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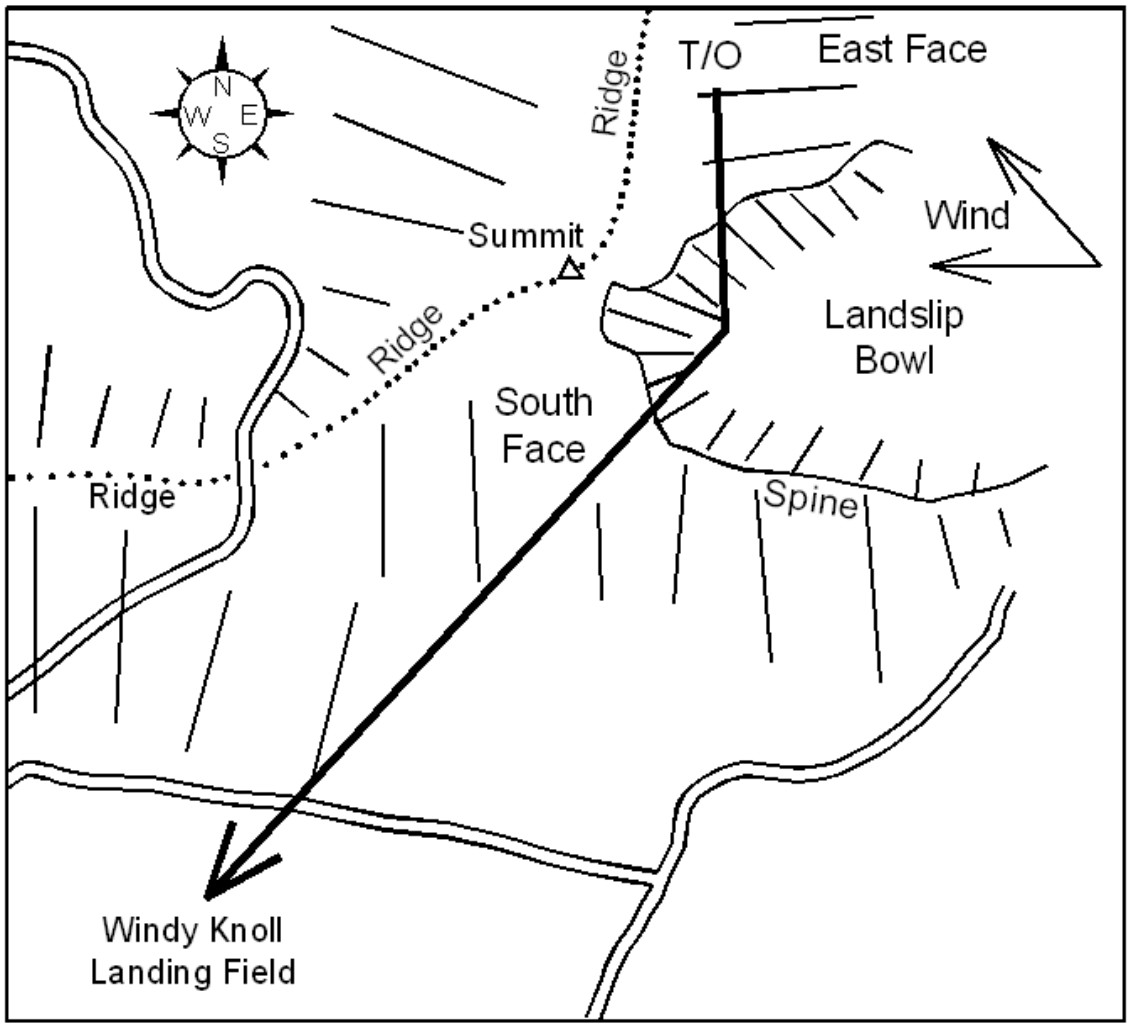
The Mam Tor Rotor Trap

Warning! The pilots who encountered this hazard should have been able to avoid it through their understanding of how air moves over the terrain. Avoiding this hazard using the solution suggested here also requires the pilots to use their knowlege, training and experience, failures of which the author cannot be held responsible!

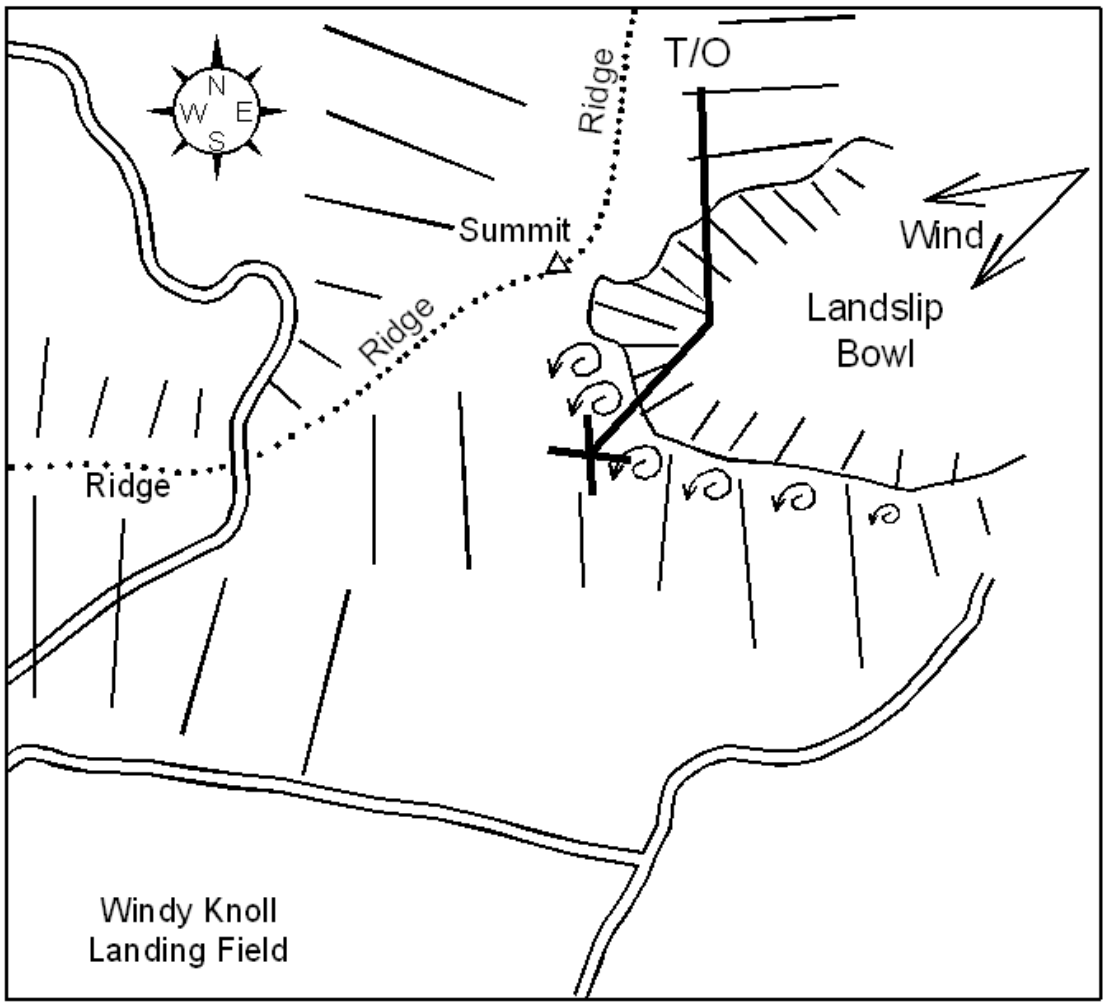
Over the years this area of rotor has caused a considerable number of incidents, some very serious. The east face of Mam Tor can be soared in winds from SE round to ENE in most reasonable conditions and sometimes as far round as NE, if a little uncomfortably. To avoid a long walk up from the bottom landing most of us usually land at Windy Knoll. The direct line to the landing field (Diagram A) passes across the edge of the landslip bowl where, with the south face, it forms a spine running eastwards towards the end of the road.



(Diagram A)

As long as we are reasonably high, with care this track is usually OK in light and moderate E to SE winds because the air is blowing almost along the edge of the spine rather than across it.

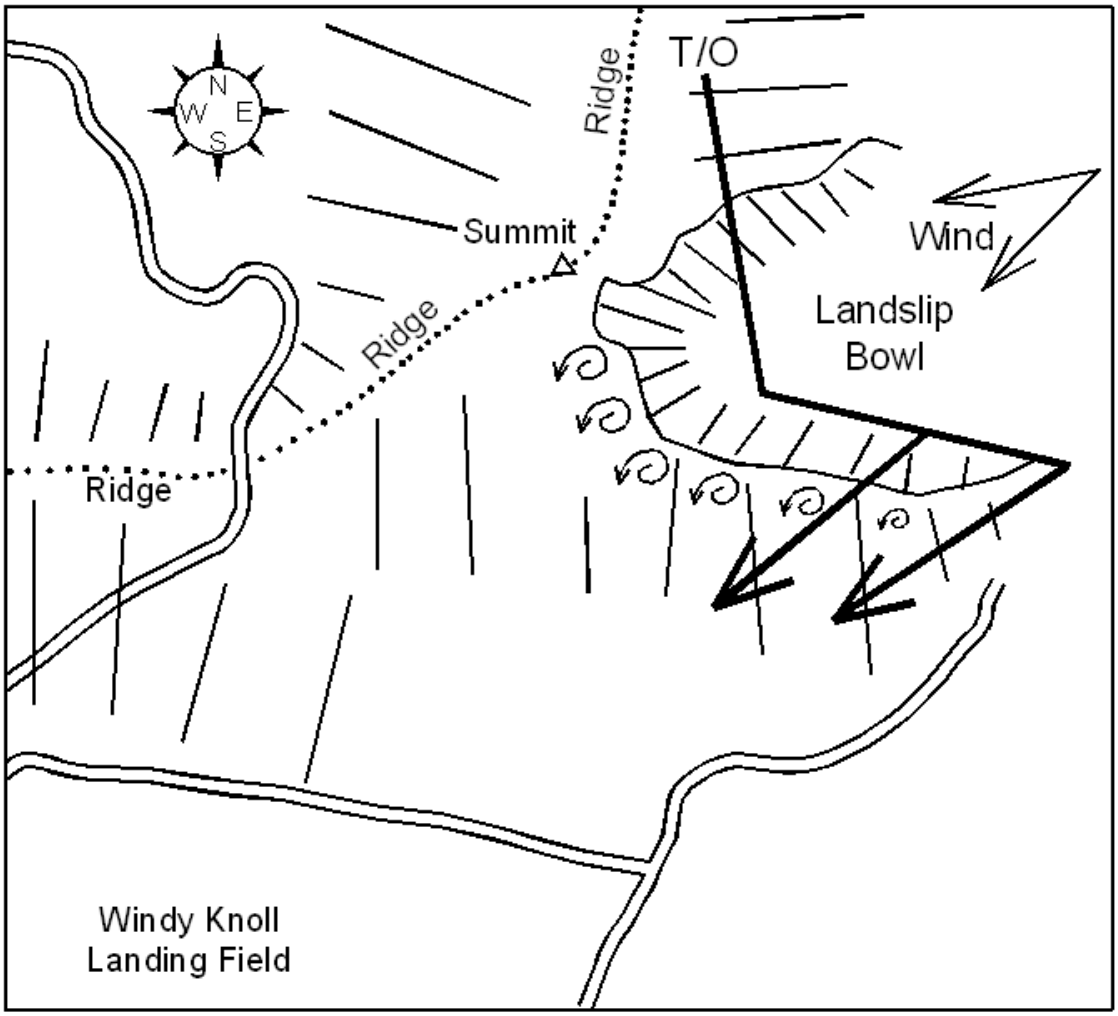
However, when the wind is from a NE or ENE direction it blows more across the edge and forms an area of rotor (Diagram B) making the direct line to the landing field very hazardous.



(Diagram B)

Unfortunately, some pilots who are used to flying in a straight line to the landing field in E to SE winds either forget to check the wind direction and strength or misjudge it before flying across the edge, and so come to grief.

As long as we recognise the wind is coming from ENE to NE the solution is simple.



(Diagram C)

We fly approximately parallel to the spine in an easterly direction (Diagram C) until we have sufficient height above the spine to keep out of rotor, and then turn towards the landing field. Because the spine gets lower as we fly eastwards we benefit in three ways. We get more height above the edge, rotor reduces as the height of the spine decreases towards the eastern end and the wind may well be a bit less lower down, further reducing the rotor.

The direct route will still be OK if we are high enough. A frequently asked question is "How high do I need to be to cross this edge safely?" The answer is that it depends on conditions. You will, of course, find out rather unpleasantly if you get it wrong! If in doubt do not go this way. Use the alternate bottom landing.

This picture, taken from the bus turning circle, shows the edge running from the trees on the left upwards towards the summit. The landslip face is quite steep and the edge is quite sharp.

This picture, taken from the road junction, shows the edge from the other side:

Note how much it slopes downwards from the summit towards the valley. This enables a pilot to fly away from the rotor area by flying parallel to the edge as shown earlier.

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