

C.2 Whangarei Airport Review

Reporting officer	Simon Weston (Group Manager, Infrastructure and Services)
Date of meeting	26 March 2014
Reason for confidentiality	To enable the council to carry on without prejudice or disadvantage negotiations

Vision, mission and values

This item is in accord with Council's vision, mission, and values statement.

1.0 Introduction

This short report raises issues from a strategic perspective associated with the long term operational capability of the Whangarei Airport and recommends that the issues raised are further investigated together with possible solutions, and reported back to council.

This report has been put together in conjunction with the Positive Growth Property Department.

2.0 Background

The Whangarei Airport has two runways, a short grass runway that is used mainly for private and small commercial operations and a sealed runway. The sealed runway is used by both private and commercial operators including the Air New Zealand Link service (ANZL). The sealed runway is the shortest commercial runway in New Zealand and is the main focus of this report.

During the past few years ANZL has operated the Beech 1900 aircraft at the Whangarei Airport, however, in late 2013 issues were raised regarding the landing and takeoff threshold crossing heights for this aircraft. This was resolved by ANZL changing from the Beech 1900 to the Q300's. The Q300's although much larger than the Beech 1900 have landing and takeoff parameters that can be complied with at the Whangarei Airport.

As a result of the larger aircraft operating from the airport the frequency of flights has reduced to balance the economics of operating larger aircraft with the same number of passengers. This means that terminal activity has increased at boarding and departure periods. This has prompted a review of the current terminal facility and council is considering improvements that would increase the overall footprint of the terminal.

The runway is the shortest ANZL operated runway in New Zealand and has a number of issues that may be problematic in the long term. To understand the issues further the Civil Aviation Authority (CAA) and ANZL were contacted and this is discussed within Section 3.0 of this report.

3.0 Preliminary Discussions and Documentation Review

Preliminary investigations into issues raised by CAA and ANZL with Whangarei Airport's current runway length and incoming/outgoing vectors have identified the following points.

3.1 Runway Length and local Topography

The runway at 1091m is the shortest ANZL commercially operated runway in New Zealand. The runway is approximately 100m shorter than the Kerikeri runway, and 200m shorter than most airports in its class. Some runways are 400 metres longer.

Hills at Waikaraka are restrictive to a straight line approach and combined with the runway length ANZL pilots require special training and authorisation before they can land/takeoff from the Whangarei Airport. ANZL have considered using similar technology to that installed at Queenstown to assist aircraft in inclement weather at Whangarei, however, this has not been progressed to date.

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3.2 Civil Aviation Authority (CAA) Issues Regarding ANZL Operations

The runway operates under the CAA Rule 139 under a 'Grandfather' type provision. The airport would not be operable without this provision. Specifically, the runway does not meet the Runway End Safety Area (RESA) requirements of CAA. This is an international (ICAO) standard of safety margins administered by CAA.

The CAA were contacted to clarify the situation. There are a few airports within New Zealand operating under this 'Grandfather' provision however the CAA can not guarantee that this provision will not be withdrawn. The CAA also commented that often, following an incident, changes are made and that the changes would apply throughout New Zealand. Further, because this is an international safety requirement external sources may influence how the CAA administers civil aviation rules.

CAA staff acknowledged that extending the existing runway would be problematic, and any increase in length beyond 15m would result in the Grandfather clause falling away. Significant civil works at either end would be costly.

ANZL have also raised that to fully comply with CAA requirements the runway needs to be moved 30 metres further away from the terminal building. This is being investigated.

3.3 Aircraft Replacement

The question was raised regarding the ANZL aircraft purchasing criteria, in relation to replacement aircraft for the Beech 1900 and the Q300. The opinion held was that aircraft are generally purchased on their payload / efficiency / speed criteria, all of which don't tend to lend themselves towards short runway operations.

ANZL commented that Q300 aircraft has a landing performance which allows minimum load restrictions into Whangarei, however there are no more Q300 aircraft being built, but they will continue to operate them for the next 10 to 15 years before replacement. As it currently stands, there is not another same size aircraft with the same or better landing performance. ANZL aims to find the fleet that fits the overall network, so they would try to fly to all destinations as a starting point. The other turboprop in the fleet is the ATR, with more ATR aircraft joining the fleet over the next 3 years; however the landing performance of the ATR aircraft means that a longer runway is required than for the Q300.

ANZL have commented that there is no available replacement for the 19 seat aircraft (Beech 1900).

3.4 Airport Improvements Related to the Q300 Operation

With the introduction of the Q300 50 seat aircraft the terminal gets very busy prior to and after boarding and departure. As a result council has investigated upgrading the terminal building. The terminal has been reviewed by OPUS Consultants and in their report of December 2013 they show two options. Option one is a basic upgrade and increases the size of the building by adding an additional single bay. The estimated cost for this is \$2.45m. The second option provides a better overall dimensional environment and is estimated at \$3.55 million.

Further to this, the higher loading from the Q300 is causing problems with the current runway and aprons and remedial works are required in the order of \$500,000.

4.0 Airport Ownership

The airport is in Joint ownership between WDC and the Crown. It has been suggested that the Crown wishes to divest of such assets and may be willing to sell/gift the airport to WDC. There are encumbrances on the airport land that may prove difficult, however, there is the possibility that should WDC acquire the full ownership of the airport land then it may be able to dispose of that land how it wishes. This is being investigated.

5.0 Airport Noise

The airport is currently located in a largely residential area. Although it is permitted within the District Plan, noise is a contention and the current noise contour can be restrictive on the airport.

Further to this ANZL has also commented that birds are an ongoing problem and controlling the bird population in an aerodrome surrounded by houses is an issue.

6.0 Strategic Review

A number of issues have been raised regarding the airport that could have a significant impact on the medium to long term future. It is suggested that a review be undertaken to fully evaluate the issues raised, and options for resolving them. A desktop exercise can also be undertaken investigating options for future airport locations, building on the work undertaken by Beca in the 1999 Whangarei Airport Master Plan.

An option could be for Council to relocate the Whangarei Airport to the Port area with options to expand as demand increases both in terms of facilities and runway length. This would have a significant positive impact on the surrounding land and the current owner would benefit significantly. Therefore the land required for the airport should be able to be acquired at a heavily discounted rate. The Airport land at Onerahi could be sold to pay for the new airport construction, including funding from the Crown as part of a (better utilised) funding package that is required for the current upgrade.

It is proposed an investigation into the issues and possible solutions be undertaken in stages.

1. Review the issues associated with the Whangarei Airport. This will include issues associated with CAA; Airport ownership; District Plan; Noise; ANZL and others.
2. Provide workable solutions to the issues raised including cost and risk. At this point report back to council before further work is undertaken.
3. Consider alternative locations for the Whangarei airport. This will be a desktop exercise with indicative costings for up to 6 locations, including a location in the old Whangarei Port.
4. Undertake a Multiple Criteria Analysis (MCA) on the options.
5. Recommendations to take up to 2 options forward for further analysis and report back to council.

6.0 Summary

A number of issues have been raised with the current airport, some of which could have serious implication for the airports medium to long term operation. It is recommended that further work is undertake to provide solutions to these issues before they arise.

Recommendation

1. The information be received.
2. That Council investigates the issues raised in a staged format as detailed within the report.
3. That Council includes funding of up to \$100k (from within existing operating budgets) within the Annual Plan for 2014/2015.

Extract from Confidential WDC Minutes 26 March 2014

Item C.2 Whangarei Airport Review

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Moved: Cr Glen

Seconded: Cr McLachlan

- "1. That the information be received.

2. That Council investigates the issues raised in a staged format as detailed within the report.

3. That Council includes funding of up to \$100k from within existing operating budgets."

CARRIED

C.1 Whangarei Airport Review

Reporting officer	Simon Weston (Group Manager, Infrastructure and Services)
Date of meeting	3 December 2014
Reason for confidentiality	To enable the Council to carry on without prejudice or disadvantage commercial activities.

Vision, mission and values

This item is in accord with Council's vision, mission, and values statement the on-going provision of a district airport is essential infrastructure to support the community.

Purpose

The purpose of this workshop is to inform Council of the Phase 1 report findings made by Beca regarding the Whangarei Airport Review, and for the discussion to then inform an agenda item for the 17 December 2014 Council meeting.

Introduction

At its February 2014 meeting Council resolved to review the several compromising issues associated with the Whangarei Airport, including issues associated with:

- Civil Aviation Authority (CAA) requirements;
- Airport ownership;
- District Plan requirements;
- Noise contour requirements;
- Air New Zealand Link (ANZL) service;
- and other medium term requirements.

The review would provide solutions to the issues raised, including cost and risk allocation, and would be reported back to Council before further work is undertaken. This study is referred to as 'Phase 1'.

Overview of findings

It is believed that the prohibitive costs and risks noted within the report outweigh any benefit of remaining at the current Onerahi site beyond a 10 year period. It is recommended that the council:

- Plans to cease regular passenger traffic operations at the Onerahi site in the next 10 years;
- Identifies and secures an alternative site for future aerodrome as soon as possible, as scoped in the next phase of this Strategic Study;
- Establishes a timeline/strategy for the construction and commencement of operations at an alternative site. The timeline will aim to deliver a new operational facility by approximately 2025;
- This strategy could include a "gate" for triggering design development subject to a reassessment of regional aircraft fleet facility requirements at 2020 to confirm the "go-live" date for the new facility.

At this workshop

The objective of this workshop is to:

- Inform Council of the Phase 1 report findings;
- Seek agreement that Council provides funding in the 2015 Long Term Plan to proceed to the next stage of the Whangarei Airport Strategic Study being the Identification of Alternative Airport Sites, Comparison of those Sites, and the scoping of a Detailed Site Analysis to further investigate any short listed sites.

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1. Report: Whangarei District Council Workshop Wednesday 3 December 2014

Report of a Workshop of the Whangarei District Council held in the Council Chamber, Forum North on Wednesday 3 December 2014 at 1.30pm

Present:

Crs S J Bell, C B Christie, P A Cutforth (1.33pm), S J Deeming, S M Glen, P R Halse, G C Innes, G M Martin, B L McLachlan and S L Morgan, J D T Williamson

Apologies:

Her Worship the Mayor S L Mai and Crs S J Bretherton and C M Hermon

In Attendance:

Chief Executive Officer (M P Simpson), Group Manager Infrastructure (S Weston), Group Manager Support Services (A Adcock), Group Manager Positive Growth (J Thompson), Group Manager District Living (P Dell), Policy and Monitoring Manager (P Waanders), Property Manager (M Hibbert), Infrastructure Projects and Support Manager (C Martin) and Senior Meeting Co-ordinator (C Brindle)

C.1 Whangarei Airport Review

Facilitators: S Weston
Cr Martin

Power Point presentation: 14/111033

This report should be read in conjunction with the agenda report and power point presentation.

The purpose of this workshop is to inform Council of the Phase 1 report findings made by Beca regarding the Whangarei Airport and for the discussion to then inform an agenda item for the 17 December 2014.

S Weston covered the content of the workshop in the attached power point presentation.

M Hibbert spoke about the issues associated with the existing infrastructure, what is proposed to address some of the issues in the interim and the recommended approach going forward.

Assurance was given that matters raised at this workshop will be addressed in the process going forward.

Matters raised included:

- Is it worth considering a regional co ordinated approach?
- Option of council loaning the money
- Ensure reserves aren't depleted
- Funding - Ratepayer or User pays?
- Investigate investment from Central government, Air New Zealand, outside interest? Northland Inc – Investment and Growth Fund - potential?
- Strategy – consider demographics, national and international market
- Future use of airport site
- Consider all consequences of project eg roading etc
- Consent process – possible to expedite.

S Weston sought an indication as to whether in terms of the LTP Council wanted to show the airport as a separate issue – debt funded. The indication was this was the preferred approach.

The workshop closed 2.59pm

7. Whangarei Airport Strategic Review

Reporting officer Simon Weston (Group Manager Infrastructure & Services)

Date of meeting 17 December 2014

Vision, mission and values

This item is in accord with Council's vision, mission and values statement as the on-going provision of a district airport is essential infrastructure to support the community.

1. Introduction

At its February 2014 meeting Council resolved to review the several compromising issues associated with the Whangarei Airport, including:

- Civil Aviation Authority (CAA) requirements;
- Airport ownership;
- District Plan and noise contour requirements;
- Air New Zealand Link (ANZL) service;
- Other medium term requirements;

The review would provide solutions to the issues raised, including cost and risk allocation, and would be reported back to Council before further work is undertaken. This study is referred to as 'Phase 1'.

This agenda item confirms that the medium to long term capability of the aerodrome is compromised, primarily due to runway length and recommends that further studies are undertaken to locate and secure a new location promptly for development within a 10 to 15 year window.

Having considered the Significance and Engagement Policy, there is no significant decision before Council at the early stages of this project. Key stakeholders are being engaged through this process and the public will be informed via media release and the Council website. If included in the LTP, consultation would be undertaken through that process.

2. Background

The Whangarei Airport has two runways, a short grass runway that is used mainly for private and small commercial operations and a sealed runway. The sealed runway is used by both private and commercial operators including the ANZL service. The sealed runway is the shortest commercial runway in New Zealand and is the main focus of this report.

During the past few years ANZL has operated the Beechcraft 1900 aircraft at the Whangarei Airport, however in late 2013 issues were raised regarding the landing and takeoff threshold crossing heights for this aircraft. This was resolved by ANZL changing from the Beechcraft 1900 to the Q300s for the Auckland flight and using the Beechcraft for the flights to and from Wellington. The Q300s, although much larger than the Beech 1900, have landing and takeoff capabilities that better matched the limitations of Whangarei Airport.

As a result of the larger aircraft operating from the airport the frequency of flights has reduced to balance the economics of operating larger aircraft with the same number of passengers. This means that terminal activity has increased at boarding and departure times. This has prompted a review of the current terminal facility and Council is considering short term improvements that would increase the overall footprint of the terminal.

Beca Ltd. (Beca) was commissioned to undertake 'Phase 1' of the strategic review with the overall objective of ensuring that the Whangarei District has an aerodrome facility that is capable of meeting the long term needs (30 to 50 years) of its users and the District.

In addition to Phase 1, it was considered prudent to undertake a preliminary assessment of 'Port Nikau' as a potential airport location. This report is referred to as Phase PN1.

Beca have now completed the commissioned work on the existing airport and the possible alternative at Port Nikau.

3. Existing Airport CAA Requirements

There is a risk to the airport's continued certification/operation with three key points of the existing design standards. In summary these are:

- Existing OLS (Obstacle Limitation Surface) infringement to the north and east means that minimum OLS to support both day and night operations cannot be achieved.
- The runway strip width narrows down from 150m to only 100m at the eastern Runway 24 threshold. When night operations were implemented in the mid 1990s the largest aircraft operating into the airport was the EMB 110 Bandeirante, which has a MCTOW (Maximum Certified Take Off Weight) of below 5700kg. Aircraft below 5700kg only require a runway strip width of 90m for night operations. Since then the Bandeirante has been replaced by the larger Beechcraft 1900 and Dash 8 Q-300 which, being over 5700kg MCTOW, require a minimum runway strip width of 150m. The airline operators are required to comply with CAR 121.71(h) Appendix C. This requires 150m strip and for Code 3 aircraft all of the 150m must be graded.
- The lack of minimum RESA (Runway End Safety Area) of 90m (recommendation is 240m) at each end.

To manage both the operation safety risk and the risk of losing CAR (Civil Aviation Rule) 139 certification the airport operator needs to detail the existing mitigations in place to manage the risk and have this as part of the formal justification for the certification.

The existing mitigations include:

- Circling guidance/lead in lights
- Terrain limit lighting
- Restriction of use Runway 24 PAPI (Precision Approach Path Indicator) only inside 1 nautical mile due to terrain
- Special charts in AIP (Aeronautical Information Publication) depicting night circling procedures
- Special pilot training and aerodrome qualifications for current Air New Zealand Link airlines.

The current draft CAR 139 NPRM does not trigger an immediate requirement for the aerodrome to re-apply for its certification. Nonetheless if the final ratified version of the CAR 139 NRPM requires full compliance for existing domestic aerodrome, these could be written up as a formal safety case and used as part of a formal exemption process if. It is our current understanding from CAA that the NPRM will become effective in mid 2015.

4. Strategic Review

The key outcomes identified in the Phases 1 and PN1 investigation are:

1. The existing Onerahi aerodrome site encompasses sufficient land for the development of landside, terminal and apron infrastructure to support aviation activity for the foreseeable future;
2. A longer runway and associated RESA is considered necessary to meet the requirements of the evolving Air New Zealand regional fleet, and provide an operational capability suitable for likely future aircraft types;
3. The major issue which undermines the medium to long term viability of the airport at the Onerahi location is the lack of ability to lengthen the existing relatively short runway;
4. A secondary, but significant issue is the ability for the airport to maintain its current operational capability given the existing non-compliances at the aerodrome. These non-compliances may need to be addressed with the adoption of changes to Civil Aviation Rule 139 anticipated to be adopted in 2015 or as part of the certification of a reconfigured runway;
5. Based on the likely regional fleet development of Air New Zealand, for the airport to remain at its current location in the next 10-20 years will require a minimum runway lengthening to 1,200 to 1,350m to facilitate turboprop operations by 68+ seat aircraft such as the ATR-72 on the existing core Auckland and Wellington routes;
6. A rough order cost for the 1,350m runway utilising "starter extensions" has been estimated at \$140 Million;

7. A shorter less capable 1,200m runway would still require the same runway platform to be constructed to comply with CAA runway strip and Runway End Safety Area (RESA) requirements and would not cost significantly less. Cost saving would only be in the order of only \$3-3.5 Million;
8. In addition to a prohibitive cost, a runway lengthening project would also require the successful navigation of some significant regulatory issues including:
 - Alteration to the designation of adjacent land under the Whangarei District Council Operative District Plan 2007. It is considered likely that this would be publicly notified;
 - Probable iwi/hāpu and community objection to reclamation in the coastal marine area;
 - Regional planning issues;
 - CAA approval process.
9. An initial pre-assessment of the Port Nikau site for a possible airport location reveals that the proposal has significant issues primarily due to the Obstacle Surfaces Limitations (i.e. surrounding terrain) but also significant costs estimated at \$148 Million (largely due to the requirements for harbour reclamation) to establish an airfield which would preclude it from being considered in the next stage of the study. However, if other alternative sites also have similar issues and there are no other practicable options available then the Port Nikau option should be evaluated against those.

5. Strategic Position of Whangarei

Airports are considered to be a critical piece of infrastructure for a regional centre such as Whangarei, and as a result long term sustainability and continuity of service is paramount. In considering the next step Council should consider the project in terms of the following:

- Likely requirements for air services over the next 50 years.
- Demographics of the area – will Whangarei continue to grow and retain its regional centre status?
- Continuity of service, and the ability for it to be serviced by the national carrier. Obviously alternative suppliers may operate from time to time; however, continuity of service is essential.
- For Whangarei to be considered the regional commercial centre for Northland and for Whangarei to attract and retain significant business a local airport is considered to be a requirement.
- Whangarei needs to future proof its transportation infrastructure, and this includes airports, as the regional commercial centre.
- Project timing is critical to ensure continuity of service, but to also adapt to the changing environment. The suggested approach for the project will incorporate this within its processes.

6. Project Execution

A detailed project execution plan will be developed for future stages of the project. Below provides a high level overview of how the project would be executed.

- Stage 2 – The next stage will identify up to six alternative locations for preliminary evaluation. Multiple Criteria Analysis (MCA) will be used to identify one or possibly two sites for further in-depth analysis. The existing location and Port Nikau will be included within the MCA. Commercial information will also be reported in greater detail. This stage will also involve significant engagement with stakeholders. Stage 2 will provide recommendations to Council to proceed to Stage 3.
- Stage 3 – This stage will undertake an in-depth investigation into the top ranking site(s) and will make recommendations to Council regarding: procurement of land / consenting / designation, funding options, detailed commercial information and risks.
- Stage 4 – This stage will progress the consenting / designation / procurement of land and a recommendation when to commence the enabling works.
- Stage 5 – Commencement (gate) of enabling works.
- Stage 6 – Airport construction works.
- Stage 7 – Airport commissioning / certification
- Stage 8 – Hand over to operations.

It is considered that ten years is a tight timeframe for the establishment of a new airport and have it commissioned and certified ready for operation. To provide the opportunity to have a new airport operational within a ten year window the next stage for the project needs to commence promptly.

7. Project Funding

At this stage, it is difficult to provide an estimate for the project given that we do not have a location on which to base an estimate on. However, it is considered that the cost is likely to be in the region of \$25m to \$40m. Stage 2 of the project will provide costs and commercial information for Council to consider in detail.

It is considered appropriate that Council includes the project within the Council's LTP process for consideration. It is recommended that Council includes funding for the following stages within the LTP:

- Stage 2: Evaluation of sites.
- Stage 3: In-depth investigation into one or two sites, including funding options.
- Stage 4: Consenting and procurement of land.
- Stage 5: Enabling works.

8. Existing Airport

The existing airport is likely to be in operation for at least the next ten years and due to the operation of the Q300 aircraft a number of improvements to the existing infrastructure and facilities are recommended. These issues are discussed under a separate agenda item. It is considered that although the 'New Airport' project may temper the suggested improvements at the existing airport, it does not alter the need for short or medium term improvements. Staff involved with the operation of the existing airport are part of the 'New Airport' project team, and therefore are aware of the timeframes involved.

9. Summary / Next Step

It is believed that the prohibitive costs and risks noted above outweigh any benefit of remaining at the current Onerahi site beyond a 10-15 year period. It is recommended that the Council:

- Plans to cease regular passenger traffic operations at the Onerahi site in the next 10 years;
- Identifies and secures an alternative site for future aerodrome as soon as possible, as scoped in the next phase of this Strategic Study;
- Establishes a timeline/strategy for the funding, construction and commencement of operations at an alternative site. The timeline will aim to deliver a new operational facility by approximately 2025;
- Includes a "gate" for triggering design development subject to a reassessment of regional aircraft fleet facility requirements at 2020 to confirm the "go-live" date for the new facility.

Funding for the next stages of this project should be included within Council's LTP for consideration. It is likely that the project would meet the significance criteria and be identified as a significant project for consultation through the LTP process.

It is recommended that a Project Control Group be instigated, with three councillors being on the group. It is also recommended that the Project Control Group reports regularly to Council on progress and on any significant new issues to consider.

Recommendation

1. That the information be received; and
2. That Council proceeds with Stage 2 of the project; and
3. That Council includes the 'New Airport' project for consideration within the 2015 Long Term Plan.

