

Understanding land transport infrastructure

Land Transport: Part 1 – Introduction to Central Otago Airport land transport infrastructure

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Understanding land transport infrastructure is important for any airport project

Any project designed to grow aviation capacity, whether at an existing or a new airport, needs to carefully consider the impact it will have on the surrounding land transport network.

This is a key consideration for this project.

Our early work has focussed on working with transport specialists to understand how a new airport could influence Central Otago's* roading network on both a local and sub-regional level.

It also looked at how the project could result in change over a broader area encompassing Otago, Southland and Canterbury.

This Information Paper provides an overview of the work that was undertaken. Two others provide an overview of the themes that have emerged as a result of this preliminary analysis. These are:

- Land Transport: Part 2 - How would a new airport integrate with Central Otago's existing land transport infrastructure?
- Land Transport: Part 3 - Why Central Otago's limited airport capacity will impact land transport.

Transport specialists have considered a range of scenarios

Christchurch Airport engaged transport specialists to undertake preliminary desktop research examining the existing land transport network in Central Otago.

They have reviewed the network's resilience, safety and current and future traffic volumes.

Initial investigations as to how a new regional airport at Tarras would change traffic patterns have also been undertaken. These changes would be greatest closest to the site.

Preliminary assessments have focussed on Tarras-Wānaka connections and Tarras-Cromwell-Queenstown connections.

A series of models was created using similar methodology to and the inputs used by roading and territorial authorities in Central Otago.

The modelling undertaken includes a range of assumptions that had to be made to provide a broad understanding of how the airport could influence the land transport network over time in a range of different scenarios.

Although these are informed assumptions, they were solely for the purpose of testing scenarios and should not be viewed as forecasts. As the project progresses those assumptions and their outputs will be revisited.

*This project defines the Central Otago region as the area encompassed by the territories overseen by Queenstown Lakes District Council and the Central Otago District Council.

The early assessments have produced some emerging themes

The assessment has shown the proposed airport could generate strategically important benefits.

In particular, it could reduce land transport travel times and distances which supports the road network's emissions and safety outcomes.

Among the themes that have emerged from this early work are:

- The proposed site is well-connected to New Zealand's state highway network.
- For most Central Otago residents, the new regional airport would be their closest airport.
- Central Otago's traffic volumes will increase regardless of whether the new regional airport is built.
- This growth in traffic will require some land transport infrastructure to be upgraded, regardless of whether a new airport is built.
- Not addressing the existing airport capacity constraint in Central Otago will not remove demand. Instead, people will travel long distances by road to reach the region. This will result in inefficient travel patterns and increased emissions.
- Parts of Central Otago's roading network are at risk of natural hazards. Points considered to be at 'extreme' risk exist on the network, for example Kingston to Queenstown and Nevis Bluff.
- A new regional airport at Tarras would have minimal impact on traffic volumes in the Wakatipu Basin – the area under the greatest pressure at present.
- Having a new regional airport situated at Tarras could strengthen the case for an sub-regional public transport network by providing consistent daytime demand.

Further work

The outcomes of the preliminary assessments are useful – and will help to inform and shape more detailed assessments.

In particular, the project needs to consider how the proposed airport site would be accessed to and from the road network. It also needs to consider how the site will accommodate local land transport (including public transport) and related infrastructure (for example, parking and electric vehicle chargers).

These elements will be assessed once further site layout work has been undertaken.

Further key inputs will be required from the various transport authorities to understand how the transport network will continue to develop if the proposed Central Otago airport progresses.

Some of the matters identified which will benefit from further engagement with stakeholders include:

- The potential safety improvements of the highway network that are being contemplated by Waka Kotahi as a result of changes in long-term traffic volumes, and the potential influence this project would have on the timing and scope of those improvements including any additional improvements that may be necessary.
- Treatment of existing one-lane bridges, recognising these are likely to require replacement with two lane bridges as base traffic volumes increase in the longer term regardless of whether a new airport is built.
- The potential to incorporate the proposed regional airport into a sub-regional public transport service.
- Potential linkages to active transport networks including proposed cycle trails.
- How the proposed airport could support regional freight movement.