Planning for a climate resilient airport

Overview
As part of a 20-year development plan for Cobar Regional Airport, Cobar Shire Council considered climate change impacts on airport operations and infrastructure through the development of a master plan for the site. The plan has focussed on strategies responsive to climate change for critical operation. The airport layout plan reduces exposure to environmental issues and makes the airport ‘user friendly’ to the large number of stakeholders involved.

Background
Cobar Regional Airport is located 5km southwest of Cobar’s town centre and is currently owned, operated and maintained by Cobar Shire Council. The airport provides access for the local mining industry, NSW Health Services including the Royal Flying Doctors Service and passenger services.

Being in the arid zone, Cobar already takes impacts from high temperature into consideration. Cobar is expected to experience an increase in temperature with more hot days, and fewer cold nights. Heatwaves are also projected to increase, be hotter and last longer with an addition 2.5 to 4.5 events per year by 2070 lasting 7-9 days longer. Fire risk will also increase, with projected increases in average and severe fire weather in the near future and longer term.

Implementation
Consultants were engaged to develop the Cobar Regional Airport Master Plan. The project brief included a requirement to undertake a climate change risk assessment of the current and proposed airport facilities and operations. The consultants also addressed the Regional Airport Master Planning Guidelines (Australian Airports Association), relevant Australian and NSW Government strategies and legislation, undertook a SWOT analysis and consulted with key stakeholders and the community.

A Community Engagement Plan was developed to provide a strategic direction for the public consultation process during the planning and preparation phase of the Master Plan. A community open day was held on 28 October 2017 during the town’s Festival of the Miner’s Ghost to seek general community feedback on the current state of the Airport and potential future development.

An internal climate change risk workshop was held and facilitated by the consultant to review and assess climate change risks and requirements for future infrastructure development, and the general state of the Airport. The climate risks were assessed based on AS/NZS ISO 31000:2009 and using the NSW and ACT Regional Climate Modelling (NARClim) data. A total of 24 risks were identified and assessed, with the inherent and residual risk ratings. There were only two risks rated as “high”. Both related to severe fire weather.
Outcomes

The Master Plan gives council a long-term strategy for future development needs of the airport. Council has already started to source funding to implement the recommendations. Climate resilience has been embedded within the strategy and the following resilience measures were recommended:

- Large above ground water tanks for firefighting use;
- An extension to the maintenance equipment facility to house bushfire and firefighting equipment;
- Solar panels to be installed on a new covered carport to provide shade and cover for vehicles and generate solar power. Panels could also be retrofitted to the existing passenger terminal, as well as on the proposed new passenger terminal roof.
- The existing runway and taxiway lights be replaced with LED fittings during the next serviceability inspection, and future lighting fixtures should adopt standard LED lighting.
- Water efficient fixtures in the terminal buildings and hangars.
- Grey water recycling for landscaping;
- Adoption of low maintenance vegetation suitable for the arid environment;
- Astro turf for play areas and new grassed areas; and
- Collection of airport stormwater runoff into retention tanks for general airport use.

Key Learnings

Attracting and retaining experienced staff remains a challenge in regional NSW. To manage future staff turnover, Council will undertake succession planning and require a status report of key projects at each MANEX (management and executive) meeting.

The Cobar Regional Airport Master Plan will guide the future development decisions of the airport to achieve sustainable growth and development of aviation operations and facilities and allow Council to capitalise on future business, operations and commercial development opportunities.

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