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22<sup>nd</sup> December 2017

Dear Haim,

### **CAA CAP 168 Criteria for New Runway Strip at Panshanger Aerodrome**

#### **York Aviation Advice**

York Aviation LLP (YAL) has been contracted by Project Phoenix, Panshanger Community Aerodrome Ltd, to comment on the proposals for a new runway strip at Panshanger Aerodrome and advise if this proposal complies with aviation criteria as set out by the CAA in CAP 168, 'Licensing of Aerodromes'.

We are familiar with the aerodrome site and comment on the proposals set out on the layout prepared by Project Phoenix included in this letter.

#### **Panshanger Aerodrome Proposed Runway Strip**

The proposed new grass runway will be 799m in length and 18m wide, and classified as a Code 1A non-instrument runway in accordance with CAP 168.

The Code 1A runway will have a 'runway strip' that is 60m wide, 30m either side of the runway centreline, for the full length of the runway and for a distance of 30m beyond each end of the 799m runway strip.

Either side of this runway strip there is a protected area of airspace, that constitutes part of the Obstacle Limitation Surfaces (OLS), called the 'transitional surface'.

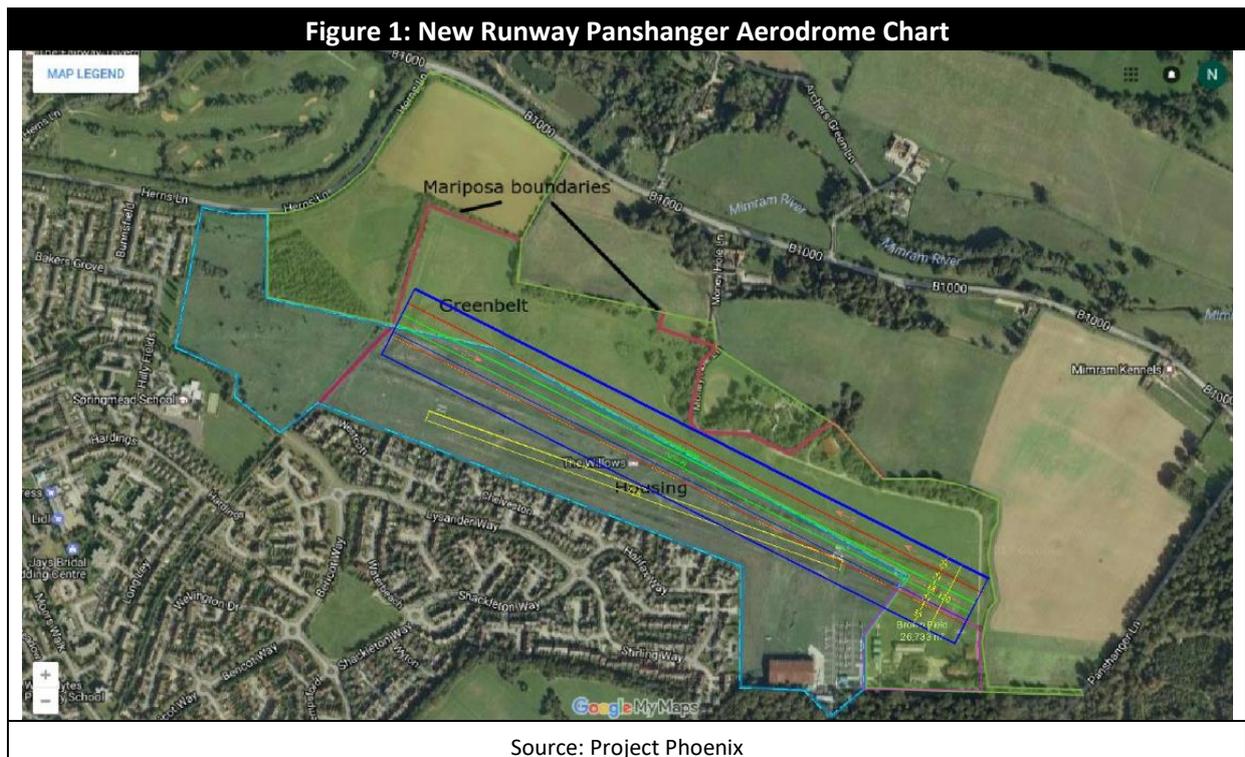
The 'transitional surface' is an invisible protected area of airspace that runs the full length each side of the runway and starts at ground level at the outer edge of the runway strip and then rises at a

gradient of 20% (1m in every 5m) from the edge of this runway strip. The starting edge of this 'transitional surface' is then along the edge of the 30m line of the runway strip (as described above) and then rises at 1m in every 5m.

This 'transitional surface' will extend across the land both within the aerodrome and outside of the aerodrome boundary. No fixed objects, whether buildings, trees, masts, aerials, etc., can penetrate this surface, otherwise the OLS and hence aerodrome safeguarding will be compromised.

The proposed layout for the runway, prepared by Project Phoenix, is set out at **Figure 1**.

This illustrates the new runway located on land across the northern part of the original aerodrome site.



This has the new runway, in light green, within the blue box at 18m wide. Either side of this is the runway strip in red, which is 30m from the runway centreline and 21m from the edge of the 18m wide runway. The blue line indicates where a 7m height clearance is achieved with the 1 in 5 'transitional slope'.

This blue line provides an indication of how far the location of structures at a height of 7m would need to be from the runway. Structures that are lower in height than this could be closer to the runway, those that are higher would need to be further away.

For information as a reference this Project Phoenix diagram also shows where the original aerodrome runway was located further to the south of this new runway position and at a slightly different orientation.

### **CAA CAP 168 Compliance**

The proposed layout at Figure 1 complies exactly with the criteria required for a Code 1A non-instrument runway. The required runway width at 18m, 'runway strip' at 60m and the 'transitional surface' at a 1 in 5 gradient are accommodated.

We note that the blue line at 35m from the edge of the runway strip provides a height clearance of 7m for structures at this location is presented as illustrative and that account will be required of all structures closer to the runway and further away to ensure that this 1 in 5 gradient OLS is not infringed.

### **Conclusions**

We are satisfied that the proposed location for a new runway at Panshanger complies with the criteria set out in CAA CAP 168 for a Code 1A runway.

Yours sincerely,

Niall Gunn  
**Principal Consultant**