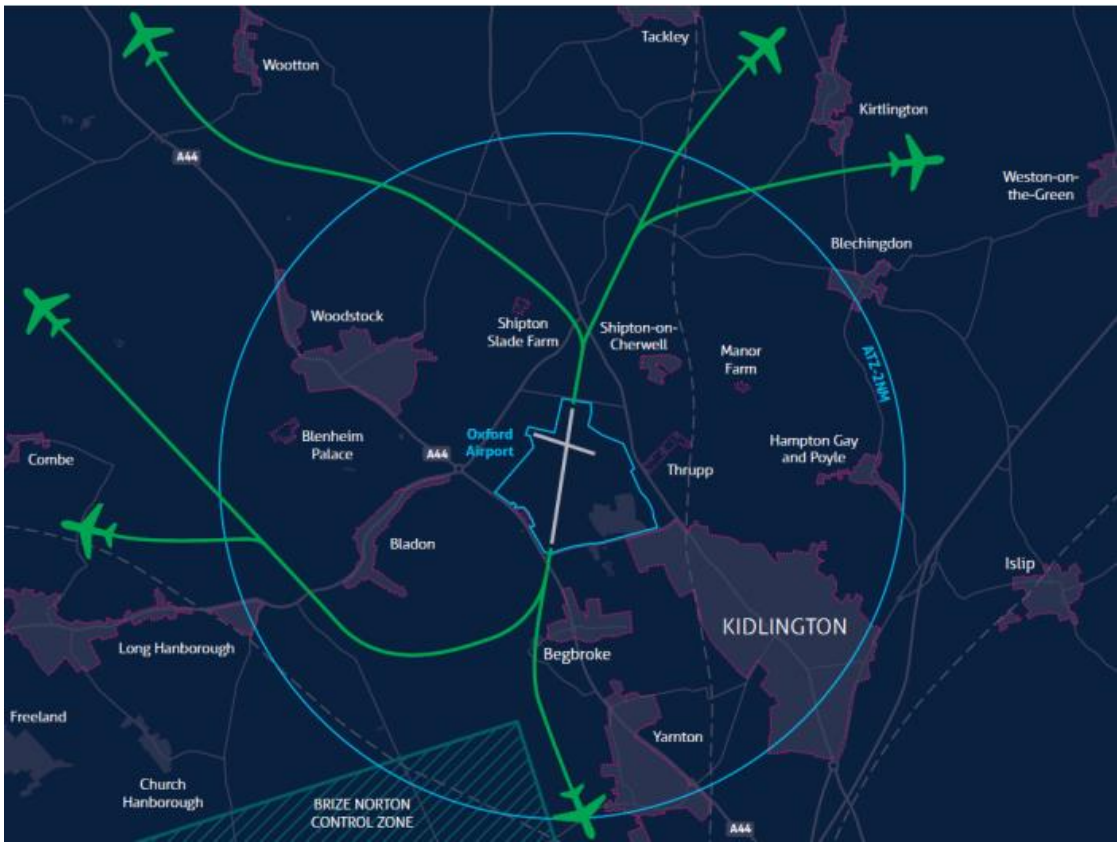
[7] SPAs provide increased protection and management for areas which are important for breeding, feeding, wintering or migration of rare and vulnerable species of birds.
[8] The SPA and Ramsar site boundaries for the Upper Nene Valley Gravel Pits are identical.
[9] A 'Ramsar' site is a wetland of international importance designated under the convention of wetlands of international importance, especially as waterfowl habitat.

operating under VFR and are not radar monitored by OASL unless they ask for a surveillance service, normally on recovery back to London Oxford Airport. There are no other known sites within the area within which OASL operates.

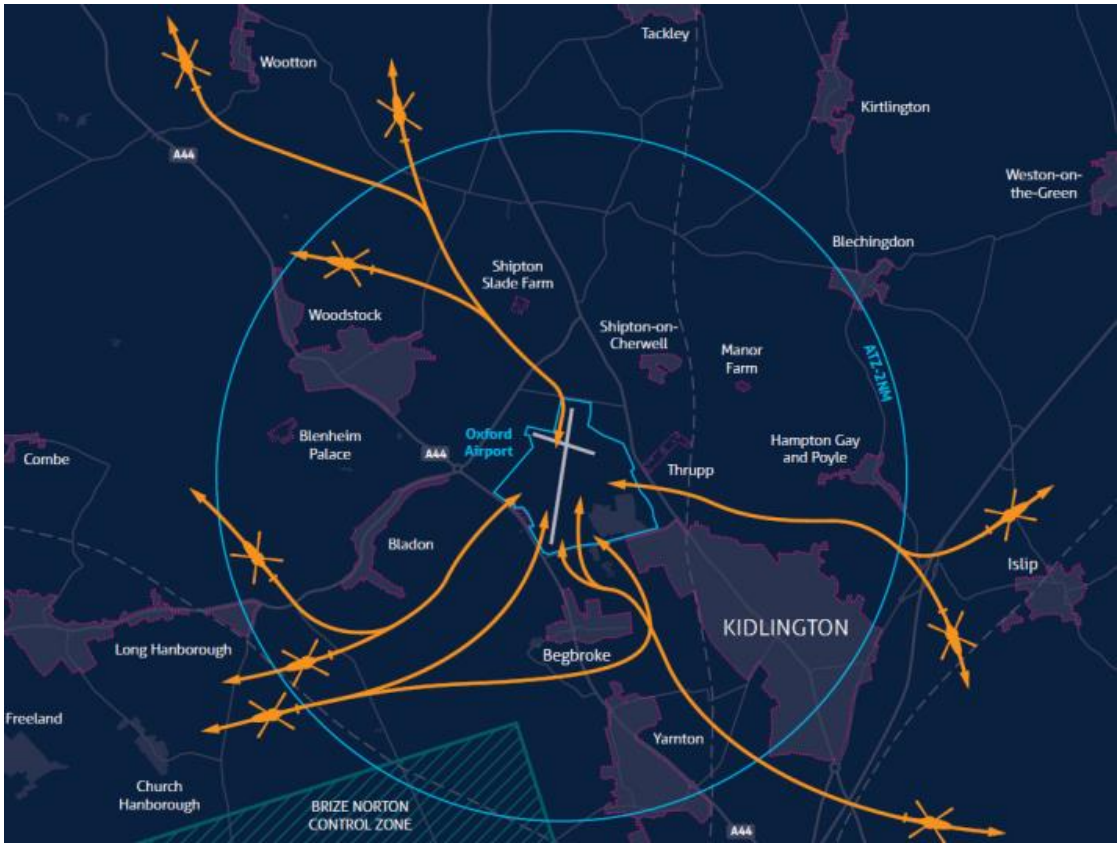
- **Compensatory habitat (areas secured to compensate for damage to SACs, SPAs and Ramsar sites).** There are no compensatory habitats within the ATZ and none known within the area within which OASL operates.

- **Environmental impacts relevant to the airspace change proposal including current-day noise and local air quality impacts on people, greenhouse gas emissions, tranquillity and biodiversity.** Data on environmental impacts, including noise and local air quality impacts on people, greenhouse gas emissions, tranquillity and biodiversity have not been required to be captured previously such that this information does not exist. This will be developed to show how things may change dependent on the direction of this ACP. The airport does have recommended routing for VFR aircraft and helicopters promulgated on its website but owing to the nature of the Class G operation, these routings cannot be guaranteed. The noise preferential routes via links and shown below are not mandated and whilst the airport tries to follow them there will be times, primarily for flight safety or airspace efficiency reasons, where aircraft will follow different routes.

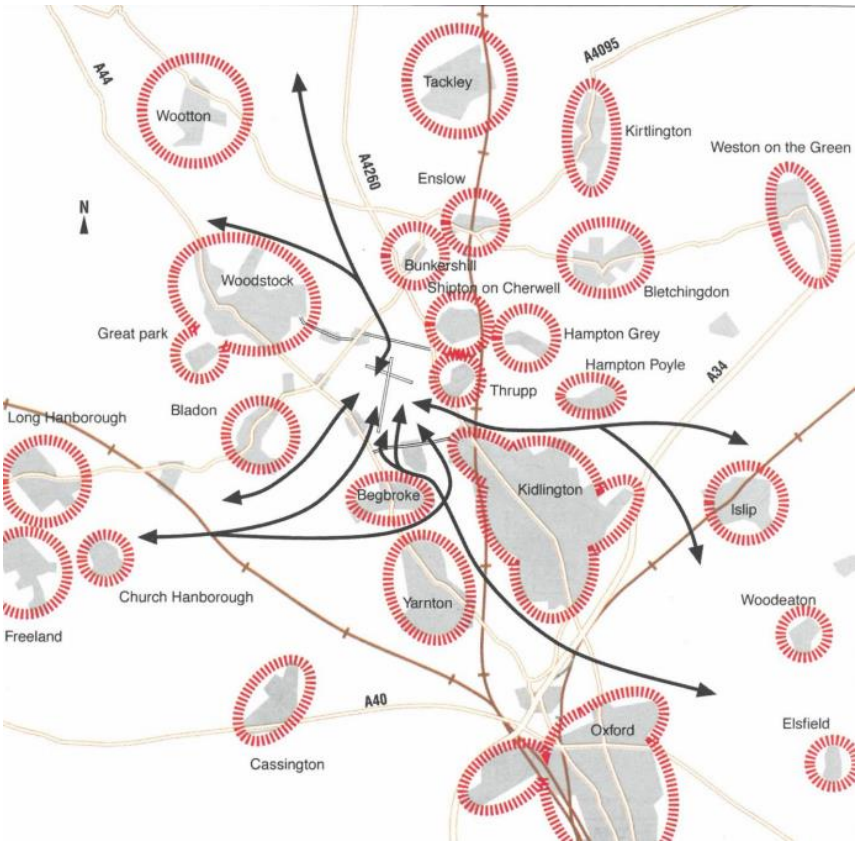
The basic Noise Abatement Recommended paths for Fixed Wing VFR Flights are depicted within the following diagram:



Similarly, the basic Noise Abatement Recommended paths for Helicopter VFR Flights are depicted below:



This is linked to promulgated avoidance of noise sensitive areas for VFR Helicopter operations as depicted in the diagram to the right:



- **Local context:**

  - **Planning agreements, conditions and other relevant agreements (for example, section 106 of the Town and Country Planning Act 1990 agreements).** An extract from London Oxford Airport's Section 106 agreement is at Annex C. There will be no changes from these conditions because of this ACP.

  - **Noise Action Plans.** Noise Action Plans are available on the London Oxford Airport website at the following link: Noise Action Scheme

  - **Noise Preferential Routes or Noise Abatement Procedures Relevant to the Airspace Change Proposal.** The current-day noise abatement procedures are available on the London Oxford Airport website at the following link: Noise Abatement Procedures. Several diagrams have been incorporated above within the bullet: "Environmental impacts relevant to the airspace change proposal including current-day noise and local air quality impacts on people, greenhouse gas emissions, tranquillity and biodiversity".

What is this Airspace Change Proposal About?

At London Oxford Airport, we aim to introduce a 3D Instrument Approach to Runway 01 and, in order to satisfy the regulatory requirement to introduce Required Navigation Performance (RNP) Approaches to airports within the UK to meet the International Civil Aviation Organisation (ICAO) Performance-Based Navigation (PBN) mandate and associated statements within the UK Airspace Modernisation Strategy (AMS), the airport must introduce RNP Approaches to runways 01 and 19 with associated airspace. In addition, the AMS introduces changes to the provision of Air Traffic Services that can be offered within Class G airspace along with the projected replacement of the ATZ with a Radio Mandatory Zone.

The dimensions of the extant ATZ surrounding London Oxford Airport have been in place for over 40 years with no changes. With the mix of aircraft types now using the airport, coupled with the criteria used to design the IFR procedures, the current ATZ is, arguably, no longer sufficient in size to support airport's arrival and departure profiles because it does not adequately contain the existing instrument approaches and departures and does not adequately contain aircraft operating within the visual circuit as some aircraft regularly leave the protected confines of the ATZ in order to maintain separation from other air traffic.

Airspace Change Proposal

London Oxford Airport has initiated an Airspace Change Proposal to develop proposals designed to offer a safe operating environment and equitable access for all airspace users and to modernise and contain existing instrument flight procedures.

Changes to UK airspace are legally required to follow the process laid down in the CAP 1616, details of which can be found online here. This seven-step process aims to ensure a fair and transparent dialogue between the Change Sponsor (us) and any affected stakeholders. It also ensures that changes are not arbitrarily applied without full engagement and formal public consultation. The CAA, as an impartial regulator and as part of its decision-making responsibility, will hold Change Sponsors to account and ensure that the Airspace Change Process set out in CAP 1616 is followed correctly.

The CAP 1616 process encompasses seven stages. Each stage is considered separately and sequentially by the CAA based on a pre-agreed timeline. The process is not solution driven and each stage informs the next.

In this instance, the proposal to modernise and contain new instrument flight procedures was presented to the CAA at the outset of this, the first stage of the Airspace Change Proposal process. The CAA agreed that an Airspace Change is an appropriate means by which to take this forward and classified this as being a Level 1 change. All documentation relating to this Airspace Change Proposal can be found on the CAA's Airspace Portal (link to CAA Portal page).

Design Principles – Stage 1: Define Step b: Design Principles

The creation of any new airspace or procedures first requires airspace Design Principles to be developed, which are then referred to throughout this process and when developing route options later in the airspace change process. Design principles provide a framework to support the development of the options to address the statement of need and therefore they must be informed by the objectives and intended outcomes as set out in the statement of need. They must also adequately cover the criteria that will be used to inform the subsequent development of design options and design principle evaluation that must be developed by the change sponsor in Stage 2.

CAP 1616 has both Mandatory Design Principles (MDP) which must be used and Discretionary Design Principles which are elective and into which we hope that you will choose to have some input. These are detailed within CAP 1616f at Page 20, "Stage 1 – DEFINE", Paragraph 2.42.

OASL is keen to engage with stakeholders and is asking for your feedback on the initial draft Design Principles we have set out below. Once we have your feedback, we, the Change Sponsor will submit our final Design Principles document to the CAA for consideration.

OASL will engage with the CAA's National Air Traffic Management Advisory Committee (NATMAC) members and has also carefully selected a wide range of local stakeholders from an area within a radius approximately 20 miles of London Oxford Airport.

OASL has compiled a set of draft design principles that are set out below. At this stage we are not seeking feedback on the wider airspace change proposal. Stakeholders will have an opportunity to engage regarding specific design/route options later in the Airspace Change process and once any proposal has been developed in greater detail.

OASL would like to understand which elements of the airspace design principles you, as another airspace user or local non-aviation stakeholder, deem as being important and would like considered. As a stakeholder you are now invited to consider the draft design principles. The list is not exhaustive, but you may wish to comment on the following:

- Do you agree with the design principles as proposed?
- Are there any other design principles you would like OASL to consider?

- Would you like the OASL to amend/discount any of its draft design principles?
- Should the OASL prioritise some design principles ahead of others?
- Would you like any more detail to be included in the design principles?

Any additional detail and reasoning behind your feedback is encouraged.

Draft Design Principles

Letter	DP	Rationale
	MDP Safety	**The airspace change proposal must maintain a high standard of safety and should seek to enhance current levels of safety.**
a	Provide a safe environment for all airspace users	Provide a safely designed airspace structure to ensure the safe operation of all airspace users. Safety is the highest priority, and the airspace must be as safe or safer than today for all stakeholders that are affected by the airspace change.
	MDP Policy	**The airspace change proposal should not be inconsistent with relevant legislation, the CAA's airspace modernisation strategy or Secretary of State and CAA's policy and guidance.**
b	PANS OPS Compliant Approaches	a. The CAA's published AMS Part 1 (CAP 1711) and Part 2 (CAP 1711A) and any current or future plans associated with it. b. UK Regulation 'Performance-Based Navigation Implementation Rule' 2018/1048 requires an exclusive use of PBN (Article 5) from 6 June 2030 as per Article 7. Aerodromes will, therefore, be required to have RNP approaches with Lateral Navigation (LNAV), LNAV/Vertical Navigation (VNAV) and Localiser Performance with Vertical Guidance (LPV) minima[10].
c	Reduce the Workload on Air Traffic Control (ATC)	ATC vector and sequence aircraft throughout the airspace under the rules of UK Flight Information Services to ensure that aircraft are safely and efficiently routed to/from the Airport. Aircraft that are unknown to Oxford cause increased workload and the potentially for safety events. If we could encourage pilots to be in contact with Oxford and/or have some limited from of protected airspace, this would reduce ATC workload and the reliance on tactical intervention.
d	Comply with any containment requirements	Conform to the CAA's Design of CAS Structures Version 2 dated 12 October 2023 (Policy for the Design of Controlled Airspace Structures SARG126_V3.pdf) where controlled airspace is deemed to be required.
	MDP Environment	**The airspace change proposal should deliver the Government's key environmental objectives with respect to air navigation as set out in the Government's Air Navigation Guidance 2017**
e	Improved profiles for noise and Carbon dioxide (CO_2)	Aircraft currently arrive from all directions as there are no defined routes to/from Oxford Airport other than for IFR traffic they would be routed to a 6-8 NM final for the

[10] LPV is part of the Mandated UK Regulation but is not supported in the UK.

Letter	DP	Rationale
		required stabilised approach. We should explore the possibility of reducing noise and/or CO_2 where we can. Where lateral and/or vertical changes to existing tracks are required to achieve improved environmental and operational performance, options should: a. Deliver an overall reduction in flight plannable track miles. b. Minimise population numbers newly overflown. c. Avoid overflying the same communities with multiple routes to and from Oxford Airport.
f	Remove dependence from adjacent ATC structures where possible	Use standard airspace structure where possible (conformity, safety, and simplicity) and conform to the principles of the CAA's Policy for the Design of Controlled Airspace Structures Version 2 dated 12 October 2023 (SARG Policy 126) where controlled airspace is deemed to be required..
g	Meet Future Demand	Design should be capable of accommodating and containing new aircraft both operating at the Airport and within the local airspace.
h	Making best use of fleet capabilities	Facilitate design using modern navigational technology.
i	Consider all aircraft types that operate from the Airport	The Design Principle Improved profiles for noise and CO_2 above could prevent some of the lighter General Aviation aircraft from being able to follow the most efficient routes such that separate routes may have to be considered.

We would like your feedback on the above draft Design Principles.

Additional Questions

A chance to provide additional feedback.

1 What is your biggest concern, if any, about the Design Principles?

2. Are there any other Design Principles you would like OASL to consider?

3. Are there any draft Design Principles you would like OASL to consider removing/rewording?

4. Should OASL prioritise some design principles ahead of others?

5. Would you like any more detail to be included in the design principles?

6. Would you like a face-to-face meeting to discuss specific questions regarding our proposal? If so, please leave contact details.

7. Please provide additional information you would like to add that we should consider relevant to this stage.

Feedback

All the details of this airspace change proposal are available on the CAA's Airspace Change Portal. The Airspace Change Proposal identification number is ACP-2023-033.

Feedback can be provided in the following ways:

- Email: acp@londonoxfordairport.com
- Letter: Airspace Change Proposal, London Oxford Airport, Langford Lane Kidlington, Oxfordshire, OX5 1RA, United Kingdom
- Word Documentation: see email attachment
- Microsoft Forms Link: Form

The use of forms or word documentation is not mandatory. We appreciate feedback in your preferred method. We would be grateful if you could respond even where you have no comment.

Please advise if you require further engagement and, if so, your preferred point of contact.

Reponses regarding the draft Design Principles must be received by 24 April 2024.

ACP Sponsor

Annexes:

A. Glossary.
B. Statement of Need.
C. Extract from London Oxford Airport Section 106 Agreement.
D. Classification of Airspace.

GLOSSARY

Acronym	Meaning
ACP	Airspace Change Proposal
AGL	Above Ground Level
AMS	Airspace Modernisation Strategy
ANO	Air Navigation Order
ANS	Air Navigation Service
ANSP	Air Navigation Service Provider
ATC	Air Traffic Control
ATCO	Air Traffic Control Officer
ATM	Air Traffic Management
ATS	Air Traffic Services
ATZ	Aerodrome Traffic Zone
CAA	Civil Aviation Authority
CAP	Civil Aviation Publication
CAS	Controlled Airspace
CAT	Commercial Air Transport
CPL	Commercial Pilot's Licence
DME	Distance Measuring Equipment
DP	Design Principles
GA	General Aviation
GNSS	Global Navigation Satellite System
HATS	Head of Air Traffic Services
HF	Human Factors
ICAO	International Civil Aviation Organisation
IFP	Instrument Flight Procedures
IFR	Instrument Flight Rule
ILS	Instrument Landing System
LNAV	Lateral Navigation
LPV	Localiser Performance with Vertical Guidance
MDP	Mandatory Design Principles
NATMAC	National Air Traffic Management Advisory Committee
NDB	Non-Directional Beacon
NM	Nautical Mile
OASL	Oxford Aviation Services Limited
PBN	Performance-Based Navigation
PPL	Private Pilot's Licence
RAF	Royal Air Force
RMZ	Radio Mandatory Zone
RNP	Required Navigation Performance
SARG	Safety and Airspace Regulation Group
TCAS RA	Traffic Collision Avoidance System Resolution Advisory
UK	United Kingdom
VMC	Visual Meteorological Conditions
VFR	Visual Flight Rule
VNAV	Vertical Navigation

STATEMENT OF NEED VERSION 3 (ABSTRACT)

In response to customer demand and having regard to the changes set out in the recently published Airspace Modernisation Strategy (AMS), London Oxford Airport seeks to define new GNSS based instrument flight procedures along with suitable regulated airspace in order to protect them and to facilitate safer flight conditions for all airspace users.

London Oxford Airport currently serves commercial pilot training, helicopter maintenance and Business Aviation jet traffic; Business Aviation jet traffic has been steadily increasing, supported by our operational expansion in new hangars and Business Aviation jet terminal improvements. These Business Aviation jets range in size from relatively small Cessna Citation Mustang to Falcon 7X, GLEX, G7000, and 737 BBJ size aircraft and customers are requesting modern Instrument Flight Procedures.

ICAO requires airports to implement PBN procedures and the UK State has signed up to this intent. Hence, there is a requirement to develop such procedures and any required associated airspace in accordance with UK CAA containment policy for Instrument Flight Procedures.

In support of the AMS, London Oxford Airport plans to add instrument approach redundancy by developing RNP Instrument Approaches to both runways as part of rationalisation of NDB with the potential for RNAV Substitution as set out within CAP1781, see Additional Information below; RNPs would require 5LNCs. This will potentially require the determination of new airspace volumes appropriate to reasonably protect the large passenger carrying business jet aircraft.

There have been approaches from aircraft operators regarding the commencement of small-scale Commercial Air Transport (CAT) operations at the airport, but controlled airspace may be needed to facilitate this type of operation. We need to understand what the requirements for CAT are before we can decide whether such operations are viable or not.

EXTRACT FROM LONDON OXFORD AIRPORT SECTION 106 AGREEMENT

4. SECTION 106 AGREEMENT

4.1. SECTION 106 AGREEMENT

In December 2005, a Section 106 agreement was entered into between Cherwell District Council and Oxford Airport which imposed the following restrictions upon the operation of the airport;

No movements are permitted between 23:59 local and 06:00 local except for:

a) Emergency services.

b) Air Ambulance.

c) Any emergency.

d) Diversion from other airports for weather conditions or temporary emergency restrictions at other airports.

e) No training circuits between 2300 local and 0700 local.

Except in cases of Emergency, not more than:

a) 160,000 movements per year (*of any aircraft type/size*).

b) 500 movements of Stage 2 jets per year (the older, noisier jets).

c) 2,000 movements of 50 tonne jets per year (typically larger airliner types).

Static testing of jet engines shall:

a) Only take place in the testing zone (currently Taxiway ‘D’).

b) Not take place for more than six hours per day weekdays Mon - Fri between 0700 - 1900 and 3 hours at weekends not before 0900 or after 1700.

Written records of daily movements shall be retained for five years. Every four months the airport will provide records of movements as follows to the Airport Consultation Committee (ACC) and Cherwell District Council:

a) Total number of movements.

b) Number of Stage 2 jet movements (if any).

c) Number of 50 tonne jets (if any).

d) Separately, the number of movements in the closed period of Emergency Services, Air Ambulance, any emergency, diversions due to weather or temporary emergency restrictions.

CLASSIFICATION OF AIRSPACE

ATS airspace is classified and designated in accordance with the following:

Class A. IFR flights only are permitted, all flights are provided with air traffic control service and are separated from each other.

Class B. IFR and VFR flights are permitted, all flights are provided with air traffic control service and are separated from each other.

Class C. IFR and VFR flights are permitted, all flights are provided with air traffic control service and IFR flights are separated from other IFR flights and from VFR flights. VFR flights are separated from IFR flights and receive traffic information in respect of other VFR flights.

Class D. IFR and VFR flights are permitted and all flights are provided with air traffic control service, IFR flights are separated from other IFR flights and receive traffic information in respect of VFR flights, VFR flights receive traffic information in respect of all other flights.

Class E. IFR and VFR flights are permitted, IFR flights are provided with air traffic control service and are separated from other IFR flights. All flights receive traffic information as far as is practical. Class E shall not be used for control zones.

Class F. IFR and VFR flights are permitted, all participating IFR flights receive an air traffic advisory service and all flights receive flight information service if requested.

Class G. IFR and VFR flights are permitted and receive flight information service if requested.

The UK does not currently use Class B or Class F airspace.

(ICAO Annex 11: Air Traffic Services, Chapter 2, Section 2.6)