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Autoriteti i Aviacionit Civil i Kosovës  
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Civil Aviation Authority of Kosovo

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# AIRPORT PROTECTIVE ZONES

Guidance Manual

## Foreword

The purpose of this manual is to describe the Airport Protective Zones System and to provide guidance to those who, by the associated legislation, are involved in its operation.

Stakeholders involved in safeguarding aircraft operations are those whose actions impact on physical developments in the defined zones around aerodromes such that these developments do not compromise the requirements of air navigation safety.

In order for the System to make a real contribution to flight safety in civil aviation in the Republic of Kosovo, it is most important that all stakeholders comply with the procedures for Airport Protective Zones.

This manual offers guidance to those responsible for the safe operation of an aerodrome or technical facilities and those responsible for building permits for physical developments to assess the impact of the proposed development or construction on the safety of air navigation. This assessment is known as Airport Protective Zones. Under Law No. 03/L-051 on Civil Aviation CAA has the responsibility for Airport Protective Zones in the territory of Kosovo.

This manual sets out the procedures on Airport Protective Zones to be followed by the responsible authorities. CAA requires that all parties are familiar with the contents and procedures described herein.

**Dritan Gjonbalaj**  
Director General  
Civil Aviation Authority

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	Name and position	Date	Signature
Prepared by:	<b>Burim Dinarama</b> Inspector, Aerodromes Department	07 February 2011	
Quality Check by:	<b>Lendita Kika-Berisha</b> Manager, Internal Auditing and Quality Management		
Approved by:	<b>Dritan Gjonbalaj</b> Director General		

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## Terms and Definitions

<b>Aerodrome</b>	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.
<b>Aerodrome elevation</b>	The elevation of the highest point of the landing area.
<b>Aerodrome reference point</b>	The designated geographical location of an aerodrome.
<b>Aerodrome Operator</b>	<p>a) A natural person who is engaged as, or who serves in the capacity of, a director or manager of an airport, an aerodrome, an airfield or an air traffic service unit, if such airport, aerodrome, airfield or air traffic service unit provides or maintains aerodrome and/or air navigation facilities for public transport aircraft operations;</p> <p>b) A natural person in charge of the inspection, maintenance, overhauling, or repair of an aerodrome, and any individual in charge of the inspection, maintenance, overhauling, or repair of air navigation service unit facilities, radio navigation aids, equipment or appliances.</p>
<b>Airport</b>	A landing area used regularly by aircraft for receiving or discharging passengers or cargo.
<b>Birdstrike</b>	A collision between an airborne bird and an aircraft. It is a common threat to aircraft safety and has caused a number of fatal accidents.
<b>CAA</b>	Civil Aviation Authority of Kosovo.
<b>Certified aerodrome</b>	An aerodrome whose operator has been granted an aerodrome certificate.
<b>Construction</b>	Erection, installation, replacement, renovation, enlargement, alteration, conversion or demolition of construction building, excluding works for maintaining existing buildings.

<b>Developer</b>	Any legal or natural person that has shown the interest to build or has applied for a building permission.
<b>Electronic aids</b>	Non-visual or instrumental aids used for air navigation at the airport.
<b>ICAO</b>	International Civil Aviation Organization.
<b>Instrument flight paths</b>	or IFR flights means a flight conducted in accordance with instrument flight rules.
<b>Ministry/ies</b>	The relevant Ministry or Ministries which may be jointly or severally responsible for issuing construction permits in accordance with the Law No. 2004/15 on Construction.
<b>Municipalities</b>	Municipalities that have an aerodrome or its Obstacle Limitation Surfaces within its municipal boundaries.
<b>TORA</b>	Take-off run available. The length of runway declared available and suitable for the ground run of an aeroplane taking off.
<b>TODA</b>	Take-Off Distance Available. The length of the take-off run available plus the length of the clearway, if provided.
<b>ASDA</b>	Accelerate-Stop Distance Available. The length of the take-off run available plus the length of the stopway, if provided.
<b>LDA</b>	Landing Distance Available. The length of runway which is declared available and suitable for the ground run of an aeroplane landing.
<b>Obstacle</b>	All fixed (whether temporary or permanent) and mobile objects, or parts thereof, that are located on an area intended for the surface movement of aircraft or that extend above a defined surface intended to protect aircraft in flight.
<b>Obstacle limitation surfaces</b>	The defined airspace surfaces around aerodromes that are to be maintained free from obstacles.

<b>Runway</b>	A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft.
<b>Radar</b>	A radio detection device which provides information on range, azimuth and/or elevation of objects.
<b>Safeguarding of aerodromes</b>	Ensuring the safety of Aerodromes or protecting aerodromes.
<b>Visual aids</b>	Aids at the airport that visually assist air navigation at the airport.
<b>Visual flight paths</b>	or VFR flights means a flight conducted in accordance with visual flight rules.

## Chapter 1

### Objectives and Purpose

#### 1.1. Objectives

The Objectives of Airport Protective Zones are as follows:

- a) To provide for legally enforceable zoning/land use control measures in vicinity of Airports in Kosovo and flight path areas.
- b) To ensure that future physical development projects in the defined zones do not, in any way, compromise the requirements of air navigation safety and are compatible with airport operations
- c) To develop a process for permitting or not permitting the constructions in the defined zones around airports.

#### 1.2. Purpose

1.2.1 The purpose of this guidance manual on Airport Protective Zones is to offer guidance to enable those responsible for the safe operation of an airport or technical site to assess the impact of proposed development or construction might have on that operation.

1.2.2 Airport Protective Zones is achieved by a process of checking proposed developments so as to:

- protect the blocks of air through which aircraft fly, by preventing penetration of surfaces created to identify their lower limits;
- protect the integrity of radar and other Electronic aids to air navigation, by preventing reflections and diffractions of the radio signals involved;
- protect visual aids, such as Approach and Runway lighting, by preventing them from being obscured, or preventing the installation of other lights which could be confused for them;
- avoid any increase in the risk to aircraft of a bird strike by preventing an increase in hazardous bird species in the vicinity of the airport and, whenever the opportunity arises, to reduce the level of risk.

1.2.3 This assessment is based on information contained in Chapter 4, 5 and 6 of Annex 14 Volume I of the ICAO Convention. Airport Protective Zones is, therefore,



carrying out this assessment and taking the measures necessary to ensure the safety of aircraft, and thereby the passengers and crews aboard them, while taking-off or landing, or while flying in the vicinity of an airport.

### 1.3. Regulatory Requirements

1.3.1 The Kosovo Law No. 03/L-051 on Civil Aviation, Article 64 Airport Protective Zones reads:

64.1 The CAA may determine that an airport requires a protective zone around it. The CAA may make such a determination (i) because of the scale of traffic of the airport, (ii) to ensure the safety and security of the airport, (iii) to ensure the integrity of customs and immigration operations conducted at the airport, and/or (iv) for other circumstances specific to that airport that raise compelling public interest concerns.

64.2 If the CAA determines that an airport requires a protective zone, the CAA shall establish the parameters of such protective zone, and shall have the authority to impose restrictions (i) on the classes of persons who may have access to the zone and (ii) on the activities, including construction activities, that may take place in the zone. In establishing the parameters of a protective zone, the CAA shall consult with the Ministry of Internal Affairs to ensure that such parameters are sufficient to ensure airport security.

64.3 Interference with aeronautical navigation services shall be avoided in a protective zone. Aviation obstacles, such as buildings, trees, wires, poles, dams and the like, shall also be prohibited in a protective zone. Only the public, a public authority or a publicly owned enterprise may own buildings or other immovable property within a protective zone.

1.3.2 Regulation No. 5/2010 on Airport Protective Zones.

This Regulation is applicable to all legal entities and individual persons owning or planning to erect a construction in the vicinity of an airport and to the institutions which pursuant to Article 34 of Law Nr. 2004/15 on Construction are responsible for issuing permissions for all types of constructions enlisted in this article, and the operators of certified airports in the territory of the Republic of Kosovo.

1.3.3 This Guidance Manual on Airport Protective Zones describes the process of airport safeguarding such that the Ministry of Environment and Spatial Planning, the concerned Municipalities, the airport operator and CAA will carry out their statutory functions in a coordinated manner regarding developments and constructions in the defined areas in the vicinity of airports.

## Chapter 2

### Planning Applications and the Airport Protective Zones Process

#### 2.1. Consultation on Airport Protective Zones

CAA certified Airport Protective Zones maps relevant to safeguarded aerodromes shall be used by the relevant Ministry and Municipalities in the review of development and construction permits whenever such development and constructions are located within the boundaries of the certified maps pertinent to that specific aerodrome. These authorities will consult the aerodrome operator in such cases to ensure that Airport Protective Zones requirements are met and maintained.

Appendix A describes how to produce an Airport Protective Zones map

#### 2.2. Airport Protective Zones Process

All applications for construction or development within the safeguarded area of the aerodrome submitted to the relevant Ministry or Municipalities shall be subject to assessment by the aerodrome operator and endorsement by the CAA.

The relevant Ministry or Municipalities shall inform in writing together with appropriate documentation of the development or construction relating to the height and location of the proposed development. In addition, any proposed developments with bird attractant properties within 13km of the aerodrome will also be referred for consultation to the aerodrome operator.

If the location of the proposed development is within 6km from the aerodrome, regardless of the height required, the aerodrome operator shall be consulted to verify the interference the building might have with the radar signal.

To enable accurate assessment of a proposed development, the aerodrome operator shall be provided with relevant information about the proposals, namely:

- the location as an OS( Ordnance Survey) Grid Reference (to at least 6 figures for each of easting and northing);
- the elevation of the site [to an accuracy of 0.25m Above Sea Level (ASL)];
- the layout, dimensions and, particularly, heights of the proposed development;
- other information as may be necessary, for example, landscaping details to enable the bird strike potential to be assessed, or the types of cladding materials proposed so that the potential for radar reflection can be modelled.

The aerodrome will assess the Planning Application with reference to:

- the Obstacle Limitation Surfaces which protect Visual and Instrument Flight Paths (refer to Section 2.4)
- the effect on Visual and Electronic Aids to Air Navigation;
- the potential to attract Birds.

Aerodrome operator shall within five working days upon receiving the application, review and provide its final assessment with substantiated reasoning to the CAA by stating any of the following findings:

- no objection;
- no objection subject to certain stated conditions duly stated;
- objection (with reasons given).

Aerodrome operator may, on exceptional basis and due to the complexity of the subject matter, extend the time referred above for five additional days, provided it receives prior consent of the relevant Ministry or Municipalities involved.

Subject to the final assessment carried out by the aerodrome operator, the CAA will issue appropriate decision in respect of the compliance of the application for the construction permit with provisions of Article 3 of Regulation No.5/2010 on Airport Protective Zones.

Without prejudice to the exercise of competences and powers granted by the applicable law to the Ministry and Municipalities, the latter shall take into account the finding of an assessment as endorsed by the CAA when taking the appropriate decision over an application for a construction permit within the scope of Article 1, of Regulation No.5/2010 on Airport Protective Zones.

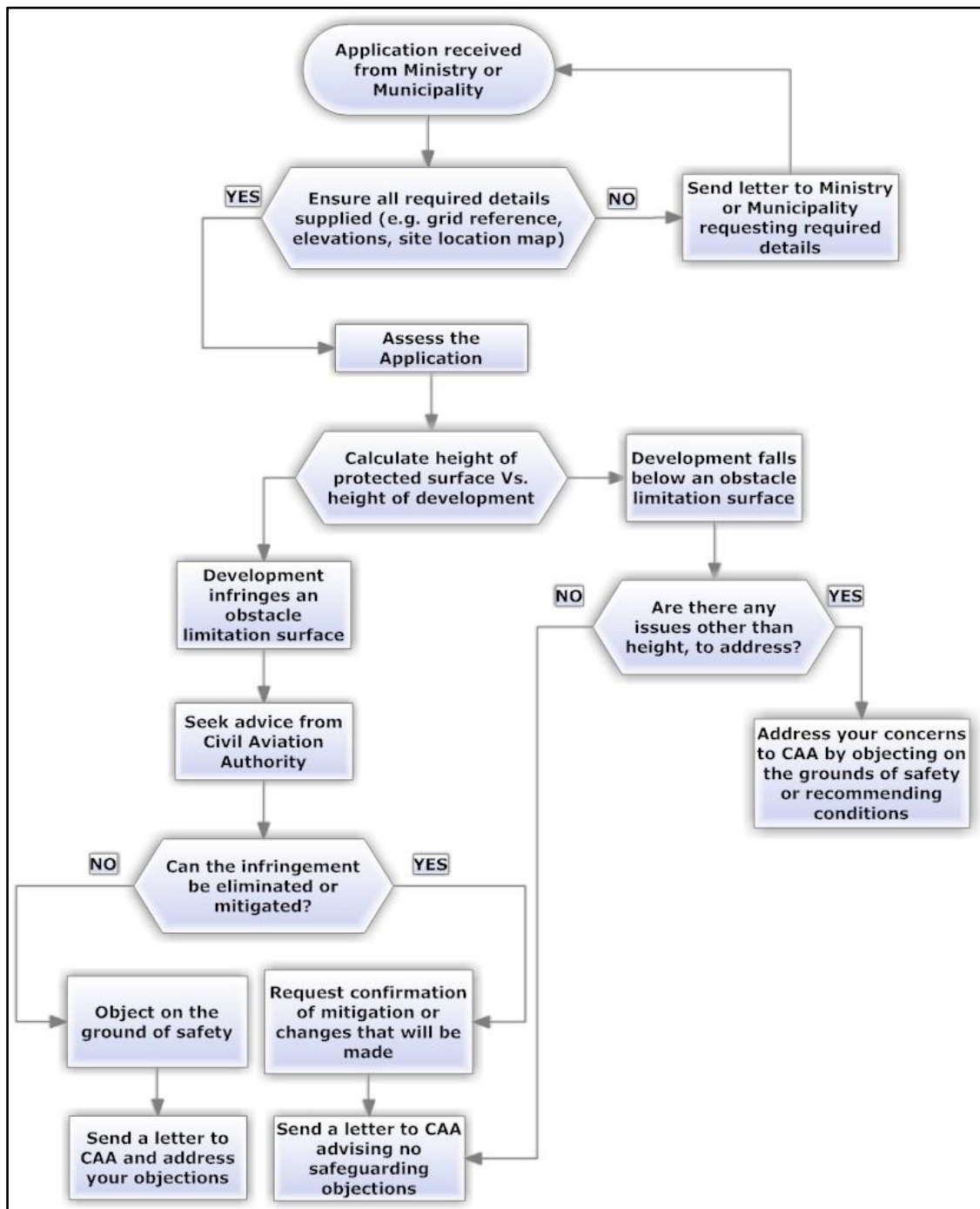
The response of the aerodrome operator shall be taken into account, together with all the other responses, when the Ministry or Municipality determines the outcome of the planning application.

The aerodrome operator shall advise CAA on the response made together with all information pertaining to the development in respect of height, layout and location.

Aerodrome operator shall notify the Municipalities and/or the Ministry of Environment and Spatial planning on any new development in the vicinity of the airport, whose permit to build has not been granted by municipal authorities.

Developers may seek advice from the aerodrome operator and from CAA regarding the planning of the development/construction, and the Ministry or Municipality may refer the developer accordingly.

The Airport Protective Zones process is illustrated in Fig.1.



**Figure 1.** Airport Protective Zones Flowchart

### 2.3. Airport Protective Zones Assessment Procedure by the Aerodrome Operator

The Airport Protective Zones assessment procedure is as follows:

- ✓ Generate an 'Airport Protective Zones case slip' to annotate all relevant information (see Appendix C for sample case slip).

- ✓ Plot the location of the proposed development on a suitable map.
- ✓ Measure the distance of the site from the aerodrome. If the site layout does not clearly indicate the exact location of the structure, use the part of the site nearest to the aerodrome.
- ✓ Determine the most critical, normally the highest, point of the proposed structure.
- ✓ Determine the exact ground height and add to the height of the structure to achieve an above ordnance datum (AOD) maximum height of the proposed development.
- ✓ Establish the prevailing surface or surfaces using the Standards and recommended practices of Annex14 of ICAO (see Section 4 below and Figure 2 and 3).
- ✓ Calculate the height of the applicable Obstacle Limitation Surface(s) at the site.
- ✓ Compare the height of the applicable obstacle limitation surface(s) at the site, with that of the maximum AOD height of the proposed structure to determine if there is an infringement and by how much.
- ✓ Consider the potential impact of the issues outlined in 2.5
- ✓ Respond to the CAA with a clear answer: **no objection**, **no objection subject to certain stated conditions** or **objection** with reasons given.
- ✓ Record the details of the assessment on the Airport Protective Zones case slip.
- ✓ Keep a record of all calculations and correspondence, and of the reasoning behind the decision made.

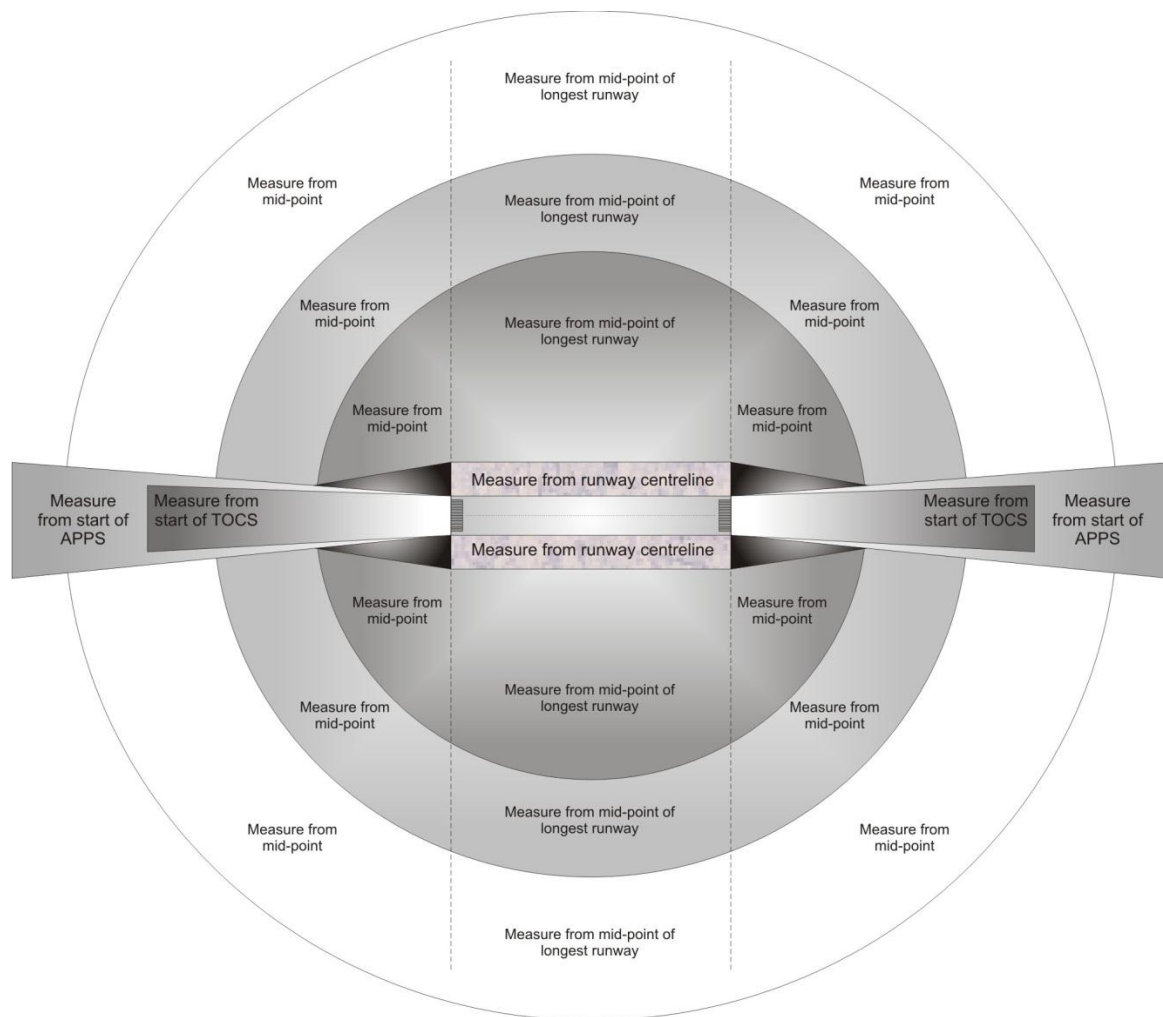
#### 2.4. Obstacle Limitation Surfaces (OLS)

According to ICAO Annex14 Volume I Chapter 4; the objectives of the specifications of OLS are to define the airspace around aerodromes to be maintained free from obstacles so as to permit the intended aeroplane operations at the aerodromes to be conducted safely and to prevent the aerodromes from becoming unusable by the growth of obstacles around the aerodromes. This is achieved by establishing a series of **OLS** that define the limits to which objects may project into the airspace.

OLS represent the lower limit of the blocks of protected airspace around an aerodrome. They take the form of a complex set of 3-Dimensional surfaces, which extend upwards and outwards from the runway(s).

The OLS completely surround the aerodrome, but those surfaces aligned with the runway(s) used to protect aircraft landing or taking-off can be more limiting than those surrounding the rest of the aerodrome, particularly as you get closer to the aerodrome. Details of the OLS can be found in Fig.2 and 3.

Under the terms of their Certification, aerodromes are normally required to prevent new developments or extensions to existing structures from infringing the OLS. It is for this reason that accurate information on the location and height of the proposed development is required. The height of vehicles is taken into account when evaluating roads and parking areas within proposed developments, unless any lighting involved is taller. Railways are treated in a similar manner.



NOT TO SCALE

**NOTE:** May not apply in all cases

# KEY

Inner Horizontal Surface [IHS]

Conical Surface

Outer Horizontal Surface [OHS]

Take-Off Climb Surface [TOCS]

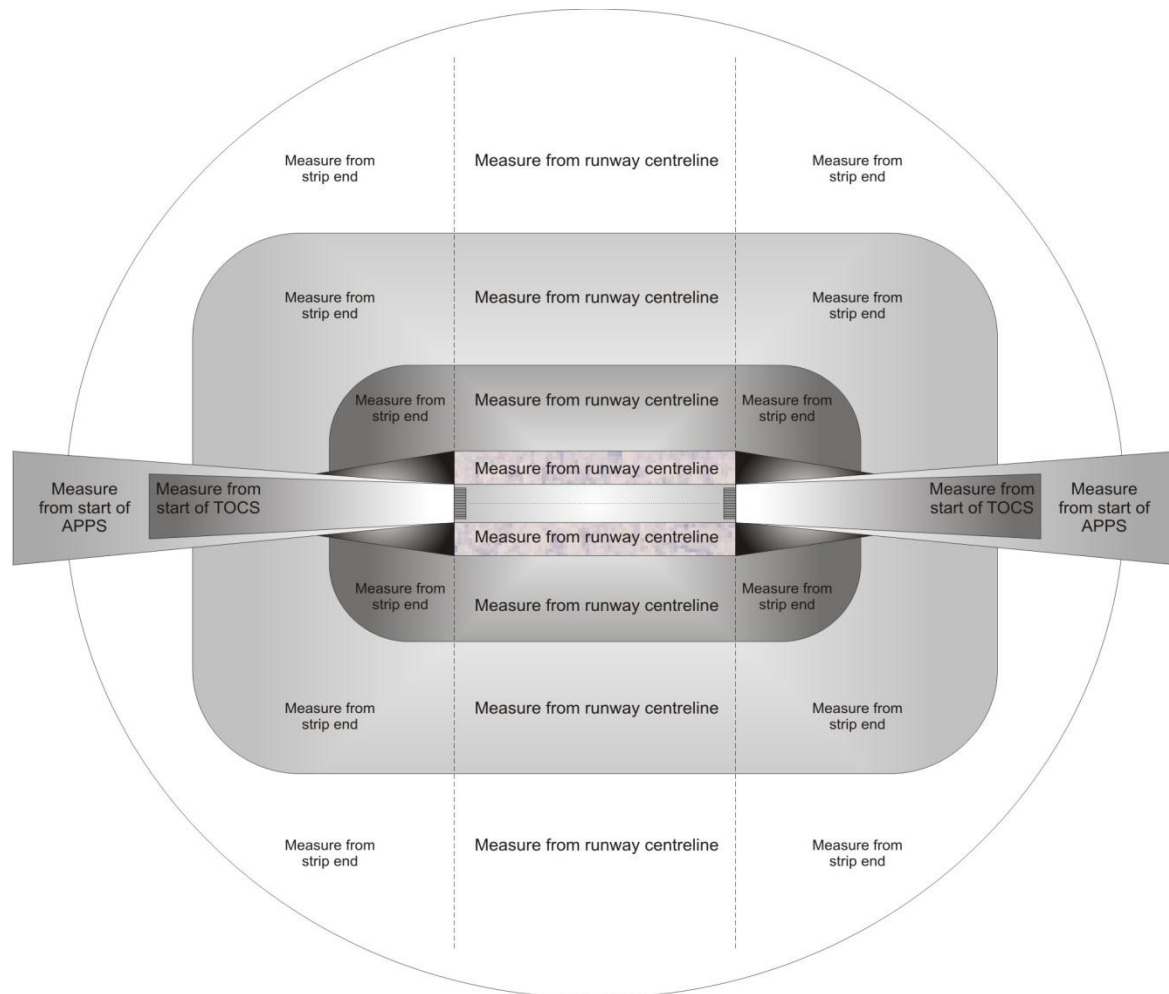
Approach Surface [APPS]

Transitional Surface

See Annex 14  
[chapter 4]

Figure 2. Guidance on the measurement of the location of a proposed development in relation to the aerodrome and its obstacle limitation surfaces, where the longest runway is less than 1800 m in length






NOT TO SCALE

**NOTE:** May not apply in all cases


# KEY

 Inner Horizontal Surface [IHS]

 Take-Off Climb Surface [TOCS]

 Conical Surface

 Approach Surface [APPS]

 See Annex 14 [chapter 4]

 Outer Horizontal Surface [OHS]


 Transitional Surface

Figure 3. Guidance on the measurement of the location of a proposed development in relation to the aerodrome and its obstacle limitation surfaces, where the longest runway is greater than 1800 m in length



## 2.5. Other Considerations

Other considerations to take into account include the following:

a) **Bird strike Hazard.** It may be appropriate to place a condition, which would normally be included as a landscaping condition, in your response that gives assurance that the proposal does not include landscaping or water features that may increase the risk of a bird strike to aircraft using the aerodrome. It is recommended that expert advice be sought on potential bird hazard developments such as landfill sites, wetlands and nature reserves.

b) **Radar and other Electronic Aids to Air Navigation.** In low visibility conditions pilots are entirely dependant on the accuracy of the information displayed on the instruments in the cockpit to navigate and land their aircraft. Similarly, air traffic controllers rely on the accuracy of the information displayed on the radar screens in front of them to maintain safe separation between aircraft. It is essential, therefore, that this information has not been distorted by interference to the radio signals involved used in the operation of the navigation aids.

The Airport Protective Zones process is used to protect such installations from:

- radio frequency interference from other sources of radio emissions;
- radio signal reflections or diffractions caused by physical objects.

A recent and less obvious source of radio frequency interference is the wind-driven generator.

c) **Visual Aids** Visual aids, consisting primarily of aeronautical ground lighting, assist pilots to line up the aircraft with the runway when approaching to land. These are protected by:

- preventing them from being obscured;
- preventing the installation and display of other lights, particularly street lighting, in a pattern or color which could be mistaken for visual aids;
- preventing a high level of background lighting which could diminish their effectiveness;
- preventing other lights which could dazzle pilots.

d) **Lighting.** It may be appropriate to place a condition in your response that gives assurance that the proposal does not include lighting that may dazzle or distract pilots or air traffic controllers on or in the vicinity of the aerodrome.

e) **Cranage.** The appointed person should consult the aerodrome/airfield manager for permission to work if a crane is to be used within 6 km of the aerodrome/airfield and its height exceeds 10 m or that of the surrounding structures or trees." It may be appropriate to place an informative in your response that gives assurance that safety will be maintained where cranes are used in the construction of the proposed development, especially when within 6 km of the boundary of the aerodrome.

- f) **Technical Site Airport Protective Zones.** Physical characteristics, such as the size, shape and construction materials, of a proposed development may affect the performance of aeronautical systems at or near an aerodrome. In addition, the sitting of telecommunication or other radiating equipment can cause adverse electromagnetic interference to these systems. It may be appropriate to approach other aviation organizations, especially where the Air Traffic Services (ATS) are provided by a third party organization, on the aerodrome to ensure the proposal does not impact on their electronic systems. It is the responsibility of aerodromes with their ATS Providers for the technical Airport Protective Zones of all of the radio sites for which they hold approvals under the ANO. Where necessary, procedures should be established to meet this requirement.
- g) **Wind turbines.** Apart from the potential to be a physical obstacle, wind generator turbines can distort radar performance. Where it has been determined that a planning application for a proposed development may have an effect on navigational or other aeronautical systems, it is common for simulation or other types of interference modelling of the effects of the development to be conducted. It is usual for the developer to bear the cost of the modelling.
- h) **Roads and railways.** Road or rail vehicles may be potential obstructions to aircraft. The International Civil Aviation Organization (ICAO) provides for this by considering a road to be a mobile obstruction of 4.8 meters and a railway to be a mobile obstruction of 5.4 meters. Consultations where a road or railway is an element should be assessed accordingly. Street furniture, signal gantries, lighting poles and other associated structures should also be the subject of consultation appropriate to their height.
- i) **Consultations which fall outside the protective zone.** If a proposal is sent to you for consultation but the development falls outside your protective zone, it may be appropriate for you to advise the consuler to seek the comment of CAA and airport operator.

If the proposed development does not infringe an OLS and there are no associated issues as detailed in 2.5, a response should be sent to the Ministry/Municipality or developer indicating that you have no Airport Protective Zones objections to the proposed development.

## 2.6. Lighting of Obstacles

The addition of warning lights to obstacles is intended to reduce the hazards to aircraft operating visually at low level while taking-off or landing at an aerodrome, particularly at night or in conditions of poor daylight visibility. The lighting of obstacles will be as per Regulation No 2/2010 on Marking of the Obstacles. This is applicable to temporary obstacles, such as cranes, as well as to permanent structures.

Where it is deemed necessary that obstacle light(s) would be required, it would be advised to the Ministry/Municipality as a Condition for attachment to any Planning Permission that may be granted.

## 2.7. Advice on Airport Protective Zones

Prior to a formal Planning Application by developer being made, the aerodrome may be prepared to offer informal advice to the developer on how to comply with the Airport Protective Zones requirements. The aerodrome's advice will depend on the level of detail provided, but it is likely to be limited to lighting, landscaping and height limits. If it believes a detailed study is required in relation to specialist aspects such as the Bird Hazard or Navigational Aid installations, it may just advise that a suitable consultant be engaged so that their report(s) can be included with any subsequent Planning Application. Any advice would be informal and without prejudice to detailed consideration of any future Planning Application(s). The absence of any Airport Protective Zones concerns should not be construed as support for any proposed development.

Other than aerodrome operator applicants may also seek advice from CAA.

## 2.8. Control of Temporary Obstacles

It is responsibility of the Ministry and Municipalities to inform the requester for construction permit, and require the assessment from the Aerodrome Responsible Officer and endorsement from CAA, if there will be a use of the crane or lifting equipment

The developer or crane operator should approach the Aerodrome concerned at least *one month* in advance of requiring using a crane or other tall construction equipment to find out if there are any limitations and regulatory procedures that must be agreed before work commences. In certain circumstances it will be necessary to approach the CAA in which case the applicant will need to co-operate in developing a safety case. Once all procedures have been agreed the developer or project manager can arrange for the crane or other lifting equipment to be delivered to the site.

*At least three days* prior to delivery at the location of the crane or other lifting equipment, the operator must report to the Aerodrome and to CAA with precise details of the crane or lifting equipment to be used on site and applies for the permit to set up and use the specified equipment. The permit will set out the criteria and any specific restrictions.

A copy must remain with the crane operator for the duration of its operation and

must be produced if requested by an Aerodrome or CAA official, or a police officer.

The following details will be required:

- The precise location of the equipment is to be provided on an Ordnance Survey Grid. Either a reference to at least six figures for Easting's and Nothings or marked out on a map that shows the Ordnance Survey Grid.
- The maximum operating height in meters Above Ordnance Datum (AOD) or the height of crane Above Ground Level (AGL) plus ground level in AOD.
- Information must be provided on the type of Crane or tall construction equipment that is to be used, Tower Crane, Mobile Crane, etc.
- The radius of the jib or boom of a fixed crane;
- The area of operation of a mobile crane;
- The intended dates and times of operation;
- Applicant's name and contact details;
- Contact details for the crane when operating.

Once these details have been considered it will be determined whether the operation can proceed and whether restrictions need to be applied. Any of the following conditions may be imposed to ensure the safety of aircraft:

- The fitting of obstacle lights;
- Restrictions on crane operating times;
- Crane operations dependant on the runways in use;
- Restrictions on crane operating height;
- Restrictions during poor visibility (whether caused by fog or low cloud).

Operating Height:

- The maximum operating height of the equipment must be provided in meters:
  - Above Ordnance Datum (AOD) or
  - Above Ground Level (AGL) provided that ground levels are indicated.

When the design of crane allows, it should normally be lowered when not in use, or when requested by an Aerodrome official, such as during periods of low visibility.

Where it cannot be lowered, it may be necessary for the jib to be parked in a specified direction when not in use.

Obstacle Lights:

- The obstacle lighting will be as per Regulation No 2/2010 on Marking of the Obstacles.

For a tower crane, the lights should be provided on top of the tower and at the end of the jib. They should be visible throughout 360 degrees and be illuminated at all times.

Unserviceable lamps should be replaced immediately after failure, and in any event within 24 hours.

The 24 hour requirement may be relaxed if pairs of lights are fitted and one is still working.

## Appendix A

### Producing an Airport Protective Zones Map

1. The maps currently used as standard for civil aerodromes reflect the need to protect certified surfaces around the aerodromes and have a squared format superimposed on the national grid. In this system each square of the national grid is colored to represent the most critical interaction between the obstacle limitation surface and ground height within that square. It is acceptable to reduce the notification height within a square, as desired, to include a safety factor. The following color coding is normally used:

<b>Grey</b>	All developments should be notified
<b>Red</b>	Developments exceeding 10 m Aerodrome should be notified
<b>Green</b>	Developments exceeding 15 m Aerodrome should be notified
<b>Yellow</b>	Developments exceeding 45 m Aerodrome should be notified
<b>Blue</b>	Developments exceeding 90 m Aerodrome should be notified

2. An Airport Protective Zones map should also show a circle of 13-kilometre radius about the aerodrome reference point representing the need for consultation about potential bird attractant developments. These developments would comprise any of the following: waste disposal sites, reservoirs, sewage works, major landscaping schemes, areas of water, and bird sanctuaries. The 13-kilometre bird strike circle is based on the fact that 99% of bird strikes occur below 2000 feet. An aircraft on a normal approach will descend into this zone when approximately 8 statute miles from the runway, which converts as 13 km.
3. Future developments may be represented on the map. First you must decide what it is that you want to safeguard. Is it the present configuration of the aerodrome or a different configuration planned for the future? Is it the full use of the infrastructure or some more limited use? Is it intended to install radar or other navigation aids?

If, for example, radar is to be moved to a new position at some time in the future, both positions can be marked on the map and safeguarded simultaneously. The map may also be designed to take other special considerations into account, which affect the use of the airspace around the aerodrome.

4. To develop an Airport Protective Zones map, first determine the Aerodrome (Runway) Reference Code. The Code comprises a number and a letter and is determined by selecting the higher value of declared Take off Distance Available (TODA) or Accelerate-Stop Distance Available (ASDA). It indicates the extent of the lateral, longitudinal and sloping planes of the airspace and ground surfaces surrounding each runway that should be kept free of obstacles.

5. Having established the Aerodrome (Runway) Reference Code you may find that the following will be under consideration in the case of each runway to be safeguarded:
  - a) Runway designation and magnetic heading;
  - b) Whether the runway is Instrument or Visual;
  - c) National Grid Reference and elevation, in meters, of the following:
    - i) *start and end of Landing Distance Available (LDA) (threshold);*
    - ii) *start and end of Take Off Run Available (TORA);*
    - iii) *end of ASDA and TODA.*
  - d) National Grid Reference of:
    - i) *mid-point of main runway (if less than 1800 m long) for the determination of the Inner Horizontal and Conical Surfaces;*
    - ii) *Aerodrome Reference Point for the determination of the Outer Horizontal Surface (where applicable).*
6. Having identified the present and future landing and take-off distances you should base the map on the most demanding elements of the existing and planned aerodrome features. This will enable the map to be used as a "worst case" reference.

## 7. Runway Strip and Obstacle Limitation Surfaces

Once you have identified the present and future landing and take-off distances you can plot the runway strip and obstacle limitation surfaces. The starting point is the Aerodrome (Runway) Reference Code. When the strip is drawn on the map you can add the approach surface slope and dimensions, then the take-off surfaces, the transitional surfaces, the inner horizontal surface, the conical surface, and the outer horizontal surface.

## 8. Instrument Flight Procedures

The protected areas for instrument flight procedures are complex and, if they are to be safeguarded, advice on their exact shape and location should be sought from an expert. It cannot be assumed that the obstacle limitation surfaces will provide sufficient protection for instrument flight procedures.

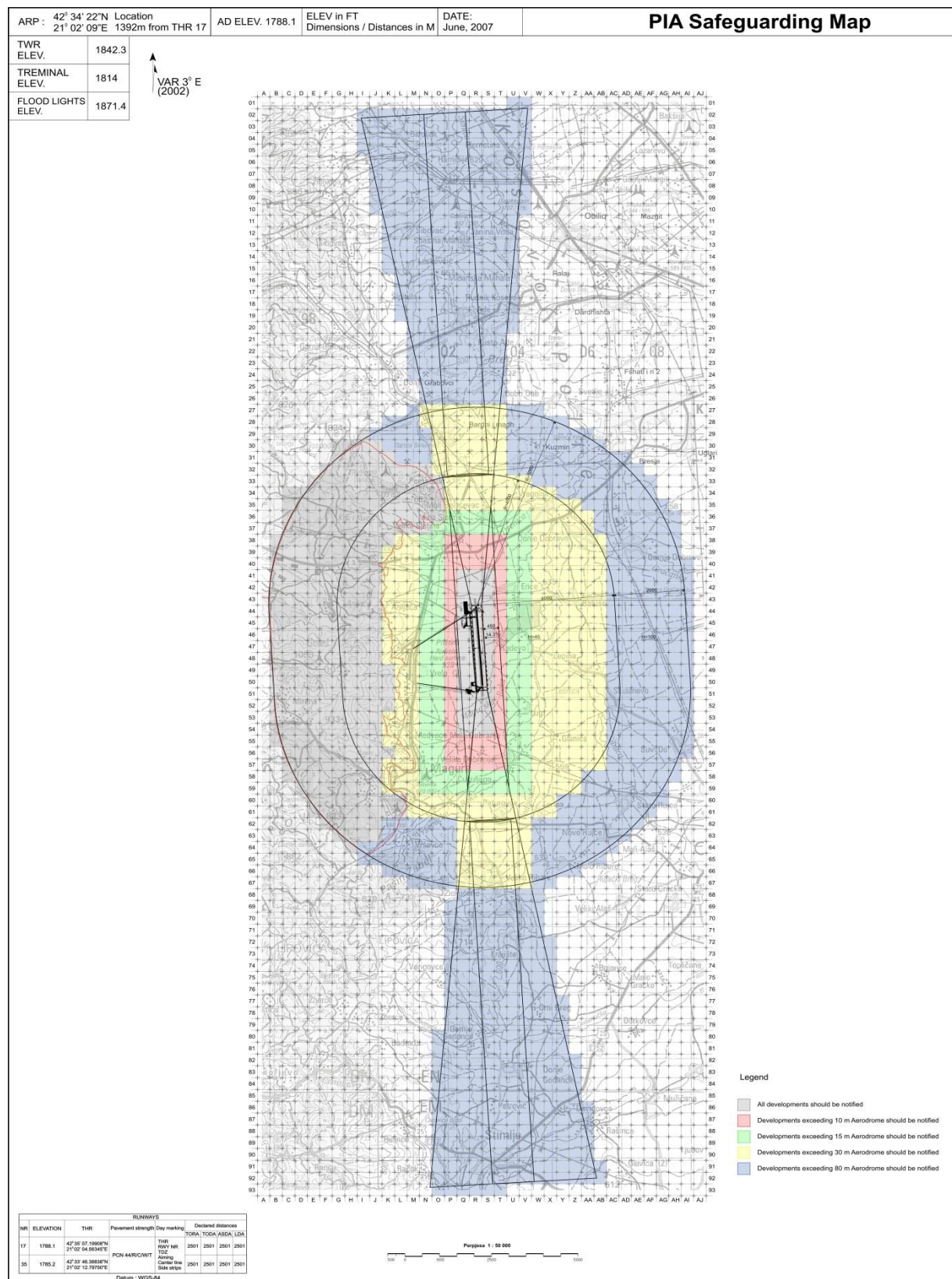
## **9. Technical Sites**

Add parameters for Airport Protective Zones of technical sites, such as telecommunications facilities. To deduce the criteria which apply it will be necessary to consult the service provider.



## Appendix B

### PIA Airport Protective Zones Map



## Appendix C

### Example Airport Protective Zones Case Slip

FORMA E VLERËSIMIT TË ZONAVE MBROJTËSE TË AEROPORTIT			
AIRPORT PROTECTIVE ZONES CASE SLIP			
<b>Për CAA:</b> <i>To CAA:</i>			
<b>Nga:</b> <i>From:</i>			
<b>Përmes:</b> <i>Through:</i>			
<b>Cc:</b> <i>Cc:</i>			
<b>Datë:</b> <i>Date:</i>			
Referenca e dosjes: <i>File referece:</i>		Dokumentet shtesë: <i>Enclosure Number: (Documents enclosed)</i>	
Aerodromi: <i>Aerodrome</i>			
Lokacioni i punishtes: <i>Location of the Tech Site:</i>			
Përshkrimi i ndërtimit: <i>Description of development:</i>			
Data e pranimit të aplikacionit: <i>Date Application received:</i>			
Lloji i aplikacionit: <i>Type of Application:</i>	KOMPLET <i>FULL</i>	<input type="checkbox"/>	IDEOR <i>OUTLINE</i>
		<input type="checkbox"/>	
1.	Koordinatat gjeodezike: <i>Ordnance Survey Co-ordinates:</i>	E	
		N	
2.	Ngjyra në hartë e Zonës Mbrojtëse: <i>Airport Protective Zones Color Zone:</i>		
3.	Lartësia e objektit të propozuar mbi kuoten e terrenit: <i>Height of proposed structure above ground level:</i>		
4.	Kuota e terrenit: <i>Height of ground level at development location:</i>		
5.	Lartësia maksimale e objektit të propozuar: <i>Overall maximum height of proposed structure:</i>		
6.	Lartësia maksimale e aprovuar: <i>Approved overall maximum height of proposed structure:</i>		
Referenca tërthore: <i>Cross Reference:</i>			
Komente: <i>Comments:</i>			

<b>Vlerësimi nga operatori i aerodromit</b> <i>Aerodrome operator's assessment</i>			
<b>Kundërshtim</b> <i>Objection</i>	<input type="checkbox"/>		
<b>Pa kundërshtim por me kushtëzime</b> <i>No objection but with conditions</i>	<input type="checkbox"/>		
<b>Pa kundërshtim</b> <i>No objection</i>	<input type="checkbox"/>		
<b>Përgatitur nga:</b> <i>Prepared by:</i>		<b>Nënshkrimi:</b> <i>Signature:</i>	
		<b>Datë:</b> <i>Date:</i>	

<b>VENDIMI I AAC-së</b> <i>CAA DECISION</i>			
<b>Për:</b> <i>To:</i>			
<b>Komente:</b> <i>Comments:</i>			
<b>Kundërshtim</b> <i>Objection</i>	<input type="checkbox"/>		
<b>Pa kundërshtim por me kushtëzime</b> <i>No objection but with conditions</i>	<input type="checkbox"/>		
<b>Pa kundërshtim</b> <i>No objection</i>	<input type="checkbox"/>		
<b>Inspektori i Aerodromeve</b> <i>Aerodrome Inspector</i>	<b>Drejtori i Departamentit</b> <i>Director of department</i>		
	<b>Datë:</b> <i>Date:</i>		

## Appendix D

### Example Airport Protective Zones Case Slip for Temporary Obstacles

AIRPORT PROTECTIVE ZONES CASE SLIP FOR TEMPORARY OBSTACLES			
<b>To CAA:</b>			
<b>From:</b>			
<b>Through:</b>			
<b>Cc:</b>			
<b>Date:</b>			
File reference:		Enclosure Number: (Documents enlosed)	
Aerodrome:			
Location of the Tech Site:			
Description of development:			
Date Application received:			
Type of Application:		<div style="display: flex; justify-content: space-around;"> <span>FULL <input type="checkbox"/></span> <span>OUTLINE <input type="checkbox"/></span> </div>	
1.	The precise location of the equipment is to be provided on an Ordnance Survey Grid. Either a reference to at least six figures for Easting's and Nothings or marked out on a map that shows the Ordnance Survey Grid.	Easting's	
		Northing's	
2.	The maximum operating height in meters Above Ordnance Datum (AOD) or the height of crane Above Ground Level (AGL) plus ground level in AOD.		
3.	Information must be provided on the type of Crane or tall construction equipment that is to be used, Tower Crane, Mobile Crane, etc.		
4.	The radius of the jib or boom of a fixed crane:		
5.	The area of operation of a mobile crane:		
6.	The intended dates and times of operation:		
7.	Applicant's name and contact details:		
8.	Contact details for the crane when operating:		
Cross Reference:			
<u>Comments:</u> <div style="border: 1px solid black; height: 100px; width: 100%;"></div>			

Aerodrome operator's assessment			
Objection	<input type="checkbox"/>		
No objection but with conditions	<input type="checkbox"/>		
No objection	<input type="checkbox"/>		
Prepared by:		Signature:	
		Date:	

CAA DECISION	
<b>To:</b>	
<u>Comments:</u> <div></div>	
Objection	<input type="checkbox"/>
No objection but with conditions	<input type="checkbox"/>
No objection	<input type="checkbox"/>
Aerodrome Inspector	Director of department
	Date: