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21 October 2019

General Manager
Upper Hunter Shire Council
(per email)

Dear Sir,

Re Scone Aerodrome Upgrade

I wish to contribute to the current debate regarding the upgrade of the Scone Aerodrome. In particular I would like to address the comments made by CASA.

I am a CASA approved Aerodrome Safety Inspector with over 40 years' experience in regulating, developing, managing and inspecting aerodromes throughout Australia and overseas. I have also been a member of the CASA convened panel of experts who have been reviewing and rewriting the standards that apply at Australian aerodromes. These new standards were recently published by CASA in the Part 139 Manual of Standards (the "MOS") and will come into effect on 23 August 2020.

On the 23 August 2020 Registered Aerodromes, such as Scone, will no longer be Registered and will have to become Certified to continue to operate in their current format, complete with instrument procedures to allow operations to safely occur in reduced weather conditions.

The difference between Registration and Certification is the level of document procedures that are required; both classes of aerodromes must meet the same physical standards.

In relation to "Grandfathering" the MOS clearly states at Clause 2.04 (3) that "The standards in this MOS for an aerodrome facility and the obstacle limitation surfaces associated with a runway (the OLS) do not apply to a grandfathered facility of the same kind if the grandfathered facility:

- (a) complies, and continues to comply, with the standards which applied to the aerodrome facility and the OLS immediately before the commencement of this MOS; and
- (b) is not:
 - (i) replaced; or
 - (ii) upgraded; and
 - (c) is maintained in accordance with the requirements of this MOS for the same kind of facility."

Therefore, Clause 2.04 (3) is clear that any facility that does not comply with a current or previous standard cannot be grandfathered and must be upgraded to the current standards if the aerodrome is to achieve a Certificate to operate.

While CASA is correct in its statements that aerodromes will not be “closed” and that there are no “current or outstanding safety issues” for Scone Aerodrome. However, this is not the full story.

Certification or not

The decision to continue to operate an aerodrome or to close it is one for the aerodrome operator and the community that owns it.

If an aerodrome is not Certified by CASA all instrument procedures associated with it will have to be cancelled. This will have dramatic effect on aircraft operations, especially on those that have to operate in poor visibility, such as in smoke and low cloud, and on the higher performance aircraft operations that require the procedures to safely establish the aircraft on the correct approach path often before the runway is visible as the procedure commences 15 nautical miles before the runway.

The other aspect of the Certification, or otherwise of an aerodrome, is that it may affect the ability of an aircraft operator to obtain appropriate insurance coverage as the risk of operating at a “landing area” is much higher than at an “aerodrome”. I have noticed that one business based at the Scone Aerodrome has indicated that it will relocate to Tamworth if the aerodrome is not Certified and its instrument procedures have to be cancelled. I understand that this could result in the loss of jobs, which could result in families leaving Scone and relocating to Tamworth.

Non-compliances and defects

There are a number of non-compliant facilities located on the aerodrome that cannot be grandfathered. They include:

-) Parallel taxiway to runway 11 threshold
 - Possibly constructed about 2010
 - Apparently constructed to a road standard and not a taxiway standard as the cross falls are too steep, the surface too uneven and the required clearances from obstacles have not been protected. Also, there is a culvert where the taxiway crosses a drain that is too narrow.
-) Private taxiways to neighbouring properties
 - Possibly constructed about 2010.
 - Do not provide the required clearances from obstacles (fences).
-) There not a Wind Direction Indicator located abeam the threshold of runway 29 to support the non-precision instrument approach procedure, as required Civil Aviation Regulation Part 139, regulations 139.185 and 139.295
 - This is required to provide wind information to pilots on an instrument approach when they may be in cloud until as low as 265 m above the aerodrome.
 - This information could also be provided by the installation of an Automatic Weather Information Broadcast facility.

There are a few facilities that can be grandfathered as they are compliant with the standards that applied when the facility was commissioned, but they are now worn out

-) Aerodrome Lighting

- installed in about 1970 in accordance with the standards contained in the Department of Civil Aviation's Airways Engineering Instructions.
 - The main cable has a measured resistance of .0011 Megaohms, which compares with the current Australian standard requirement of at least 2 Megohm. This indicates a leakage to earth through the worn insulation such that the reliability of the lights cannot be ensured.
-) Apron Flood Lighting
- Installed in about 1970 in accordance with the standards contained in the Department of Civil Aviation's Airways Engineering Instructions;
 - Grandfathered until the apron parking positions change, which has occurred with the growth in larger aircraft using the aerodrome, particularly for the livestock sales.

There are also some significant maintenance issues that must be addressed to enable the aerodrome to continue operating:

-) The runway surface is at the end of its serviceable life due to road standard asphalt having been used. The big difference between runways and roads is the type and volume of traffic using each facility.
- On a road the constant and varied vehicles using it continue to knead the asphalt, keeping the bitumen content as a flexible binder, and generally moving the surface to close up cracks to prevent water egress. This state usually prevails for about 18 years, after which the bitumen becomes brittle and the pavement begins to deteriorate.
 - On a runway, there is not the constant or varied traffic to continually knead the pavement, which results in the bitumen binder oxidising in the sunlight and becoming brittle and shrinking. This results in the joints between asphalt mats opening and various other cracks forming and the pavement deteriorating at a much more rapid rate. This nature of road designed asphalt can be rectified by using specialty asphalt designs developed for aircraft pavements that generally have a higher bitumen content. Nevertheless, the average life of a runway surface is 15 to 18 years, with road asphalt generally only lasting about 12 to 15 years.
 - The other consideration is the traffic – higher performance aircraft generally land at about 150 kph on small wheels (relative to their size and weight) when compared to road vehicles. As such, it is a safety issue if the runway surface has any significant defects, such as potholes.
-) There is a large area of swelling (a "gilgai) caused by moisture in the expansive clays under the runway. This problem has resulted from inadequate sub-surface drainage along the edges of the runway, allowing moisture to accumulate in the clayey pavement materials.
- The only solution to this, if the runway is to remain serviceable, is to excavate the failed area, stabilise the sub-grade and construct a new pavement.
 - The installation of appropriate drainage will prevent it reoccurring.

Safety Issues or not

Council has addressed then safety issues by:

-) Regularly monitoring the condition of the runway through increased inspections;
-) Immediately undertaking short term repairs to the pavement as and when required to maintain it in a serviceable condition;
-) By closing the non-compliant taxiway to prevent aircraft using it.

The CASA correspondent is correct in stating that CASA has not issued any safety findings against Scone Aerodrome, at this time. I believe that this is entirely due to Council's proactive attitude towards the aerodrome in that they have:

- Identified and addressed the safety problems;
- Developed a plan for the aerodrome's future, that includes attracting new businesses to the area and developing a unique tourist attraction focusing on "war birds" to benefit the community; and
- Developing a plan to quickly rectify the defects and provide the infrastructure for the future.

Because of this proactive attitude CASA is working with Council to address the safety issues, as they do with all proactive aerodrome operators. In my experience, the issuing of safety findings is not CASA's first action if an aerodrome operator has demonstrated actions to address the issues. In the case of Scone Aerodrome, Council advised CASA of the issues long before CASA's Aerodrome Inspector visited the aerodrome to see that the aerodrome continued to be safe for aircraft operations.

Future Infrastructure

Council has taken the opportunity to construct a parallel taxiway at this time because the new standards have increased the clearances required from taxiways to runway centrelines, based on International standards that must cater for all weather conditions. Since about 1955 the required clearance applicable at Scone Aerodrome between runway and taxiway centrelines has been 63 m. The new standards that will be applicable from 23 August 2020 increases the clearance to 88 m. This increase will prohibit the construction of a parallel taxiway as there is only 90 m available between the runway centreline and the neighbouring boundaries at the eastern end of the aerodrome.

Therefore, Council has decided to construct a taxiway that can be constructed within the limited available space and that will be compliant with the current standards. This taxiway will then be grandfathered under the new standards. This will enable safe and efficient aircraft ground movements, both from the aerodrome tenancies and from its neighbours who were each granted private access to the runway.

The apron expansion in conjunction with the development of the war-birds attraction will enable more, large aircraft to be accommodated, instead of having to leave after depositing passengers at Scone, and accommodate more resident aircraft, including fixed wing and helicopters involved in firefighting.

I hope that this addresses the concerns of your readers and correspondents and places the current aerodrome developments into the correct context. Council has been considering the best interests of its ratepayers in this project by ensuring that it is warranted, obtaining Government funding and creating a new tourist attraction for the town.

Yours faithfully,
AIRPORTS PLUS PTY LTD

A handwritten signature in black ink, appearing to read 'T J Griffiths', with a long horizontal flourish extending to the right.

T J Griffiths
Director