

Little Rissington Ground Survey - 17th September 2008

Ground survey was undertaken by Sterling surveys (Peter and Matt) and ARSF (Rob Brackley and Mark Warren).

Summary

The survey site is at Little Rissington – an old MoD airfield and business park. For the survey, a GPS base station was set up in the grounds of the business park, specifically it was located south west of the first hangar when you enter the business park. The hangar is in use as the premises of a removal firm. This base station site is marked as B on Figure 1. It was collecting data for approximately 9 hours. Whilst the base station was in position collecting data, 64 additional points were surveyed; 63 of which were on the airfield and 1 on the business park. Each point was surveyed using GPS for 5 minutes. The points were surveyed for use as LIDAR, hyperspectral and camera control points, although not all points are suitable for every sensor. Photographs were taken of all the survey points by both Sterling Surveys and ARSF.

Points suitable for LIDAR control: 14 on E-W runway, 4 north of E-W runway, 5 on NW-SE runway, 2 on road S of runways. These points should fall within 14 degrees swath of a cross centred on EW runway. Other points outside this swath are available for checks of the calibration.

Points suitable for camera control: 5 white crosses on runways (2 points at each cross), 1 point in business park – may be difficult to identify from image but best we could find in the area.

Points suitable for hyperspectral control: 2 runway intersections (points at each corner), 4 or 5 road intersections, possibility of using camera control points, concrete vs grass boundaries.

Point descriptions

The 64 points surveyed can be seen in Figure 2. Of the white crosses on the runways, 2 points were surveyed at each cross. These are described in Figure 3. On the disused runways, that is points 14, 15, 36, 37, 55 and 56, point-type A and B were measured. On the runway in use, points 46, 47, 62 and 63, point-type B and C were measured. To clarify, points 15, 36, 47, 56, and 63 are type B; 14, 37 and 55 are type A; 46 and 62 are type C.

E-W Runway cross-section points; 16, 17 18 and 33, 34, 35 are in 2 lines across a portion of the width of the runway, at either end of the runway. Points 19, 20, 21, 22, 27, 28, 29 and 32 are along the length of the runway. These are for the LIDAR range calibration.

Runway intersection points; 23, 24, 25, 26, 48, 49, 50 and 51 mark the corners of the intersection of the runways. These should be useful for the hyperspectral instruments.

Points 3, 4, 5 and 6 form a rectangle and mark the corners of a raised concrete floor against the grass. Points 7, 8, 9, 10 and 11 form an L shape across the junction of two roads. Points 1 and 2 are the back (away from the road) two corners of a concrete carpark (?). These points can be seen in Figure 4.

Point 12 is a corner of a road (or path?) intersection, point 13 is in the middle of a road intersection. These are shown in Figure 5.

Points 30 and 31 are located on a path off the runway and may be useful for spectral instrument control. Also points 38 to 41 located in the North of the airfield may be useful for spectral instrument control. These are shown in Figures 6 and 7 respectively.

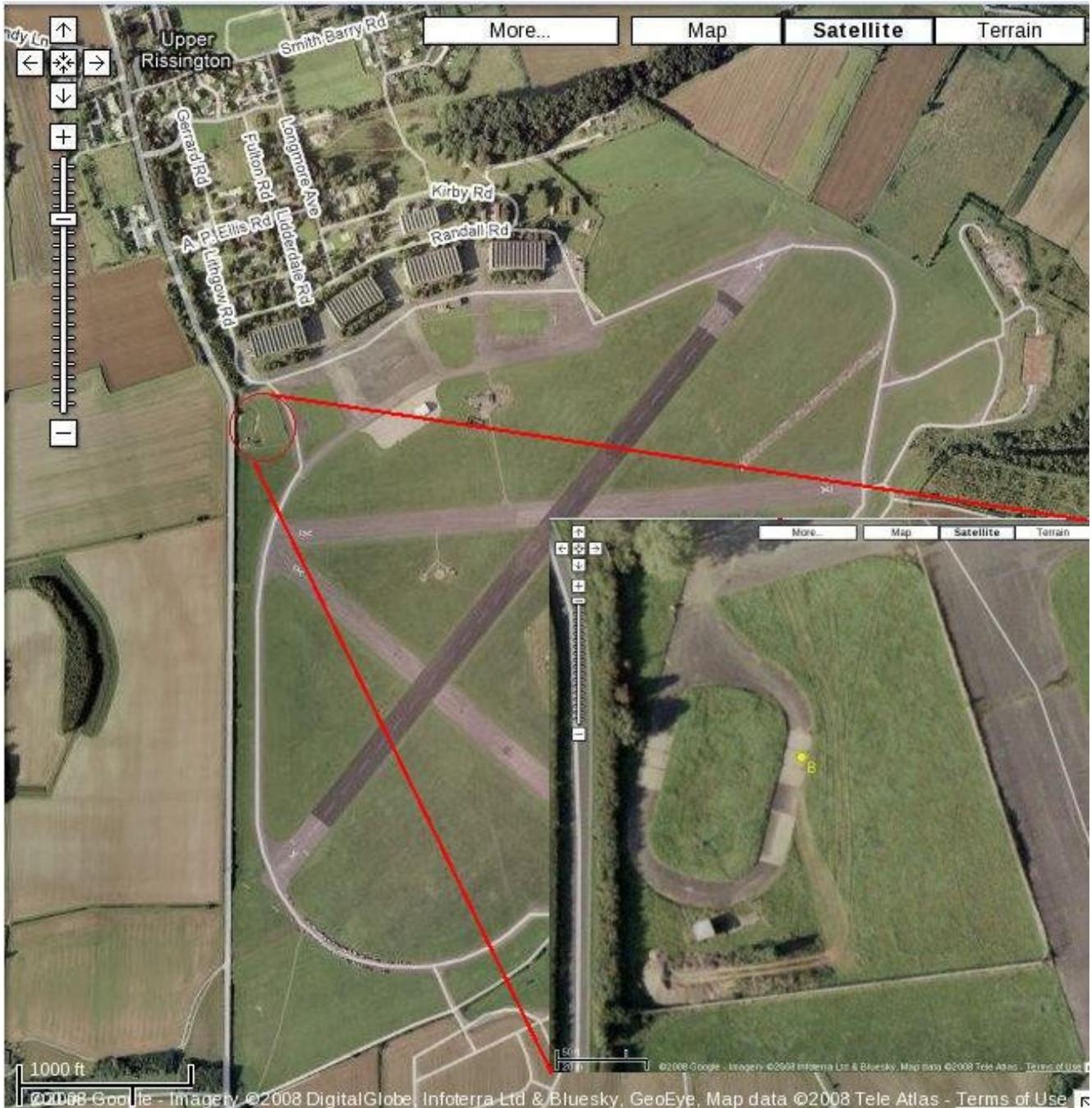


Figure 1. Basestation (B) location with respect to survey site.



Figure 2. Rough positions of the survey points numbered in order of measurement.

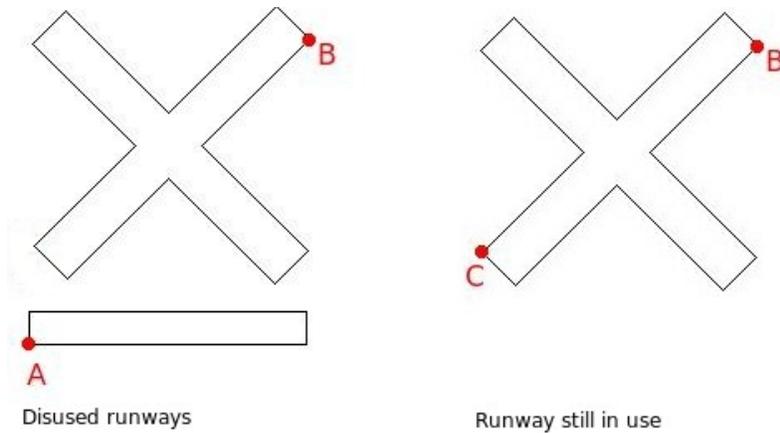


Figure 3. Location of points on the white crosses. For disused runways A and B surveyed. For other runway B and C surveyed for each cross. (Oriented such that end of runway at bottom of figure)

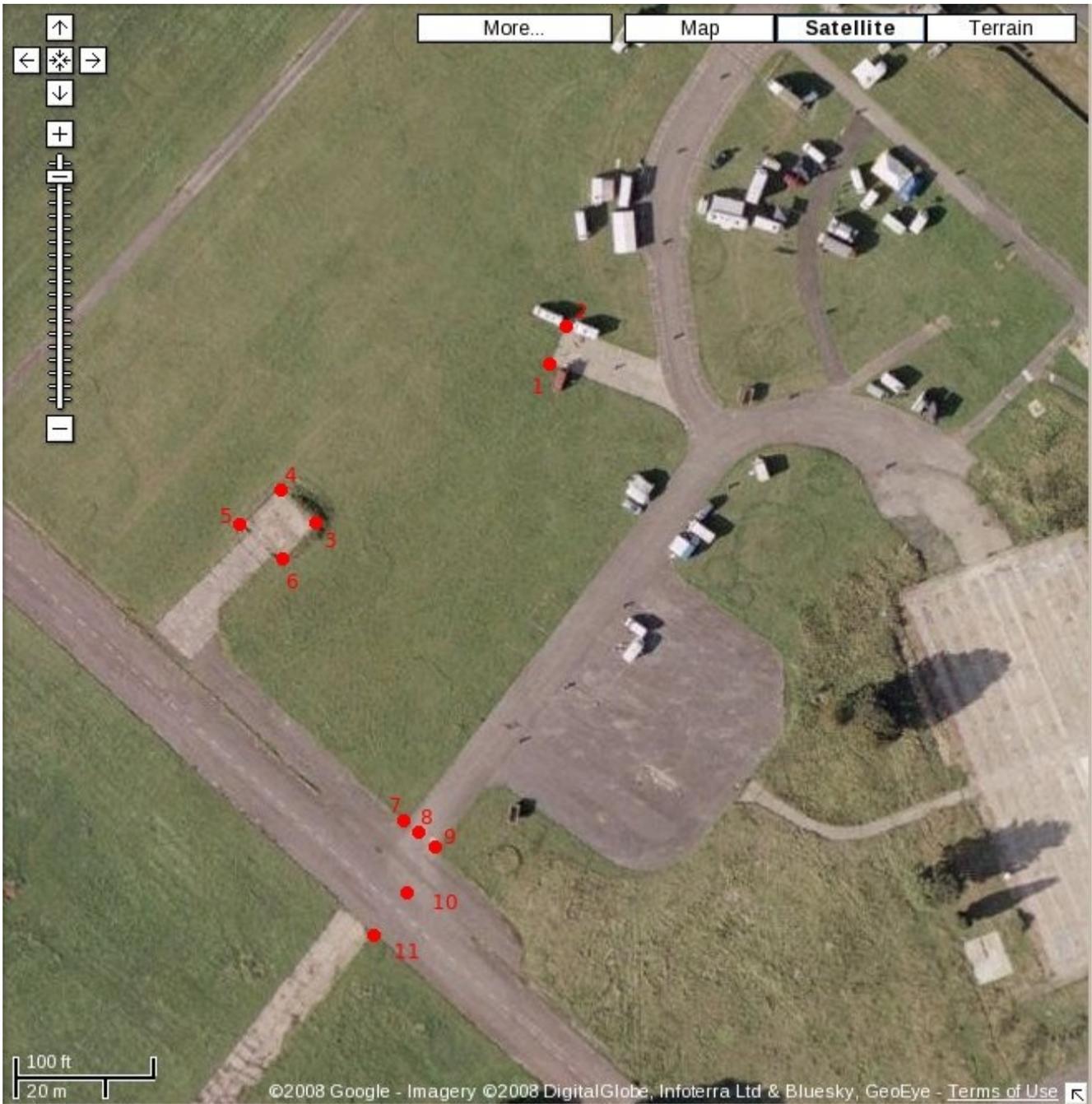


Figure 4. Distribution of points 1 to 11. Points 1-7, 9 and 11 may be good for spectral instruments; 8 and 10 as checking points for LIDAR range calibration.



Figure 5. Points 12 and 13. These could be used as spectral points.



Figure 6. Points 30 and 31 located just South of E-W runway.



Figure 7. Points 38 to 41 located North of runway. May be useful as spectral instrument control points.