



MEDIA RELEASE

NORFOLK ISLAND AIRPORT PAVEMENT RESURFACING

On Thursday 21 February, Dr Greg White, an airport pavement specialist employed by Norfolk Island Regional Council, made a presentation to the community about the Norfolk Island Airport's resurfacing project, including information on the process and materials required for the works.

Dr White has kindly allowed us to publish his presentation on NIRC's website.

Lotta Jackson

GENERAL MANAGER

25 February 2019

Norfolk Island Airport Pavement Resurfacing

Dr. Greg White

PhD, ME, MEng, BE(Civil), CPEng, MIEAust, RPEQ

Airport Pavement Specialist / Director Airport Pavement Research Program

Community Meeting

21 February 2019

Scope of Brief

- Background
- Urgency of work
- Aggregate sources
- Potential solutions
 - Summary
 - Questions

Background

- Runway was resurfaced in 2006/2007
- Now at the end of its life
 - Significant cracking (water ingress)
 - Large stones being lost (aircraft jet damage)
 - Localised structural deficiencies (potholes)
- Replacement within two years
 - GHD in February 2017
 - Jasko in November 2017
 - APES since January 2018 (without delay)
- Work scheduled for first half of 2020
- Contractor confirmed 1 March 2019
- Significant Commonwealth grant

- **General scope**

- New surface

- Both runways

- Apron and taxiway

- Concrete pads for parking

- Lighting modernisation

- Ancillary works (lines, grooving, patching)

- **Budget constraints**

- Potential scope reduction

- Concrete apron pads in asphalt

- Reduced length/width of cross runway

- Core scope of main runway, taxiway and apron

- Materials and equipment

- 6,000 tonnes of sand
- 2,000 tonnes of bitumen
- 30,000 tonnes of crushed rock
- Mobile asphalt plant
- Demountable working accommodation
- Demountable laboratory facilities
- 40 items of mobile plant and equipment
- 60 management and work staff

- This is periodic maintenance

- Not an upgrade for bigger planes
- Expected every 10-12 years

- Significant economic development
 - Accommodation (estimated 5,000 nights)
 - Meals (estimated 15,000 meals)
 - Hire cars (estimated 3,000 days)
 - Tenderers expected to use local
 - Trucks for transportation
 - Electrical work assistance
 - Top soil works to runway flanks
- Estimated value of \$3M

Urgency of work

- Runway is in worse condition than in 2004
- Runway is in worse condition than other airports
- Significant risk of becoming unserviceable
- Should have received a safety notice in 2018
 - Held back due to imminent resurfacing
 - Delaying the work will revisit this
 - 30 days to provide a plan to CASA
 - Otherwise runway may be declared unsafe and closed
 - Likely reopening after works are completed
- Current plan to resurface in first half of 2020
- Requires contract award by 1 March 2019
- Possible maintenance ongoing, but its not enough

Rock Sources

- Rock 'reasonably' available is 15,000 tonnes
- Project requires 30,000 tonnes
 - New quarry
 - Major expansion at Cascade
- Obtaining 30,000 tonnes requires
 - A 'significant development' declaration
 - Preliminary quarry design
 - Referral to the Commonwealth
 - Commonwealth EIS
 - NIRC Development Approval
 - Will take minimum 2-3 years (best case)
 - More like 4-6 years (realistic)
 - A new quarry is not in the Commonwealth grant
- Adequate local rock not available for at least 2-3 years

Potential solutions

- Two competing priorities
 - Timing (runway safety/availability risk)
 - Rock source (biosecurity risk)
- Four potential solutions
 - Option 1
 - 2020 with imported rock
 - Option 2
 - 2023+ with local rock
 - Option 3
 - 2020 patching with imported rock
 - 2023+ resurfacing with local rock
 - Option 4
 - 2021+ patching with local rock
 - 2023+ resurfacing with local rock

- **Option 1 (2020 with imported rock)**
- Current proposal
- Commonwealth grant will fund the bulk
- Consistent with CASA expectations
- Lowest risk to aircraft safety
- Lowest risk of airport closure
- Biosecurity risk
 - 6,000 tonnes of sand
 - Plant and equipment
 - **Extra 30,000 tonnes of aggregate**
 - Mitigated by similar processes to the sand in 2007
- **Viable and recommended option**

- **Option 2 (2023+ with local rock)**
- Minimises importation risks
 - 6,000 tonnes of sand
 - Plant and equipment
- Adequate local rock at least 2-3 years away
- More likely 4-6 years away
- New quarry development is not funded
- Runway unlikely to last
- CASA likely to issue a safety notice
- Air New Zealand likely to cease services
- **Not a viable option**

- **Option 3 (2020 patches with imported rock and 2023+ with local rock)**
- Much more expensive and cost not known
- Commonwealth grant may be compromised
- No timeline on final work
- Asphalt plant on island indefinitely
- Delayed award and commencement
- Increased risk to aircraft safety
- Increased risk of airport closure
- Still requires around 8,000 tonnes of imported rock for patching
- **Technically viable** but **economically responsible**

- **Option 4 (2021+ patches with local rock and 2023+ with local rock)**
- Much more expensive and cost not known
- Commonwealth grant may be compromised
- No firm timeline for patching or final work
- Asphalt plant on island indefinitely
- Delayed award and commencement
- Runway unlikely to last
- CASA likely to issue a safety notice
- Air New Zealand likely to cease services
- **Not a viable option**

In Summary.....

- Runway requires resurfacing without delay
- Adequate local rock not currently available
 - Cascade for patching 1-2 years
 - Cascade for full job 2-3 years
 - New quarry source 4-6 years
- Delaying will likely result in either
 - Runway declared unsafe
 - Aircraft safety incident
 - Either way, Air New Zealand likely cease flights
 - Runway will likely be closed until repaired
- Any repairs will take 6-12 months to perform

Runway closure/safety risk

versus

Import biosecurity risk

(you can not avoid both)

Questions?