

APPENDIX 5: HEIGHT REQUIREMENT FOR HAMILTON AIRPORT

1. Main Runway:

The Proposed Main Runway once extended is 2,984m long (including 188m long starter extensions at each end) by 46m wide.

2. Main Strip:

The Proposed Main Runway is contained within the Main Strip. The Main Strip is 2,728m long by 300m wide. The coordinates and elevations of the four corners of the Main Strip, in terms of the Geodetic Datum 2000 - Mt Eden Circuit and the Moturiki Datum are as follows:

MN	mE	Elevation
<u>689584.61</u>	<u>449606.95</u>	<u>49.85</u>
<u>689500.00</u>	<u>449894.77</u>	<u>49.85</u>
<u>692201.79</u>	<u>450376.50</u>	<u>56.50</u>
<u>692117.17</u>	<u>450664.31</u>	<u>56.50</u>

3. Existing Subsidiary Strip:

The existing Subsidiary Strip is 748m long and 120m wide. The coordinates and elevations of the corners of the Subsidiary Strip, in terms of the Geodetic Datum 2000 - Mt Eden Circuit and the Moturiki Datum are as follows:

mN	mE	Elevation
<u>690876.23</u>	<u>449359.68</u>	<u>51.30</u>
<u>690756.78</u>	<u>449348.20</u>	<u>51.30</u>
<u>690685.32</u>	<u>450091.64</u>	<u>52.00</u>
<u>690804.77</u>	<u>450103.12</u>	<u>52.00</u>

4. Proposed Realigned Subsidiary Strip

It is proposed to realign the subsidiary strip. The length of the realigned strip will be 720m and the width will remain at 120m. The coordinates and elevations of the realigned subsidiary strip, in terms of the Geodetic Datum 2000 – Mt Eden Circuit and the Moturiki Datum are as follows:

mN	mE	Elevation
<u>690896.36</u>	<u>449420.14</u>	<u>51.30</u>
<u>690778.96</u>	<u>449445.88</u>	<u>51.30</u>
<u>690951.26</u>	<u>450141.22</u>	<u>52.00</u>
<u>691069.02</u>	<u>540117.51</u>	<u>52.00</u>

5. Horizontal Surface:

A surface located in a horizontal plane above the Main Runway with an elevation of 97m Moturiki Datum having its out limit at a

locus of 4000m measured from the periphery of the Main Strip.

6. Conical Surface:

A surface sloping upwards and outwards from the periphery of the Horizontal Surface at a gradient of 1 vertical to 20 horizontal (1 in 20) to an elevation of 202m above Moturiki Datum.

7. Main Strip Takeoff and Approach Surface:

There is combined Takeoff and Approach Surface at both ends of the Main Strip. Each Takeoff and Approach Surface rises upwards and outwards from the ends of the Main Strip at a gradient 1 vertical to 62.5 horizontal (1 in 62.5) commencing at 56.50m above Moturiki Datum at the northern end and 49.85m above Moturiki Datum at the southern end for a horizontal distance of 15.00km. Each side of the Takeoff and Approach Surface diverges from the extended line of each edge of the Main Strip at a rate of 15% of the distance from the end of the Main Strip.

8. Subsidiary Strip Takeoff and Approach Surface:

There is a combined Takeoff and Approach Surface at both ends of the Subsidiary Strip. Each Takeoff and Approach Surface rises upwards and outwards from the ends of the Subsidiary Strip at a gradient of 1 vertical to 20 horizontal (1 in 20) to where it intercepts the Horizontal Surface. Each side of the Takeoff and Approach Surface diverges from the extended line of each edge of the Subsidiary Strip at a rate of 10% of this distance from the end of the Subsidiary Strip.

9. Transitional Slopes:

These rise upwards and outwards from the sides of both the Main and the Subsidiary Strips and the edges of each Approach Slope to intercept the Horizontal Surface. The Transitional slope for the Main Strip is 1 vertical to 7 horizontal (1 in 7) and the Transitional slope for the subsidiary strip is 1 vertical to 5 horizontal (1 in 5). All of the above surfaces are illustrated on the following diagram. [to be inserted at update stage]

NOTE: In accordance with Designation DN39 Waikato Regional Airport Ltd requires that the District Plan not allow any object to be constructed or any plant to grow above the

surfaces as defined in Clauses 4 to 9 above, except that the existing stand of oak trees on Lot 1 DP357645 are permitted to penetrate through the Main Strip Takeoff and Approach Surface at the northern end of the runway, provided that they do not penetrate through a Take Off and Approach Surface at a gradient of 1 vertical to 50 horizontal (1 in 50) commencing at 56.50m above Moturiki Datum at the northern end.

10. Doppler Very High Frequency Omni-directional Radio Range and Distance Measuring Equipment Facility (VOR/DME):

1050 metres on the centreline of the existing runway extended to the north from the north end of the Main Strip is a VOR/DME (VOR) which is an essential navigation aid for the operational safety of aircraft using the Airport. In terms of Geodetic Datum 2000, Mt Eden Circuit, the centre of the structure is located at 692251.2mN, 450547.5mE. In order to ensure the efficiency of this aid no metallic structures other than wire fences less than 1.2 metres high are permitted within 200 metres of this position. Outside of a 200 metre radius of the aid no structure or part of a structure may be erected which will be above a conical surface centred at the centre of the aid, originating at a level of 55.4 metres above Moturiki Datum and rising at an angle of 3.5 degrees above the Horizontal. It is proposed to relocate the VOR / DME to a new position to the south of the main runway on Part Allotment 312 Te Rapa Parish as shown on Drawing No 126760/07/P111 NOR. The relocated VOR/DME will be subject to the following restrictions:

- a) Within a radius of 100m from the VOR / DME no metallic or non-metallic objects, trees, vegetation and other obstructions are permitted above the height of the VOR counterpoise.
- b) Within an area between 100m radius and 200m radius from the VOR / DME no metallic or non-metallic structures, trees, vegetation, power lines or other obstructions are permitted above an elevation starting at the height of the VOR counterpoise and rising at an angle of 3.5° above the horizontal.

