



# Case study: Identifying and dealing with deviations

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# Case study: Identifying and dealing with deviations

- In this part of the course, the instructors will propose a practical study case, related to the theoretical subject provided.
- The intention for this case is that attendants, by groups, analyze the case, and achieve possible conclusions.
- On the groups have exposed their conclusions, the instructors will open a discussion on the content, to gather all the points of view.



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- The CAA of the country LALALAND is planning the certification process of the Donosti Airport.
1. Taking into consideration the information given, **identify** possible **deviations / non-compliances** to the infrastructure requirements.
  2. **Would the CAA certify the airport** with those deviations / non-compliances? **Why?**
  3. **If not, which actions** could the CAA require to de aerodrome operator?

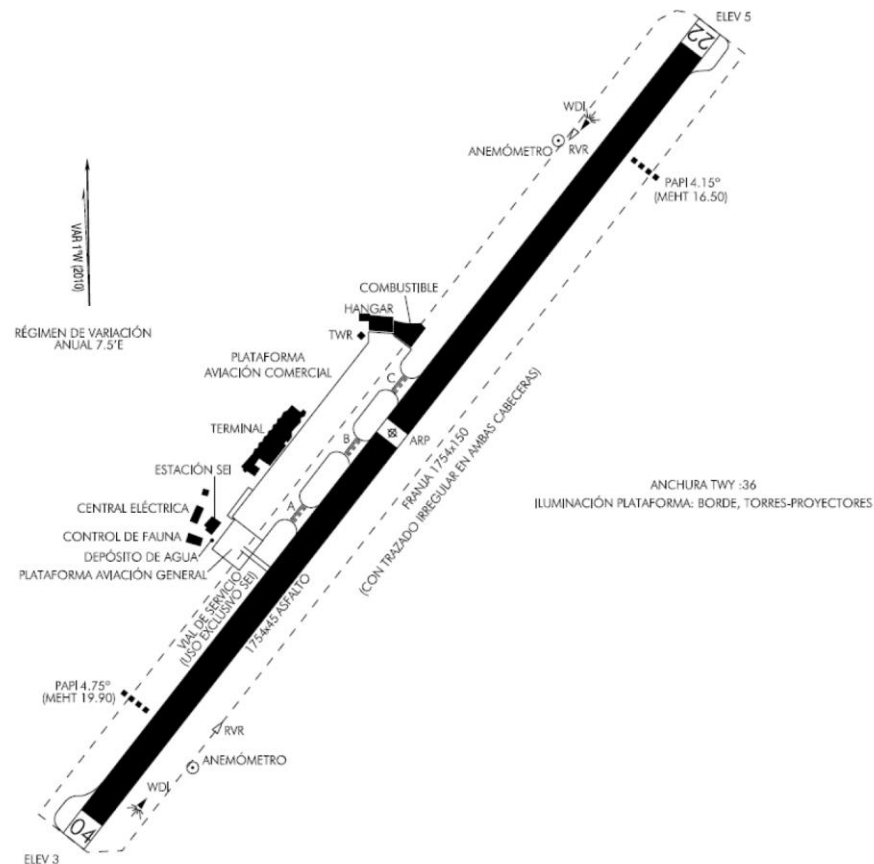


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→ Aerodrome data:

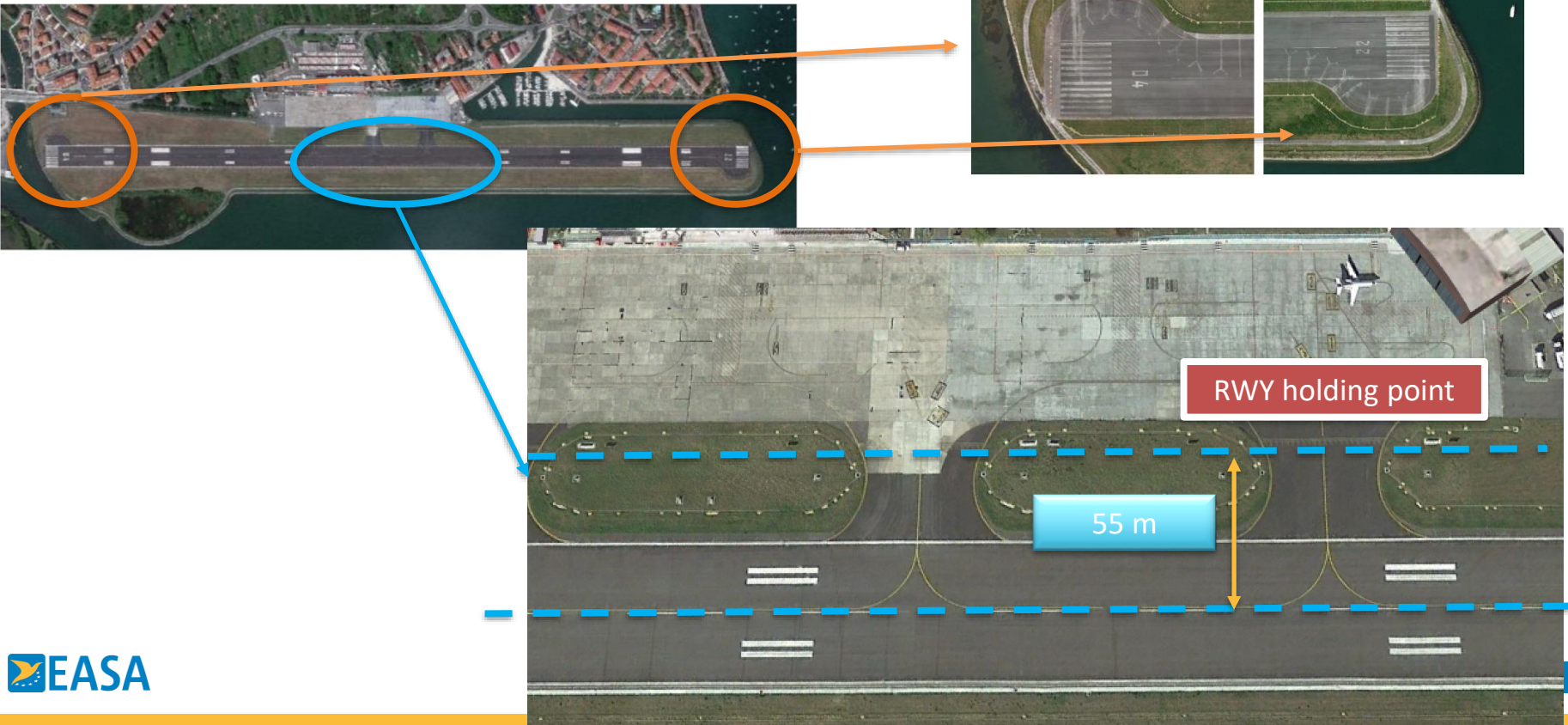
Aerodrome reference code	3C
Conditions to operate	VFR/ IFR + Day/Night
Types of approaches	RWY 04: Visual approaches RWY 22: Non-precision instrumental approaches
Types of departures	Departures with RVR > 800m

	RWY 04	RWY 22
RWY Strip	1754 x150	1754 x150
RESA	NIL	NIL
SWY	NIL	NIL
CWY	NIL	NIL



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→ Aerodrome data:



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→ Applicable requirements:

ANNEX VII

## Essential requirements for aerodromes

### 1. PHYSICAL CHARACTERISTICS, INFRASTRUCTURE AND EQUIPMENT

- 1.1.3. The designated landing and take-off area shall be surrounded by defined areas. Those areas are intended to protect aircraft flying over them during take-off or landing operations or to mitigate the consequences of undershooting, running off the side or overrunning the take-off and landing area, and shall satisfy the following conditions:
- (a) those areas shall have dimensions appropriate to the aircraft operations anticipated;
  - (b) the slope and slope changes of those areas shall not create an unacceptable risk to aircraft operations;
  - (c) those areas shall be free from objects which might create an unacceptable risk to aircraft operations. This shall not preclude frangible equipment to be located in those areas, if required to assist aircraft operations; and
  - (d) each of those areas shall have a bearing strength sufficient to serve its purpose.

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## → Applicable requirements:

(a) A strip should extend before the threshold and beyond the end of the runway or stopway for a distance of at least:

- (1) 60 m where the code number is 2, 3, or 4;
- (2) 60 m where the code number is 1 and the runway is an instrument one; and
- (3) 30 m where the code number is 1 and the runway is a non-instrument one.

(b) A strip including a non-precision approach runway should extend laterally to a distance of at least:

- (1) 140 m where the code number is 3 or 4; and
- (2) 70 m where the code number is 1 or 2;

on each side of the centre line of the runway and its extended centre line throughout the length of the strip.

(c) A strip including a non-instrument runway should extend on each side of the centre line of the runway and its extended centre line throughout the length of the strip, to a distance of at least:

- (1) 75 m where the code number is 3 or 4;
- (2) 40 m where the code number is 2; and
- (3) 30 m where the code number is 1.

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→ Applicable requirements:

(a) Length of runway end safety area

- (1) A runway end safety area should extend from the end of a runway strip to a distance of at least 90 m and, as far as practicable, extend to a distance of:
  - (i) 240 m where the code number is 3 or 4 and
  - (ii) 120 m where the code number is 1 or 2 and the runway is an instrument one; and
- (2) A runway end safety area should extend from the end of a runway strip, as far as practicable, to a distance of 30 m where the code number is 1 or 2 and the runway is a non-instrument one.

(c) Width of runway end safety area

The width of a runway end safety area should be at least twice that of the associated runway and, wherever practicable, be equal to that of the graded portion of the associated runway strip.



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→ Applicable requirements:

- (c) The location of a runway-holding position established in accordance with [CS ADR-DSN.D.335](#) should be such that a holding aircraft or vehicle will not infringe the obstacle-free zone, approach surface, take-off climb surface or ILS/MLS critical/sensitive area or interfere with the operation of radio navigation aids.

Type of runway	Code number <sup>d</sup>			
	1	2	3	4
Non-instrument	30 m	40 m	75 m	75 m
Non-precision approach	40 m	40 m	75 m	75 m
Precision approach Category I	60 m <sup>b</sup>	60 m <sup>b</sup>	90 m <sup>a,b</sup>	90 m <sup>a,b,c</sup>
Precision approach Categories II and III	—	—	90 m <sup>a,b</sup>	90 m <sup>a,b,c</sup>
Take-off runway	30 m	40 m	75 m	75 m

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## → Potential solutions:

- a) restricting the operations during adverse hazardous meteorological conditions (such as thunderstorms);
- b) defining, in cooperation with aeroplane operators, hazardous meteorological conditions and other factors relevant to aerodrome operating procedures and publishing such information appropriately;
- c) improving an aerodrome's database of operational data, detection of wind data, including wind shear and other relevant meteorological information, particularly when it is a significant change from an aerodrome's climatology;
- d) ensuring that accurate and up-to-date meteorological information, current runway conditions and other characteristics are detected and notified to flight crews in time, particularly when flight crews need to make operational adjustments;
- e) improving runway surfaces in a timely manner and/or the means of recording and indicating necessary action for runway improvement and maintenance (e.g. friction measurement and drainage system), particularly when the runway is contaminated;
- f) removing rubber build-up on runways according to a scheduled time frame;

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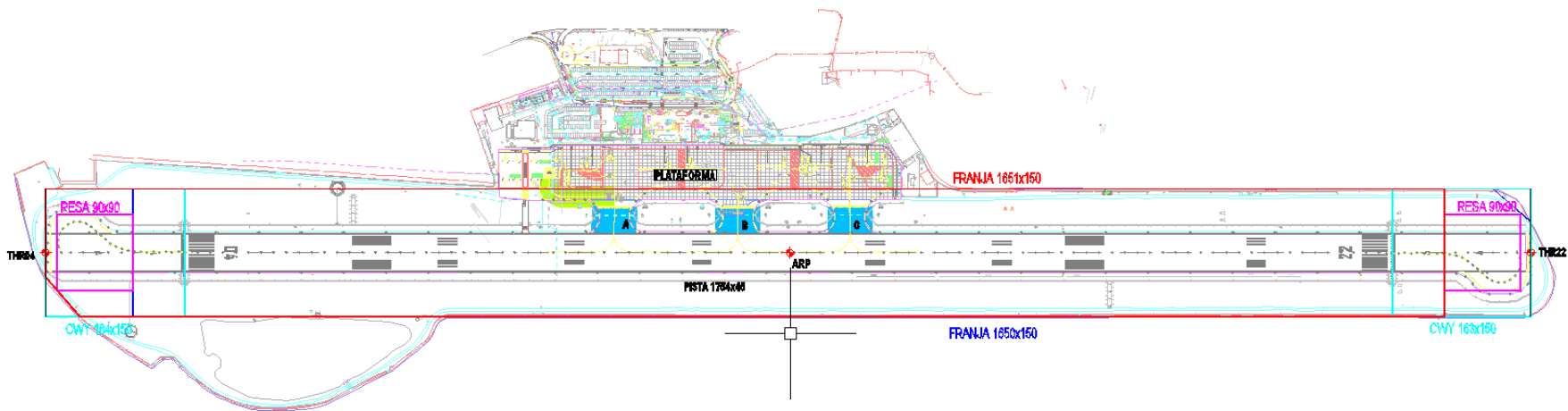
## → Potential solutions:

- f) removing rubber build-up on runways according to a scheduled time frame;
- g) repainting faded runway markings and replacing inoperative runway surface lighting identified during daily runway inspections;
- h) upgrading visual and instrument landing aids to improve the accuracy of aeroplane delivery at the correct landing position on runways (including the provision of ILSs);
- i) reducing declared runway distances in order to provide the necessary RESA;
- j) installing suitably positioned and designed arresting systems as a supplement or as an alternative to standard RESA dimensions when necessary (see Note 1);
- k) increasing the length of a RESA and/or minimizing the potential obstruction in the area beyond the RESA; and
- l) publishing provisions, including the provision of an arresting system, in the AIP.

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→ One solution can be...

Establishment of protection areas

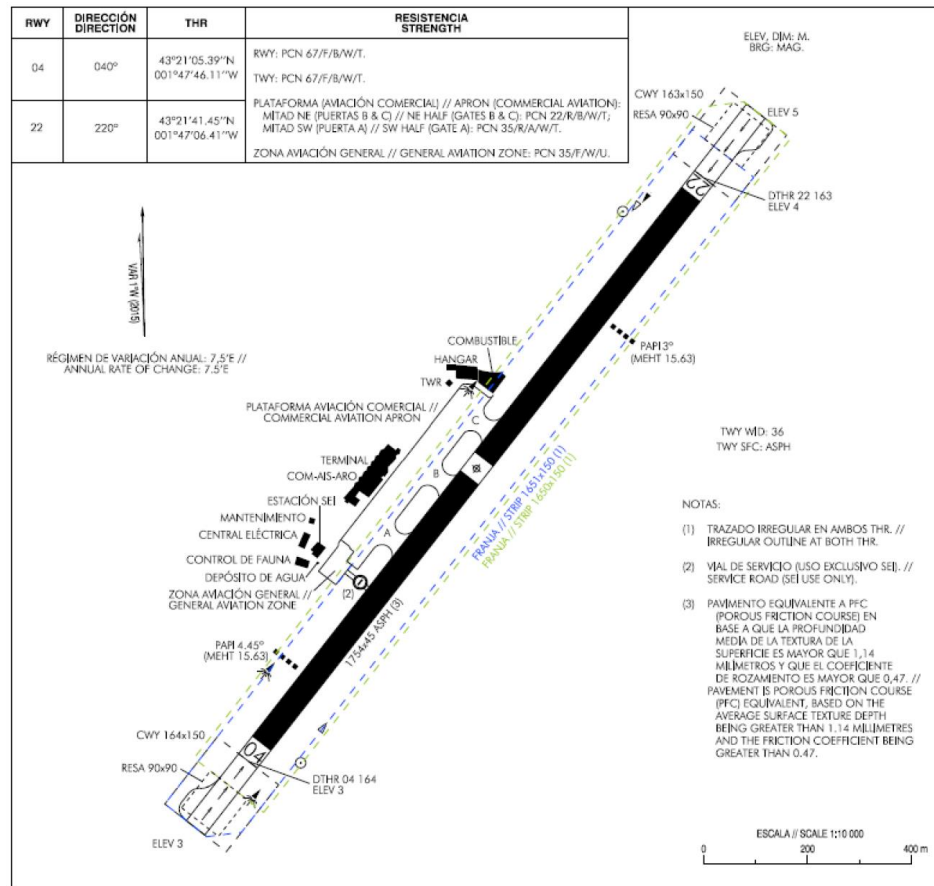


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→ One solution can be...

## Establishment of protection areas

	RWY 04	RWY 22
RWY Strip	1650 x 150	1650 x 150
RESA	90 x 90	90 x 90
SWY	NIL	NIL
CWY	163 x 150	164 x 150



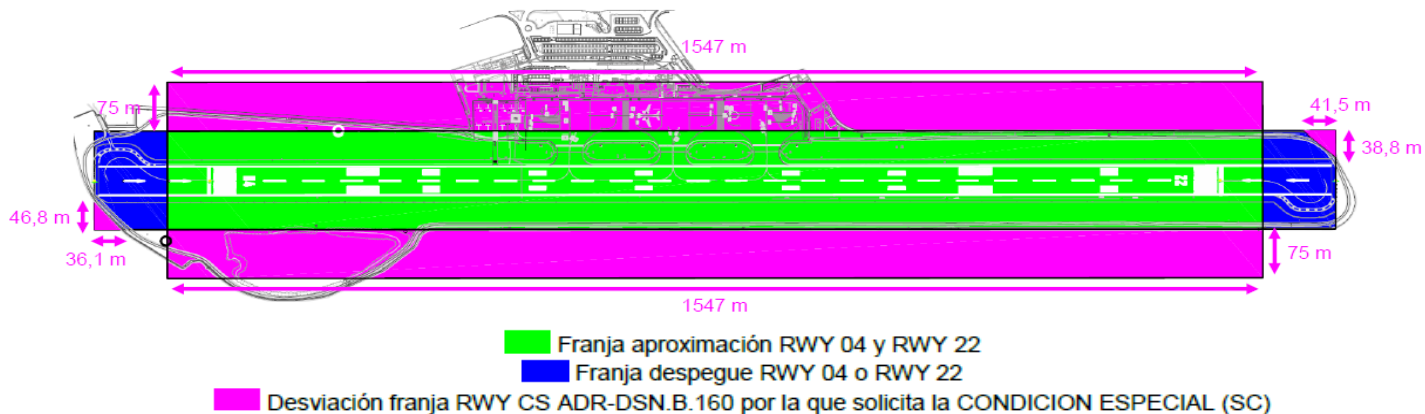
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→ One solution can be...

Establishment of protection areas



Issuing a Special Condition



Definition of procedures

Aircraft taxiing = RWY in use

# Identifying and dealing with deviations



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