

245. I.C.A.O. AGA Standards and Recommended Practices prescribe dimensions and slopes and heights of imaginary approach and other surfaces in the vicinity of the aerodrome. These "surfaces" define the limits above which it is desirable that no obstruction should exist, and it is prescribed as a standard that if such obstructions do exist they must be marked. The prescribed surfaces in some respects vary with the class of aerodrome, and therefore with the class of aircraft for which the aerodrome class is broadly conceived to be suitable. In other respects, the surfaces prescribed are common to all classes of aerodromes. No direct reconciliation can be found for the apparent differences between the OPS and the AGA Standards, but the explanation is to be found in the different approach. The OPS Standards provide the means of determining whether an existing aerodrome is suitable for the operation of a particular aircraft. The AGA Standards prescribe the dimensions of aerodromes and objects in the vicinity which, if incorporated in the design of the aerodrome, will make it safe in critical conditions for all aeroplanes of the class for which the particular Standards were designed—in other words, they incorporate a large margin for some aircraft. Further examination of this reveals the ways which are open to New Zealand in fitting aircraft operations to the aerodromes which it is possible to construct in this country.

246. The approach surface slopes are the most important and critical in the specifications governing the surroundings of an aerodrome. The AGA Standards prescribe a slope of 1 in 50, in the most severe (instrument landing) case, from the ends of the landing strip outwards for a distance of 10,000 feet in both directions. The OPS Standards prescribe, in effect, that the aeroplane will approach at an angle not steeper than 1 in 20, and that nothing must project above that slope. For take-off, the OPS Standards only prescribe that the aeroplane must be able, with the critical engine inoperative, to clear all obstacles with a vertical margin of 50 feet. An aerodrome with an approach slope of 1 in 50 therefore provides a large margin for an aeroplane with a "one-engine-inoperative" climb angle of 1 in 20. While the AGA Standards and Recommended Practices are set out as minima, it is important to bear in mind that they are minima to cover aircraft of widely differing performance characteristics. Where, as in New Zealand, it may at some aerodromes be impossible to satisfy all the I.C.A.O. Standards, safety must be preserved by the choice of aircraft having suitable operating characteristics. In considering obstacles in the approach area, it should be noted that AGA Standards do not prohibit obstacles projecting above the approach surface, but they prescribe an obligation to mark (includes lighting) those which so project. Nothing, however, should project above the steeper slopes prescribed in the OPS Standards. At the same time, there is a great difference between an isolated obstacle in the