



भारतीय विमानपत्तन प्राधिकरण
AIRPORTS AUTHORITY OF INDIA

भा0वि0प्रा0/वारा0/वि0अ0-01/2024

दि0: 11-07-2024

सेवा में,

जिलाधिकारी महोदय,
वाराणसी, उत्तर प्रदेश।

विषय: वाराणसी विमानक्षेत्र संदर्भ बिन्दु (Aerodrome Reference Point) की परिधि में नागर विमानन महानिदेशालय, भारत सरकार के कार सेक्शन 4, सीरीज बी, पार्ट 1, अंक 2, के अनुसार संरक्षित लेज़र क्षेत्र स्थापित कराने के संबंध में।

महोदय,

उपरोक्त विषय के सन्दर्भ में आपको सूचित किया जाता है की विमानों के, विशेषकर रात के समय, तेज रोशनी या लेज़र-जनित प्रकाश से प्रकाशित होने की घटनाएं बढ़ती जा रही हैं। विमान संचालन के दौरान लेज़र पॉइंटरो और अन्य लेज़र उपकरणों के अनुचित उपयोग से गंभीर सुरक्षा खतरा उत्पन्न हो सकता है। हाल ही में वाराणसी विमानतल पर हुए कुछ घटनाओं ने इस खतरे को और रेखांकित किया है, जहां लेज़र लाइट विमान के कॉकपिट में प्रवेश कर गई, जिससे चालक दल के अंधत्व और भ्रम की स्थिति पैदा हो गई। इस तरह की घटनाएं विमान की सुरक्षा के लिए गंभीर खतरा उत्पन्न कर सकती हैं।

उपरोक्त एवं लेज़र उत्सर्जकों के खतरनाक प्रभावों से विमानों की सुरक्षा के मद्देनजर, वाराणसी विमानतल के आसपास नागर विमानन महानिदेशालय, भारत सरकार के कार सेक्शन 4, सीरीज बी, पार्ट 1, अंक 2, के अनुसार निम्नलिखित संरक्षित लेज़र क्षेत्र स्थापित करने का अनुरोध किया जाता है।

1. लेज़र-बीम मुक्त उड़ान क्षेत्र (LFFZ : laser-beam free flight zone)
2. लेज़र-बीम महत्वपूर्ण उड़ान क्षेत्र (LCFZ : laser-beam critical flight zone)
3. लेज़र-बीम संवेदनशील उड़ान क्षेत्र (LSFZ : laser-beam sensitive flight zone)

इन क्षेत्रों की क्षैतिज सीमा, ऊर्ध्वाधर सीमा और इन क्षेत्रों में अधिकतम स्वीकार्य विकिरण स्तर अनुलग्नक ए में दिए गए हैं। इन क्षेत्रों के अंतर्गत अनुलग्नक बी में दिए गए मौनक संचालन प्रक्रिया के अनुसार लेज़र उपकरणों के उपयोग को पूरी तरह से प्रतिबंधित या कड़ाई से विनियमित किया जाए।

लेजर, प्रकाश और आतिशबाजी प्रदर्शन आयोजकों को इन क्षेत्रों में लेजर गतिविधि की अनुमति देने के लिए दिशानिर्देश अनुलग्नक बी में दिए गए हैं।

संरक्षित लेज़र क्षेत्र में प्रतिबंध वाराणसी विमानतल के आसपास के एयरस्पेस को सुरक्षित बनाने में उपयोगी साबित होंगे। अतः आपसे अनुरोध है कि कृपया संरक्षित लेज़र क्षेत्र स्थापित करने हेतु एवं आम जनता में जागरूकता बढ़ाने हेतु उचित दिशानिर्देश जारी करें।

सादर धन्यवाद

संलग्न यथोक्त।

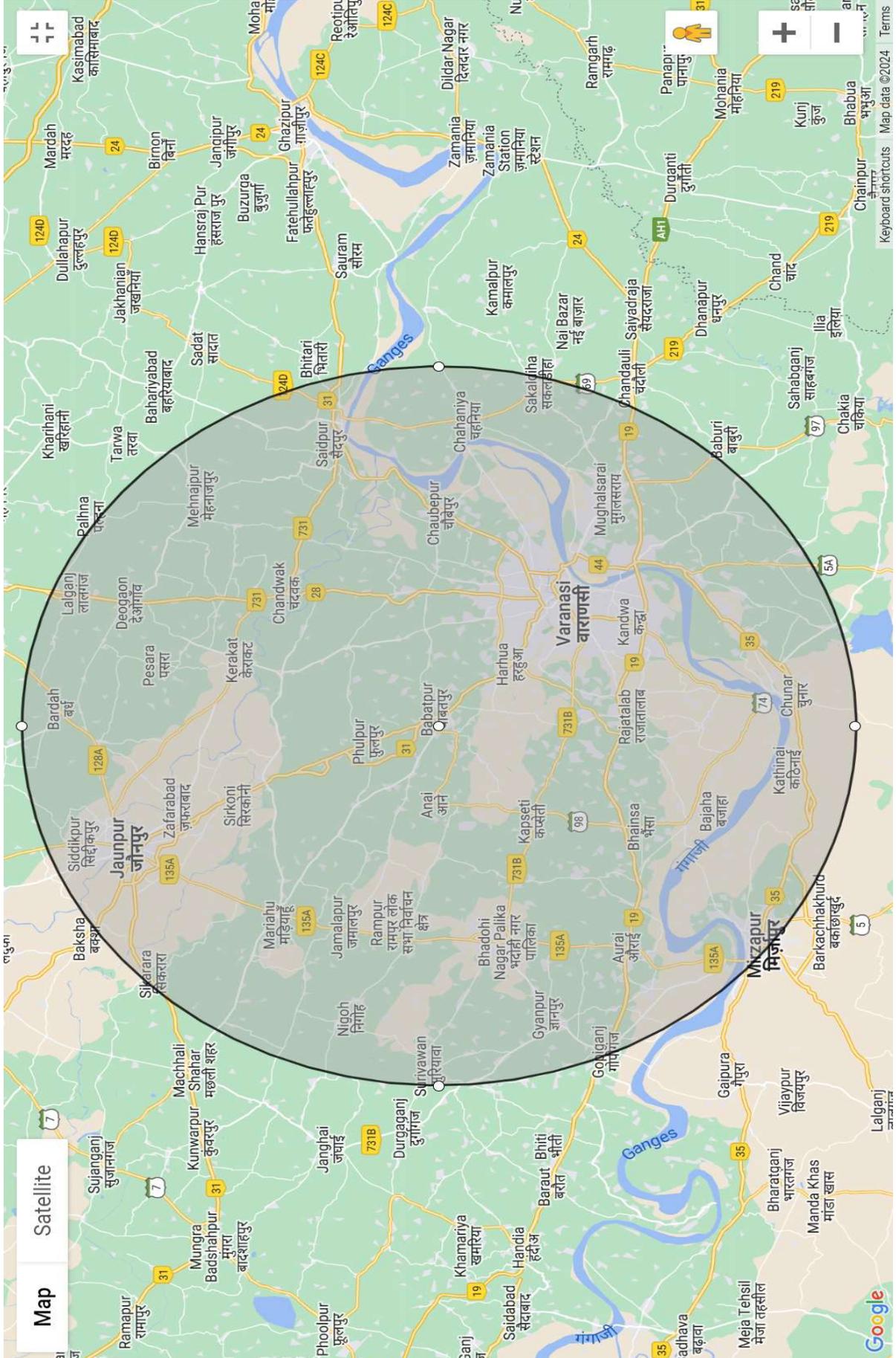
भवदीय,


पुनीत गुप्ता
विमानपत्तन निदेशक
ला.ब.स.अं. हवाई अड्डा वाराणसी

प्रतिलिपि - सादर सूचनार्थ :-

- कार्यालय उप महानिदेशक (उ. क्षे.), नागर विमानन विभाग, भारत सरकार, जी+5 बिल्डिंग, टर्मिनल-1, आईजीआई हवाई अड्डा, नई दिल्ली- 110037
- कार्यकारी निदेशक (एयरड्रोम लाइसेंसिंग), एएआई, राजीव गांधी भवन, सफदरजंग हवाई अड्डा, नई दिल्ली - 110003
- कार्यकारी निदेशक (प्रचालन), एएआई, राजीव गांधी भवन, सफदरजंग हवाई अड्डा, नई दिल्ली - 110003
- क्षेत्रीय कार्यालय निदेशक (उत्तरी क्षेत्र), डी.ए.ए. कॉम्प्लेक्स, आई.टी.आई. हवाई अड्डा, नई दिल्ली - 110037

Zone	Vertical Limit	Horizontal Limit	Visual Interference Level (Maximum Irradiance level in the zone)	Remarks
Laser Beam free flight Zone (LFFZ)	GND to 2300 Ft AGL	Area bounded by lines joining points 252631N 0824346E, 252731N 0824346E, 252732N 0824603E then along the clockwise arc of a circle of 5NM radius centred on 252704N 0825131E to 252717N 0825658E, 252712N 0825914E, 252612N 0825914E, 252619N 0825655E then along the clockwise arc of a circle of 5NM radius centred on 252704N 0825131E to 252631N 0824603E to point of origin	50 nW/cm ²	5NMw.r.t ARP (Aerodrome reference point) in all directions and 07 NM in approach path of RWY09 & RWY27 (1/2 NM either side on extended centreline beyond 5 NM)
Laser Beam critical flight zone (LCFZ)	GND to 3300 Ft AGL	Area bounded by a circle of radius 10 NM centred at 252704N 0825131E	5 μW/cm ²	10 NM w.r.t. ARP in all directions
Laser Beam sensitive flight zone (LSFZ)	GND to 3300 Ft AGL	Area bounded by a circle of radius 15 NM centred at 252704N 0825131E	100 μW/cm ²	15 NM w.r.t. ARP in all directions



Guidelines for laser, light and firework display organizers

- 1) For light and firework displays, Organizers should notify DGCA, State Administration and LBSI Airport, Varanasi of their proposed activity (Form 1). To allow time to de-conflict or co-ordinate the activity, as well as promulgate warnings to the aviation community and establish any control measures considered necessary, notification needs to be given atleast 15 days in advance.
- 2) The appropriate authority will examine the proposal based on the published guidelines. If further information or action is required from the Display Organizer, the appropriate authority may contact the originator of the proposal to discuss suitable future courses of action.
- 3) It is of prime importance that light displays and fireworks are never directed at or towards aircraft or aerodromes. The Light Display organizer should also nominate a single point of contact, who will be directly responsible for the conduct of the actual event during submission of their proposal.
- 4) A person proposing to operate a light or a laser shall notify the appropriate authority if:
 - a) because of its glare or effect on a pilot's vision, the light or laser is liable to endanger the aircraft;
 - b) for a laser, it would produce exposures in navigable airspace exceeding the maximum permissible exposure defined;
 - c) it is likely to endanger the aircraft by being mistaken for:
 - i) a light or part of a system of lights established or approved for display at or near an aerodrome; and
 - ii) a light marking which is a hazard in navigable airspace; and
 - d) The location falls within the laser protection zones around an aerodrome.
- 5) Display organizers should be aware of the geographical zone, within which DGCA considers it necessary to impose restrictions in order to protect flight operations
- 6) Within 18500 m (10 NM) of Aerodrome Reference Point (ARP) , the following procedures should be adhered to:
 - a) Ideally, measures should be in place to prevent light escaping towards the aerodrome or along the extended runway centreline.
 - b) If this proves impractical, other precautions are to be taken to ensure that light displays do not impinge on safe flight operations, such as arranging for a direct telephone or radio communications link between the point of contact and relevant aerodrome, through which the Light Display can be terminated immediately on request from either an aircraft or the affected aerodrome.

NOTE: If this is not possible, then the light display may represent a threat to flight safety and should not proceed.

Form 1 shall be submitted by an applicant in case of a requirement to conduct outdoor Laser activity in the vicinity of an Aerodrome (Email : apdvns@aai.aero, vibn.ats@aai.aero).



भारतीय विमानपत्तन प्राधिकरण
AIRPORTS AUTHORITY OF INDIA

**FORM 1: NOTICE OF PROPOSAL TO CONDUCT OUTDOOR LASER, LIGHT
/FIREWORK OPERATION(S)**

To:	
From: (Applicant)	
Date:	
GENERAL INFORMATION	
Event or facility	
Name of Applicant	
Address of activity	
Date(s) of activity	
Time(s) of activity	
Geographic Location of activity	
Longitude	----- deg (°) ----- min (') ----- sec (")
Latitude	----- deg (°) ----- min (') ----- sec (")
Determined by:	<input type="checkbox"/> GPS <input type="checkbox"/> Map <input type="checkbox"/> Other (specify) -----
Ground elevation at site (above Mean Sea Level)	
Laser/Firework activity height (above ground level)	
Testing and alignment	
Operation	
BRIEF DESCRIPTION OF OPERATION	
ON-SITE OPERATION INFORMATION	
Operator(s):	
On-site phone 1	
On-site phone 2	
Brief Description of Control Measures	
ATTACHMENTS	
Number of laser / Firework configurations:	
List any additional attachments needed to evaluate this operation (could include maps, diagrams, and details of control measures).	
DESIGNATED CONTACT PERSON (IF FURTHER INFORMATION IS REQUIRED)	
Name:	
Position:	
Phone:	
Fax:	
E-mail:	
STATEMENT OF ACCURACY	
To the best of my knowledge, the information provided in this Notice of Proposal is accurate and correct.	
Name (if different from contact person):	
Position:	
Signature:	

5.3 Lights

5.3.1 General

Lights which may endanger the safety of aircraft

5.3.1.1 A non-aeronautical ground light near an aerodrome which might endanger the safety of aircraft shall be extinguished, screened or otherwise modified so as to eliminate the source of danger.

Laser emissions which may endanger the safety of aircraft

5.3.1.2 To protect the safety of aircraft against the hazardous effects of laser emitters, the following protected zones shall be established around aerodromes:

- a laser-beam free flight zone (LFFZ)
- a laser-beam critical flight zone (LCFZ)
- a laser-beam sensitive flight zone (LSFZ).

Note 1.— Figures 5-10, 5-11 and 5-12 may be used to determine the exposure levels and distances that adequately protect flight operations.

Note 2.— The restrictions on the use of laser beams in the three protected flight zones, LFFZ, LCFZ and LSFZ, refer to visible laser beams only. Laser emitters operated by the authorities in a manner compatible with flight safety are excluded. In all navigable air space, the irradiance level of any laser beam, visible or invisible, is expected to be less than or equal to the maximum permissible exposure (MPE) unless such emission has been notified to the authority and permission obtained.

Note 3.— The protected flight zones are established in order to mitigate the risk of operating laser emitters in the vicinity of aerodromes.

Note 4.— Further guidance on how to protect flight operations from the hazardous effects of laser emitters is contained in the Manual on Laser Emitters and Flight Safety (Doc 9815).

Note 5.— See also ICAO Annex 11 — Air Traffic Services, Chapter 2.

Lights which may cause confusion

5.3.1.3 A non-aeronautical ground light which, by reason of its intensity, configuration or colour, might prevent, or cause confusion in, the clear interpretation of aeronautical ground lights should be extinguished, screened or otherwise modified so as to eliminate

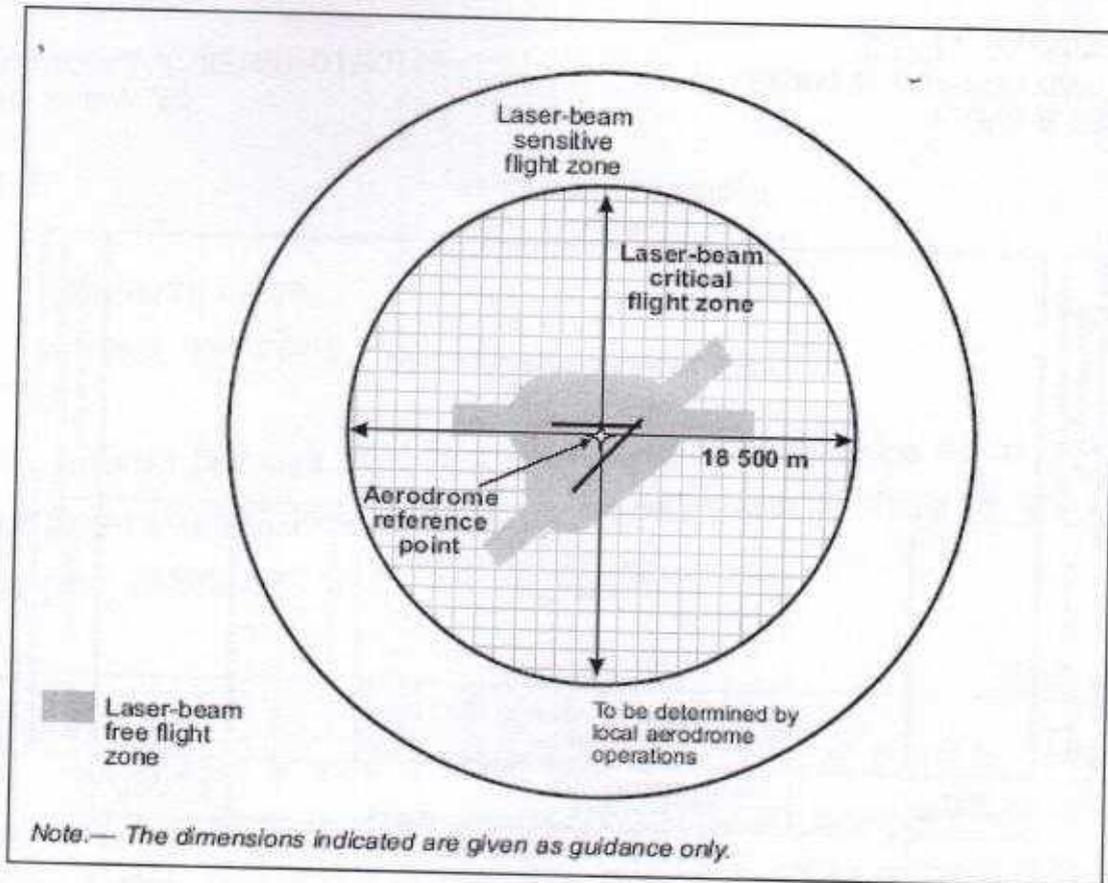


Figure 5-11. Protected flight zones

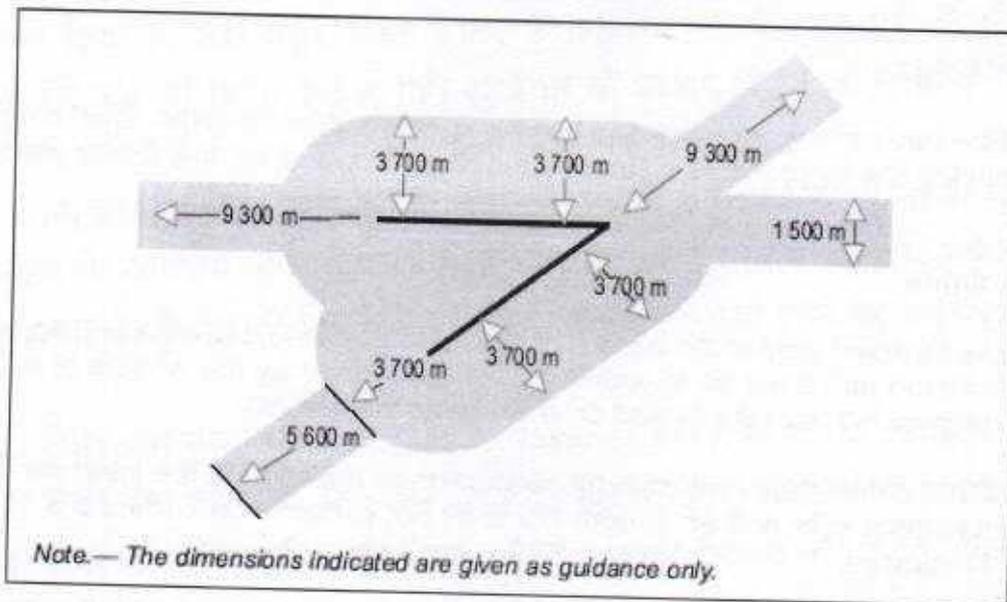


Figure 5-12. Multiple runway laser-beam free flight zone

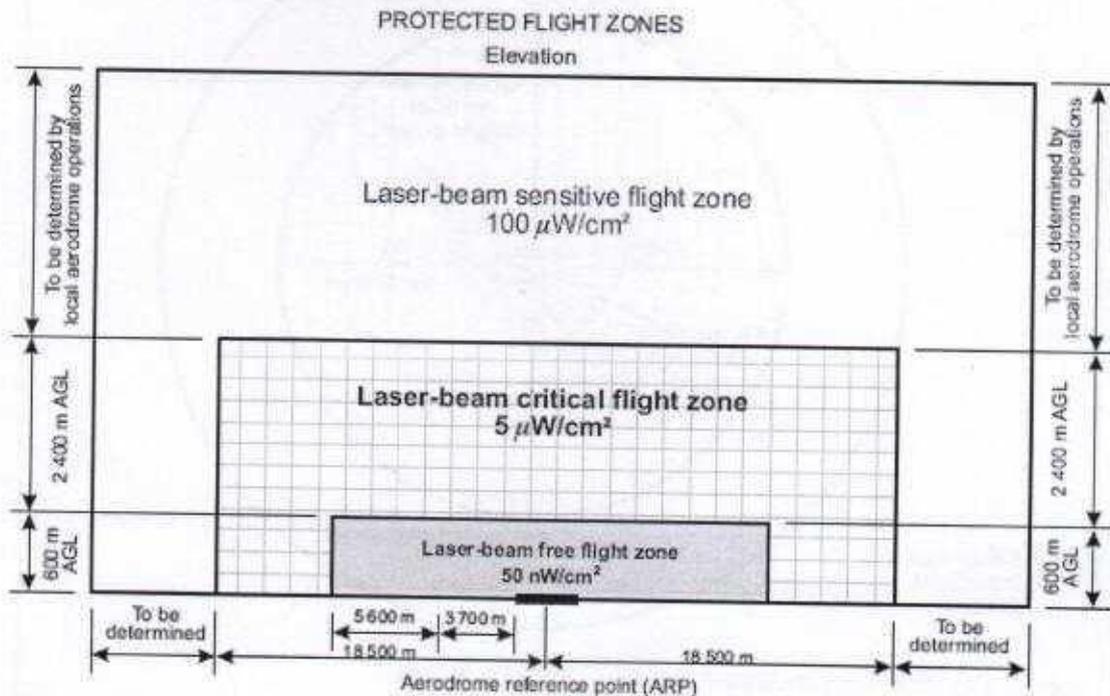


Figure 5-13. Protected flight zones with indication of maximum irradiance levels for visible laser beams

Elevated lights

5.3.1.6 Elevated runway, stopway and taxiway lights shall be frangible. Their height shall be sufficiently low to preserve clearance for propellers and for the engine pods of jet aircraft.

Surface lights

5.3.1.7 Light fixtures inset in the surface of runways, stopways, taxiways and aprons shall be so designed and fitted as to withstand being run over by the wheels of an aircraft without damage either to the aircraft or to the lights themselves.

5.3.1.8 The temperature produced by conduction or radiation at the interface between an installed inset light and an aircraft tire shall not exceed 160°C during a 10-minute period of exposure.

Note.— Guidance on measuring the temperature of inset lights is given in the Aerodrome Design Manual, Part 4.