

SAFE GLIDING RANGE

- WHO DOES THIS AFFECT?**

All staff except B Cat and above who are PFL qualified and current must remain within safe gliding range of the airfield.

- HOW IS THIS CALCULATED?**

The operating range from the airfield is 25 nautical miles and within this, safe gliding distance is affected by height and wind speed. The best glide angle for a Vigilant is 1:28 at 60 knots. This table shows the maximum glide distance at each height enabling return to the airfield at circuit height:

NIL WIND CONDITIONS				UP WIND			
height in feet	height in feet less circuit height	glide distance at 1:28 in feet	safe gliding distance in nautical miles	wind at 10 knots	wind at 20 knots	wind at 30 knots	wind at 40 knots
1000	200	5600	0.9	1.0	1.2	1.8	2.0
2000	1200	33600	5.4	6.3	7.2	10.8	11.9
3000	2200	61600	9.9	11.5	13.1	19.7	21.9
4000	3200	89600	14.3	16.7	19.1	28.7	31.9
5000	4200	117600	18.8	22.0	25.1	37.6	41.8
6000	5200	145600	23.3	27.2	31.1	46.6	51.8
7000	6200	173600	27.8	32.4	37.0	55.6	61.7
8000	7200	201600	32.3	37.6	43.0	64.5	71.7

- HOW ABOUT DOWN WIND?**

Operating instructions require us to go in the upwind area. This table shows the equivalent safe gliding distances down wind:

With a 30 knot wind the safe gliding distance down wind from 3000ft is 3.3nm compared to 19.7nm from directly upwind. Remember the upper wind is stronger and varies by around 30 degrees at 2000 ft. Without care you can easily find yourself down wind.

NIL WIND CONDITIONS		DOWN WIND			
height in feet	safe gliding distance in nautical miles	wind at 10 knots	wind at 20 knots	wind at 30 knots	wind at 40 knots
1000	0.9	0.7	0.6	0.3	0.2
2000	5.4	4.5	3.6	1.8	1.2
3000	9.9	8.2	6.6	3.3	2.2
4000	14.3	11.9	9.6	4.8	3.2
5000	18.8	15.7	12.5	6.3	4.2
6000	23.3	19.4	15.5	7.8	5.2
7000	27.8	23.1	18.5	9.3	6.2
8000	32.3	26.9	21.5	10.8	7.2