

OPERATION OF DRONES IN THE VICINITY OF AERODROMES

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OBJECTIVE

- To Create awareness of the safety concerns of operating drones at or in the vicinity of aerodromes

OUTLINE

- Introduction
- Definition of key terms
- Aerodrome-related critical areas prohibited for drones
- Safety issues created by drones operation
- Actions required by operators

INTRODUCTION

- The uses of drones cannot be underestimated
- The need to operate drones safely
- The need to interact with ATC
- The need to use airport facilities
- Capability of drones to interact with airfield facilities

DEFINITIONS

- Aerodrome
- Airport
- Vicinity

DEFINITION - **Aerodrome**

- A defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft (**The Civil Aviation (Aerodromes) Regulations, 2019**).

DEFINITION - Airport

- An aerodrome with extended facilities, mostly for commercial air transport. Airports often have **facilities** to store and **maintain** aircraft, and a control tower. An airport consists of a landing area, which comprises an aerially accessible open space including at least one operationally active surface such as a runway for a plane to take off or a helipad, and often includes adjacent utility buildings such as control towers, **hangars** and terminals. Larger airports may have airport aprons, taxiway bridges, air traffic control centres, passenger facilities such as restaurants and lounges, and emergency services (**Wikipedia**).

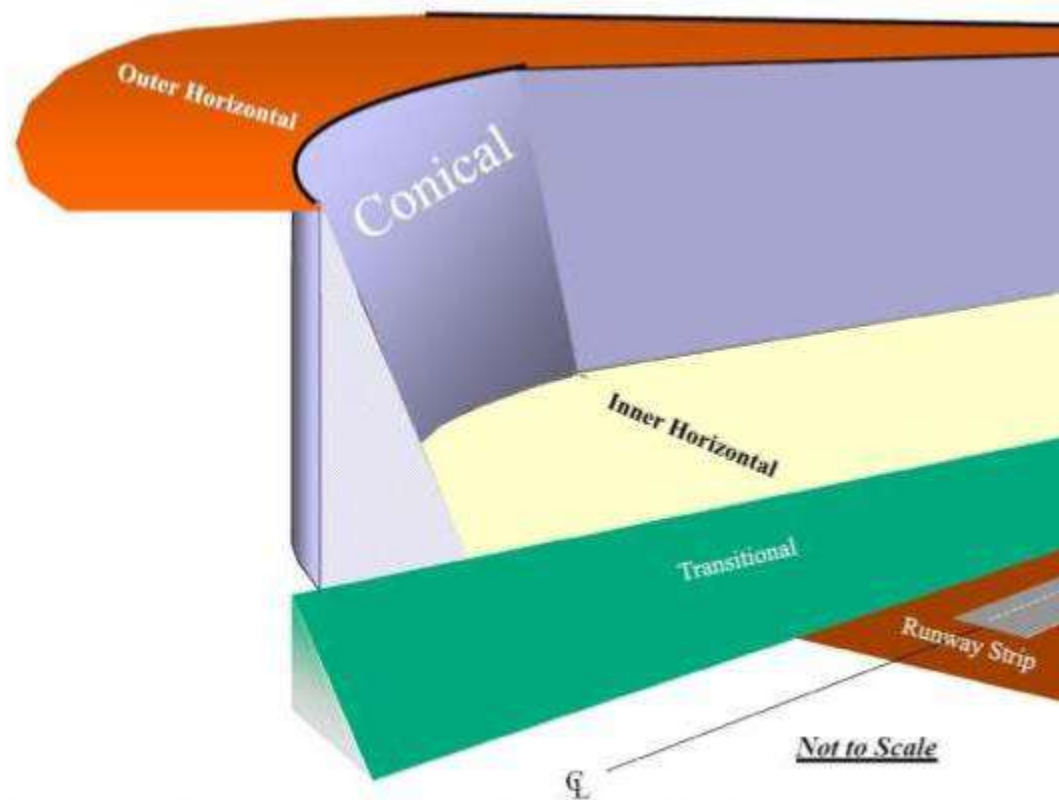
DEFINITION - Vicinity

- A defined airspace around an aerodrome for control of obstacles that may infringe the obstacle limitation surfaces around the aerodrome, contained within a radius of fifteen kilometers from the aerodrome reference point up-to a height of one thousand five hundred feet above ground level (**The Civil Aviation (Aerodromes) Regulations, 2019**).

AERODROME CRITICAL AREAS

- Instrument landing system and facilities
- Safety surfaces (Obstacles Limitation Surfaces);
 - Approach surfaces of runways
 - Take-off climb surfaces of runways
 - Transitional surface,
 - Conical surface,
 - Other surfaces (inner/outer horizontal).
- Runways, taxiways, aprons, etc.

SAFETY SURFACES



EXAMPLE OF IMPACT OF DRONES OPERATION AROUND AN AIRPORT

– DECEMBER 2018

- flights from Gatwick suspended for more than **36 hours** after drones were reported over the airfield
- Recreation around Entebbe International Airport

SAFETY ISSUES OF DRONE OPERATIONS AT AERODROMES

- Drones will not detect airfield visual aids; e.g markings, signs
- Need to be controlled, otherwise collision with aircraft
- Obstructing the safety surfaces can lead to collision with aircraft
- Incursion

ACTIONS REQUIRED

- Good regulations
- Identify “No drones fly areas”
- Participate in regulation development/amendments of drones issues
- Conduct risk assessments on areas in the vicinity of aerodromes

ACTIONS REQUIRED

- Roles of everybody on mitigation of risks
- Funding of such mitigations
- Procedure to legally operate drones
- Enforcement actions
- Training on use of drones

THANK YOU