

North Weald Aerodrome

Infringement statistics analysis has identified a trend in infringements of Stansted airspace. This hot-spot narrative is the second in a series covering satellite airfields around Stansted controlled airspace. It is intended to provide guidance to help pilots operating at North Weald prevent airspace infringements.

- DOWNLOAD: [North Weald Area of Operation A5](#)

North Weald Aerodrome (EGSX) is located at 51°43'18"N, 0°9'15"E, approximately 10NM from Stansted Airport on a bearing of 197°. The aerodrome lies within the Stansted Transponder Mandatory Zone (TMZ-2) which extends from the surface to 1,500 feet AMSL and beneath Stansted Control Area (CTA-2). An Area of Operation (AoO) is established to facilitate flight at North Weald for aircraft unable to comply with TMZ requirements.



Figure 1: Chart extract from CAA 1:500k Sheet 2171CD Southern England and Wales Edition 49 (2023)

Controlled Airspace Proximate to North Weald



Figure 2: Chart extract from AD-2-EGSS-4-1 and table showing airspace structures

	Structure	Airspace Class	Level (AMSL)
1	Stansted CTR	D	Surface – 3,500 feet
2	Stansted CTA-1	D	1,500 feet – 3,500 feet
3	Stansted CTA-2	D	1,500 feet – 2,500 feet
4	Stansted CTA-3	D	2,500 feet – 3,500 feet
5	Stansted CTA-4	D	2,500 feet – 3,500 feet
6	Stansted TMZ-1	G	Surface – 1,500 feet
7	Stansted TMZ-2	G	Surface – 1,500 feet
8	Stapleford ATZ	G	Surface – 2,185 feet
9	LTMA-1	A	2,500 feet – FL195
10	LTMA-3	A	3,500 feet -FL195

Area of Operation (AoO)

North Weald lies within Stansted TMZ-2, within which aircraft must carry and operate a serviceable Mode-S transponder (as per SERA.60005 (b)). An AoO is established up to 1500 feet AMSL to facilitate flight into and out of North Weald for aircraft unable to comply with the requirements of the TMZ.

The AoO is depicted below (Figure 3) and its shape comprises a circle of 2NM radius centred on 51°43'18"N, 0°9'15"E, with a "stub" to the southwest which extends approximately 1.5NM west of the eastern TMZ boundary. Epping Visual Reference Point (VRP) is within this stub.



Figure 3: Chart extract from CAA 1:250k Sheet 8 England South Edition 26 (2022) showing EGSX AoO

Aircraft without a serviceable Mode-S transponder must adhere to one of the following two options when visiting North Weald:

1. **Route entirely via the North Weald AoO;** or
2. **Obtain a permission** from either:
 - Farnborough Radar on 132.800 MHz between 0800 hours and 2000 hours UTC; or
 - Stansted Radar on 120.625 MHz at other times.

Aircraft without serviceable Mode-S wishing to operate within the TMZ, outside of the AoO, must gain specific Air Traffic Control (ATC) approval.

North Weald Procedures

Circuit Procedures

There are two reciprocal runways at North Weald, Tarmac/Concrete and Grass both orientated 02/20. Circuits are conducted to the west at 1,200 feet QNH. Due to the Stansted CTA above, overhead joins are not permitted.

Visual cues for the circuit can be seen below (Figure 5). To avoid an infringement of the Stansted CTR, pilots should make turns abeam or south of the M11 Junction 7 Roundabout. Aircraft unable to comply with TMZ requirements **MUST** turn at M11 Junction 7 to remain inside the AoO, see below (Figure 4).

All aircraft **MUST** remain south of The Church Langley Water Tower which lies on the boundary of the CTR (see Figure 5).



Figure 4: M11 Junction 7



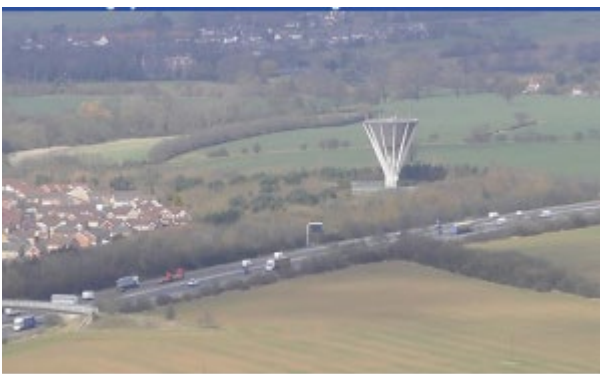
Figure 5: EGSX circuit cues



M11 Junction 7 Roundabout from above.



M11 Junction 7 Roundabout from 1200 feet



Church Langley Water Tower

Airspace Infringements at North Weald

Due to the nature of North Weald's location in relation to Stansted Airport, the impact of infringements in this area on Stansted Airport's operations is high and often requires the implementation of safety intervention measures from ATC. These measures can include the issuing of traffic information, radar vectors or avoiding action or in the suspension/delay in departures. ATC must ensure that a minimum of 3NM or 3,000 feet is maintained between aircraft inbound to Stansted and any infringing aircraft. Should less separation be achieved a loss of separation occurs and the controller is suspended from controlling duties pending investigation.

Below (Figure 6) is a snapshot from the CAA's Airspace Analyser Tool. Figure 6 illustrates aircraft tracks inbound to Stansted which were routed from the South over North Weald within CTA-2 at between 1,500 and 2,500 feet (AMSL) from 1 January 2023 to 22 June 2023. The lowest aircraft was recorded at 1,700 feet. The 3NM scale line highlights the radius that must be maintained around an infringing aircraft, as 3,000 feet separation would not be possible.

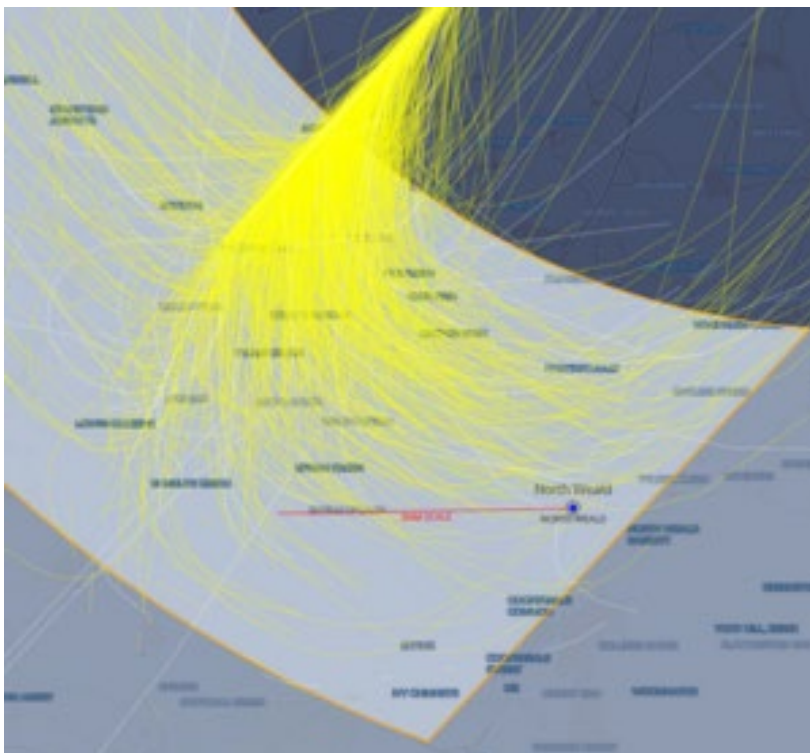


Figure 6: EGSS inbound tracks from the south at 1,500 feet – 2,500 feet, 1 January 2023 – 22 June 2023.

Types of infringement reported in the vicinity of North Weald

Vertically into CTA-2

Due to the airfield elevation of 321 feet, it is essential that you operate on the Stansted QNH to avoid entering the CTA above. You must ensure that climbs are arrested at the circuit altitude of 1,200 feet and you maintain a high level of monitoring of your altitude after departing the circuit, beneath the CTA.

Tips to avoid a vertical infringement of Stansted CTA-2

- **Minimise distraction** within the cockpit whilst climbing out, flying in the circuit and beneath the CTA to enable you the capacity to monitor your altitude. The concept of a 'sterile cockpit' is not limited to commercial aircraft operations.
- Remind yourself of the 1,200 feet circuit limit on your **pre-departure checklist**.
- Understand **the impact of forecast weather** on your flight. Thermic or turbulent conditions can inadvertently push you upwards. A strong headwind will result in a greater climb angle, as with reduced ground speed you will travel a shorter distance laterally before reaching 1,200 feet, which is important to consider if you use ground features as circuit turning points without referencing your altitude. Use the regulated [Met Office Aviation Briefing Service](#) in your planning.
- Only depart when you are comfortable and ready. **Do not rush yourself** into a gap in the circuit traffic to the detriment of your situational awareness. It has been found that rushing to depart in such a gap has often led to pilots forgetting to select their transponders on to ALT. Thereby leading to an infringement of the TMZ.
- Monitor your altitude after leaving the North Weald circuit – you are still flying under the CTA, when possible [Take 2](#) – remain 200 feet below the base.

Laterally into the CTR

The Stansted CTR is less than 2NM on runway heading from the airfield boundary to the north northeast It is of particular importance when managing the workload of climbing out from Runway 02, however must also be considered when managing traffic ahead when downwind for Runway 20.

Tips to avoid a lateral infringement of the Stansted CTR

- Be aware of your **ground speed** – particularly if operating an aircraft with a higher relative performance than one you are used to, you'll approach the CTR quicker.
- If safe to do so, **turn abeam the M11 Junction 7 roundabout**. This will give you a 1NM buffer from the CTR.
- If unable to turn at M11 Junction 7, you **MUST** ensure you turn prior to the **Church Langley Water Tower**. Your turn should be commenced prior to the built-up area of Church Langley west of the M11 to ensure it is completed before the water tower.
- **Do not be pressured by limited gaps in the circuit**. Departing too soon after a preceding aircraft (particularly one slower than you) will result in the need to extend your climb from 02 out for separation. When operating on Runway 20, consider slowing your cruise, going around at circuit height or leaving the circuit to avoid extending the downwind leg into the CTR.

Lateral into CTA-2

Overhead joins are not permitted at North Weald. You must plan how you will integrate with established circuit traffic ahead of time.

Tips to avoid a lateral infringement of Stansted CTA-2

- **Do not plan to overfly North Weald if transiting TMZ-2, without having established two-way communications with North Weald Radio on 123.530 MHz**. The circuit is often busy at 1,200 feet, leaving very little distance from the CTA above should you need to climb to avoid traffic. Overflying North Weald without establishing positions of circuit traffic increases the risk of a mid-air collision. Alternatively, request a clearance from Stansted Radar to transit the CTA above North Weald or

obtain information from Stapleford Radio on 122.805 MHz to transit the Stapleford ATZ in accordance with Rule 11 (5) of the Rules of the Air Regulations 2015.

- Incorporate an easily **identifiable limit point** into your pre-flight planning, which is plotted on your chart and PLOG beyond which you won't proceed until at circuit height to avoid last moment descents below the CTA or the effect of a strong tailwind. From the east such a limit point could be Chipping Ongar A414/B184 Interchange VRP or from the southwest M25 Junction 26.
- Increase your situational awareness **by listening out on the North Weald Radio frequency** (123.530 MHz) to establish a picture of the traffic situation at the airfield prior to arrival. Identify an area in your planning in which you can **hold if the airfield traffic is high** and wait until you have a full picture before commencing your join. Remember North Weald Radio is non-surveillance so should only be used when arriving, departing, or operating in the circuit.

TMZ-2

Aircraft operating at North Weald must either be Mode-S equipped, operate wholly within the AoO or obtain a permission from Farnborough or Stansted Radars (as detailed above.)

Tips to avoid an infringement of Stansted TMZ-2

- **Check, check and check again.** Include an ALT check on your checklist immediately prior to departure. Incorporate it into your checks once lined up, and once again when airborne, prior to leaving the AoO. Confirmation bias is a common causal factor in TMZ infringements.
- Incorporate an ALT check into your **limit point** identified at the pre-flight planning stage when inbound to the airfield. Do not proceed beyond until you have descended to circuit height AND checked your transponder is set to ALT.
- **Check your transponder is within limits.** Farnborough LARS can advise if your Mode-C is displaying erroneously against your altimeter. The maximum error of altitude encoder and transponder equipment can be no more than +/- 125 feet.
- **Request a permission** to transit the TMZ if your transponder is in-operational or out of limits (as detailed above), or if you are uncertain of its operational status in-flight.

How to avoid airspace infringements

Apply Threat and Error Management

Identify threats you may face and errors that you may make. Plan for how you would address each, so you are not surprised in-flight.

Threats at North Weald include:

- Notified airspace: Stansted CTA-2, Stansted TMZ-2, Stansted CTR or Stapleford ATZ
- Other aircraft: the area in the vicinity of North Weald and Stapleford can become very congested with traffic of varying performance levels.
- Distraction, for example from passengers or technical issues. Workload is high in the vicinity of North Weald and you must be wholly focused on the flying task. See [Safety Sense Leaflet 31 on Distraction and Interruption](#)

Errors you could make at North Weald include:

- Operating within the TMZ, outside of the AoO, without an operational Mode-S transponder displaying ALT information.

- Extending your climb-out (from Runway 02) or downwind (Runway 20) leg, leading to an inadvertent entry into the CTR.
- Losing situational awareness as to your lateral and vertical position relative to CTA-2.
- Fail to formulate a contingency plan (a 'Plan-B') in your pre-flight planning. The airspace in this area can be very busy, including limit points in your plan can create more time in the air to manage the workload.

> Read more on TEM: [Threat & Error Management](#)

Plan your flight appropriately using regulated material

Study airspace structures along your route and make note of vertical as well as lateral dimensions. Be aware of using non-regulated, third-party materials as your sole source of planning – make use of regulated, up to date paper charts and [NATS UK Aeronautical Information Service \(AIS\)](#) to access [NOTAM](#), the [UK Aeronautical Information Publication \(AIP\)](#) & [Supplements](#) and [UK Aeronautical Information Circulars \(AICs\)](#). In the UK, NATS AIS is the authorised source of UK aeronautical information provided on behalf of, and regulated by, the CAA.

Where able, plan your route to “TAKE2” – remain 200 feet from the base of controlled airspace and/or 2 NM from the edge. You could always increase this buffer in cases of thermic or windy conditions.

Obtain an appropriate Air Traffic Service or use a Frequency Monitoring Code (FMC)

Familiarise yourself with the different UK Flight Information Services available to you and the differences between a basic, traffic and deconfliction service. Make use of a [Lower Airspace Radar Service \(LARS\)](#) where available.

If operating proximate to controlled airspace and you do not want to obtain an air traffic service, listen to an appropriate frequency and use the FMC rather than squawking 7000. This way, the unit will be able to contact you quickly should they need to.

Whilst operating proximate to Stansted, make use of the Stansted FMC. The Frequency is 120.625 MHz and the squawk is 7013 as annotated on the VFR chart (see Figure 7). Alternatively, within the TMZ obtain a service from Farnborough LARS North on 132.800 MHz.



Figure 7: Chart extract showing Stansted CTR, CTA-2 and TMZ-2 with FMC annotation.

Correctly use a VFR Moving Map

Ensure your device is connected to wifi and the charting is updated before you plan your route and that you carry a backup if your device was to fail in flight. Familiarise yourself with your Moving Map's user guide. Moving Map technology should not be the sole means of planning or navigation as highlighted in the European General Aviation Safety Team's Safety Promotion Leaflet, [Using Advanced Navigation Technology Safely](#).

In flight, make sure that the moving map is within your field of vision, that it is showing airspace boundaries and that airspace alerts are enabled. Don't cancel airspace alerts until you are completely aware of them and the associated TEM.

Further information on Stansted Controlled Airspace can be found in Hot-Spot Narratives:

- 16. Stansted CTA, CTR and TMZ
- 35. Hunsdon Microlight Site