

**Environment Assessment of
Darwin Airport Traffic Management Plan
Effective December 2014**

Uncontrolled if printed

Table of contents

1	Introduction.....	3
1.1	Darwin Airport SID and STAR Route Structure	4
1.1	Proposed Changes	4
4	Analysis.....	9
4.1	Noise Analysis.....	9
4.2	Matters of National Environmental Significance (NES)	11
4.3	Matters of indigenous heritage and cultural significance	11
5	Findings.....	11
6	Conclusion.....	11
Figure 1	Darwin Airport	3
Figure 2	HELLI SID – existing (red) and proposed (blue)	4
Figure 3	PALGA SID – existing (red) and proposed (blue)	5
Figure 4	JULIE SID – existing (red) and proposed (green)	6
Figure 5	ALLEE STAR – existing (red) and proposed (blue).....	7
Figure 6	WANGI STAR – existing (red) and proposed (green)	8
Table 1	Noise levels at residential area	9
Table 2	Matters of Environmental Significance	11

1 Introduction

Darwin Airport is located within the city of Darwin, in the Northern Territory. Darwin Airport has two runways; Runway 11/29 which is 3,354 metres long and Runway 18/36 which is 1,524 metres long. Runway 18/36 does not have runway lighting; and thus is unsuitable for night time arrivals and departures.

Darwin Airport has noise abatement procedures in place which include preferred runway and preferred tracking directions. Additional noise abatement procedures apply specifically to the operation of fighter jet aircraft. Darwin Airport is a military-controlled airport for which Airservices holds no detailed flight track data

Figure 1 shows a satellite image of Darwin Airport.



Figure 1 Darwin Airport

1.1 Darwin Airport SID and STAR Route Structure

The purpose of this document is to conduct an environmental assessment of a proposal to restructure the Standard Instrument Departures (SID) and Standard Arrival Routes (STAR) at Darwin Airport; in order to improve system safety and increase the efficiency of the Darwin Terminal Area (approx 100km radius from the airport), based upon the current and forecast air traffic volume and disposition.

1.1 Proposed Changes

The proposed changes are shown in Figures 2-7.



Figure 2 HELLI SID – existing (red) and proposed (blue)

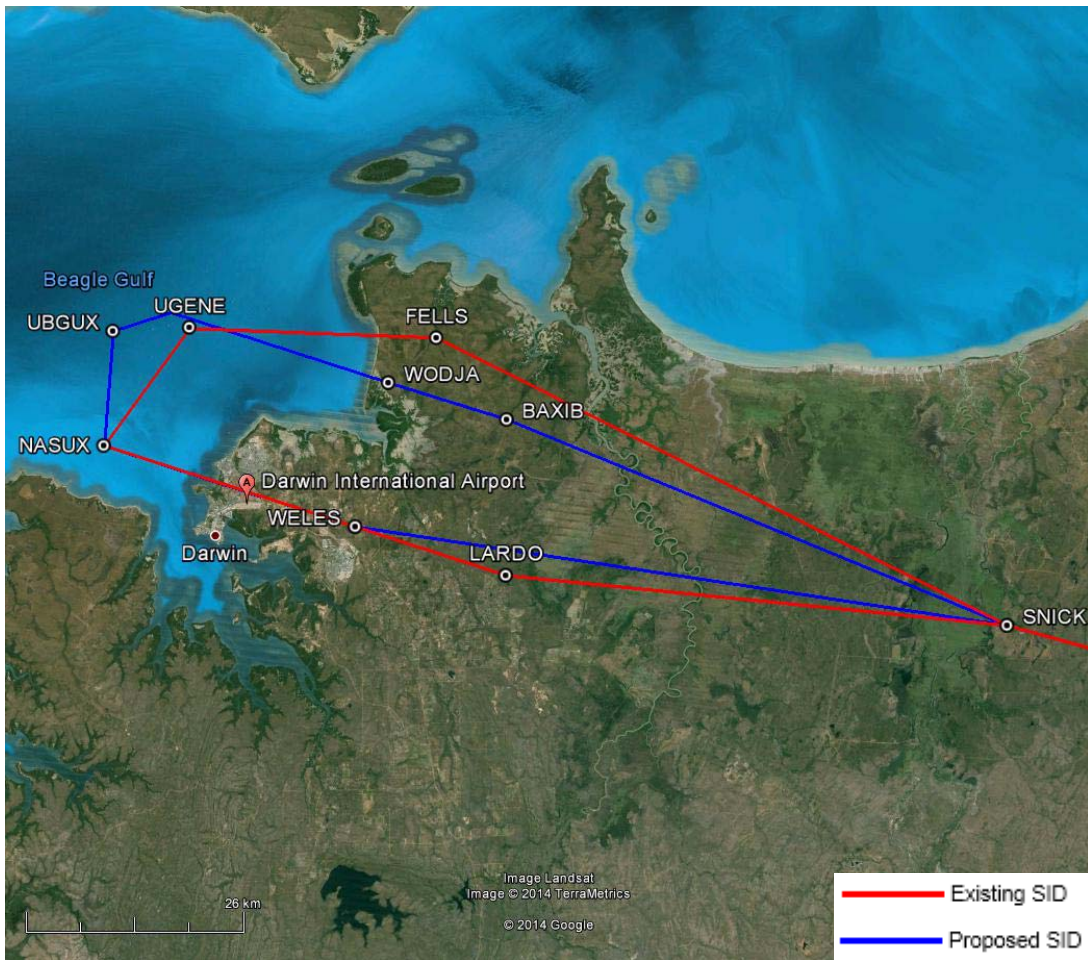


Figure 3 PALGA SID – existing (red) and proposed (blue)

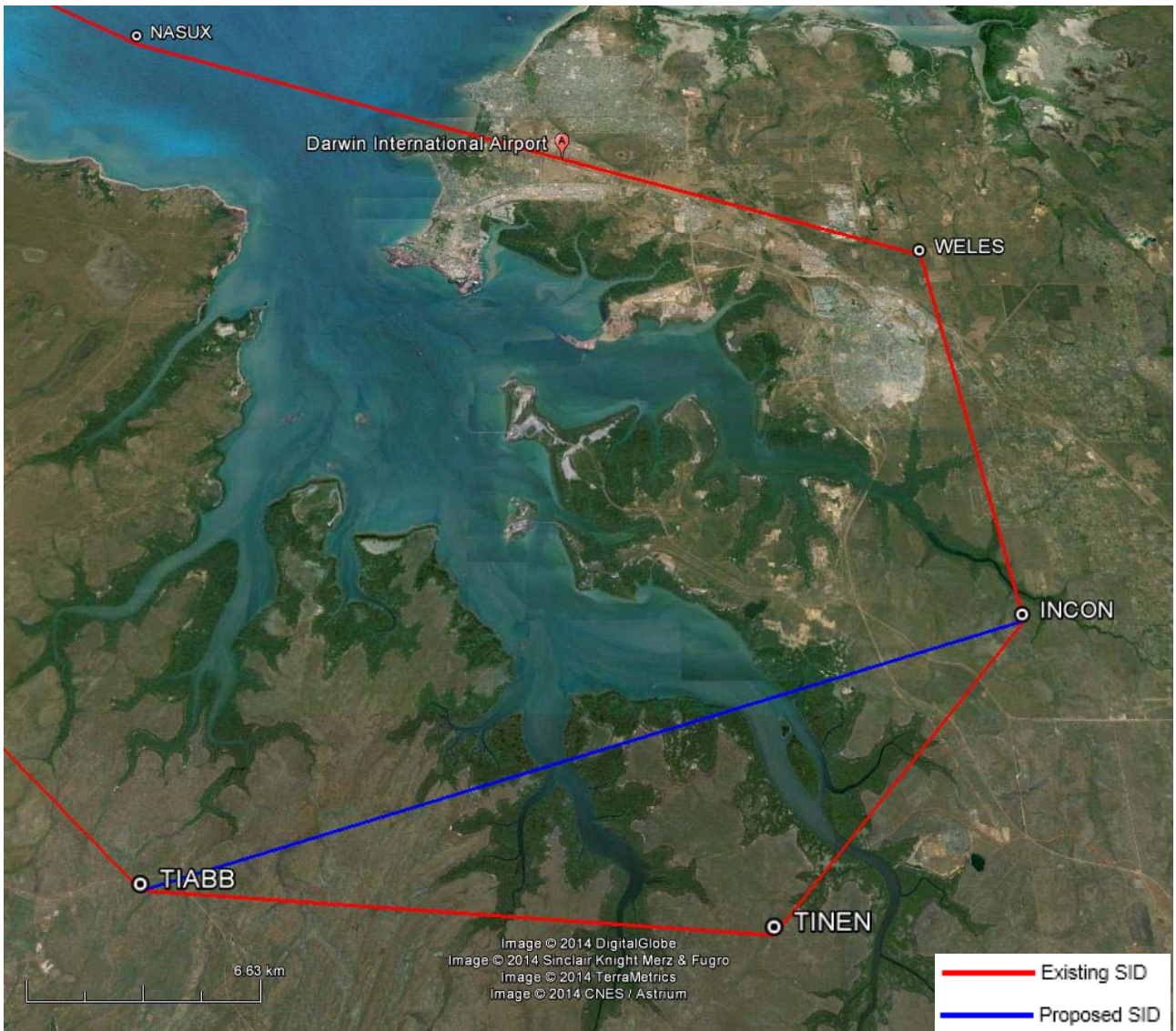


Figure 4 JULIE SID – existing (red) and proposed (blue)

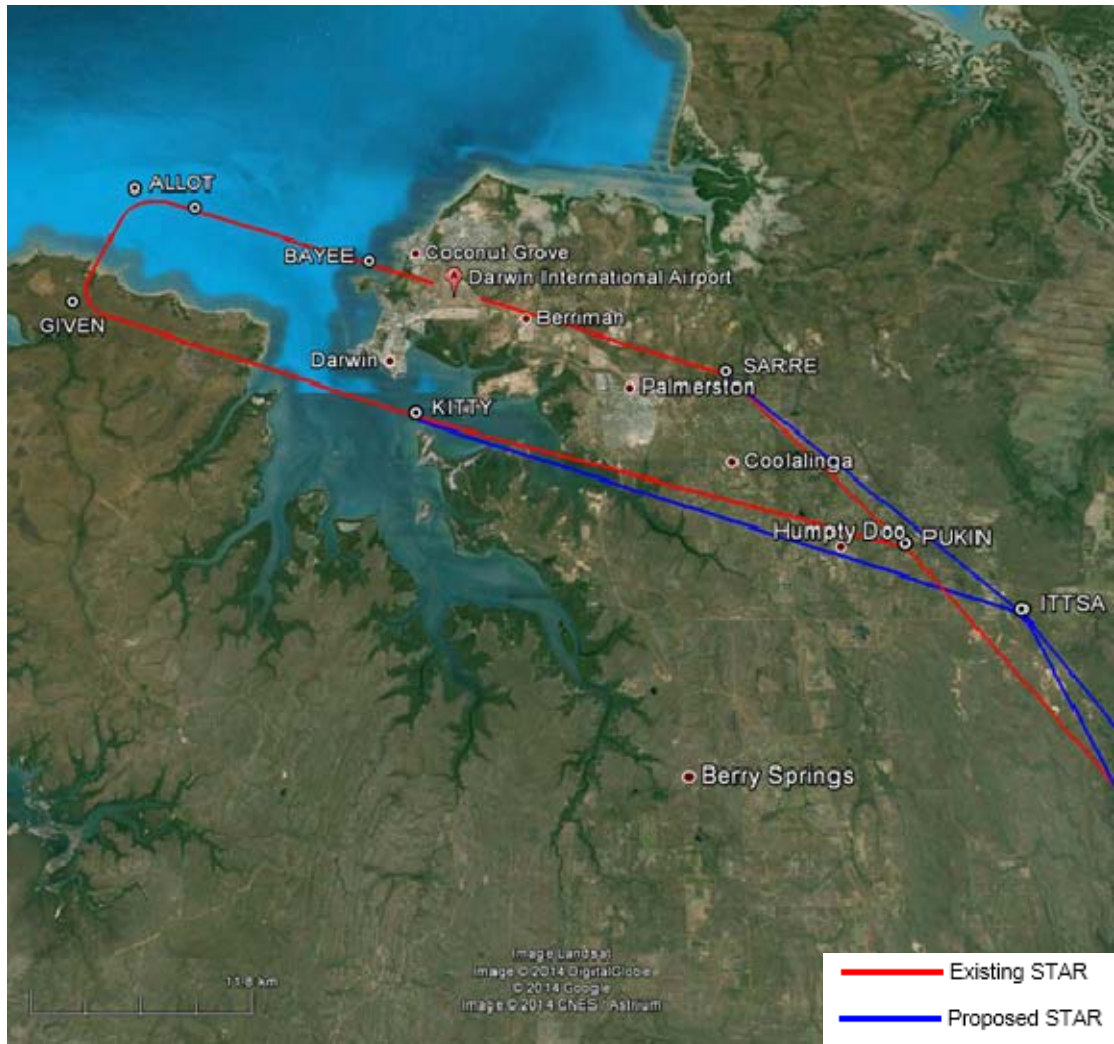


Figure 5 ALLEE STAR – existing (red) and proposed (blue)

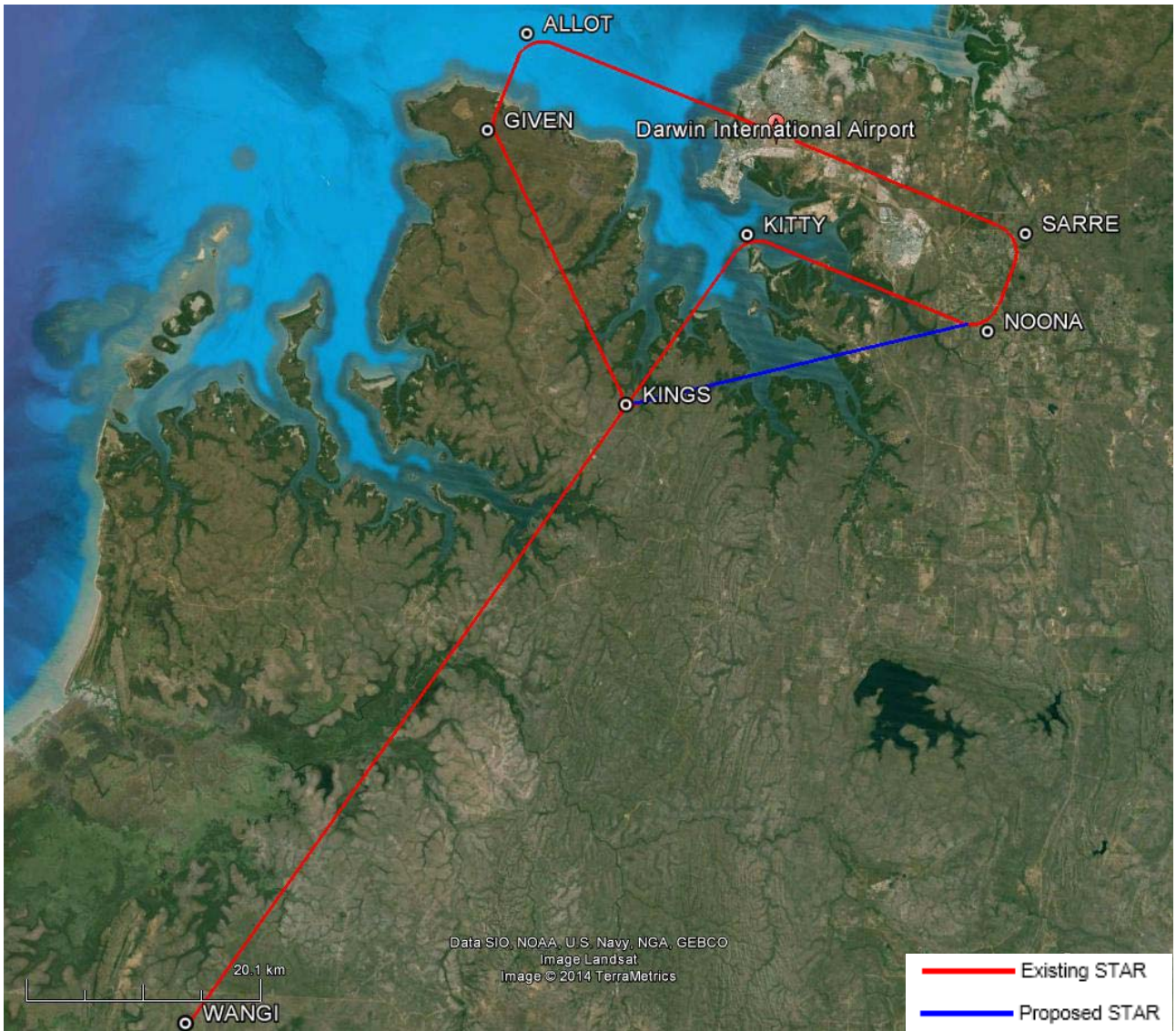


Figure 6 WANGI STAR – existing (red) and proposed (blue)

2 Analysis

2.1 Noise Analysis

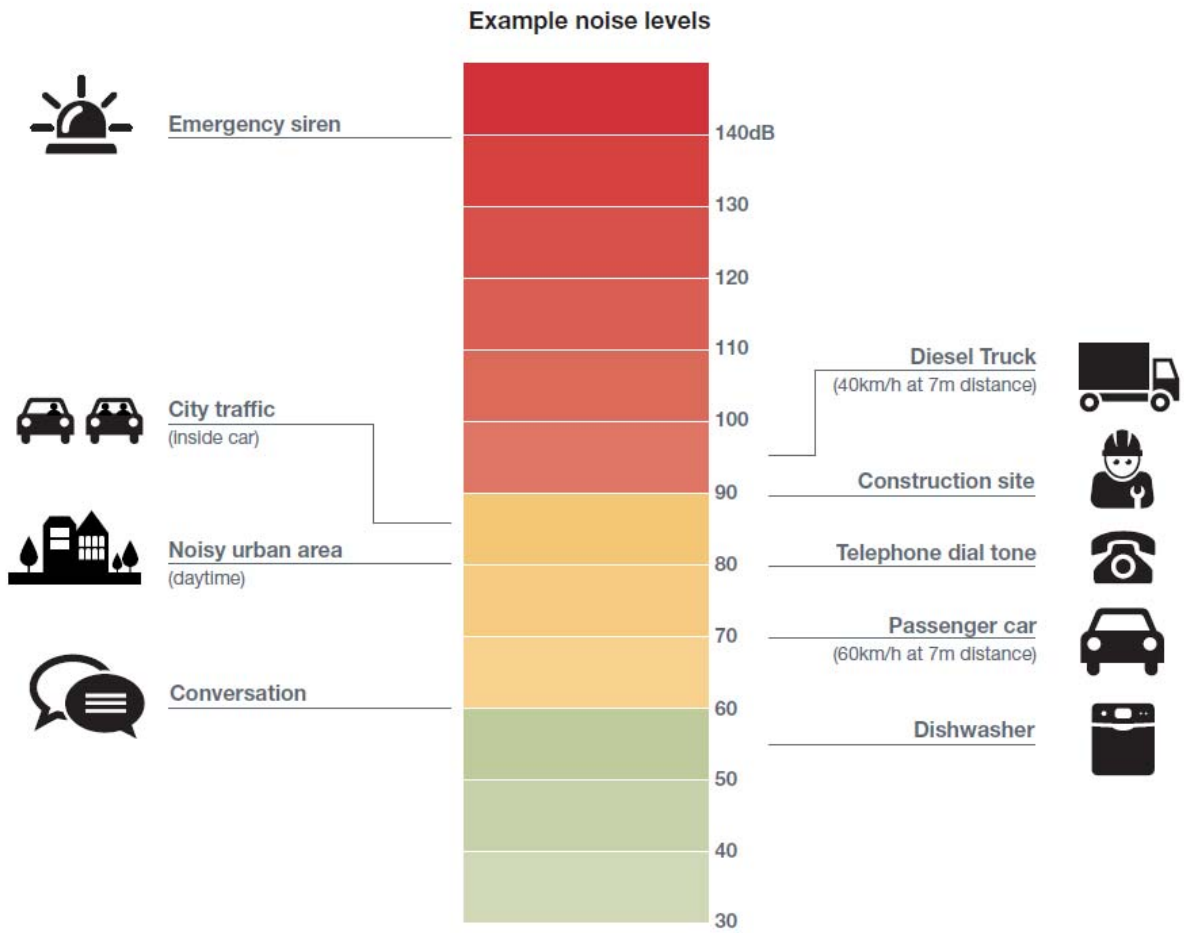
Table 1 shows the noise levels that will be experienced in residential areas as a result of the proposed SID and STAR changes. The distance shown in Table 1 for each procedure is the distance from the runway of the closest residential area, excluding those areas where the procedure is unchanged.

The noise levels shown in Table 1 are those of the A320-232, according to the INM, which was the loudest commonly used civilian airliner in operation at Darwin Airport. Sample flight track data extracted from ODAS (Operational Data Analysis Suite) has shown the A320 to be the most common commercial jet aircraft operating at Darwin Airport noting that Airservices do not have detailed flight track data for the military controlled airport. .

Procedure	Runway	Changed	Distance Km	Predicted Average Altitude feet	Modelled A320-232 Noise Level dB(A)		Threshold For Potential Significance= 60dB(A)
					Departure	Arrival	
HELLI SID	11	YES	30	8500	55		Below
HELLI SID	29	YES	29	8500	55		Below
JULIE SID	11	YES	30	8500	55		Below
JULIE SID	29	NO					NA
PALGA SID	11	YES	70	>10,000	<50		Below
PALGA SID	29	YES	24	7200	58		Below
ALLEE STAR	11	YES	54	>5,000		<50	Below
ALLEE STAR	29	YES	31	3800		57	Below
CRAIG STAR	11	NO					NA
CRAIG STAR	29	NO					NA
WANGI STAR	11	NO					NA
WANGI STAR	29	YES	31	3800		57	Below

Table 1 Noise levels at residential area

In all cases, the areas affected by the changes are sufficiently far from the airport that the noise levels are below the threshold for potential significance of 60 dBA.



Above are some comparisons of sound levels most of us would experience on a regular basis

2.2 Matters of National Environmental Significance (NES)

The Department of the Environment Protected Matters Search Tool was utilised to determine if any of the proposed procedures overfly national parks, sensitive wetland areas, or other areas of environmental significance. The results are in Table 2.

World Heritage Properties	None
National Heritage Places	3
Wetlands of International Importance	None
Great Barrier Reef Marine Park	None
Commonwealth Marine Areas	None
Listed Threatened Ecological Communities	None
Listed Threatened Species	29
Listed Migratory Species	53

Table 2 Matters of Environmental Significance

The proposal does not expose any new areas to aircraft noise; therefore the areas of environmental significance are already exposed to aircraft overflight. Although there may be increases in the numbers of overflights, details are unknown but are not expected to have an adverse environmental impact, given the readings shown in Table 1. The number of overflights will not change the predicted noise levels which are not expected to exceed 60 dBA.

2.3 Matters of indigenous heritage and cultural significance

The Larrakia and Woolna People are acknowledged as the traditional custodians of the land under the proposed changes. A cultural and heritage values analysis indicated that there will be no sites of indigenous significance newly overflowed as a direct result of implementing the proposed SID and STAR changes. No matters of potential significance have been identified in the desk top review of matters of cultural and heritage value.

3 Findings

As a result of the analysis:

- No new areas will be affected
- Changes to the flight paths are well away from residential areas
- The changes are not likely to be noticeable
- There is not expected to be a significant environmental impact from the proposed changes

4 Conclusion

The proposed flight path changes are not likely to have a significant impact within the meaning of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

The proposed changes are not likely to be visually noticeable to the community due to the high altitude of aircraft and minimal lateral change in the current and proposed tracks.