



AUCKLAND ATC TOWER REPLACEMENT
Airways consultation response.

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Executive Summary

Air New Zealand unequivocally supports the selection of a Digital Aerodrome Services (**D-ATS**) solution to the replacement of Auckland ATC Tower. To select any other option is to impose a 1960's solution on a 2030's aerodrome.

There is real opportunity available to Airways to adopt a solution which is not only cost effective but in Airway's own description, in CANSO guidance material, provides for improvements in capability which are not attainable through any traditional Tower structure.

Air New Zealand perceives that the primary driver of the timeline is the lease expiring in 2027. We seek clarity on this and also request that no decision is made on a replacement Tower solution until negotiations have been completed with Auckland International Airport Ltd. regarding the potential for an extension. It would be an elegant solution to have D-ATS commissioned and operational shortly prior to any future northern runway, although we accept that the existing tower needs replacing regardless of a second runway.

Auckland airport is essential to the prosperity of the country, however rushing to a solution for the Tower replacement may result in a suboptimal outcome which is not forward focused. Air New Zealand strongly believes that a drive for a D-ATS installation with an appropriately timed "decision check point" defined, will enable all risks to be managed.

We strongly reject the suggestion that D-ATS is not mature enough or there is a lack of operational experience. The evidence provide regarding Budapest makes that extremely clear. In adopting D-ATS, Airways may be a fast follower but will certainly not be the leader of the pack.

Concerns have been expressed about regulatory framework to support D-ATS, we propose that the combination of guidance from EASA, CANSO, Civil Aviation Authority Singapore, Civil Aviation Authority UK and CAD Hong Kong should provide sufficient assurance for this to be discounted.

Air New Zealand values the opportunity to provide feedback on this proposal and are open to further discussions.

Feedback on the Auckland ATC Tower replacement options outlined

Air New Zealand agrees that all three options proposed provide a workable ATC solution.

The “digital tower” is the only solution being offered that has any likelihood of delivering improved ATC outcomes in terms of safety and efficiency. The other solutions are replacing a 1960’s solution with a near identical 2020’s version.

The “digital tower” is clearly the most cost-effective solution being offered.

It is unclear whether the timeline for replacement of the Auckland Airport ATC Tower (**Tower**) is being driven by end of lease requirements or serviceability requirements. The ability to reschedule the Tower replacement by extending the lease arrangements will defer significant expenditure to a timeframe where the industry is more able to support the costs.

The timeframe for replacement is a critical element of this proposal and Air New Zealand requests that no decision is made on a Tower replacement until negotiations with Auckland International Airport (**AIAL**) have occurred to extend the lease.

Whilst an extension is clearly beneficial, we believe that the work programme for a Tower replacement should not go beyond that of the commissioning of a second runway at Auckland, coordination with AIAL is paramount.

Feedback on Airways preferred approach for the replacement of the Auckland ATC Tower

Air New Zealand strongly believes that the approach outlined in the consultation document can be improved. Airways must drive for a Digital Aerodrome Services (**D-ATS**) solution at the core of the programme.

Due to the need for certainty at New Zealand’s premier gateway and busiest airport it would be appropriate to have a decision check point defined. A check point at which, a comprehensive risk-based assessment of the project timelines including the ability for Civil Aviation Authority to provide regulatory support is made. If there is significant completion risk identified then work would be commenced on a Hybrid model in parallel to the ongoing D-ATS deployment.

Whilst this counter proposal is similar to the consultation document it reverses the priorities and drives Airways energies toward the D-ATS solution which is the only option that can provide real future benefit.

Any extension to the timeframe (discussed in question 1) has the additional benefit that it will allow more time for a robust evaluation of the continued maturity of D-ATS and for regulatory guidance already in place in Europe and elsewhere to be adopted in New Zealand.

Considerations:

• [The importance of the Auckland Airport as a New Zealand gateway port](#)

Auckland is important to New Zealand Inc. and it is appropriate to consider this when accounting for the risks associated with any programme of work, however Auckland is also one of the simpler tower operations in New Zealand:

- There is almost no circuit activity at Auckland
- The vast majority (circa 95%) are IFR flight operations with a significant proportion arriving via an instrument approach
- There are no terrain issues
- There is currently a single runway with the future planned to be parallel and displaced for simultaneous operations.
- There are very few general aviation operations and those that do occur are generally for ILS training.

Air New Zealand holds the strong belief that whilst the significance of Auckland cannot be ignored, appropriate risk mitigation is obvious and available.

• [The need to ensure continuity of service](#)

Air New Zealand agrees that continuity of service is imperative, but that is equally true for all three options and provides no differentiation.

• [The lack of operational digital tower technologies implemented offshore in a similar operating environment to that of Auckland Airport](#)

This is completely incorrect, Budapest Ferenc Liszt International Airport (LHBP) the main airport serving Hungary's capital city and the busiest airport in the country, handling 16.2M passengers and 122,800 flights in 2019 on 2 parallel runways, has been utilising a Contingency Tower in full operational mode since approx. 2017.

[Note: Auckland had 21.1M passengers and 177,655 flights in 2019.]

During the Covid-19 pandemic response HungaroControl utilised the Contingency Tower in full operational mode as a means to create separated A and B teams.

Gábor Menráth, Head of Terminal Control Department at HungaroControl explains: "We have physically separated our tower controllers who operate on 12-hour shifts. The nightshift works from our physical tower at Budapest Airport and the dayshift from our remote tower at HungaroControl's head office. After each shift, a complete decontamination is carried out and we made sure the two groups do not meet each other. This made sure that tower operations can be performed even in the harshest pandemic situations." [Digital towers come of age - CANSO](#)

[Note: They choose to run the busier daytime shift from the remote digital tower.]

Budapest is now deploying a Remote Tower and Contingency tower which will be operational in 2024, and will replace the on-airport facility. Making Budapest the first European capital airport to be fully managed by air traffic controllers located outside of the

airport area. HungaroControl who will operate the tower are a European Union Aviation Safety Agency (EASA) certified ANSP operating under the EASA regulatory framework.

Also, London City Airport handling 5.1M passengers and 80,700 flights in 2019 on a single runway, has had a remote tower, located outside of the airport area, in operation since 2021. As the conventional tower at London City Airport reached the end of its life, the airport and NATS made the shift to a Digital Tower. Aerodrome ATS is now provided from an operations room at the NATS control centre in Swanwick. This is operated by UK NATS under a Civil Aviation Authority UK regulatory framework.

There are also various D-ATS solutions being deployed in Singapore, Germany, Norway and Hong Kong which are all locations where Airways and Civil Aviation Authority New Zealand have, or could arrange, information sharing to lessen the risk of deployment.

- **Recognition of the need to complete the project prior to the current lease expiry date**
Refer to question 1. A formal approach must be made to AIAL, seeking a lease extension before final commitment to any one of these choices.

- **The options and implementation approaches that would reduce and / or defer capital and operating expenditure**

Air New Zealand's review of the costs in this paper aligns with Airways, reinforcing that there is significant cost advantage in deploying the digital solution.

- **The level of in-house experience and expertise needed to implement and support the primary service replacement.**

The successful deployment of Skyline-X, the new IL4 buildings and the supporting infrastructure creates a great deal of confidence in Airways ability to manage such a project.

- **Confidence that the solution design and implementation will be able to operate to at least the same capacity, capability, and efficiency levels in the Auckland environment as the current service and cater for future growth in traffic.**

The target should not be like for like, but rather the ability to deliver improved safety outcomes in a more efficient manner. Digital is quite clearly the only option of the three which can enable that outcome, as Airways reinforced in the CANSO guidance material.

Regulatory guidance

In 2020, CANSO developed and published guidance material [CANSO Guidance Material for Remote and Digital Towers](#). It is clear from the acknowledgements of this publication that Airways were party to the development. Which included being the source of a summary slide (figure 4) entitled "Digital towers – the value they bring us". Air New Zealand agrees with the views that Airways expresses in this document that D-ATS offers opportunities for significant operational safety and efficiency gains that are not possible using any other solution.

In 2015 EASA issued Annex to ED Decision 2015/014/R entitled “Guidance Material on the implementation of the remote tower concept for single mode of operation”, and further guidance material in 2019 when they issued Annex I to ED Decision 2019/004/R entitled “Guidance Material on remote aerodrome air traffic services”. EASA has also developed minimum standards for the hardware associated with D-ATS including “ED-240A - Minimum Aviation System Performance Standards (MASPS) for Remote Tower Optical Systems”.

A very strong regulatory environment to support D-ATS has been developed, deployed and updated by EASA and can be readily adopted in the New Zealand context.

Feedback on the changes highlighted to the Capital Plan

Air New Zealand requests guidance on the depreciation model that will be adopted for the three solutions proposed, particularly given the significant variance in renewal lifetimes between them.

Recently, Airways adopted a Works in Progress model where an asset is not part of the cost-base until the asset is delivered into service. We note that there are material figures allocated in the financial years prior to 2027 proposed operational date. Please provide an explanation.

You have provided an estimate that the costs associated with the “preconstruction activities” associated with a hybrid tower (period between Nov 22 and Jul 24). (Refer consultation document para 4.5) are “circa \$1 million” and that you “plan to restrict this expenditure to the maximum extent possible” (refer email dated 14 Oct). Although small when measured in terms of the overall spend of the project, if the timeline can be extended then our view is that this spend can and should be avoided.

Whilst noting the consultation’s statement in 5.2 “Whilst the initial investment is lower for the digital tower option, the ongoing operating costs are higher and requires more frequent lifecycle replacements.” Air New Zealand’s assessment is that a D-ATS solution still provides a significantly lower overall cost in any reasonable timeframe, approx. 25% lower cost over a 10 year period.