



**United Kingdom and Ireland
Special Operations Department**

Panavia Tornado 50th Anniversary

17th August 2024





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Overview

2024 sees the 50th anniversary of the first flight of the multinational Panavia Tornado. Built and served the air forces of the United Kingdom, Italy, and Germany, with exports to Saudi Arabia, the Tornado was a successful multinational program that led to the successful Eurofighter Typhoon.

Therefore, the United Kingdom and Ireland Special Operations Department, in partnership with the Italian and German Special Operations Departments, would like to invite you to the “Tornado 50th Anniversary” at RAF Marham, the former home of the RAF’s last Tornado squadron where you will be able to partake in many missions that this formidable aircraft does daily.

Date and Time

Date: Saturday 17th August 2024

Time: 1200z – 1600z

Definitions

The following are definitions of some acronyms used throughout this document:

| TERM | EXPLANATION |
|-------|---|
| GAT | General Air Traffic (e.g. Filed IFR or VFR under S, N or G) |
| OAT | Operational Air Traffic (e.g. Filed IFR or VFR under M) |
| TACAN | Tactical Air Navigation System |
| RAF | Royal Air Force |
| GAF | Luftwaffe/German Air Force |
| AM | Aeronautica Militare/Italian Air Force |
| XU | IVAO United Kingdom and Ireland Division |



Guidelines

- Pilots **MUST** register before the Event if they wish to join the event.
- There will be multiple missions to fly from RAF Marham.
- The recommended Aircraft types for this event are the Tornado GR1, Tornado GR4, Tornado IDS, Tornado ECR and Tornado ADV (Air Defence Variant). Other types can be flown.

Arrival/Departures

RAF Marham will be staffed in the morning between 0900z and 1200z so that aircraft can be positioned at the airfield and ready for the event. This will allow pilots to fly in from current and former Tornado Bases around Europe, especially for the event.

Points to note:

- This is not an official part of the Event but is provided to improve the experience.
- It is recommended that aircraft arriving from another country **SHOULD** operate as GAT until reaching UK airspace.
- Pilots are reminded that all Airspace above FL195 in the United Kingdom is Class C airspace and must obtain clearance before entering this airspace.

Missions

During the main event, there will be four distinct missions to fly. The minimum requirement of the event is to complete 1 of the missions, but you may choose to complete as many missions as you wish.

Mission 1 – Low Level

Mission 2 – High Energy Manoeuvres / Basic Fighter Manoeuvres (BFM)

Mission 3 – Air To Ground Range Practice



Mission 1 – Low Level

Transit to LFA7 at medium level, descend low level and fly around the Mach Loop 3 times before returning to Marham.

Route:

This flight will be conducted as VFR outside controlled airspace. Below is the advised route for the Mach loop, but you must fly your own navigation to the entry. The best way to navigate the route is visually via the river mouths and roads.

Entry: 523159N0040334W 523541N0035149W

Loop: 523735N0034409W 524122N0034144W 524318N0034140W 524414N0034446W 524446N0034653W
524254N0035035W 524052N0035303W 524009N0035217W 523922N0035057W 523805N0035035W
523648N0035100W

Exit: 524009N0035427W 523447N0040645W

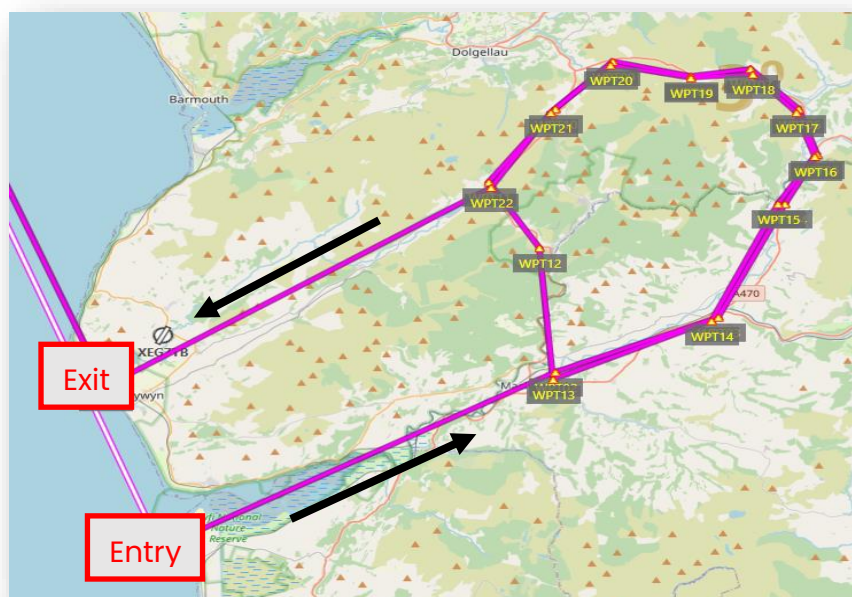


Figure 1 - Machloop



Figure 2 - EGYM to Machloop



Mission 2 - High Energy Manoeuvres / BFM

Depart EGYM and head north to the danger area D323, where you will spend at least 10 minutes practising high-energy manoeuvres solo or basic fighter manoeuvres against other pilots in your formation.

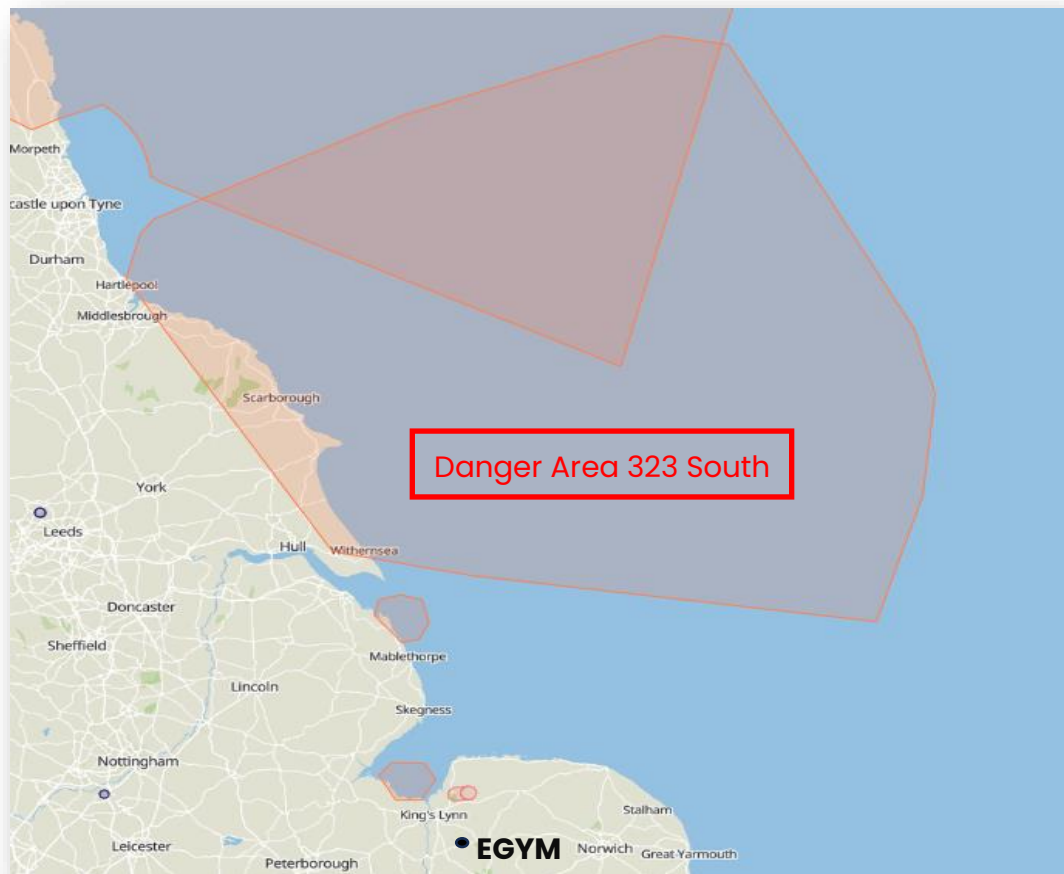


Figure 3 - DA323

Mission 3 – Air To Ground Range Practice

Depart EGYM to practice air-to-ground attacks, either hot or dry.

- To operate into Holbeach, EGVV will clear you to enter the range, where you will enter an anti-clockwise (Left) pattern central over the target.
- You should do at least three passes of the targets on the beach, either hot/cold.
- Once complete, report to EGVV.

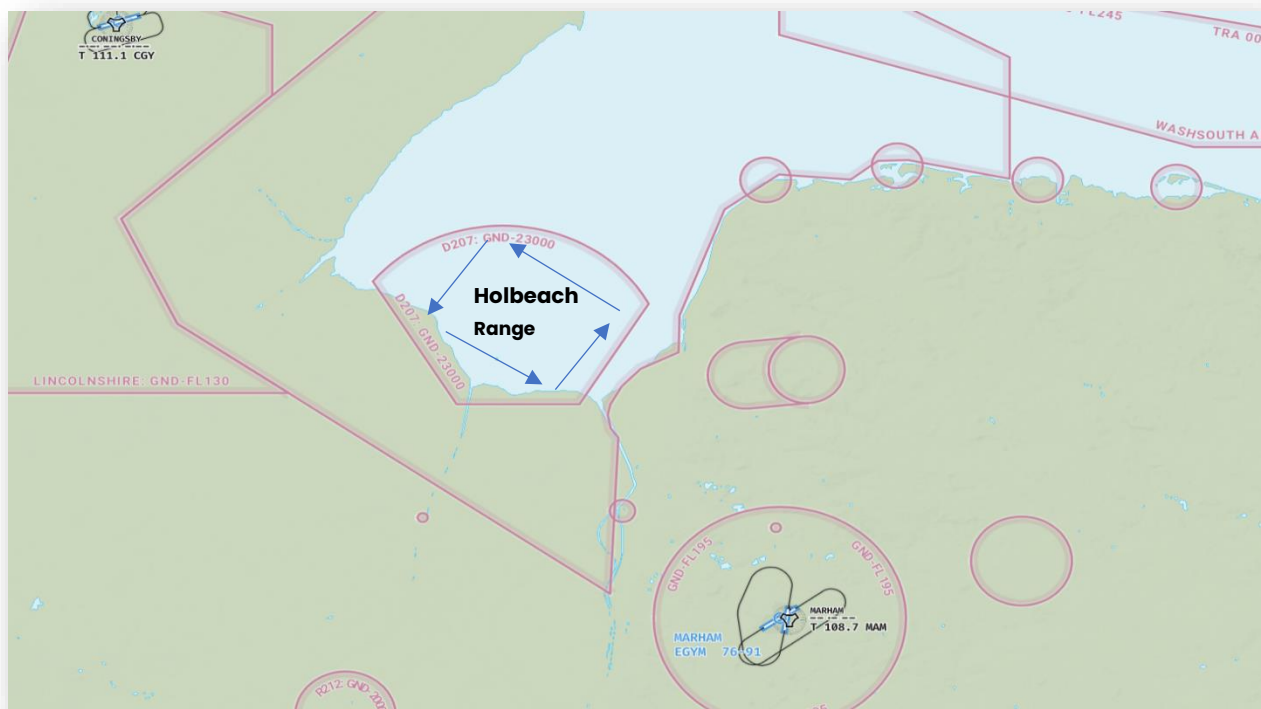


Figure 4- Holbeach Range



Figure 5 - Holbeach Range's targets

Parking

ASPs A and B are to be used for the event, which is located on the north side of the airfield.

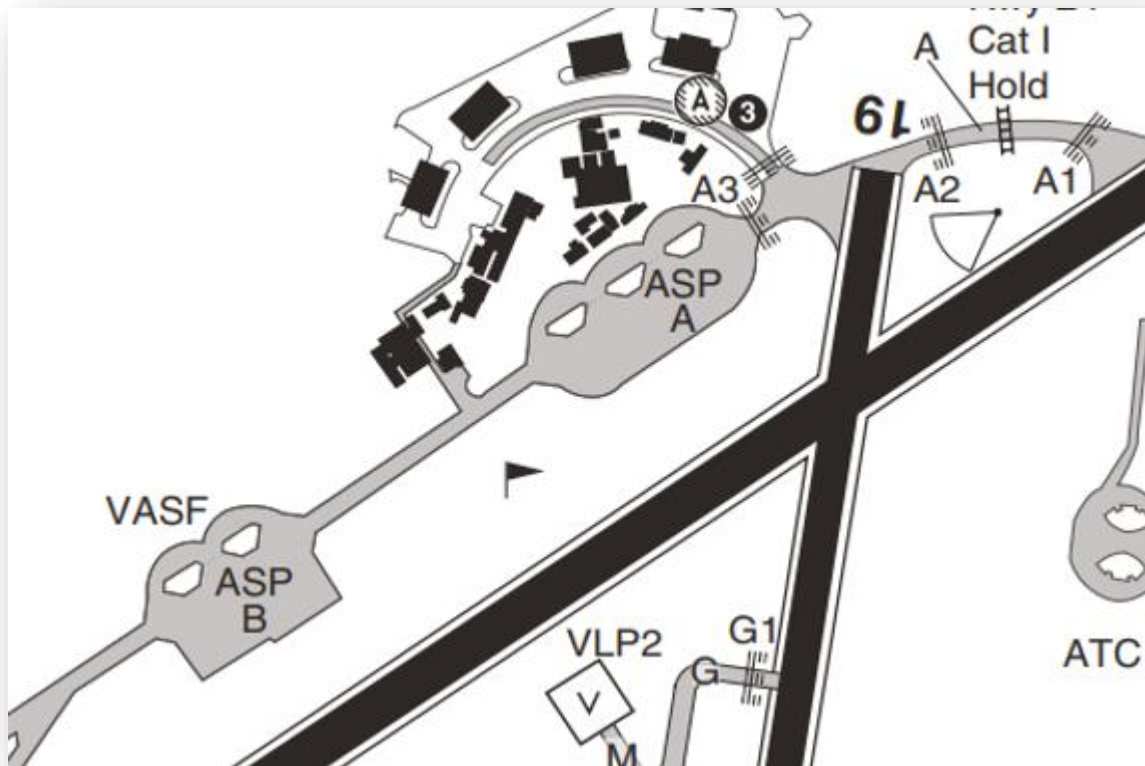


Figure 6 - Parking

Controllers

- Controllers must have an in-depth understanding of the operations and phraseology of Special Operations in the United Kingdom and Ireland Division.
- Controllers should understand and accommodate pilots who are unfamiliar with Special Operations phraseology and procedures and should assist where possible.
- Controllers must use clear English when there is an apparent misunderstanding in instructions.



Charts

The following resources are available:

| RESOURCE | LINK |
|-------------------------------|---|
| Military AIP (United Kingdom) | https://www.aidu.mod.uk/aip/ |
| Civil AIP (United Kingdom) | NATS UK AIP (ead-it.com) |
| RAF Marham EGYM Chats | EGYM-Marham-Combined.pdf (mod.uk) |
| Letter of Agreement (IVAO XU) | Letter of Agreement (IVAO XU) (ivao.aero) |

RAF Marham Ground Layout:

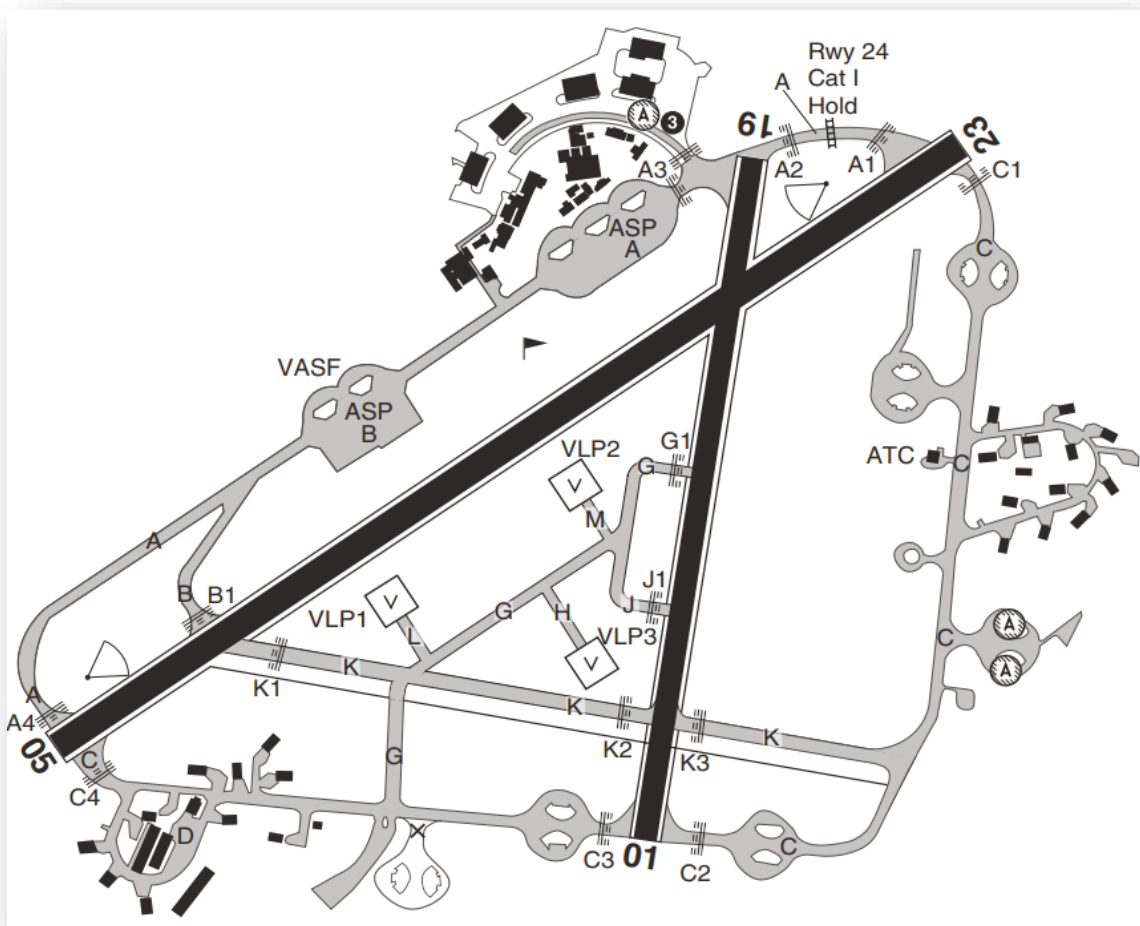


Figure 7 - EGYM Ground Map



TACAN Routing:

The following chart shows the routing available from the edge of Airspace in the United Kingdom. TACAN Documentation - <https://www.aidu.mod.uk/aip/pdf/enr/ENR-4-1.pdf>



Figure 8 - TACAN Routes



Navigational Aids

The following local navigational aids are available:

| NAME | ID | TYPE | FREQ | DISTANCE | BEARING (From EGYM) |
|------------|-----|-------|-------|----------|---------------------|
| Marham | Mam | TACAN | 108.7 | 0 | 0 |
| Lakenheath | LKH | TACAN | 110.2 | 15NM | 179 ° |
| Norwich | NWI | NDB | 342.5 | 27NM | 085 ° |

Airfield Info

The following runways will be in use:

| RUNWAY | LENGTH | ILS | CIRCUIT | HEIGHT |
|--------|--------|-------------|------------|-------------------|
| 05 | 2736m | None | Right Hand | 1000ft QFE |
| 23 | 2783m | 110.750/235 | Left Hand | |
| 01 | 1864m | None | Left Hand | |
| 19 | 1864m | None | Right Hand | |

Frequency's

The following frequencies will be in use:

| POSITION | CALLSIGN | FREQUENCY |
|-----------------|---------------------------|-----------|
| EGVV_CTR | Swanwick Military (South) | 127.450 |
| EGYM_APP | Marham Approach | 124.150 |
| EGYM_TWR | Marham Tower | 118.325 |



Scenery

While scenery will not be enforced for this Event, it is advised to enhance the experience.

| PLATFORM | LINK |
|-----------------------------|--|
| FSX, FSX:SE, P3Dv1-5 | Just Flight - RAF Marham (FREEWARE by Airfield Construction Group) |
| X Plane 11 | RAF Marham (EGYM) - Scenery Packages - X-Plane.Org Forum RAF Holbeach EGYH - Scenery Packages - X-Plane.Org Forum |
| MSFS 2020 | RAF Marham EGYM (UK) for Microsoft Flight Simulator MSFS RAF Holbeach - EG D207 Air Weapons Range for Microsoft Flight Simulator MSFS |

Email/Forum/Discord

Leading up to this Event, you can contact the Special Operations Department of IVAO United Kingdom and Ireland using the following means:

| PURPOSE | MEANS | NOTES |
|----------------|--|--|
| Email | xu-soc@ivao.aero xu-soac@ivao.aero | |
| Forum | http://xu.forum.ivao.aero | |
| Discord | https://xu.ivao.aero/discord | IVA O XU Members only. |
| | https://sod.ivao.aero/discord | IVA O HQ-SOD Discord, Look for XU-SOC or XU-SOAC |