

## RA 3519 - Permanent Fixed Wing Aerodrome - Visual Aids for Denoting Restricted Use Areas

### Rationale

Some areas of the aerodrome will be unsafe for Air Systems to use. These areas need to be clearly identifiable, in order to minimise the probability of damage to an Air System. Standardised marking of these areas is required to inform operators of their presence and potential for causing damage.

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### Regulation

#### 3519(1)

### Closed Runways and Taxiways

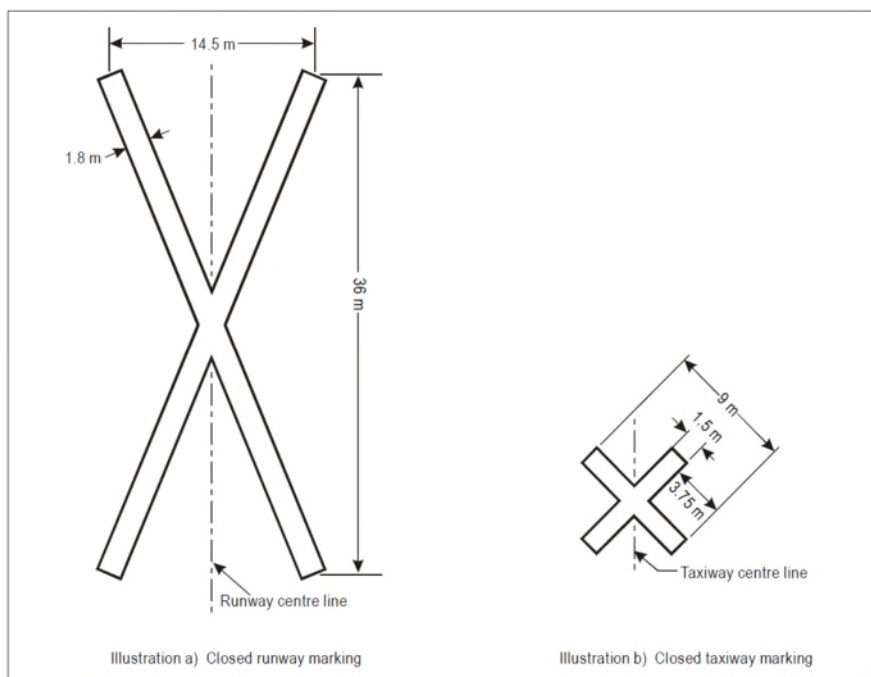
3519(1) Heads of Establishments (HoEs) and Aviation Duty Holder (ADH) Facing organizations **shall** ensure that a closed marking is displayed on a runway, or taxiway, or portion thereof, which is permanently or temporarily closed to the use of all Air Systems.

### Acceptable Means of Compliance 3519(1)

### Closed Runways and Taxiways

1. A closed marking **should** be displayed on a temporarily closed runway or taxiway, except that such marking may be omitted when the closing is of short duration (as approved by the Aerodrome Operator) and adequate warning is provided to users.
2. Closed Runway markings **should** be:
  - a. White and be of the form and proportions as detailed in Figure 1; and
  - b. Placed at each end of the runway, or portion thereof, declared closed, and additional markings **should** be so placed that the maximum interval between markings does not exceed 300m.
3. Closed Taxiway markings **should** be:
  - a. Yellow and be of the form and proportions as detailed in Figure 1; and
  - b. Placed at least at each end of the taxiway or portion thereof closed.

Figure 1. Closed Runway Marking



### Acceptable Means of Compliance 3519(1)

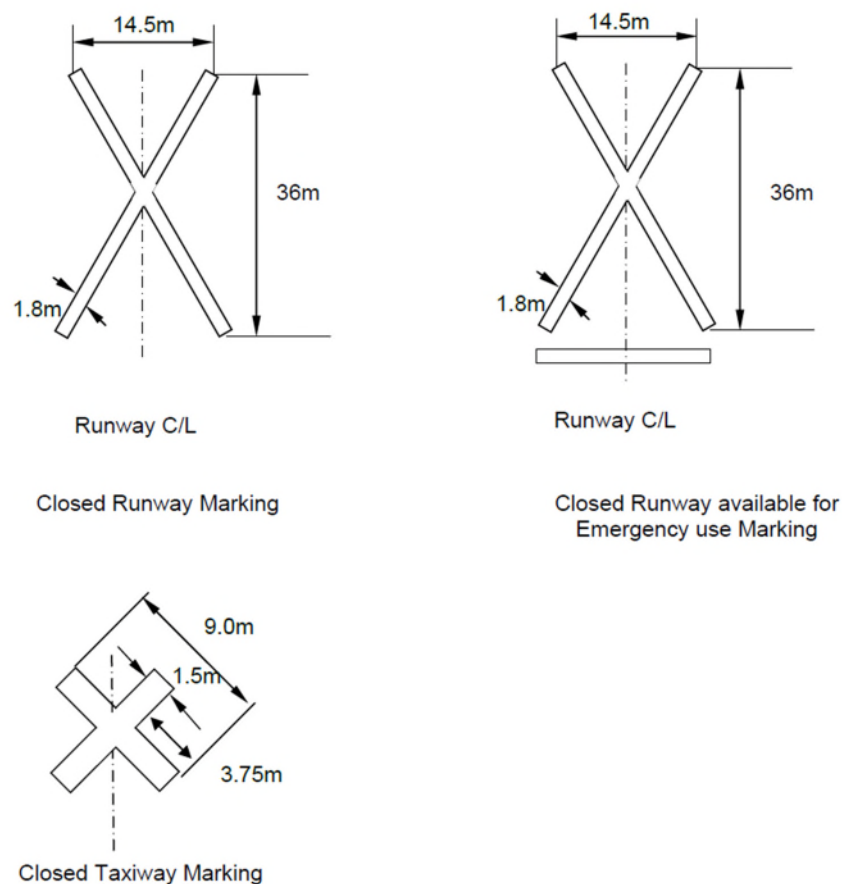
4. When a runway, or taxiway, or portion thereof is permanently or temporarily closed, all normal runway and taxiway markings **should** be permanently removed.
5. In addition to closed markings, when the runway, or taxiway, or portion thereof closed is intercepted by a usable runway or taxiway which is used at night, unserviceability lights **should** be placed across the entrance to the closed area at intervals not exceeding 3m.
6. Lighting on a closed runway or taxiway or portion thereof **should not** be operated, except as required for maintenance purposes.

### Guidance Material 3519(1)

#### Closed Runways and Taxiways

7. Where a closed runway is available for emergency use and providing it has been inspected in the previous six months and declared serviceable for an emergency landing at any time, an underscored closed marking may be placed at each end of the runway, or portion thereof, declared closed, and additional underscored markings may be so placed that the maximum interval between markings does not exceed 300m (Figure 2).

Figure 2. Emergency Use Closed Runway Marking



#### Civil Equivalence.

8. This regulation is in line with International Civil Aviation Organization (ICAO) Annex 14 Vol I para 7.1.

### Regulation 3519(2)

#### Hazardous Areas

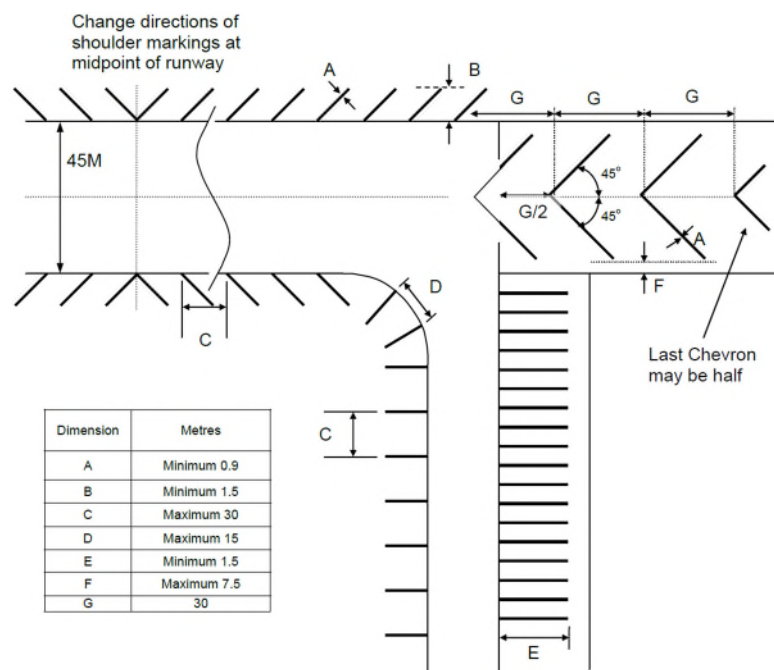
- 3519(2) HoEs and ADH Facing organizations **shall** ensure that, if the provision of runway side stripes and taxiway edge markings do not provide adequate definition of the operational surface, restricted use area markings are applied to the non-operational area. Restricted use and hazardous areas on or adjacent to the runway and taxiway surfaces **shall** be marked for better recognition.

**Acceptable Means of Compliance 3519(2)**

**Hazardous Areas**

9. **Runway Shoulder.** Runway Shoulder restricted use area markings **should**:
  - a. Be a series of yellow (non-reflective aviation surface yellow) stripes;
  - b. Be 0.9m wide extending outboard at an angle of 45° from the edge of the operational surface for not less than 1.5m measured perpendicular to the runway edge to within 1.5m of the outer edge of the shoulder, or for a distance of 7.5m whichever is less (Figure 3);
  - c. Be no more than 30m apart; and
  - d. Lie on a line forming a chevron with the apex on the runway centre-line and pointing toward the midpoint of the runway.
10. **Taxiway Shoulder.** Taxiway Shoulder restricted use area markings **should**:
  - a. Be a series of yellow (non-reflective aviation surface yellow) stripes which:
  - b. Be perpendicular to and extend outward from the taxiway edge for not less than 1.5m (Figure 3); and
  - c. Be no less than 0.9m wide and spaced not more than 30m apart, and on curved edges not more than 15m apart.
11. **Restricted Use Area.** Restricted Use Area markings at Pre-Threshold areas **should** be marked with a chevron marking if:
  - a. The surface before a threshold is paved;
  - b. Exceeds 60m in length; and
  - c. Is not suitable for normal use by Air Systems.
12. Restricted Use Area markings **should**:
  - a. Point in the direction of the runway and be placed as shown in Figure 3; and
  - b. Be aviation yellow with an overall width of 0.9m.
13. Blast pavement striping **should** be at least 15m long or the width of the blast pavement if less than 15m.

Figure 3. Hazardous Area Markings



**Guidance  
Material  
3519(2)**

**Hazardous Areas**

**Civil Equivalence.**

14. This regulation is in line with ICAO Annex 14 Vol I para 7.2.

**Regulation  
3519(3)**

**Unserviceable Areas**

3519(3) HoEs and ADH Facing organizations **shall** ensure that unserviceability markers are displayed wherever any portion of a taxiway, apron or holding bay is unfit for the movement of Air Systems but it is still possible for an Air System to bypass the area safely. On a movement area used at night, unserviceability lights **shall** be used.

**Acceptable  
Means of  
Compliance  
3519(3)**

**Unserviceable Areas**

15. Unserviceability markers, and where necessary lights, **should** be placed at intervals sufficiently close to delineate the unserviceable area.

16. Unserviceability markers **should** consist of conspicuous upstanding devices such as flags, cones, lights or marker boards with the following properties:

- a. An unserviceability cone **should** be at least 0.5m in height and red, orange, or yellow, or any one of these colours in combination with white;
- b. An unserviceability flag **should** be at least 0.5m square and red, orange, or yellow, or any one of these colours in combination with white; and
- c. An unserviceability marker board **should** be at least 0.5m in height and 0.9m in length, with alternate red and white, or orange and white vertical stripes.
- d. An unserviceability light **should** consist of a red fixed light. The light **should** have an intensity sufficient to ensure conspicuity considering the intensity of the adjacent lights and the general level of illumination against which it would normally be viewed. In no case is the intensity to be less than 10cds of red light.

**Guidance  
Material  
3519(3)**

**Unserviceable Areas**

**Civil Equivalence.**

17. This regulation is in line with ICAO Annex 14 Vol I para 7.4.