4.3 New Plymouth Airport flight path protection surfaces

New Plymouth Airport is located near the mouth of the Waiongana Stream in New Plymouth District. In order for the airport operator to remain certified to operate the airport, the airport operator must provide "obstacle limitation surfaces" under the Civil Aviation Rules (Civil Aviation Act 1990). The mechanisms to prevent flight path obstacles are regional and district plans.

New Plymouth Airport requires flight path protection surfaces to cover the coastal marine area in the vicinity of the airport. The extent of the flight path protection surfaces is shown in figures 2, 3 and 4. The flight path protection surfaces are a group of inclined and horizontal planes. The protection surfaces are intended to prevent obstacles being placed within the airport's flight paths. Five types of surface, described below, cover the coastal marine area.

4.3.1 Description of protection surfaces

Approach surfaces
Three approach surfaces are located over the coastal marine area:

(i) South-western approach surface over Port Taranaki: this is an inclined surface, rising from the south-western end of the main runway strip (23 m above mean sea level) at a gradient of 1.6 per cent (1 in 62.5), its sides splaying 15 per cent from the edges of the main runway strip.

(ii) North-eastern approach surface over Waitara River estuary: this is an inclined surface, rising from the north-eastern end of the main runway strip (23 m above mean sea level) at a gradient of 1.6 per cent (1 in 62.5), its sides splaying 15 per cent from the edges of the main runway strip.

(iii) North-western approach surface over the open coast area: this is an inclined surface, rising from the north-western end of the subsidiary runway strip (20 m above mean sea level) at a gradient of 1.6 per cent (1 in 62.5), its sides splaying 15 per cent from the edges of the subsidiary runway strip.

Transitional surfaces
Two transitional surfaces rise off the edges of the approach surfaces at a gradient of 1 in 7 to intercept the horizontal surface.

Horizontal surface
The horizontal surface is a level surface overlying the airport and its surrounding areas at a height of 74 m above mean sea level. The extent of the horizontal surface is a radius of 4000 metres from the ends of the runway strips.

Conical surface
The conical surface is an inclined surface that rises from the edge of the horizontal surface at a rate of 2.5 per cent (1 in 40).

Rural airport protection zone
A flat surface under which a structure should not exceed 3 metres in height.

4.3.2 Effect of this plan

The flight path protection surfaces are given effect through Policy 11.2 in Issue eleven, Section 3.0 of this plan. In particular, controlled activities must comply with the height restrictions established above, while any application to carry out a discretionary activity will be declined if it does not comply with the height restrictions. Under no circumstances will any structure be allowed to breach the flight path protection surfaces.

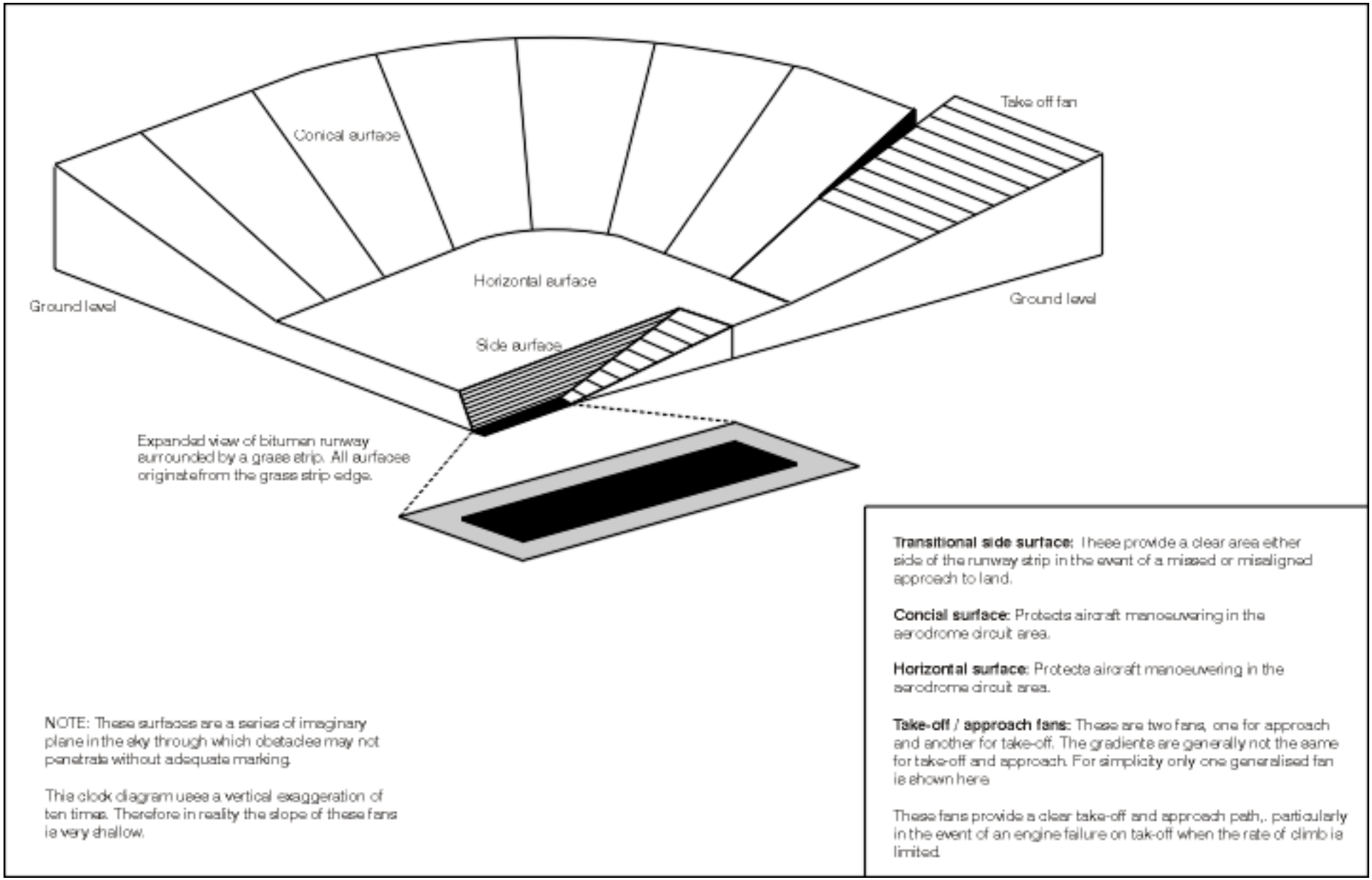

Figure 2: A generalised description of CAA's requirements for protection surfaces surrounding New Zealand airports

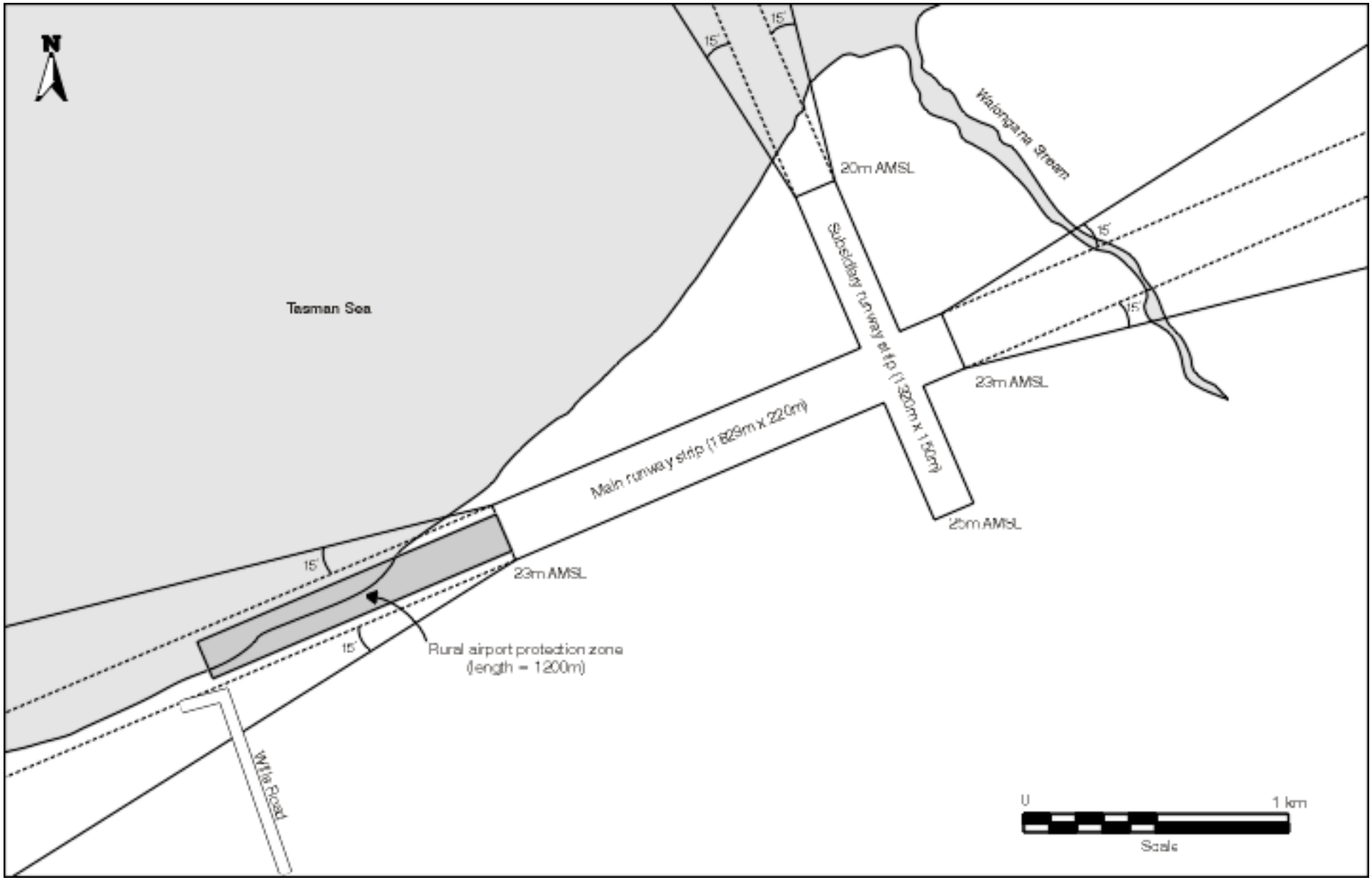

Figure 3: Base measurement used to calculate New Plymouth Airport flight path protection surfaces

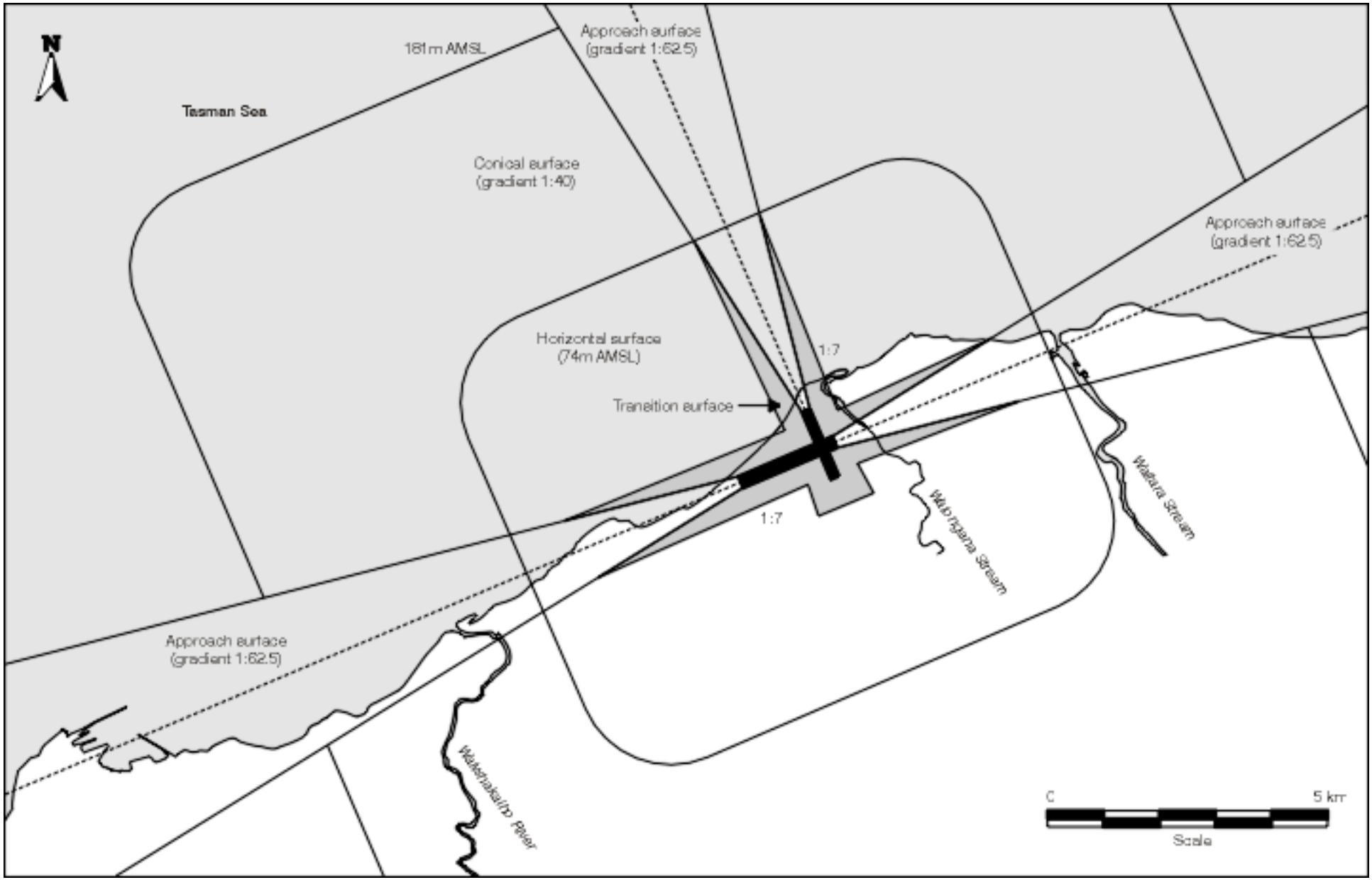

Figure 4: New Plymouth Airport flight path protection surfaces