

ANCCG Meeting Sep-18

FY18 Noise Management Report

By Laura McNeill

MARSHALL DAY
Acoustics 



Designation 1100 Requirements

- Condition 9(b) requires the Airport to Prepare an Annual Noise Management Report containing
 - Results from noise monitoring (3 permanent monitors)
 - The Actual Noise Contours (ANC) to determine compliance
 - The Annual Aircraft Noise Contours (AANC) for projected aircraft activity to determine offers for the sound insulation programme
 - Summary of past and future noise reduction initiatives (new)
- The report also includes a summary of the following:
 - Air traffic records
 - Flight path diagrams
 - Noise complaints
 - Engine testing noise

FY18 Noise Management Report

Air Traffic Records

Flight Paths

Measured Noise Levels

2018 Actual Noise Contour

2019 Annual Aircraft Noise Contour

Engine Testing Noise

Noise Complaints

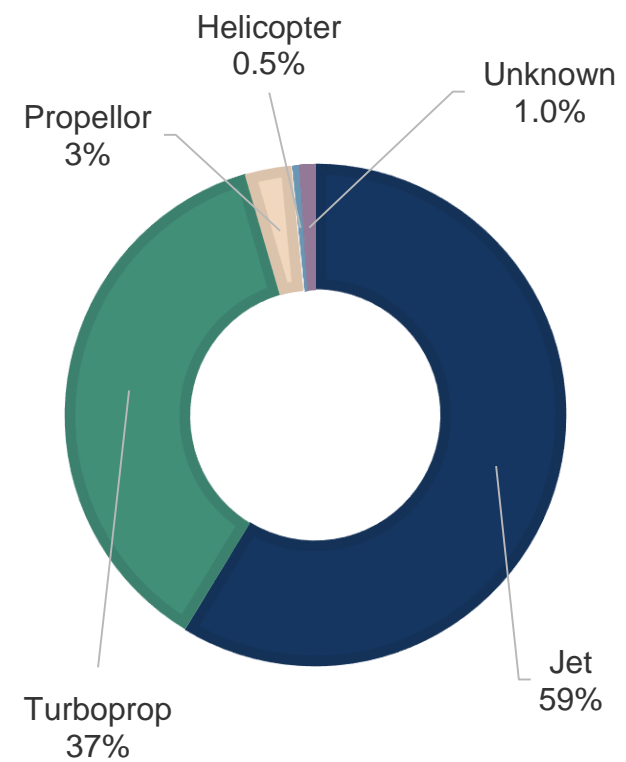
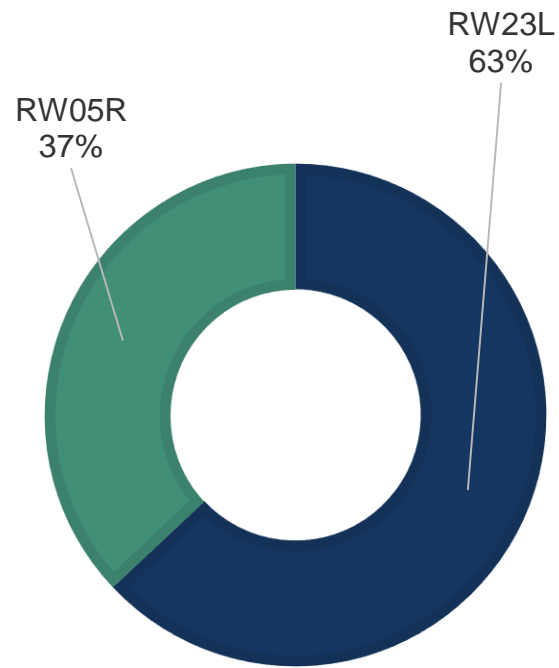
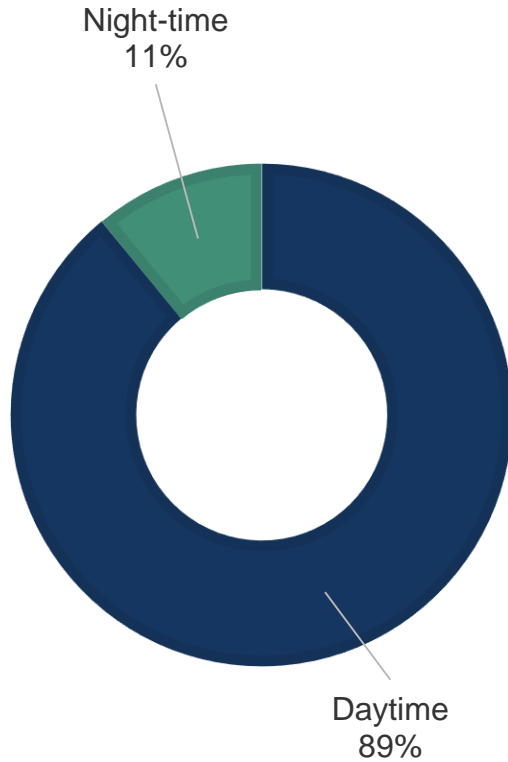
FY18 Air Traffic Records

Air Traffic
↑ 1% to
172,627
Since FY17

Daytime
↑ 1% to
153,083
Since FY17

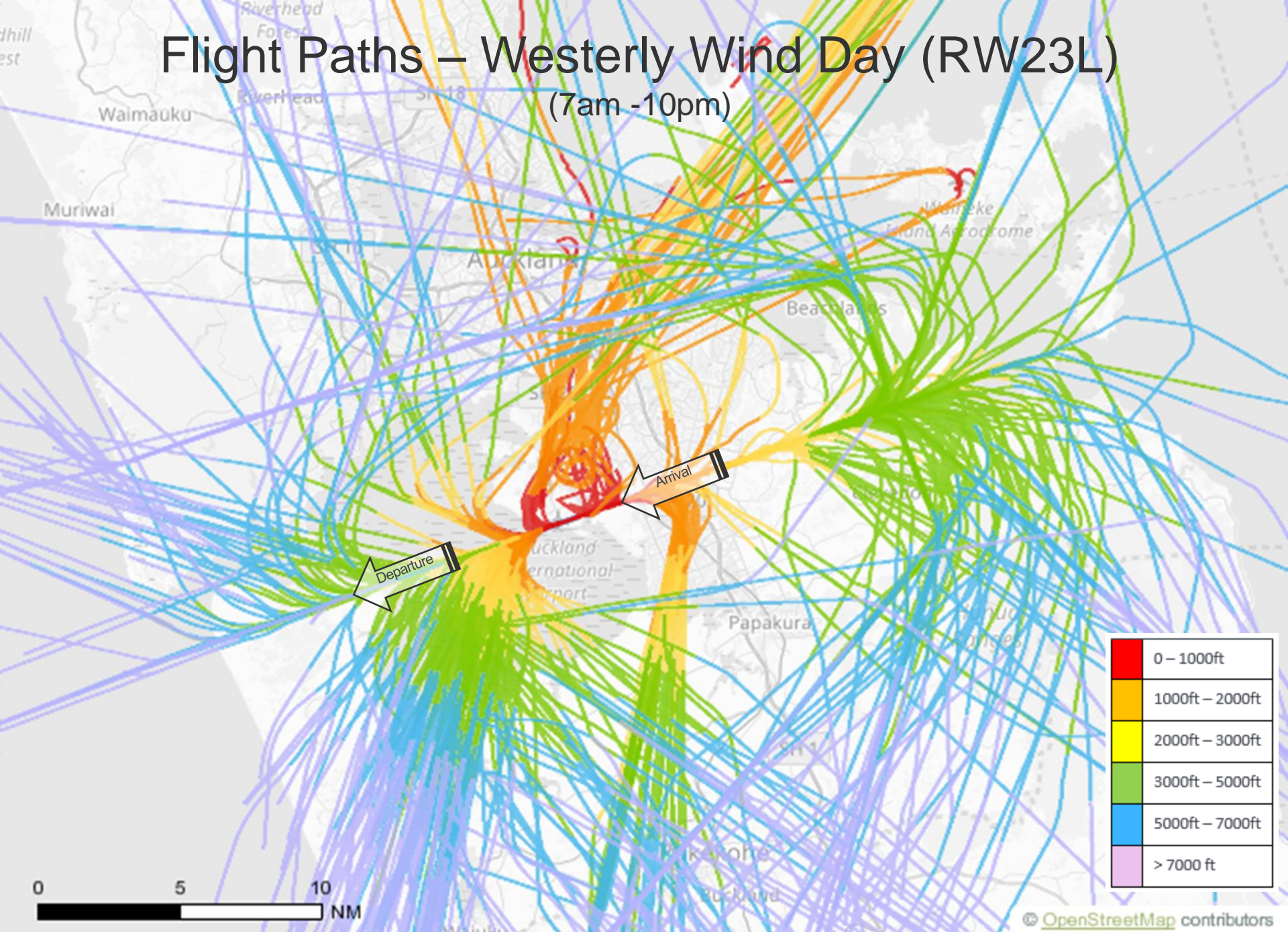
Night-time
↓ 1% to
19,544
Since FY17

Breakdown – Air Traffic FY18

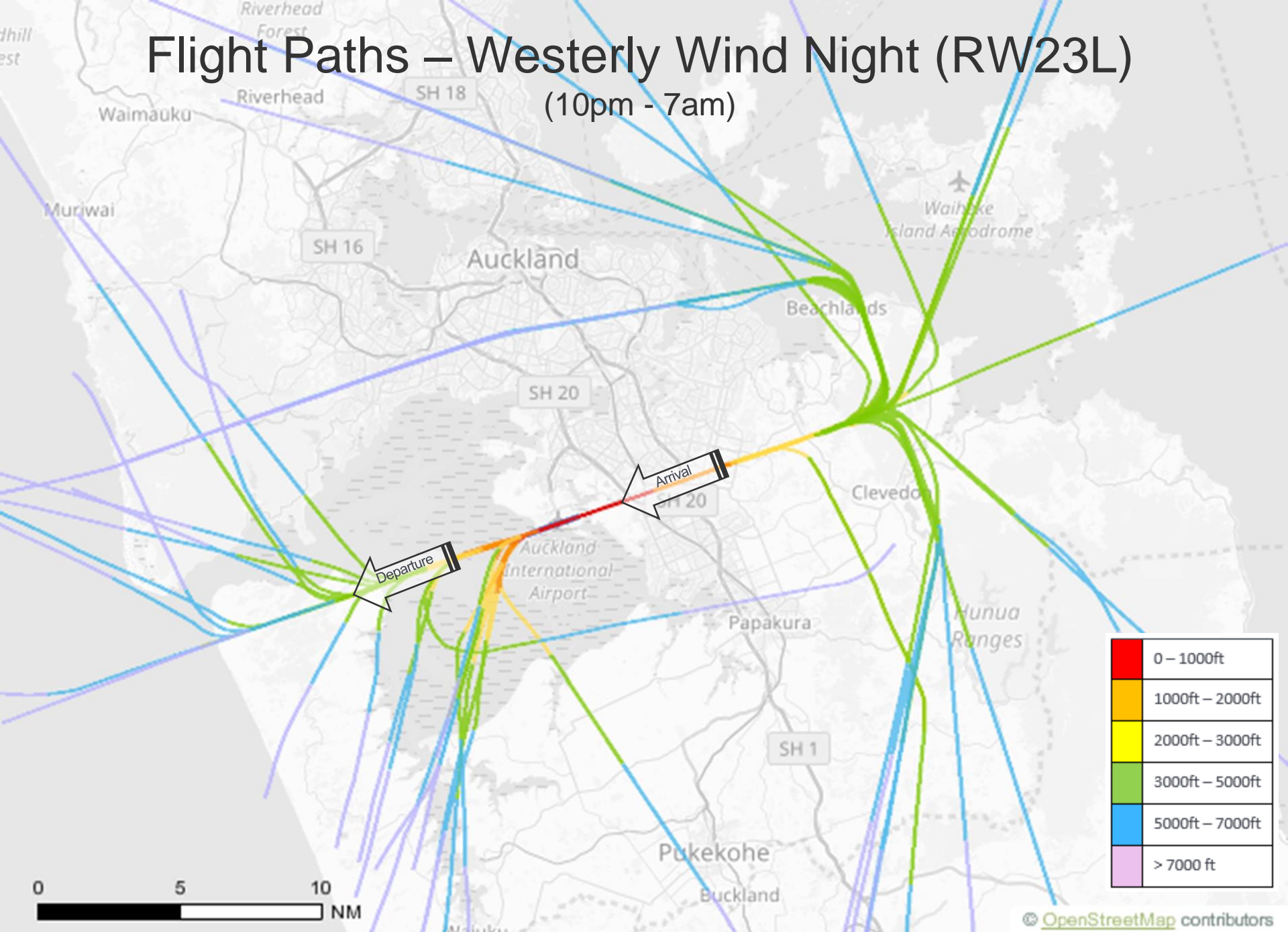


Flight Paths – Westerly Wind Day (RW23L)

(7am -10pm)

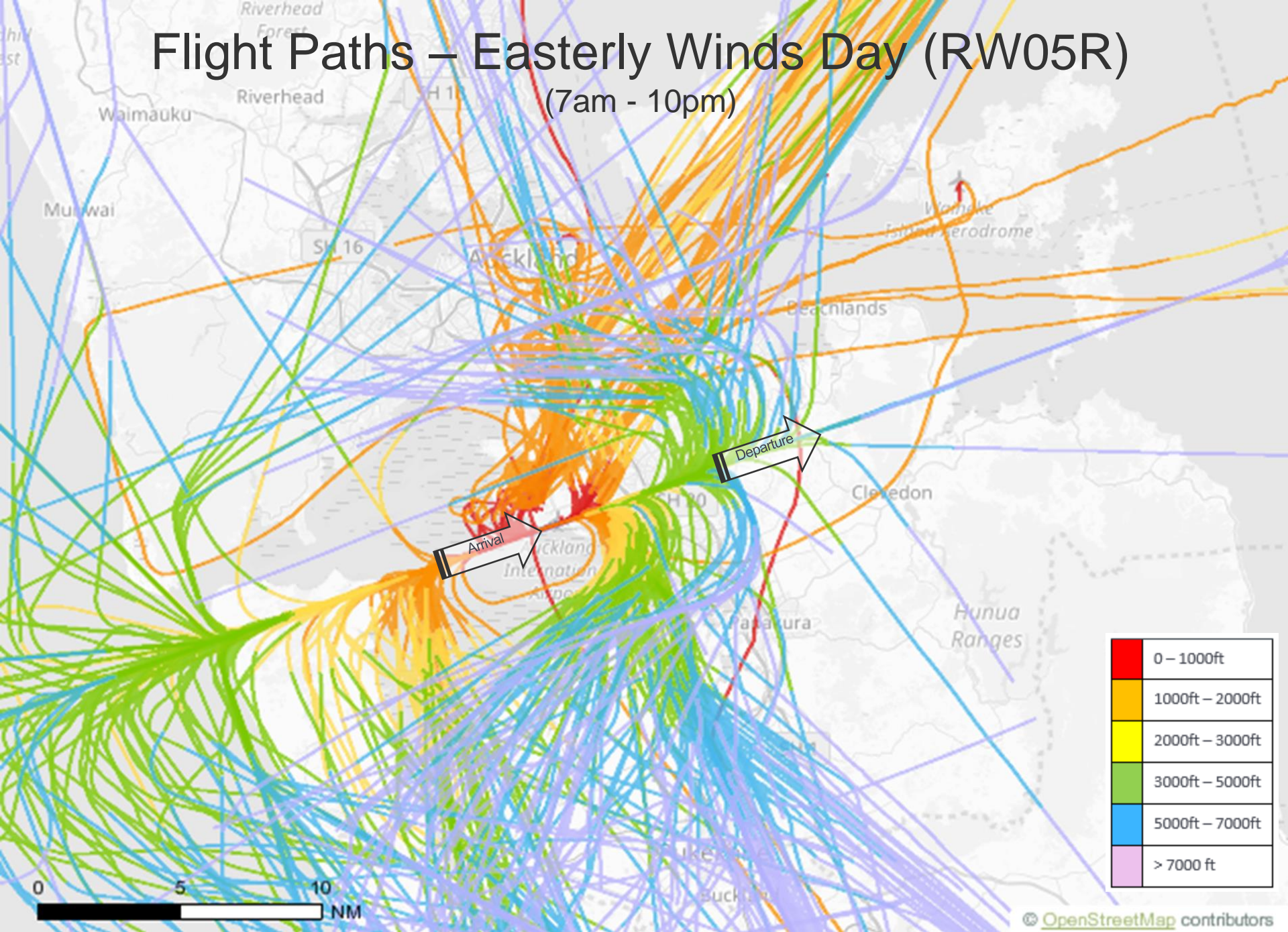


Flight Paths – Westerly Wind Night (RW23L) (10pm - 7am)

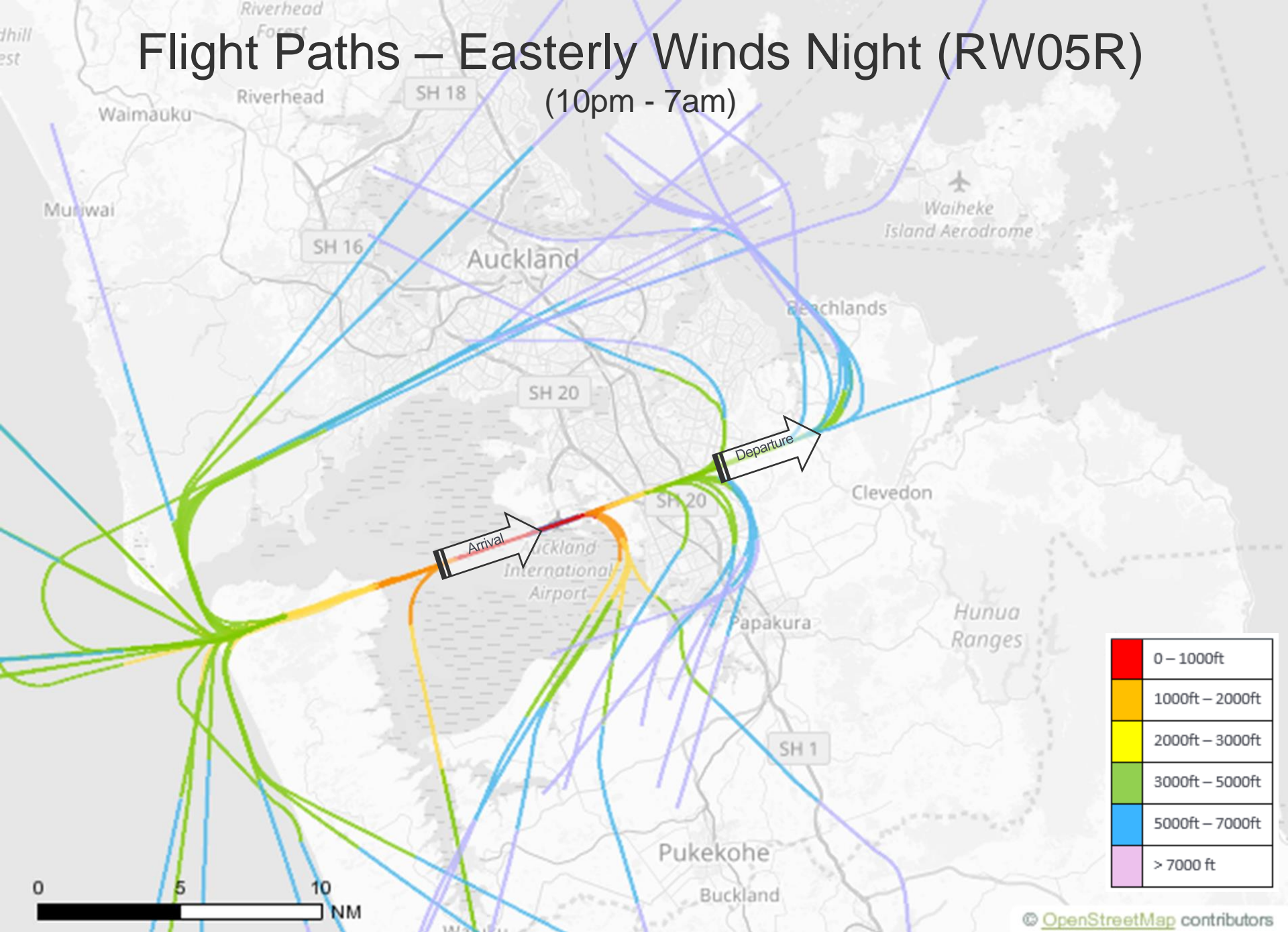


Flight Paths – Easterly Winds Day (RW05R)

(7am - 10pm)



Flight Paths – Easterly Winds Night (RW05R) (10pm - 7am)



Measured Noise Levels FY18

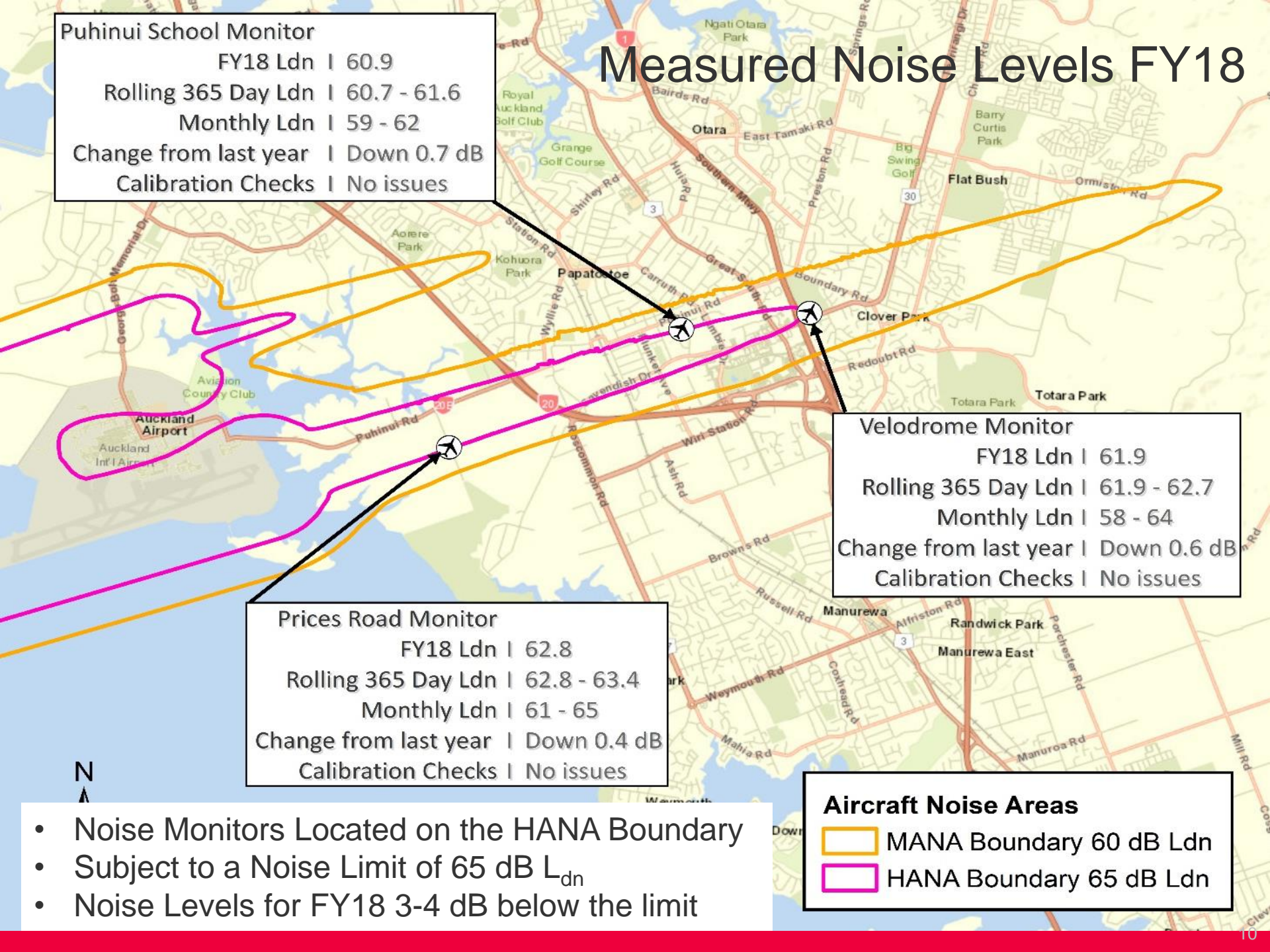
Puhinui School Monitor
FY18 Ldn | 60.9
Rolling 365 Day Ldn | 60.7 - 61.6
Monthly Ldn | 59 - 62
Change from last year | Down 0.7 dB
Calibration Checks | No issues

Velodrome Monitor
FY18 Ldn | 61.9
Rolling 365 Day Ldn | 61.9 - 62.7
Monthly Ldn | 58 - 64
Change from last year | Down 0.6 dB
Calibration Checks | No issues

Prices Road Monitor
FY18 Ldn | 62.8
Rolling 365 Day Ldn | 62.8 - 63.4
Monthly Ldn | 61 - 65
Change from last year | Down 0.4 dB
Calibration Checks | No issues

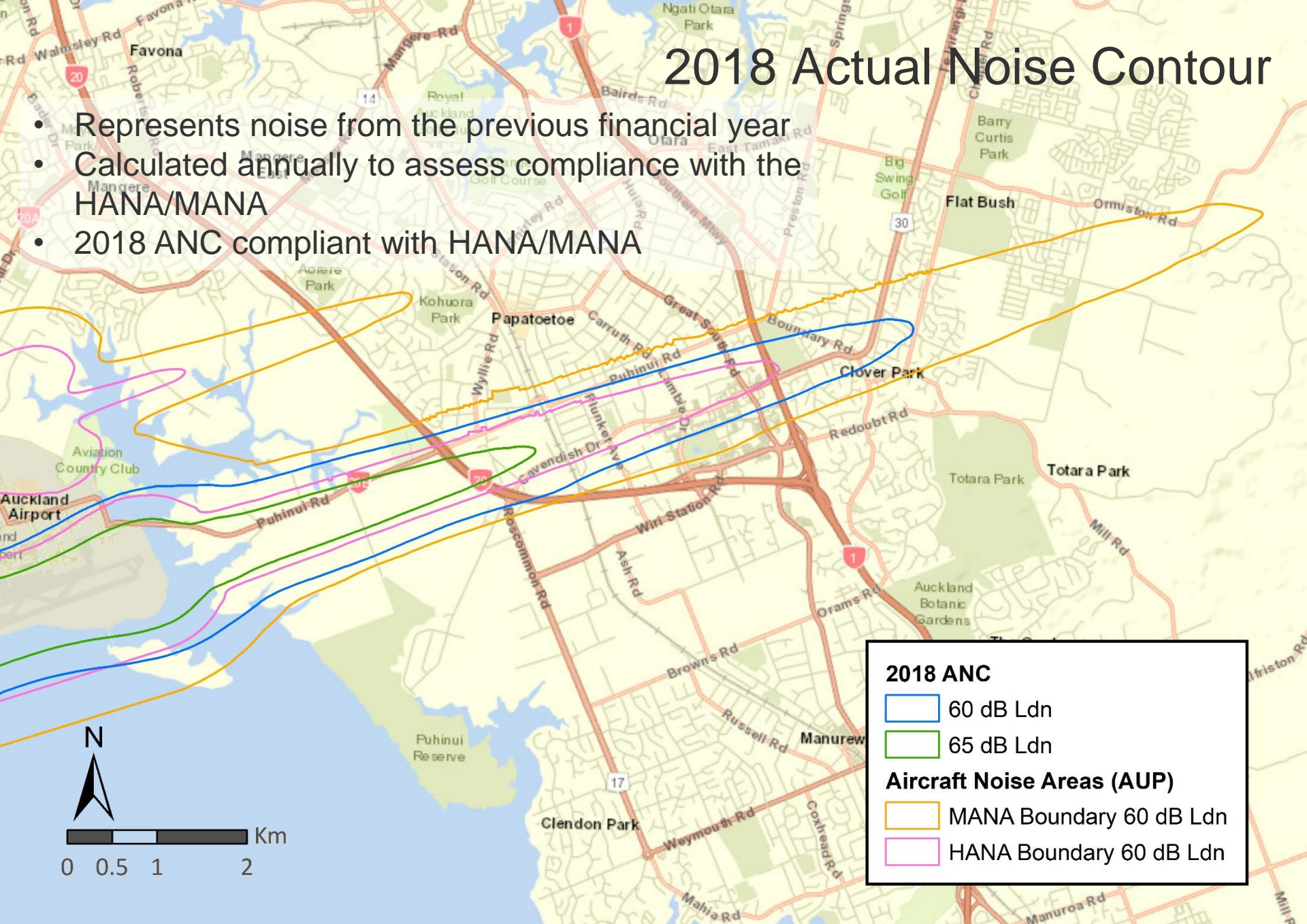
Aircraft Noise Areas
MANA Boundary 60 dB Ldn
HANA Boundary 65 dB Ldn

- Noise Monitors Located on the HANA Boundary
- Subject to a Noise Limit of 65 dB L_{dn}
- Noise Levels for FY18 3-4 dB below the limit

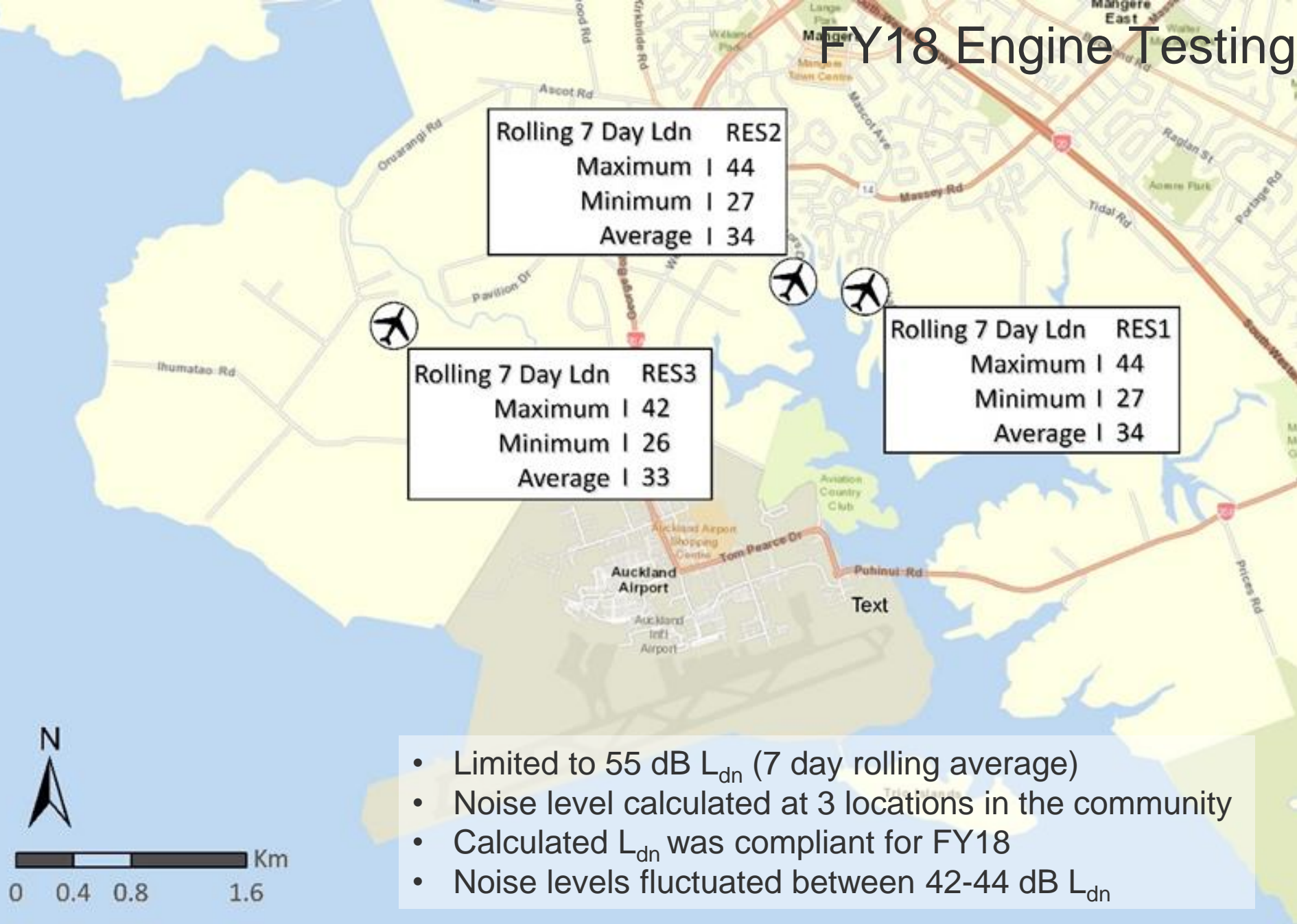


2018 Actual Noise Contour

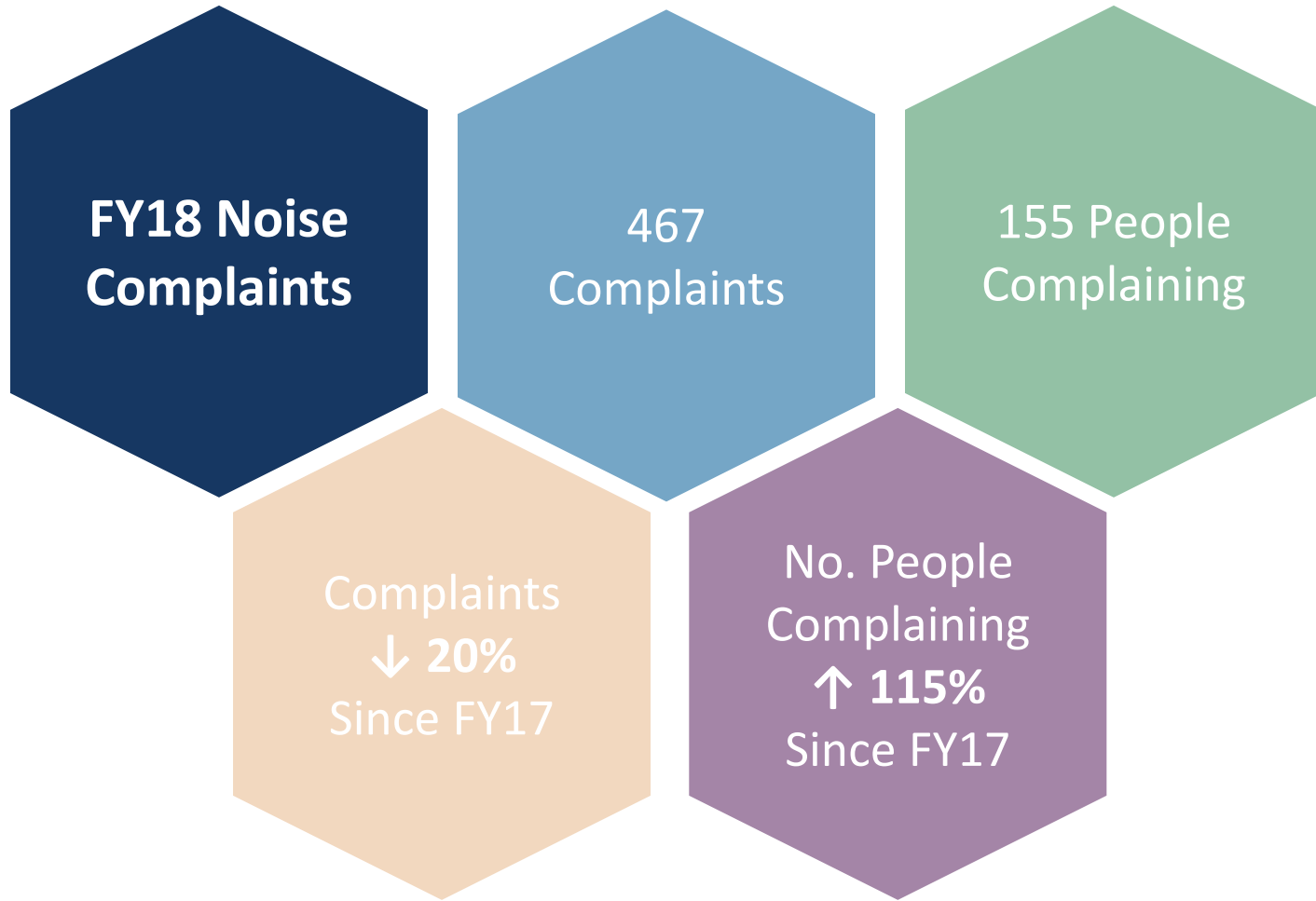
- Represents noise from the previous financial year
- Calculated annually to assess compliance with the HANA/MANA
- 2018 ANC compliant with HANA/MANA



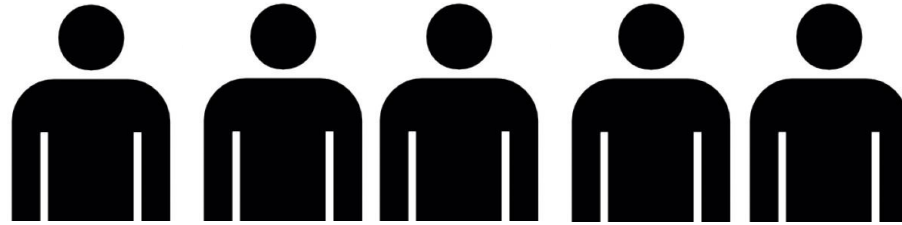
FY18 Engine Testing



- Limited to 55 dB L_{dn} (7 day rolling average)
- Noise level calculated at 3 locations in the community
- Calculated L_{dn} was compliant for FY18
- Noise levels fluctuated between 42-44 dB L_{dn}

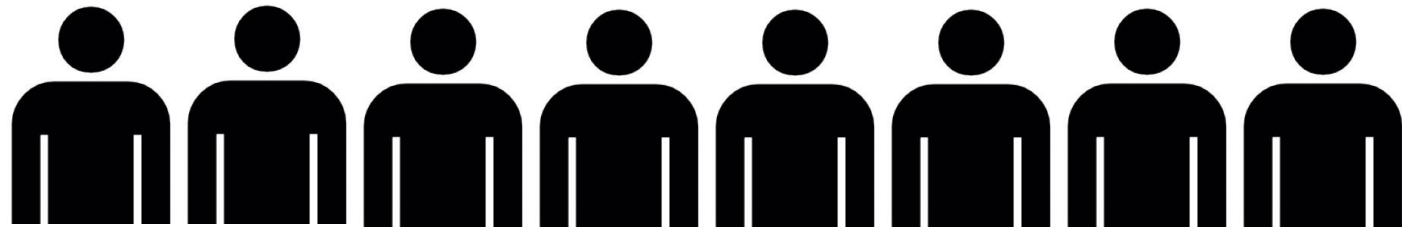


36%



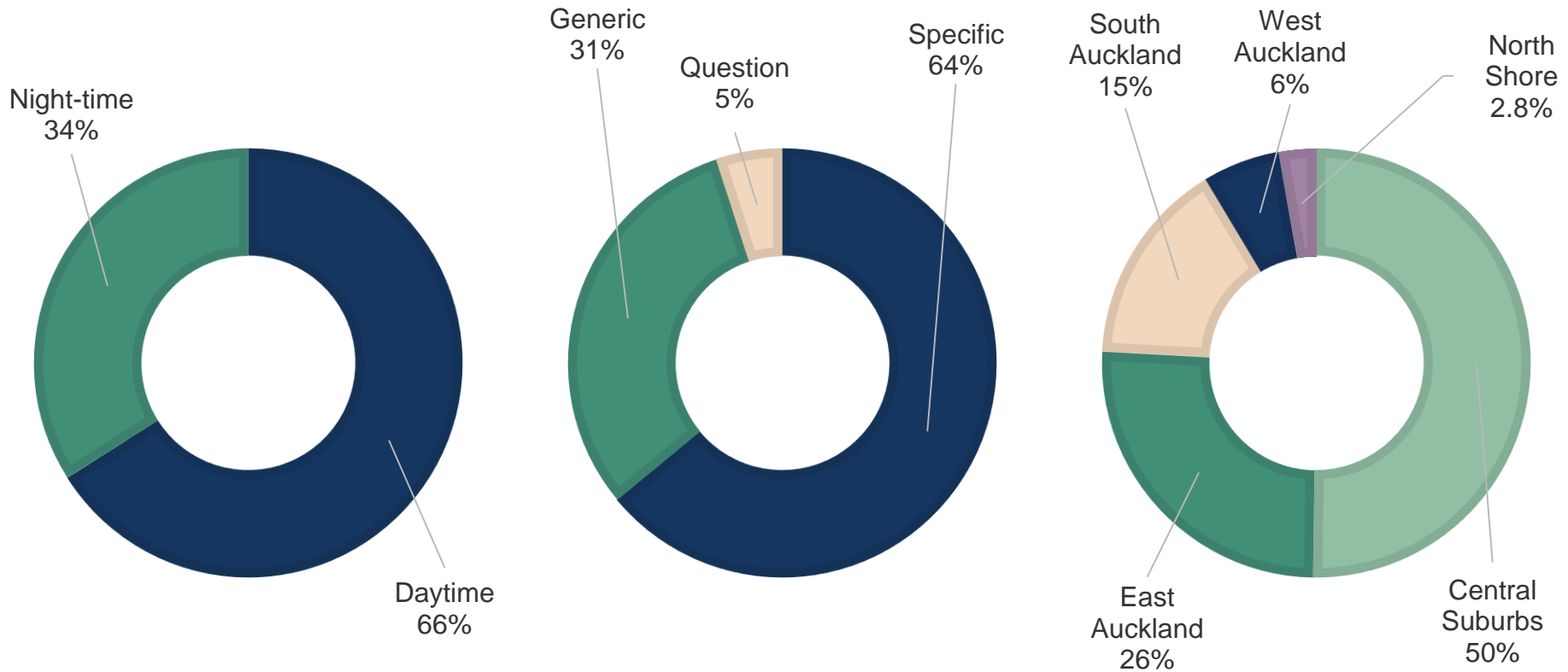
of complaints made by 5 people

43%

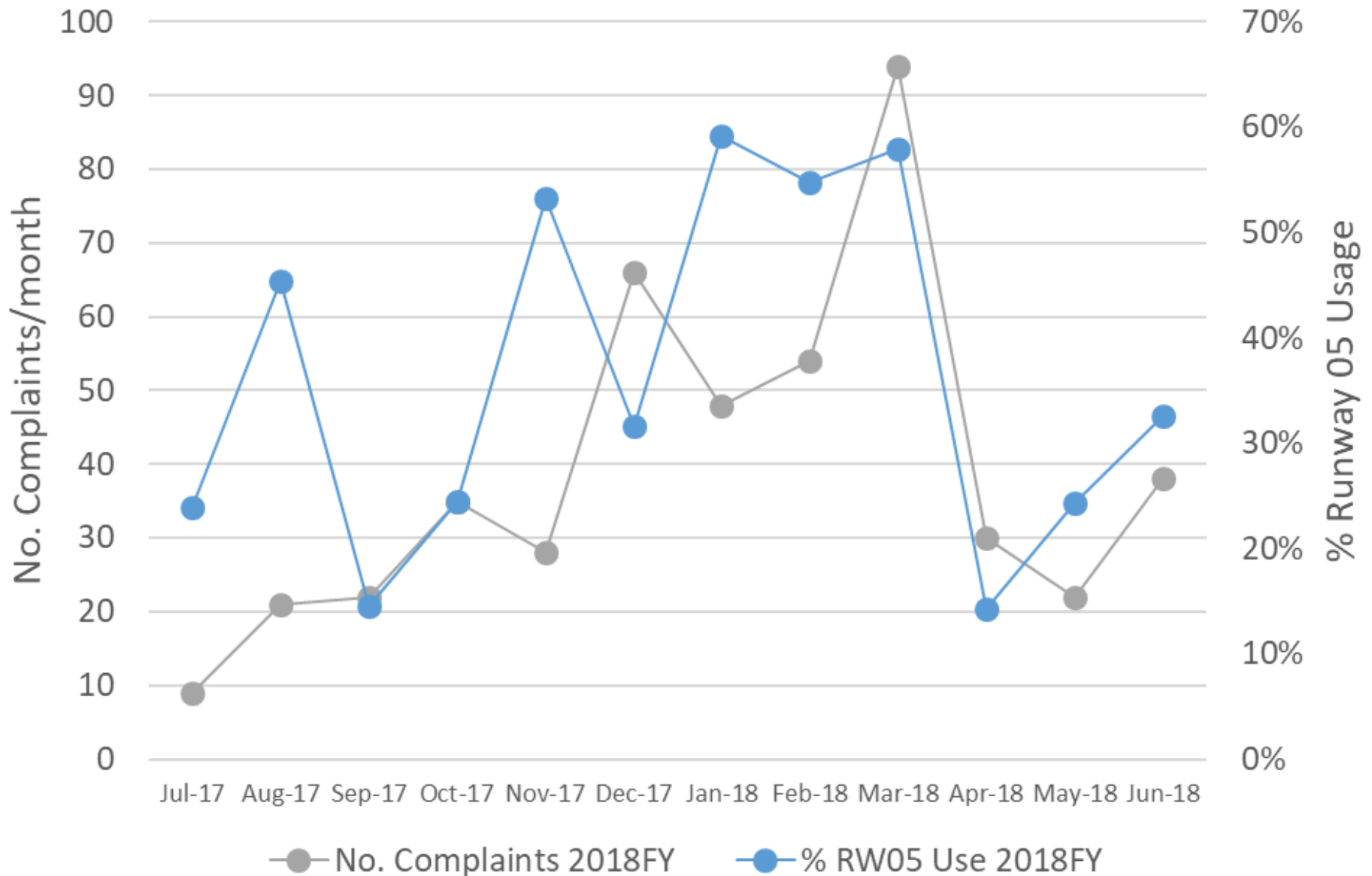


of complaints made by 8 people

Breakdown – Noise Complaints FY18



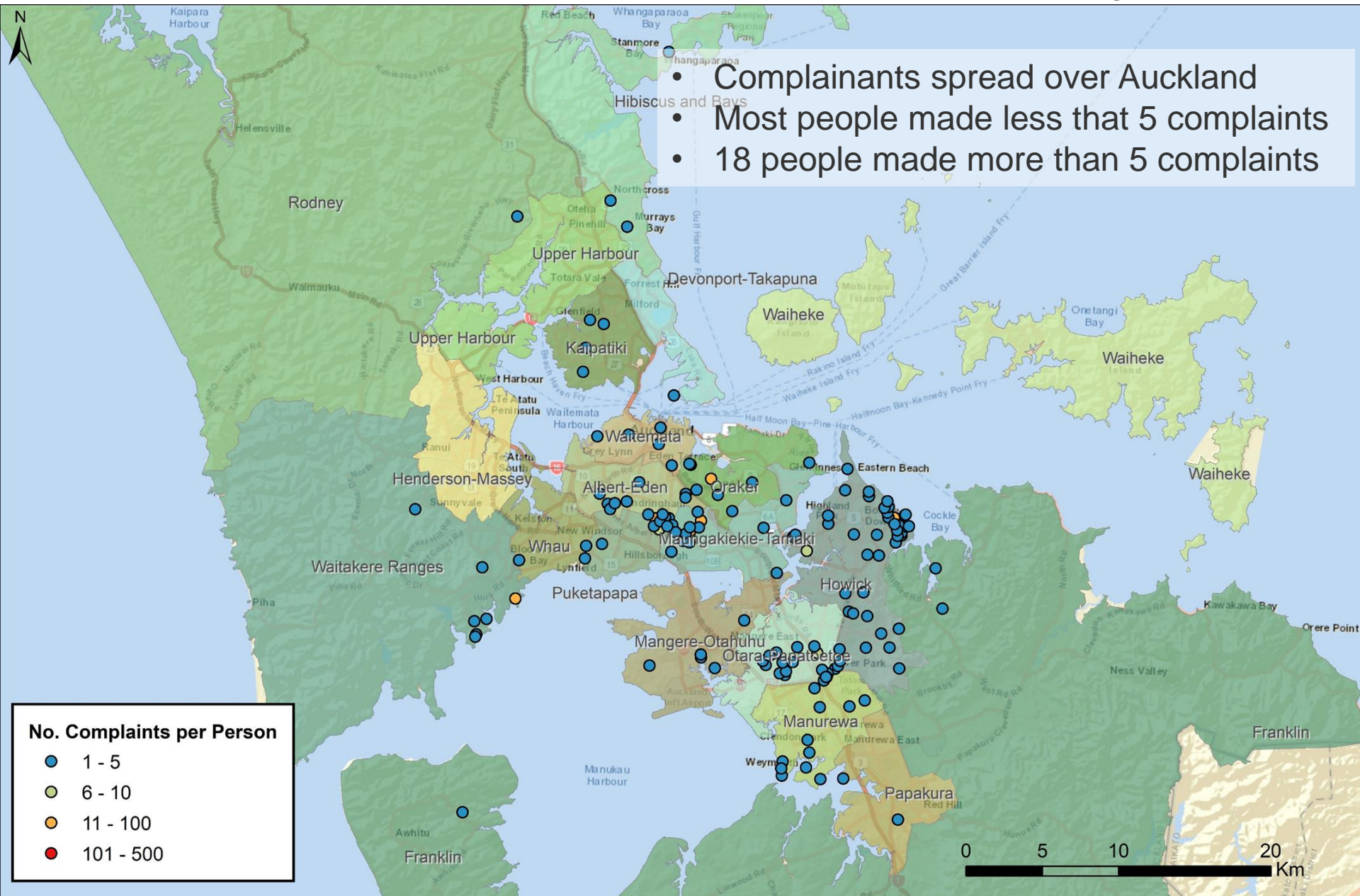
Complaints vs Runway 05R Usage



Note: 05R usage means departures over Manukau and arrivals over the Manukau Harbour.

Location of Complainants

- Complainants spread over Auckland
- Most people made less that 5 complaints
- 18 people made more than 5 complaints

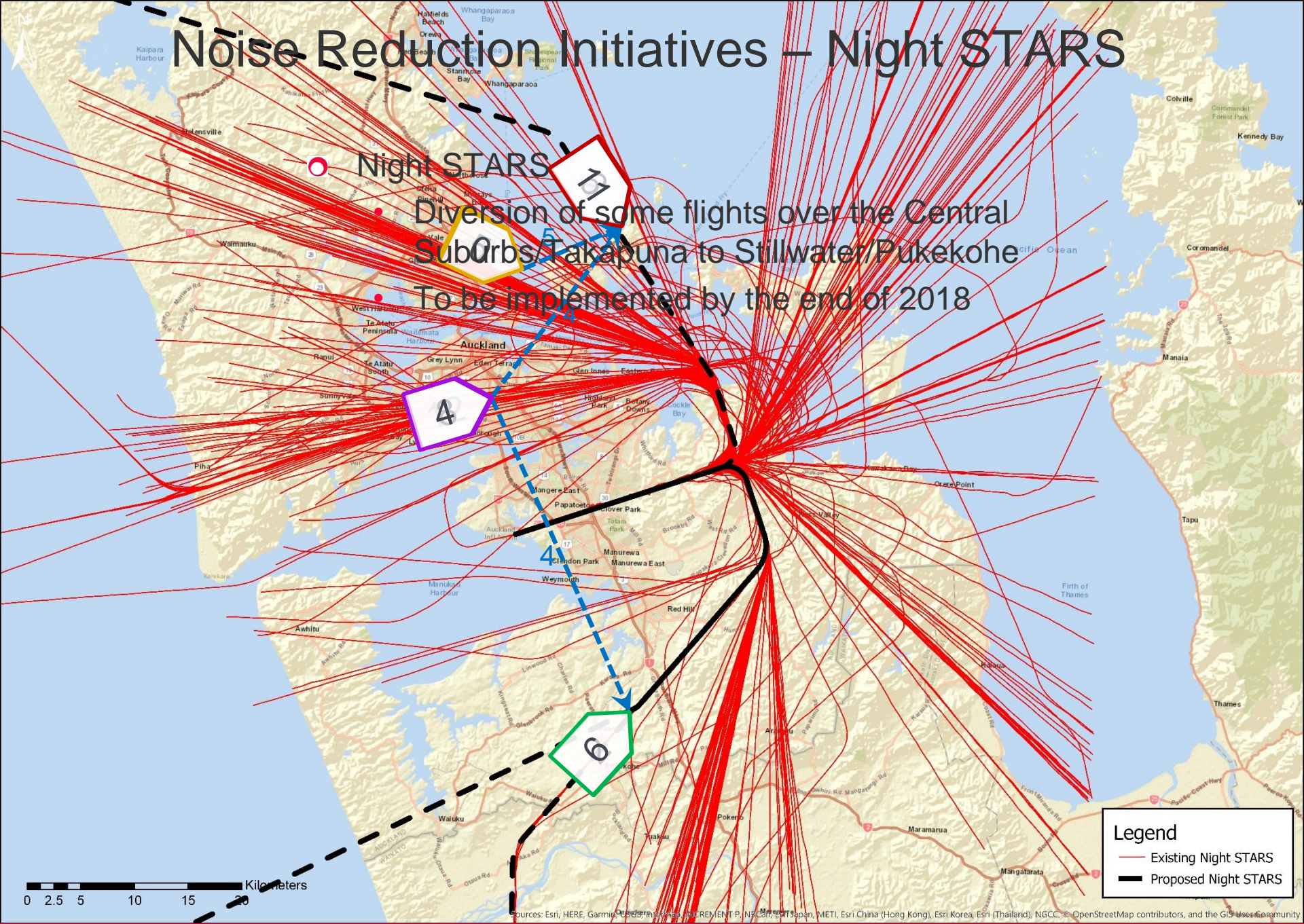


Noise Reduction Initiatives – Night STARS

Night STARS

Diversion of some flights over the Central SubUrbs/Takapuna to Stillwater/Pukekohe

To be implemented by the end of 2018



Legend

- Existing Night STARS
- Proposed Night STARS



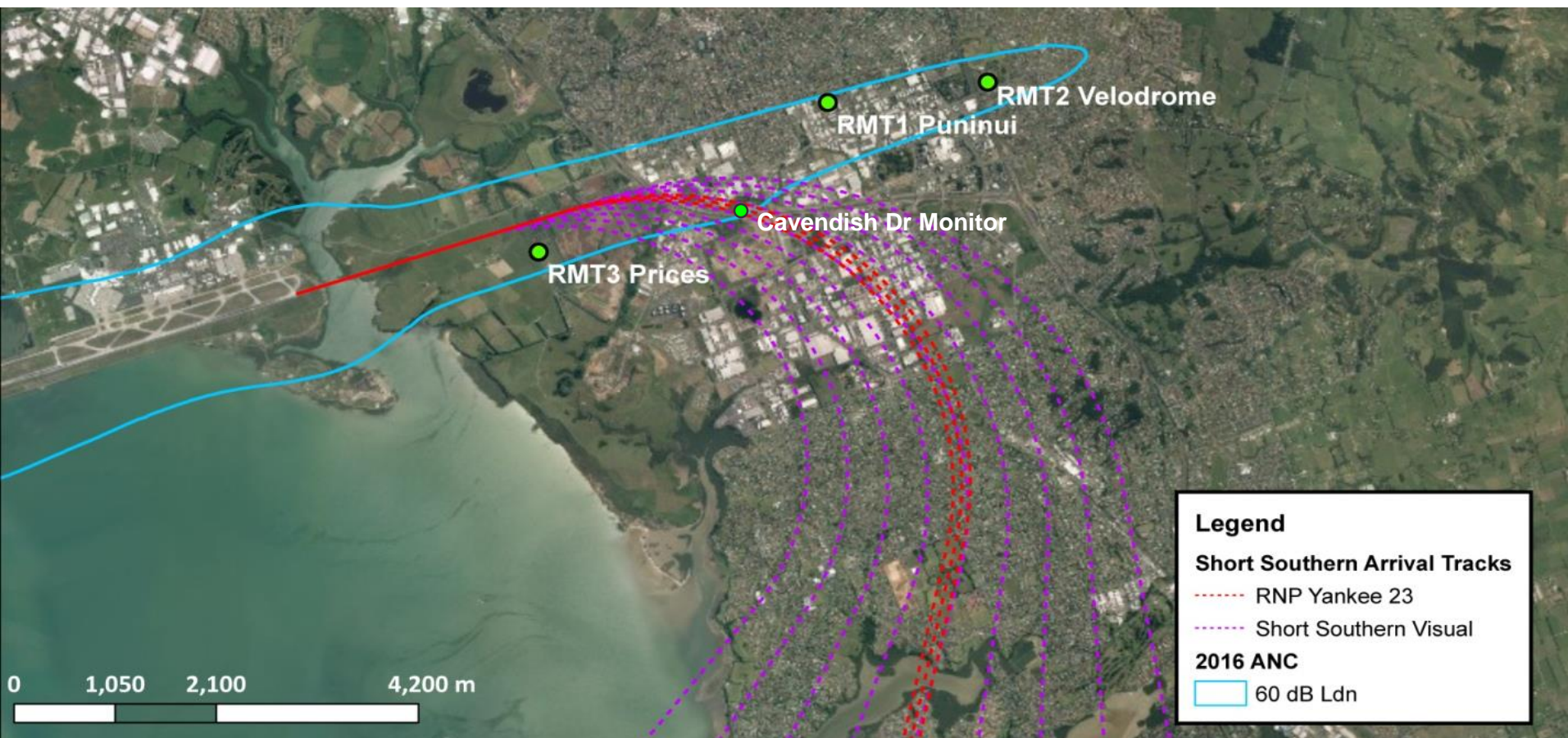
Sources: Esri, HERE, Garmin, DeLorme, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, OpenStreetMap contributors, and the GIS User Community

Conclusions

- Proposed Stillwater/Pukekohe approaches overfly less people
- Pukekohe/Stillwater experience a small increase in aircraft overflights
- Noise level in Stillwater/Pukekohe is low (50 – 60 dB L_{Amax})
- Takapuna/Central Suburbs experience a small decrease in aircraft overflight
- Some flights to remain on the approach over the Central Suburbs

Noise Reduction Initiatives – Night Arrivals

- Non-compliance in 2016 around Cavendish Drive
- Monitor installed & night flights stopped between 10pm and 7am to ensure compliance in future



Questions?