

APPENDIX L

This appendix provides a response to the questions posed by the State in relation to the Sunshine Coast Airport Expansion Project's Environmental Impact Statement (EIS). It provides an alternative representation of the information provided in the EIS and has been provided for information to assist in understanding the content of the EIS. Please note that the counts included in this report have been completed using a dwellings dataset provided by Acoustic Consultants Wilkinson Murray during the preparation of the EIS. The methodology used to develop the dwellings dataset is provided in **EIS Chapter D3** (Aircraft Noise). These counts should be used to understand the magnitude of impact, but should not be used as absolute numbers. It must also be noted that the metrics in relation to the ANEF and N70 contours as presented in the EIS provide a suitable guide to the overall impacts of aircraft noise. The fine granularity provided in this appendix may lead to an unrealistic expectation of aircraft noise in a real world environment.

Dwellings outside the ANEC, N70, N60 and LaMax contours will still experience noise from aircraft as they approach and depart the airport.

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Additional aircraft noise maps and information

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request response from Arup

Final | 8 October 2015

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

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1 Introduction

This report provides a response to the questions posed by the State in relation to the Sunshine Coast Airport Expansion Project's Environmental Impact Statement (EIS). It provides an alternative representation of the information provided in the EIS and has been provided for information to assist in understanding the content of the EIS.

Please note that the counts included in this report have been completed using a dwellings dataset provided by Wilkinson Murray during the preparation of the EIS. The methodology used to develop the dwellings dataset is provided in Chapter D3: Aircraft Noise of the EIS. These counts should be used to understand the magnitude of impact, but should not be used to quote absolute numbers.

It must also be noted that dwellings outside the ANEC, N70, N60 and LaMax contours will still experience noise from aircraft as they approach and depart the airport.

The following scenarios are used in this memo and the EIS:

- 2012 (existing) - Used as the 'current' scenario – existing runway and flight schedule.
- 2014 (Planning Scheme) - ANEF included in the current Sunshine Coast Planning Scheme.
- 2020 (do minimum) - Modelled schedule at 2020 with minor upgrades to the existing runway.
- 2040 (do minimum) - Modelled schedule at 2040 with minor upgrades to the existing runway.
- 2020 (new runway) - Modelled schedule at 2020 with new runway alignment operational.
- 2040 (new runway) - Modelled schedule at 2040 with new runway alignment operational.

The following noise metrics are used in this report:

- Australian Noise Exposure Forecast/Concept (ANEF/C)
- N contours (N70 and N60)
- Single event contours (LaMax) – note that these show arrivals and departures at both ends of the runway and do not represent a 'real world' scenario.

Full descriptions of these metrics can be found in Chapter D3: Aircraft Noise of the EIS.

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The following sensitive receptors have been identified:

- Dwellings – dwellings identified in the dwellings dataset. The methodology used to develop the dwellings dataset is provided in Chapter D3: Aircraft Noise of the EIS.
- Community facilities – As identified in Chapter D5: Social and visual impacts.
- Accommodation providers – Short stay dwellings located at Marcoola, along David Low Way, to the east of Sunshine Coast Airport.

A map package is attached to this report providing a series of maps to accompany the analysis and discussion. Aerial imagery used in this mapping was generated via Arc GIS with the source of these maps shown at the bottom of each map. This aerial imagery is used to provide a geographic reference for the noise contours and dwelling locations, but has not been relied on for analysis purposes. Aerial imagery is dated 4/11/2011.

The following presents the information requested.

2 Provide more detailed information on the N70, N60 and LaMax predictions

The following tables provide the requested dwelling count information. Mapping showing each of these scenarios is attached to this memo. Please note mapping has not been provided at 1:5,000 scale because this would generate many more maps and would not aid understanding of the overall scenario. The ANEC and N70 suburb comparison maps provided in the map package have been prepared on a suburb by suburb basis and have been produced much closer to this scale (depending on the suburb size). The GIS shapefiles used for the ANEC contours have been packaged and provided as a .zip file.

2.1 ANEC

See EIS chapters D3: Aircraft Noise and D5: Social and Visual Impacts for a full description of the ANEC and ANEF.

Table 1 ANEC counts for various scenarios

ANEC contour	Year and scenario				
	2012 (current)	2020 (do minimum)	2040 (do minimum)	2020 (new runway)	2040 (new runway)
ANEC20	854	1,162	1,510	879	926
ANEC25	219	320	430	230	559
ANEC30	42	67	85	46	0
ANEC35	9	11	0	13	0
TOTAL dwellings within ANEC contour 20 or more	1,124	1,560	2,025	1,168	1,485

Counts for the 2014 Planning Scheme ANEF have not been included in this table as the ANEF covers both the existing and new runway layouts. A map showing this has been included in the ANEC map package.

2.2 N contours

See EIS chapters D3: Aircraft Noise and D5: Social and Visual Impacts for a full description of N contours. N70s are used for the day and evening periods, while N60s are used for the night time period. Note that there are no scheduled night time flights at Sunshine Coast Airport until 2040.

Table 2 N70 events – Summer weekday day (7am - 6pm) for various scenarios

N70 events – Summer weekday day (7am – 6pm)	Year and scenario				
	2012	2020 (do minimum)	2040 (do minimum)	2020 (new runway)	2040 (new runway)
5 – 9	1,775	2,320	2,055	199	164
10 – 19	1,307	1,175	2,577	351	137
20 – 49	1,239	1,666	2,025	1,288	1,364
50 +	67	186	503	0	210
TOTAL dwellings experiencing more than 5-9 events	4,388	5,347	7,160	1,838	1,875

Table 3 N70 events – Summer weekday evening (6pm – 10pm) for various scenarios

N70 events – Summer weekday evening (6pm – 10pm)	Year and scenario				
	2012	2020 (do minimum)	2040 (do minimum)	2020 (new runway)	2040 (new runway)
5 – 9	1,367	1,393	1,168	1,185	464
10 – 19	174	407	1,291	46	1,112
20 – 49	0	0	287	0	39
50 +	0	0	0	0	0
TOTAL dwellings experiencing more than 5-9 events	1,541	1,800	2,746	1,231	1,615

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Table 4 N60 events – Summer weekday night (10pm – 7am)

N60 events- Summer weekday night (10pm – 7am)	Year and scenario				
	2012	2020 (do minimum)	2040 (do minimum)	2020 (new runway)	2040 (new runway)
2 events	No night time flights	No night time flights scheduled	1,504	No night time flights scheduled	1,366
TOTAL dwellings experiencing 2 events	n/a	n/a	1,504	n/a	1,366

2.3 Single event contours (LaMax)

See EIS chapters D3: Aircraft Noise and D5: Social and Visual Impacts for a full description of single event contours. A 737-800 has been used as the ‘worst case’ aircraft type for this airport. Mapped versions of the 2020/2040 do minimum and new runway scenarios are included in the map package for the suburb of Mudjimba. Note that these contours show arrivals and departures at both ends of the runway and do not represent a ‘real world’ scenario.

Table 5 Single event contours (LaMax) for arrivals and departures

Noise contours for 737-800	Number of dwellings impacted in do minimum scenario (18/36 runway alignment)		Number of dwellings impacted in new runway scenario (13/31 runway alignment)	
	Arrival	Departure	Arrival	Departure
70 dB(A)	8,808	14,353	235	758
75 dB(A)	4,455	4,532	275	83
80 dB(A)	1,416	3,011	217	251
85 dB(A)	665	1,104	329	705
90 dB(A)	289	531	110	682
95 dB(A)	44	272	0	3
Totals	15,677	23,803	1166	2482

3 Existing Noise (based on 2012 or more recent data sets)

3.1 Dwellings within 5km

Using the dwellings dataset, 7,738 dwellings are located within 5km of Sunshine Coast Airport. The following presents information about the number of dwellings within this 5km radius that receive aircraft noise of 70dB(A) or greater. The answer to this question depends on the scenario being assessed so there are a number of counts presented.

3.1.1 Number of dwellings within 5km of Sunshine Coast Airport experiencing N70 (5 or more events) on a summer weekday day:

- 2012 (existing) N70 (5 or more events) = 4,238 dwellings
- 2020 (do minimum) = 4,822 dwellings
- 2040 (do minimum) = 5,901 dwellings
- 2020 (new runway) = 1,818 dwellings
- 2040 (new runway) = 1,851 dwellings

3.1.2 Number of dwellings within 5km of Sunshine Coast Airport receiving 70dB(A) or greater on an arrival or departure of a 737-800 aircraft:

- Arrivals on existing runway = 4,863 dwellings
- Departures on existing runway = 7,151 dwellings
- Arrivals on new runway = 1,144 dwellings
- Departures on new runway = 2,329 dwellings

3.2 Dwellings within 5-10km

Using the dwellings dataset, 30,795 dwellings are located within 5-10km of Sunshine Coast Airport. The following presents information about the number of dwellings within this 5-10km radius that receive aircraft noise of 70dB(A) or greater. The answer to this question depends on the scenario being assessed so there are a number of counts presented.

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3.2.1 Number of dwellings within 5-10km of Sunshine Coast Airport experiencing N70 (5 or more events) on a summer weekday day:

- 2012 (existing) N70 (5 or more events) = 150 dwellings (5-9 events)
- 2020 (do minimum) = 525 dwellings (5-9 events)
- 2040 (do minimum) = 1,259 dwellings (667 at 5-9 events and 592 at 10-19 events)
- 2020 (new runway) = 8 dwellings (3 at 5-9 events and 5 at 10 - 19 events)
- 2040 (new runway) = 9 dwellings (4 at 10- 19 events and 5 at 20-49 events)

3.2.2 Number of dwellings within 5-10km of Sunshine Coast Airport receiving 70dB(A) or greater on an arrival or departure of a 737-800 aircraft:

- Arrivals on existing runway = 10,453 dwellings
- Departures on existing runway = 16,327 dwellings
- Arrivals on new runway = 9 dwellings
- Departures on new runway = 29 dwellings

3.3 Dwellings 10km+

There are a number of scenarios involving the new runway alignment where dwellings located more than 10km from Sunshine Coast Airport receive aircraft noise of 70dB(A) or greater.

3.3.1 Number of dwellings within 10km+ from Sunshine Coast Airport experiencing N70 (5 or more events) on a summer weekday day:

- 2020 (new runway) = 12 dwellings (11 at 5-9 events and 1 at 10- 19 events)
- 2040 (new runway) = 15 dwellings (3 at 5-9 events, 11 at 10-19 events and 1 at 20-49 events)

3.3.2 Number of dwellings within 10+km of Sunshine Coast Airport receiving 70dB(A) or greater on an arrival or departure of a 737-800 aircraft:

- Arrival on existing runway = 361 dwellings
- Departure on existing runway = 325 dwellings
- Arrival on new runway = 13 dwellings
- Departure on new runway = 124 dwellings

4 Community facilities

Chapter D5: Social and visual impacts provides a detailed description of the baseline and impact scenarios in relation to community facilities. To further aid understanding of the impacts associated with the change in runway alignment an assessment of community facilities in relation to their location within N70 summer weekday day and ANEC contours has been undertaken and is documented in Table 6 and Table 7.

4.1 Community facilities - ANEC

Table 6 provides details of the location of community facilities within ANEC for 2012, 2020 (do minimum and new runway) and 2040 (do minimum and new runway). The colours used in the table correspond to the colours used on the associated ANEC mapping.

Table 6 Community facilities and their location within ANEC for various scenarios

ANEC					
Community facility	2012 (existing)	2020 (do min)	2040 (do min)	2020 (new runway)	2040 (new runway)
Coolum Ambulance Station	Not in ANEC contour	Not in ANEC contour			
Coolum Beach Christian College	Not in ANEC contour	Not in ANEC contour			
Coolum Primary School	Not in ANEC contour	Not in ANEC contour			
Cotton Tree Community Hub	Not in ANEC contour	Not in ANEC contour			
Cotton Tree Caravan Park	Not in ANEC contour	Not in ANEC contour			
C&K Mudjimba Community Kindergarten	Not in ANEC contour	Not in ANEC contour			
Good Start Early Learning Centre	Not in ANEC contour	Not in ANEC contour			
Kid's Plus Childcare	Not in ANEC contour	Not in ANEC contour			
Keith Royal Park	ANEC30	ANEC30	ANEC25	ANEC30	ANEC25
Marcoola Community Hub	Not in ANEC contour	ANEC20	ANEC20	ANEC20	ANEC20

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ANEC					
Community facility	2012 (existing)	2020 (do min)	2040 (do min)	2020 (new runway)	2040 (new runway)
Marcoola Lifeguard Tower and SLSC	ANEC20	ANEC20	ANEC25	Not in ANEC contour	Not in ANEC contour
Mt Coolum Community Hub	Not in ANEC contour				
Mt Coolum Day Care Centre	Not in ANEC contour				
Mt Coolum Jehovah's Witness Church	Not in ANEC contour				
Mt Coolum mobile library stop	Not in ANEC contour				
Mudjimba Beach Caravan Park	Not in ANEC contour	ANEC20			
Mudjimba Lifeguard Tower and SLSC	Not in ANEC contour	Not in ANEC contour	Not in ANEC contour	ANEC20	ANEC20
Mudjimba Community Hub	Not in ANEC contour	ANEC20			
Mudjimba mobile library stop	Not in ANEC contour	ANEC20			
Mudjimba Community Hall	Not in ANEC contour	Not in ANEC contour	ANEC20	Not in ANEC contour	Not in ANEC contour
Mudjimba Multisports Complex	ANEC20	ANEC20	ANEC25	ANEC20	ANEC20
Mudjimba Skate Park	ANEC20	ANEC20	ANEC20	ANEC20	ANEC25
Mudjimba Tourist Information Centre	ANEC35	ANEC35	ANEC30	ANEC35	ANEC25
North shore Community Centre	ANEC20	ANEC20	ANEC25	ANEC20	ANEC20
Pacific Paradise mobile library stop	Not in ANEC contour				
Pacific Paradise Community Hub	Not in ANEC contour				

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ANEC					
Community facility	2012 (existing)	2020 (do min)	2040 (do min)	2020 (new runway)	2040 (new runway)
Pacific Paradise Primary School	Not in ANEC contour				
Power Memorial Park	Not in ANEC contour	ANEC20			
Rural Fire Brigade	Not in ANEC contour				
Tadpoles Childcare	Not in ANEC contour	Not in ANEC contour	ANEC20	Not in ANEC contour	Not in ANEC contour
Town of Seaside community hub	Not in ANEC contour				
Twin Waters Lifeguard Tower	Not in ANEC contour				
Twin Waters mobile library stop	Not in ANEC contour	Not in ANEC contour	ANEC20	Not in ANEC contour	Not in ANEC contour

4.2 Community facilities – N70

Table 7 provides details of the location of community facilities within N70 contours for 2012, 2020 (do minimum and new runway) and 2040 (do minimum and new runway). The colours used in the table correspond to the colours used on the associated N70 mapping.

In relation to N70 noise events, please note that the EIS commentary highlighted facilities that received *five or more* N70 noise events on a summer weekday day. The information provided in Table 7 provides more detailed information about the number of N70 events for each scenario.

Table 7 Community facilities and their location within N70 contours for various scenarios

N70 summer weekday day (7am – 6pm)					
Community facility	2012 (existing)	2020 (do min)	2040 (do min)	2020 (new runway)	2040 (new runway)
Coolum Ambulance Station	Not in N70 contour				
Coolum Beach Christian College	Not in N70 contour				
Coolum Primary School	Not in N70 contour				

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N70 summer weekday day (7am – 6pm)					
Community facility	2012 (existing)	2020 (do min)	2040 (do min)	2020 (new runway)	2040 (new runway)
Cotton Tree Community Hub	Not in N70 contour	5-9 events	10-19 events	Not in N70 contour	Not in N70 contour
Cotton Tree Caravan Park	Not in N70 contour	5-9 events	10-19 events	Not in N70 contour	Not in N70 contour
C&K Mudjimba Community Kindergarten	5-9 events	5-9 events	10-19 events	10-19 events	10-19 events
Good Start Early Learning Centre	Not in N70 contour				
Kid's Plus Childcare	Not in N70 contour				
Keith Royal Park	20 - 49 events	20 - 49 events	50+ events	20 - 49 events	50+ events
Marooala Community Hub	20 - 49 events				
Marooala Lifeguard Tower and SLSC	20 - 49 events	20 - 49 events	20 - 49 events	Not in N70 contour	Not in N70 contour
Mt Coolum Community Hub	Not in N70 contour	Not in N70 contour	5-9 events	Not in N70 contour	Not in N70 contour
Mt Coolum Day Care Centre	Not in N70 contour	Not in N70 contour	5-9 events	Not in N70 contour	Not in N70 contour
Mt Coolum Jehovah's Witness Church	Not in N70 contour				
Mt Coolum mobile library stop	Not in N70 contour				
Mudjimba Beach Caravan Park	Not in N70 contour	5-9 events	5-9 events	10-19 events	20 - 49 events
Mudjimba Lifeguard Tower and SLSC	Not in N70 contour	5-9 events	5-9 events	20 - 49 events	20 - 49 events
Mudjimba Community Hub	10-19 events	10-19 events	20 - 49 events	10-19 events	20 - 49 events
Mudjimba mobile library stop	Not in N70 contour	5-9 events	5-9 events	10-19 events	20 - 49 events
Mudjimba Community Hall	5-9 events	5-9 events	10-19 events	5-9 events	10-19 events
Mudjimba Multisports Complex	20 - 49 events	20 - 49 events	50+ events	10-19 events	10-19 events
Mudjimba Skate Park	10-19 events	10-19 events	20 - 49 events	20 - 49 events	20 - 49 events
Mudjimba Tourist Information Centre	20 - 49 events	50+ events	50+ events	20 - 49 events	50+ events

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N70 summer weekday day (7am – 6pm)					
Community facility	2012 (existing)	2020 (do min)	2040 (do min)	2020 (new runway)	2040 (new runway)
North shore Community Centre	20 - 49 events	20 - 49 events	50+ events	10-19 events	10-19 events
Pacific Paradise mobile library stop	5-9 events	10-19 events	10-19 events	Not in N70 contour	Not in N70 contour
Pacific Paradise Community Hub	5-9 events	5-9 events	10-19 events	Not in N70 contour	Not in N70 contour
Pacific Paradise Primary School	5-9 events	10-19 events	10-19 events	Not in N70 contour	Not in N70 contour
Power Memorial Park	Not in N70 contour	5-9 events	5-9 events	20 - 49 events	20 - 49 events
Rural Fire Brigade	5-9 events	5-9 events	10-19 events	10-19 events	20 - 49 events
Tadpoles Childcare	10-19 events	10-19 events	20 - 49 events	Not in N70 contour	Not in N70 contour
Town of Seaside community hub	10-19 events	10-19 events	20 - 49 events	Not in N70 contour	Not in N70 contour
Twin Waters Lifeguard Tower	Not in N70 contour	Not in N70 contour	5-9 events	Not in N70 contour	Not in N70 contour
Twin Waters mobile library stop	10-19 events	10-19 events	20 - 49 events	Not in N70 contour	Not in N70 contour

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5 Accommodation

Using the dwellings dataset, there are 543 dwellings in the commercial accommodation buildings that lie to the east of Sunshine Coast Airport (shown within the red boundary on the image below). These dwellings have been included in all counts included in this memo.



To assist in understanding the impact on these dwelling units, **Table 8** and **Table 9** provide ANEC and N70 counts for the Marcoola accommodation units. Mapping for these counts has also been included in the attached map package.

Table 8 Accommodation unit counts – ANEC

ANEC					
Community facility	2012 (existing)	2020 (do min)	2040 (do min)	2020 (new runway)	2040 (new runway)
ANEC20	307	543	543	543	343
ANEC25	0	0	0	0	200
ANEC30	0	0	0	0	0
ANEC35	0	0	0	0	0

Table 9 Accommodation unit counts – N70 Summer weekday day

N70 summer weekday day (7am – 6pm)					
Community facility	2012 (existing)	2020 (do min)	2040 (do min)	2020 (new runway)	2040 (new runway)
5-9 events	0	0	0	0	0
10-19 events	200	0	0	0	0
20-49 events	343	543	436	543	543
50+ events	0	0	107	0	0

6 Predicted operational noise impacts

A range of questions have been asked about how the new runway alignment will change contours that dwellings are located within. Tables 6, 7, 8 and 9 compare the ANEC and N70 2020 and 2040 and provide dwellings counts for the changes between the do minimum and new runway scenarios.

A series of comparison maps for the ANEC and N70 (summer weekday day) have been prepared and are attached to this memo to help explain the changes between the 2020 and 2040 do minimum and new runway scenarios.

Please note that ANEC/ANEF are composite measures and do not describe noise levels. See EIS chapters D3: Aircraft Noise and D5: Social and Visual Impacts for a full description of the ANEC and ANEF.

Table 10 Difference in number of dwellings in ANEC 2020 (do min) and 2020 (new runway)

ANEC contour	Number of dwellings in ANEC 2020 (do min)	Number of dwellings in ANEC 2020 (new run)	Dwellings located in the same ANEC contour	Dwellings moved from a lower ANEC to a higher ANEC	Dwellings moved from a higher ANEC to a lower ANEC	Dwellings no longer in ANEC	Dwellings newly in ANEC
				from a lower ANEC to a higher ANEC	from a higher ANEC to a lower ANEC	no longer in ANEC	newly in ANEC
ANEC20	1,162	879	681	0	68 (down from ANEC25)	465	130
ANEC25	320	230	190	16 (up from ANEC20)	24 (down from ANEC30)	57	0
ANEC30	67	46	40	5 (up from ANEC25)	1 (down from ANEC35)	0	0
ANEC35	11	13	10	3 (up from ANEC30)	0	0	0
Totals	1,560	1,168	921	24	93	522	130

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Table 11 Difference in number of dwellings in ANEC 2040 (do min) and 2040 (new runway)

ANEC contour	Number of dwellings in ANEC 2040 (do min)	Number of dwellings in ANEC 2040 (new run)	Number of dwellings located in the same ANEC contour	Dwellings moved from lower ANEC to a higher ANEC	Dwellings moved from a higher ANEC to a lower ANEC	Dwellings no longer in ANEC	Dwellings newly in ANEC
ANEC20	1,510	926	450	0	116 (down from ANEC25) 25 (down from ANEC30)	730	335
ANEC25	430	559	118	330 (up from ANEC20)	60 (down from ANEC30)	196	51
ANEC30	85	0	0	0	0	0	0
ANEC35	0	0	0	0	0	0	0
Totals	2,025	1,485	568	330	201	926	386

Table 12 Difference in number of dwellings in N70 contours 2020 (do min) and 2020 (new runway) on a summer weekday day

N70 contour	Number of dwellings in N70 2020 (do min)	Number of dwellings in N70 2020 (new run)	Number of dwellings located in the same N70 contour	Dwellings moved from lower N70 to a higher N70	Dwellings moved from a higher N70 to a lower N70	Dwellings no longer in N70	Dwellings newly in N70
5-9 events	2,320	199	0	0	16 (down from 10 – 19 events) 168 (down from 20-49 events)	2,067	15
10 – 19 events	1,175	351	113	103 (up from 5-9 events)	121 (down from 20 – 49 events) 7 (down from 50+)	919	7
20 – 49 events	1,666	1,288	832	150 (up from 5-9) 127 (up from 10-19)	179 (down from 50+ events)	545	0
50+ events	186	0	0	0	0	0	0
Totals	5,347	1,838	945	380	491	3,531	22

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Table 13 Difference in number of dwellings in N70 contours 2040 (do min) and 2040 (new runway) on a summer weekday day

N70 contour	Number of dwellings in N70 in 2040 (do min)	Number of dwellings in N70 in 2040 (new run)	Dwellings located in the same N70 contour	Dwellings moved from a lower N70 to a higher N70	Dwellings moved from a higher N70 to a lower N70	Dwellings no longer in N70	Dwellings newly in N70
5-9 events	2,055	164	0	0	146 (down from 20-49 events) 14 (down from 50+ events)	1,973	4
10 – 19 events	2,577	137	25	0	77 (down from 20-49 events) 19 (down from 50+ events)	2,260	16
20 – 49 events	2,025	1,364	696	82 (up from 5-9 events) 292 (up from 10-19 events)	287 (down from 50+ events)	1,079	7
50+ events	503	210	183	27 (up from 20 – 49 events)	0	0	0
Totals	7,160	1,875	904	401	543	5,312	27

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ANEC

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APPENDIX L

Additional aircraft noise maps and information (continued)

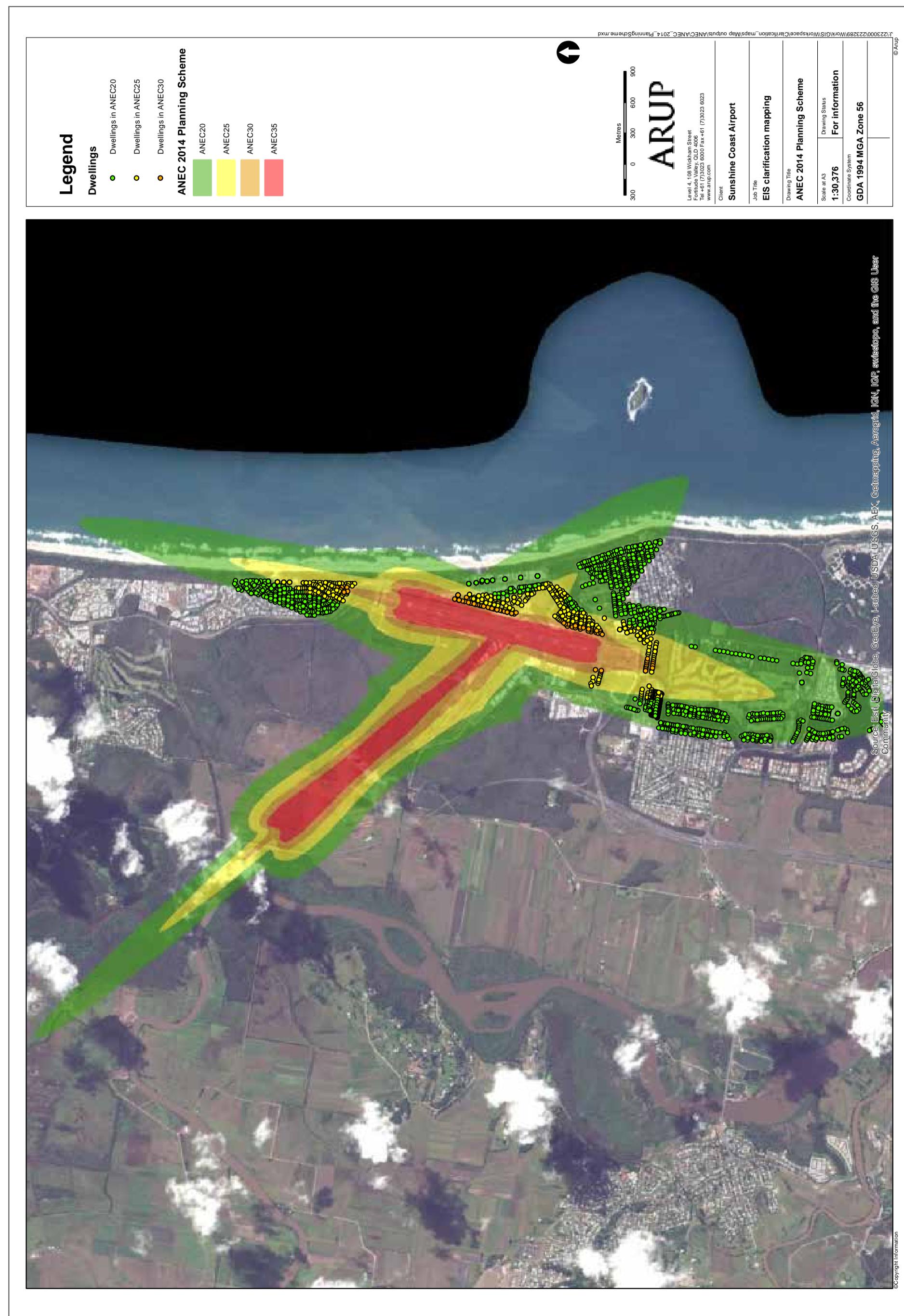


Additional aircraft noise maps and information (continued)



APPENDIX L

Additional aircraft noise maps and information (continued)



N70

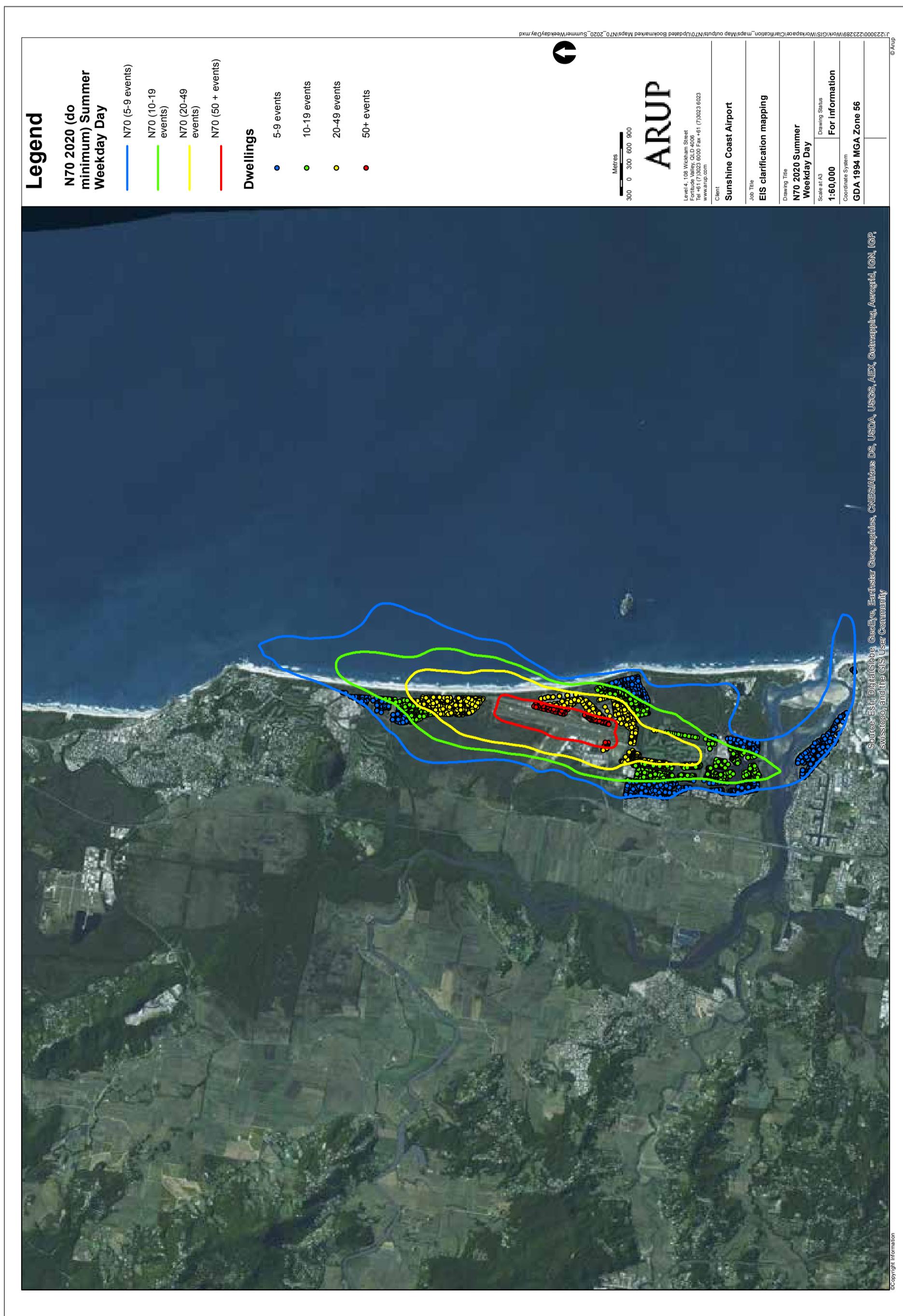
Summer weekday day

APPENDIX L

Additional aircraft noise maps and information (continued)

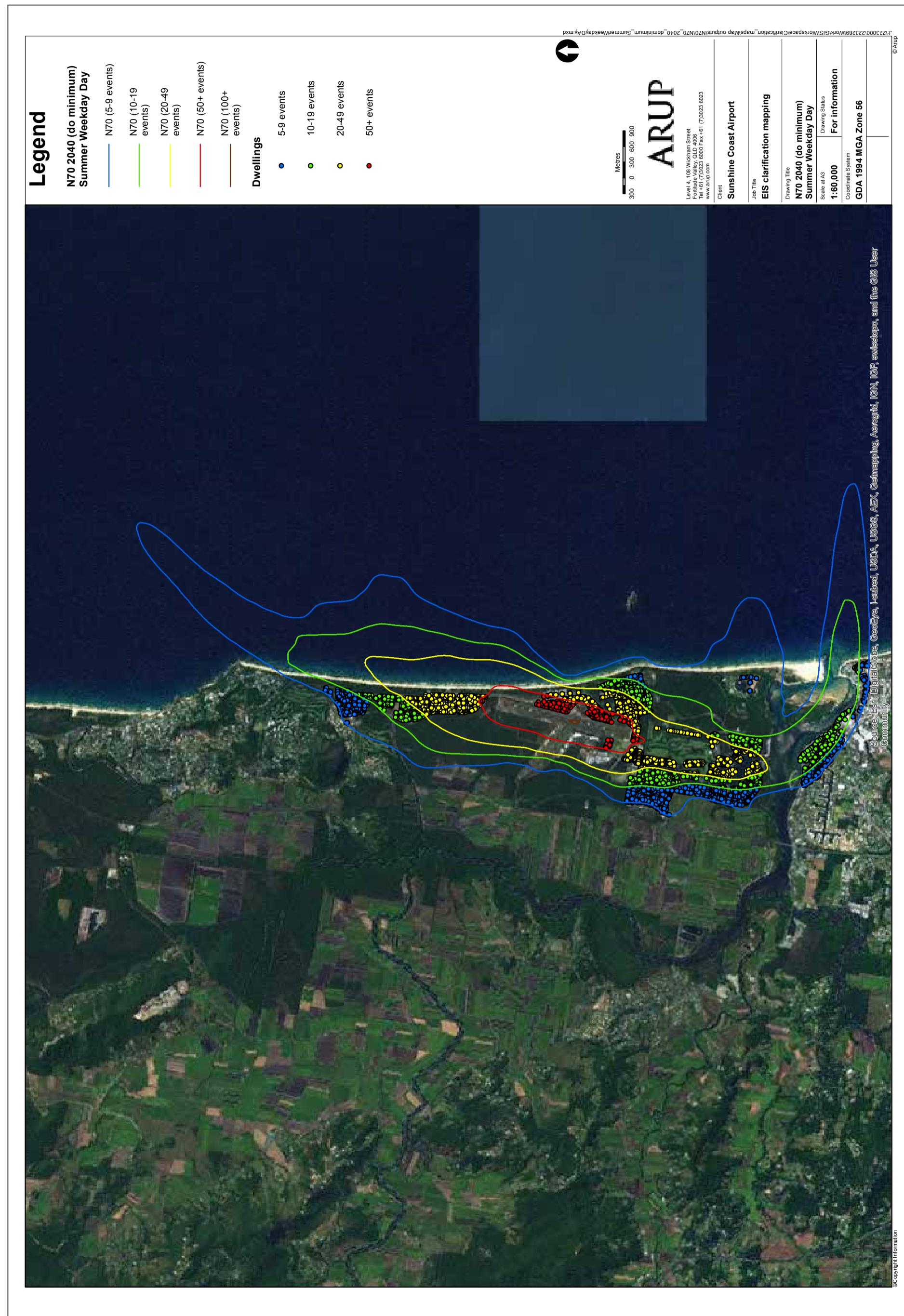


Additional aircraft noise maps and information (continued)



APPENDIX L

Additional aircraft noise maps and information (continued)

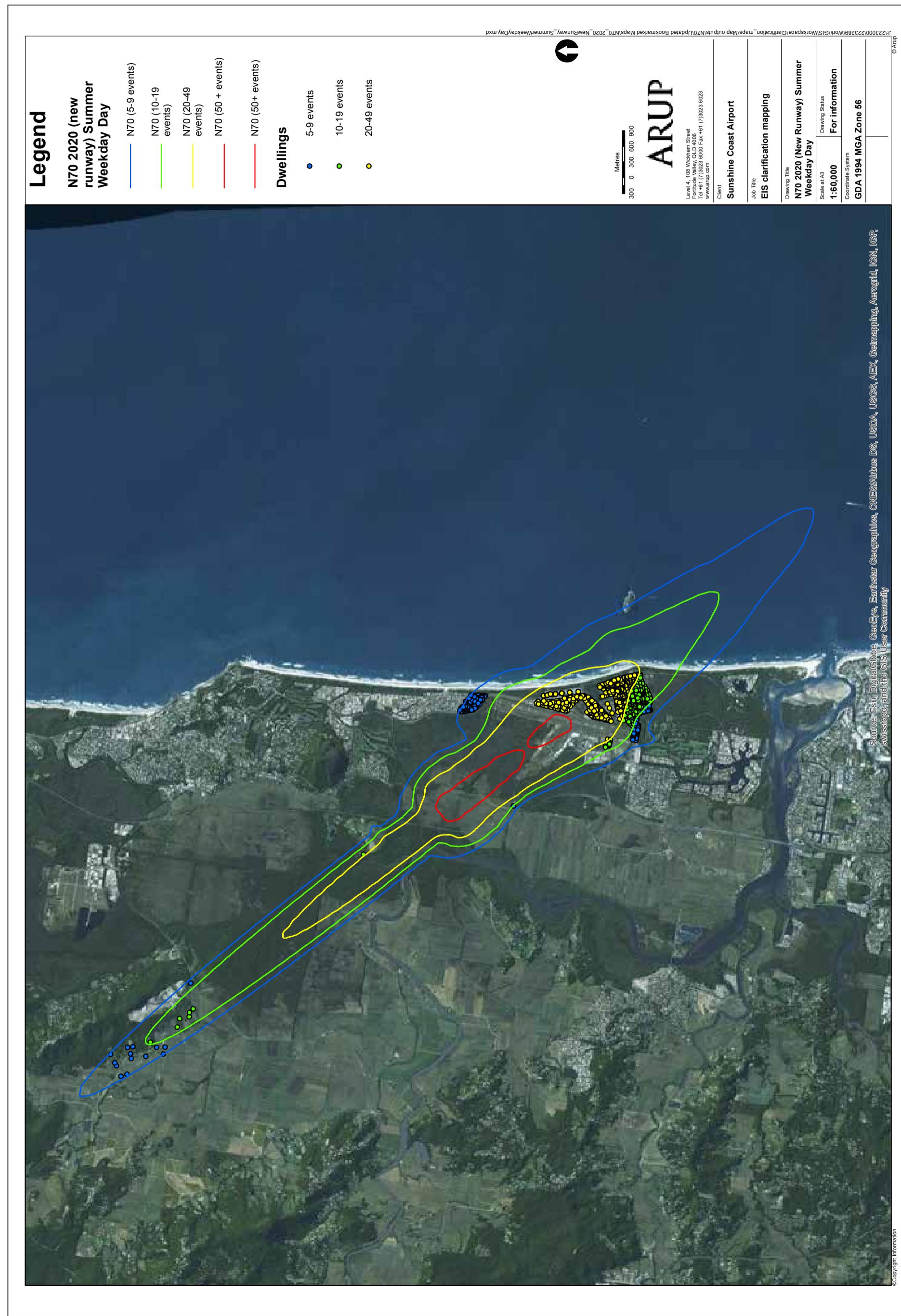


Additional aircraft noise maps and information (continued)



APPENDIX L

Additional aircraft noise maps and information (continued)



Additional aircraft noise maps and information (continued)

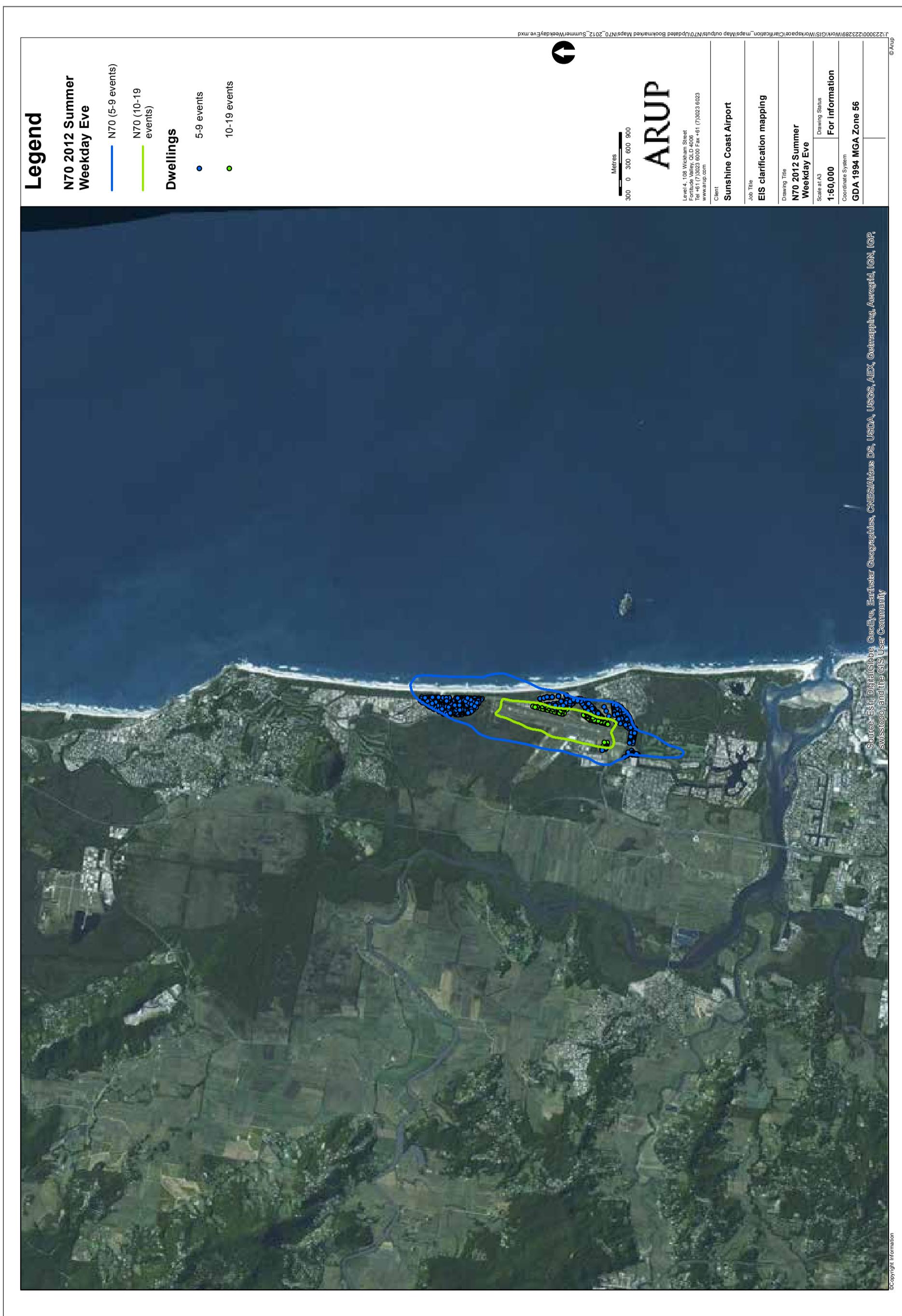


APPENDIX L

Additional aircraft noise maps and information (continued)

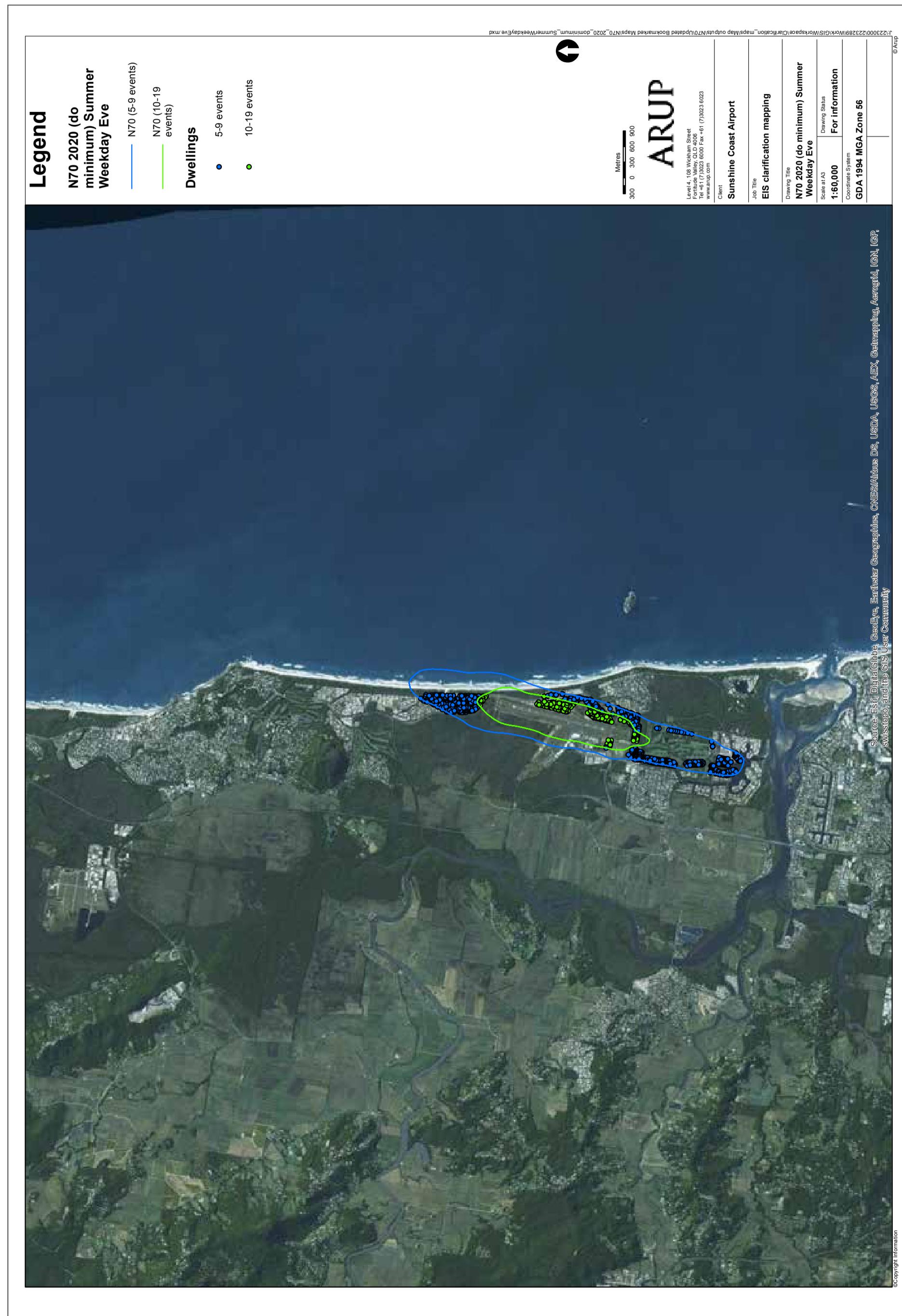
N70
Summer week day
evening

Additional aircraft noise maps and information (continued)



APPENDIX L

Additional aircraft noise maps and information (continued)

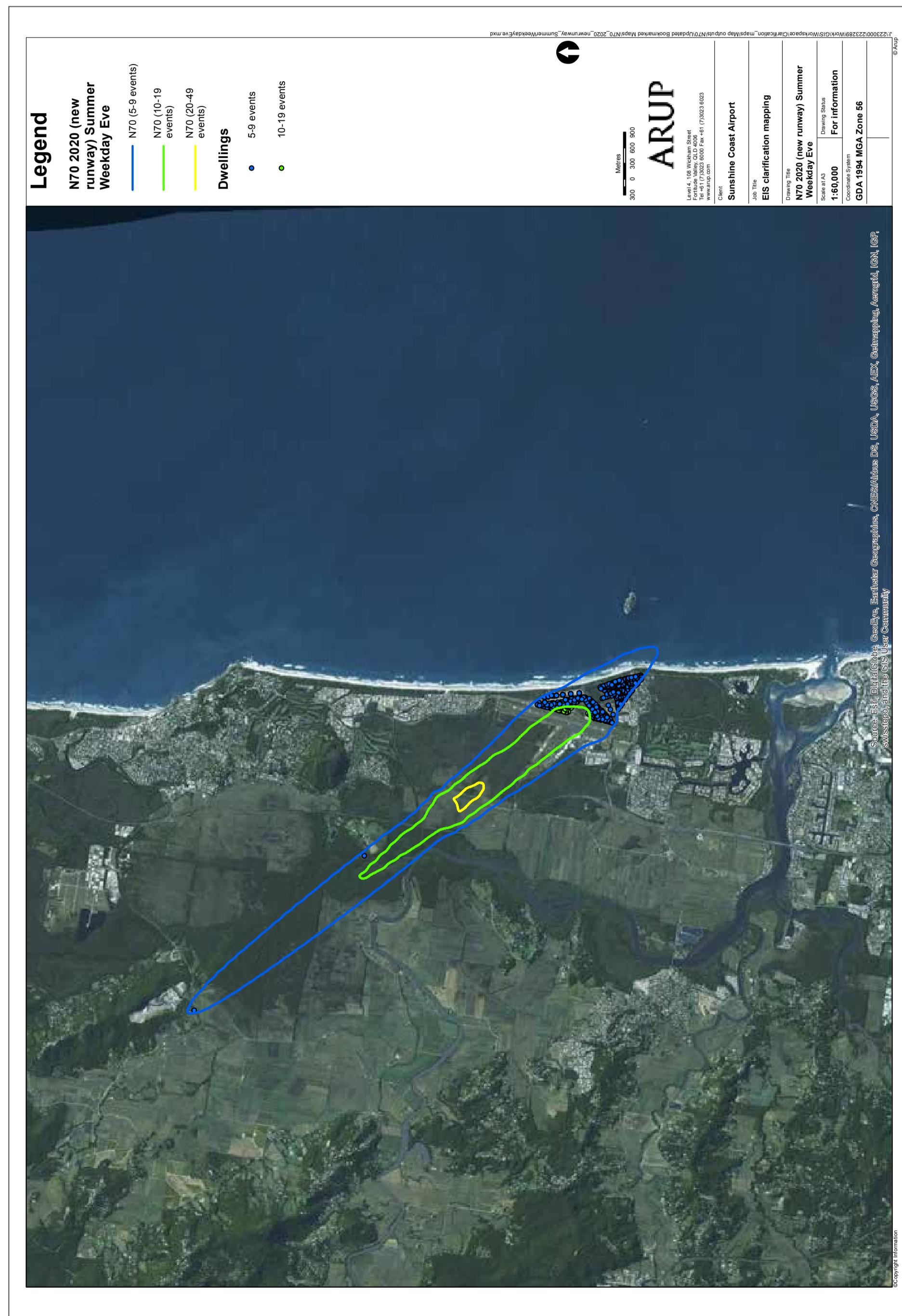


Additional aircraft noise maps and information (continued)

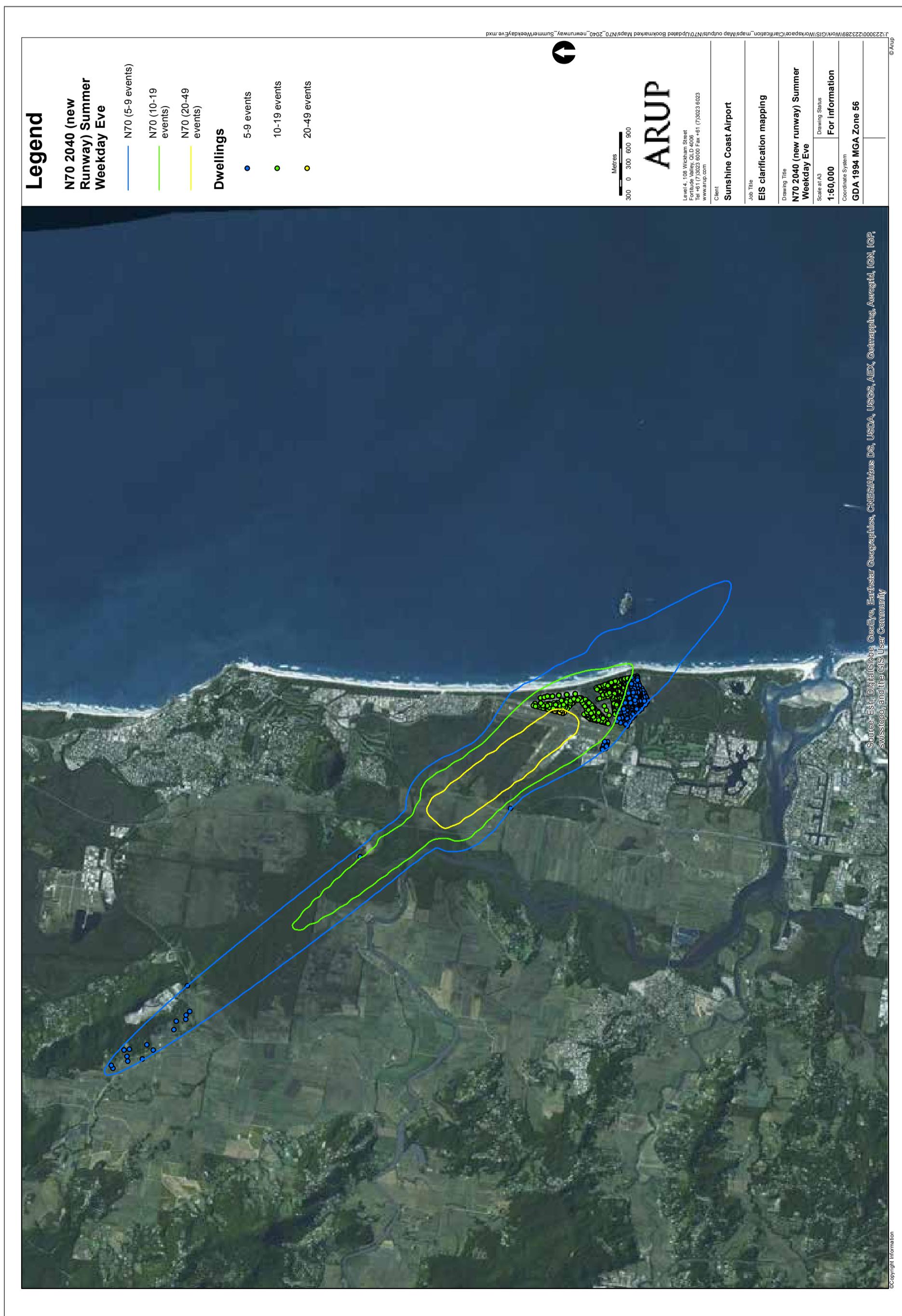


APPENDIX L

Additional aircraft noise maps and information (continued)



Additional aircraft noise maps and information (continued)



APPENDIX L

Additional aircraft noise maps and information (continued)

N60

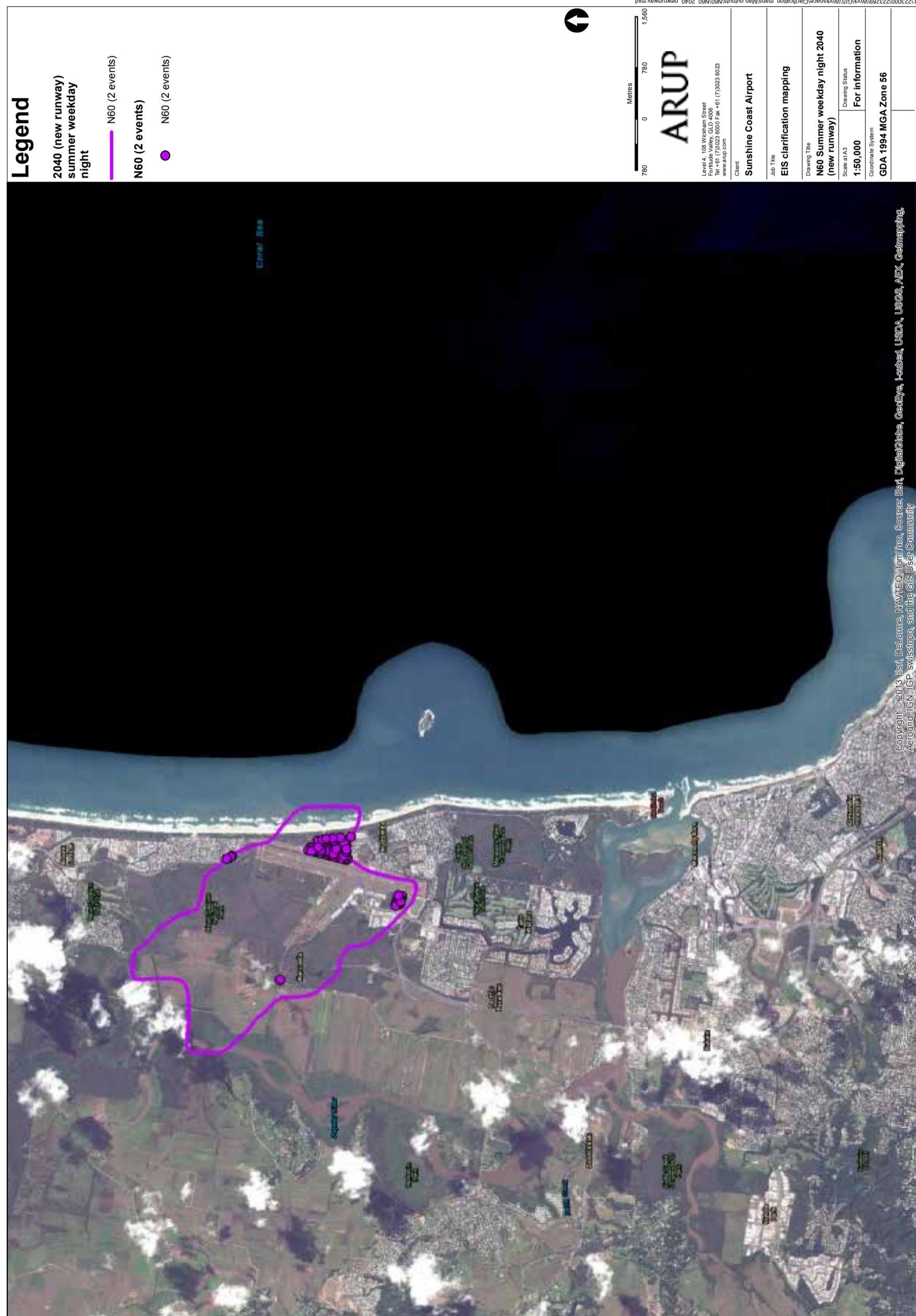
Summer weekday night

Additional aircraft noise maps and information (continued)



APPENDIX L

Additional aircraft noise maps and information (continued)



ANEC suburb comparisons

APPENDIX L

Additional aircraft noise maps and information (continued)

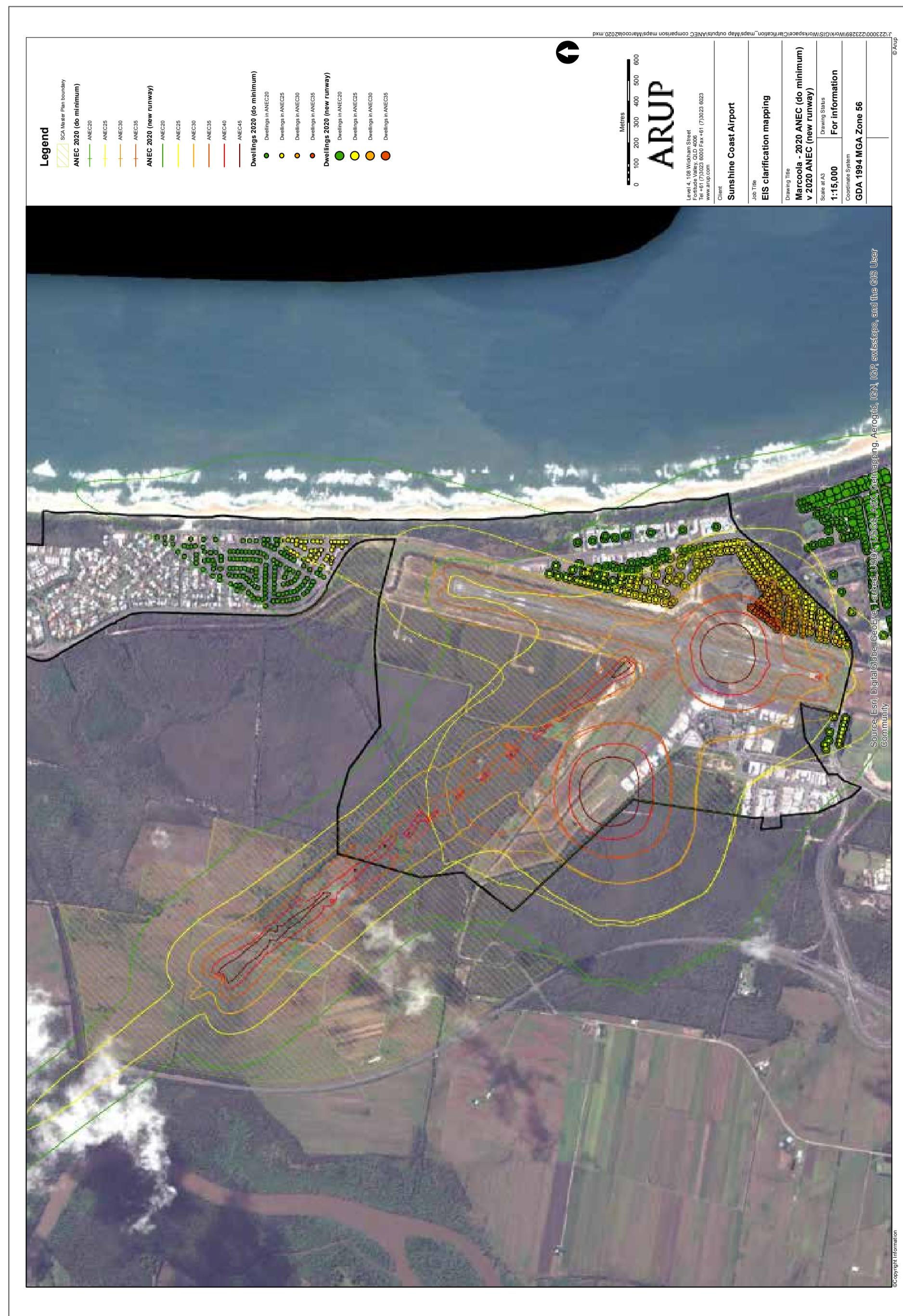


Additional aircraft noise maps and information (continued)



APPENDIX L

Additional aircraft noise maps and information (continued)

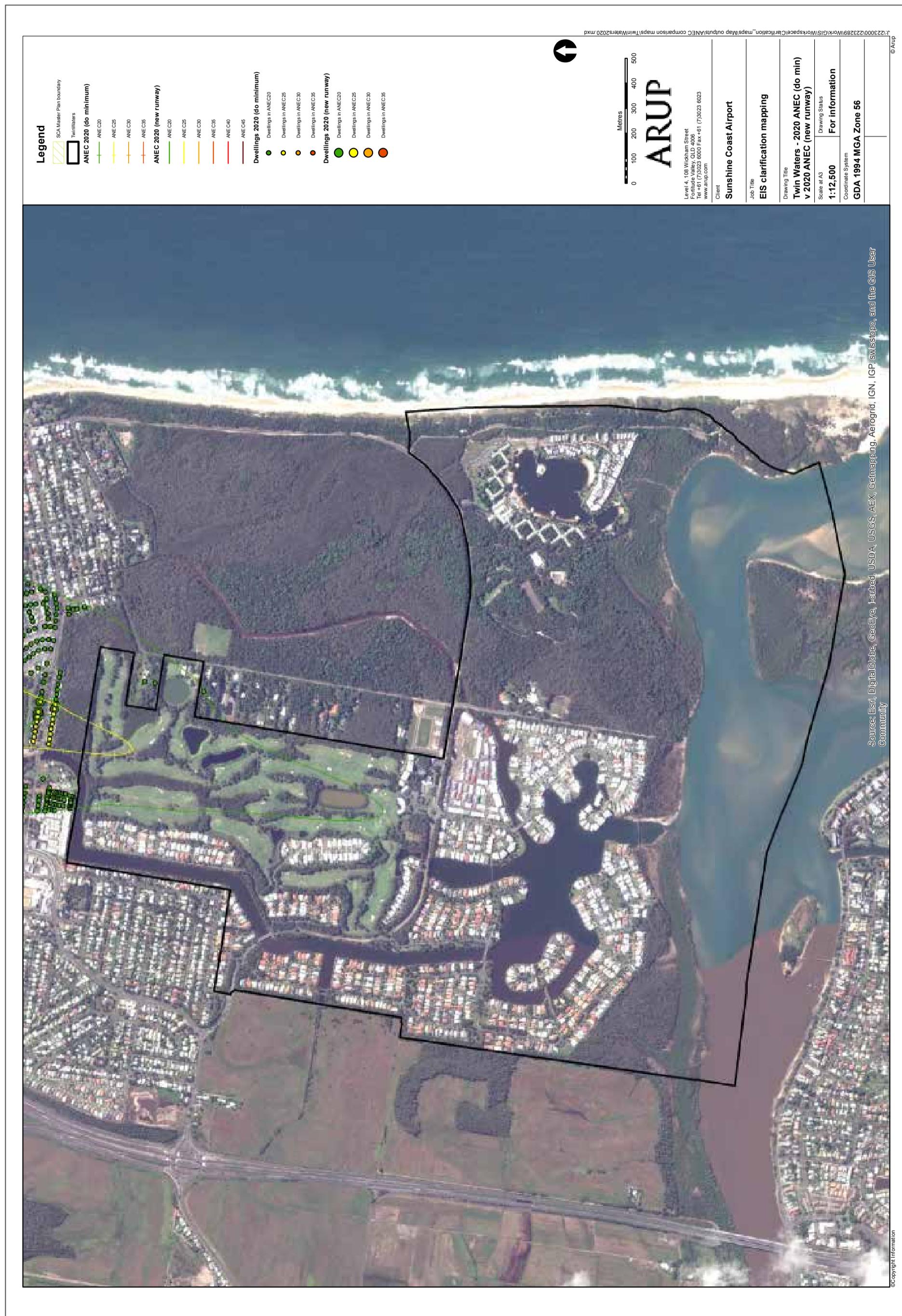


Additional aircraft noise maps and information (continued)



APPENDIX L

Additional aircraft noise maps and information (continued)

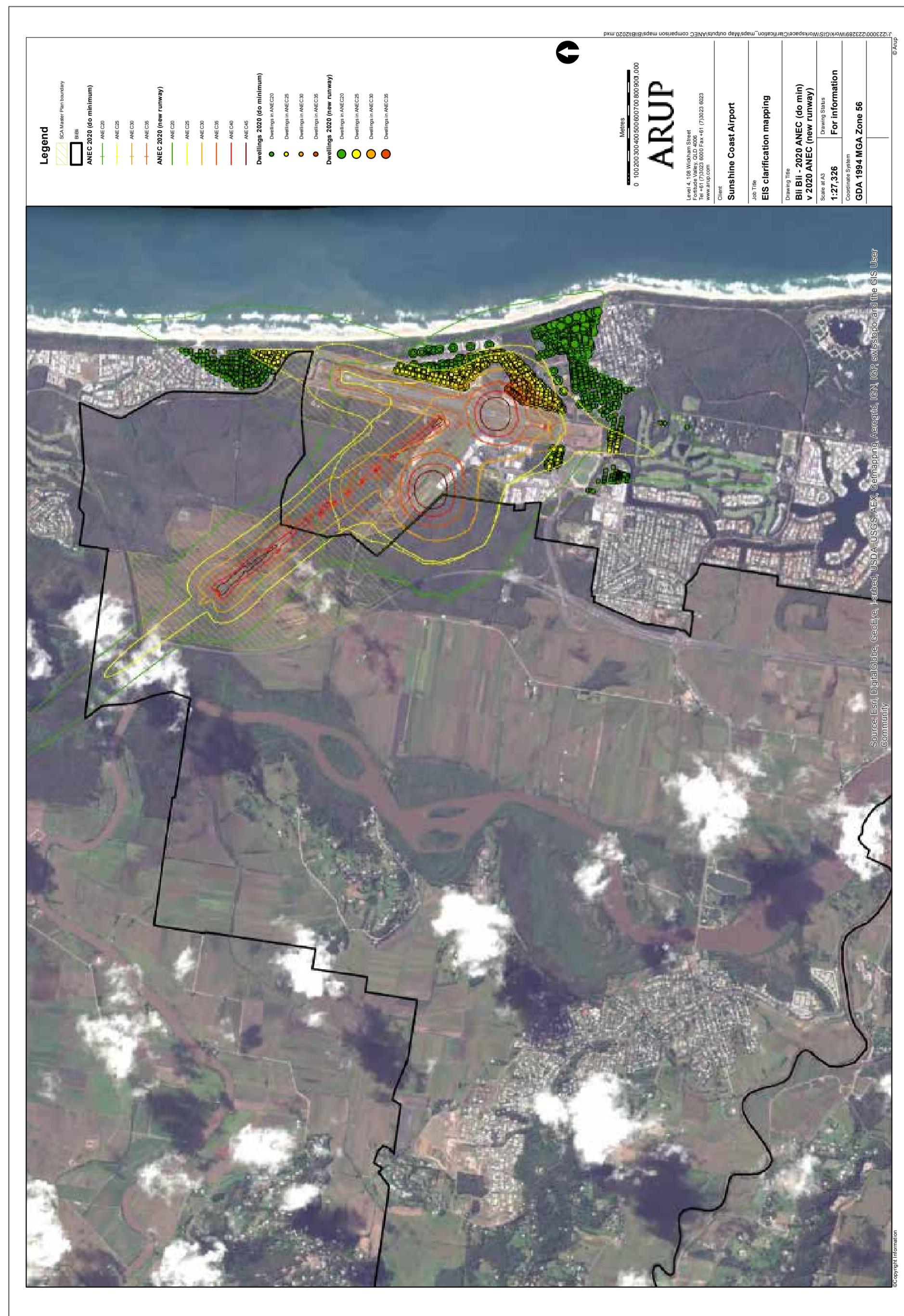


Additional aircraft noise maps and information (continued)

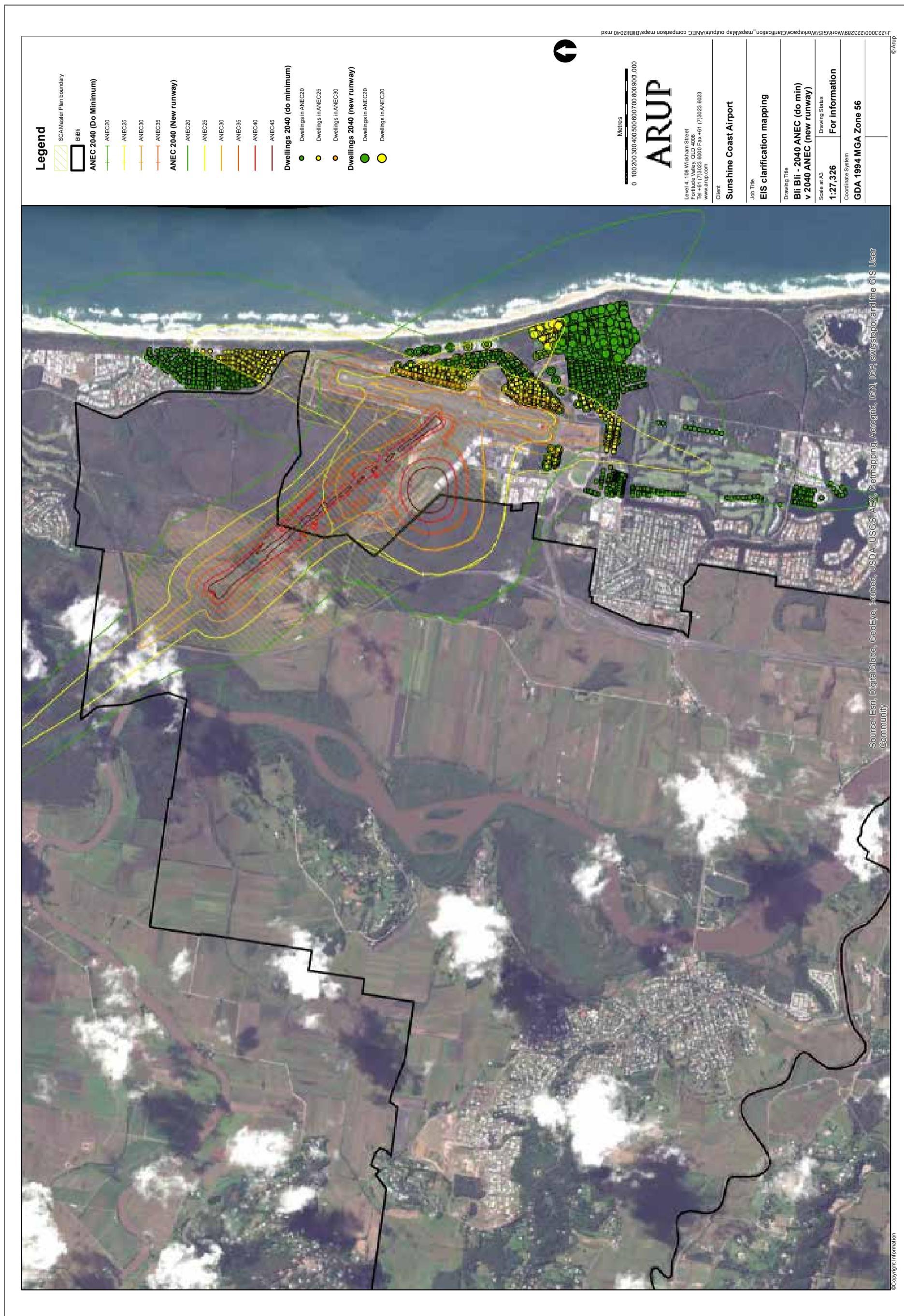


APPENDIX L

Additional aircraft noise maps and information (continued)

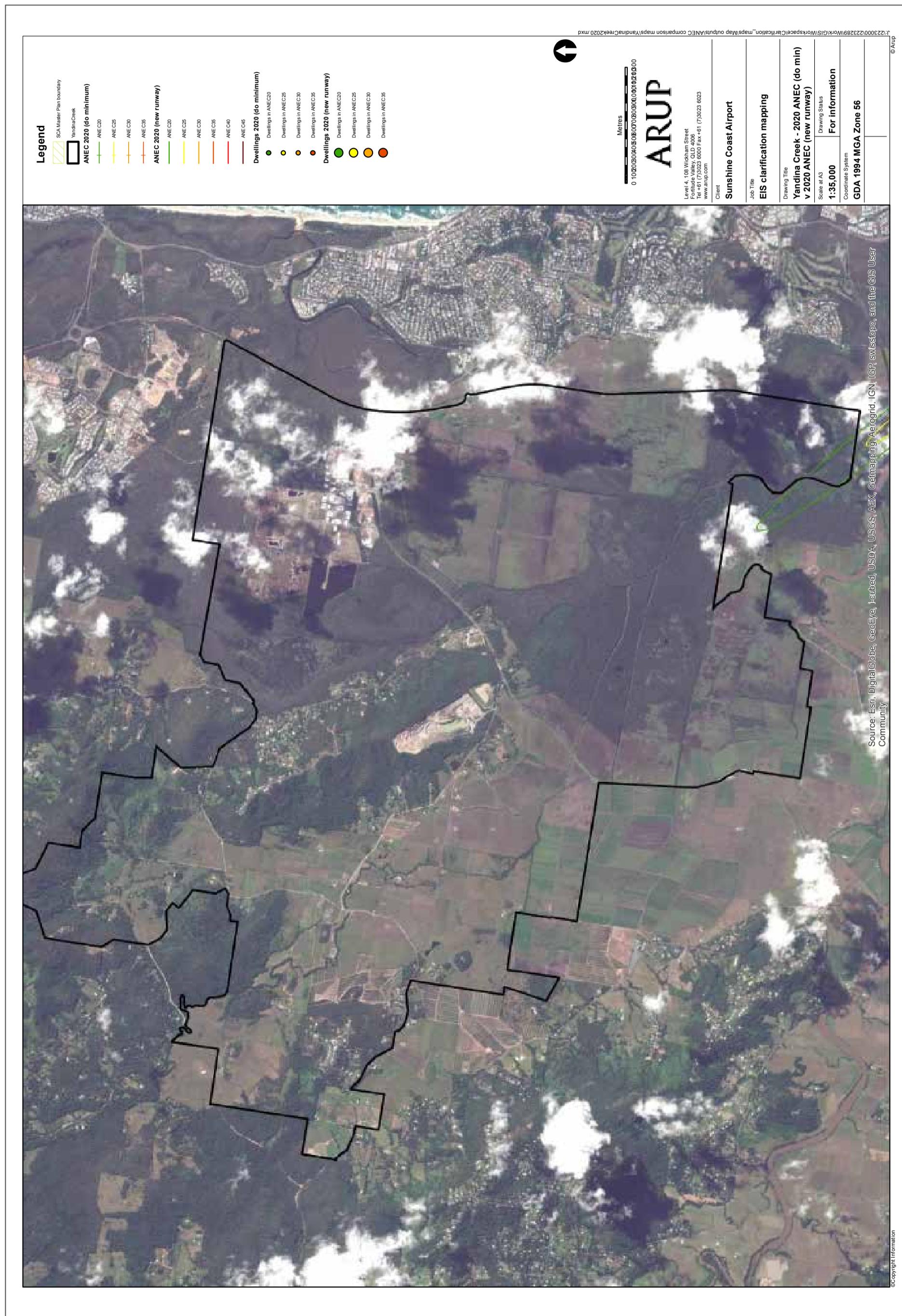


Additional aircraft noise maps and information (continued)

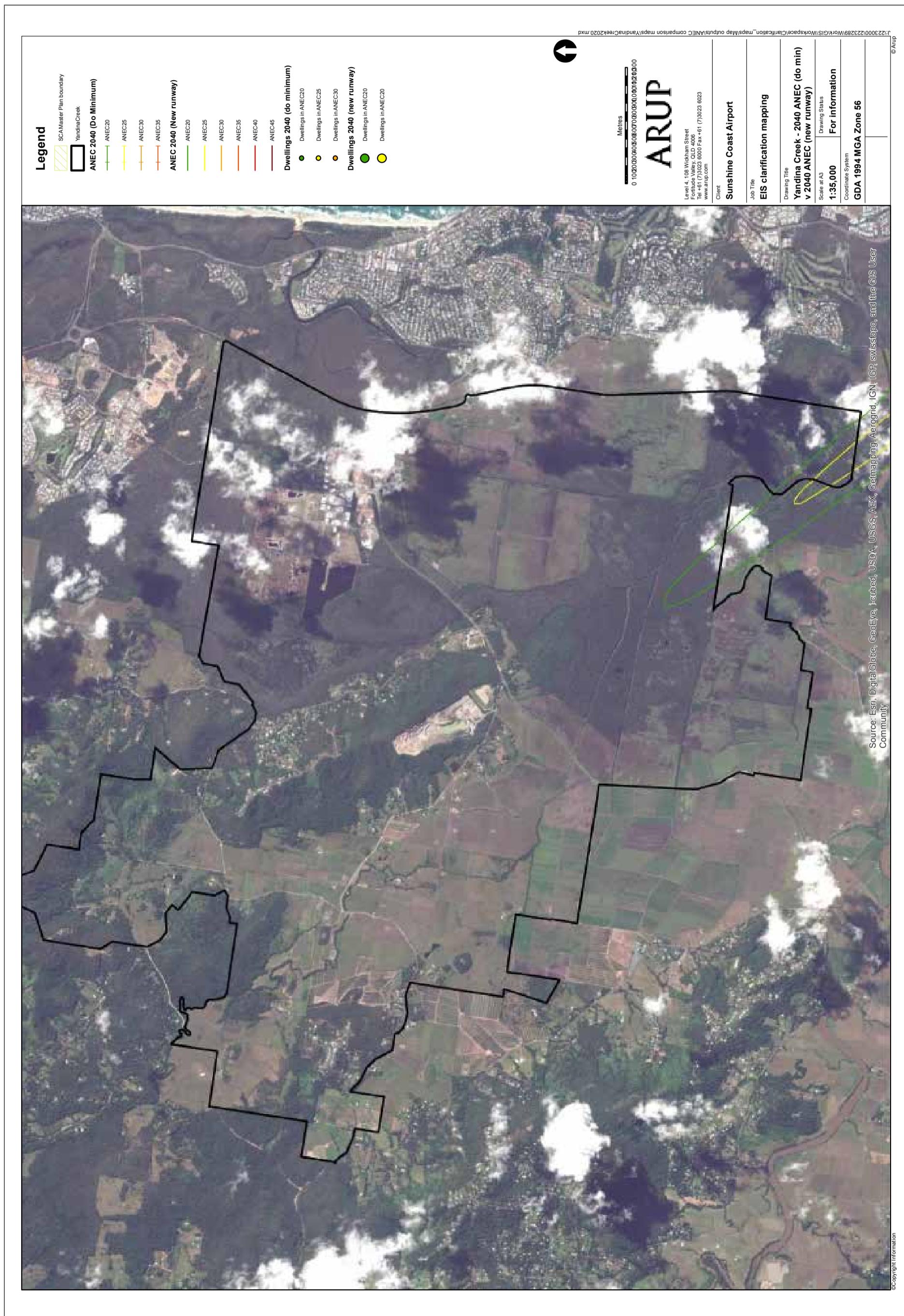


APPENDIX L

Additional aircraft noise maps and information (continued)

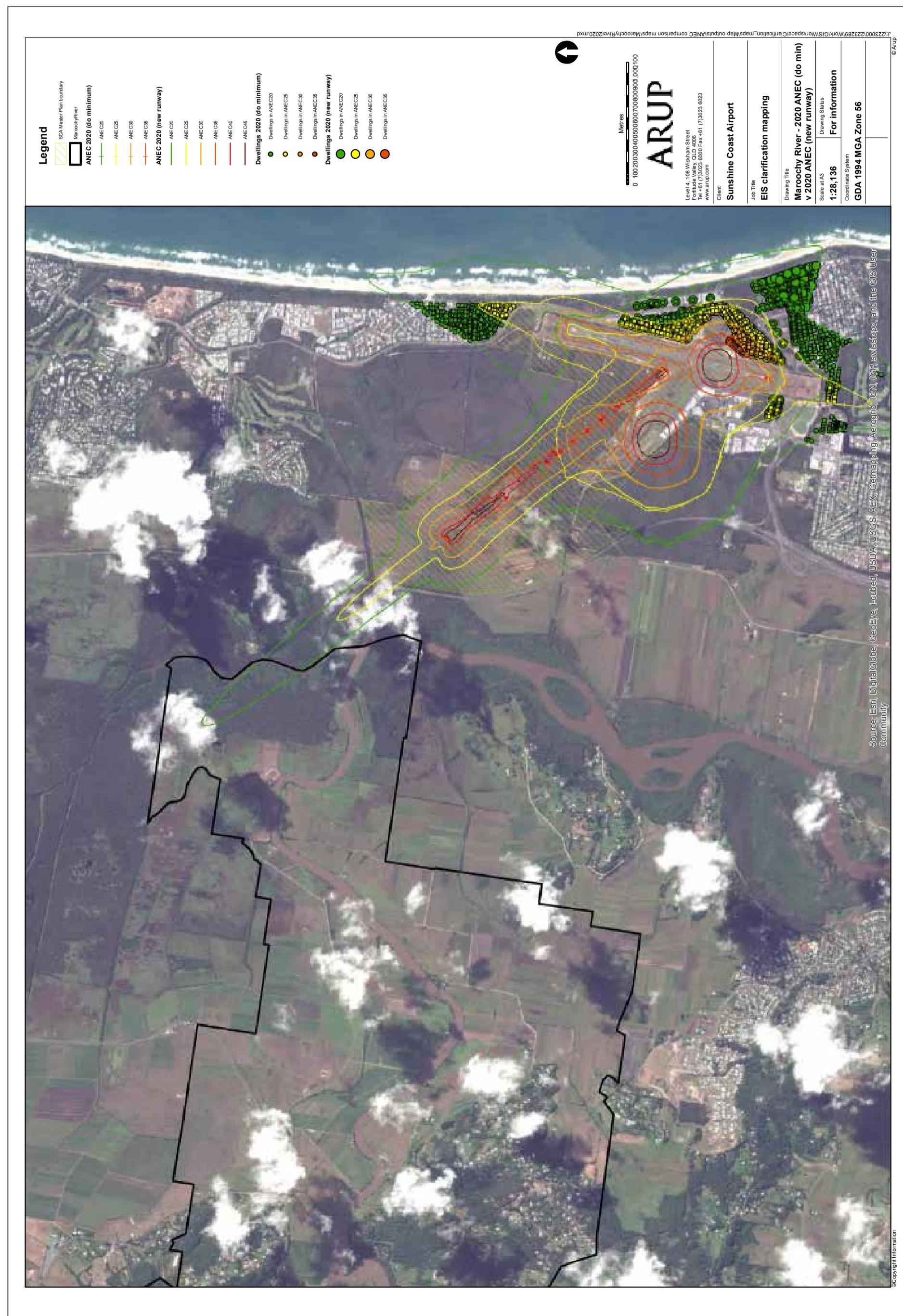


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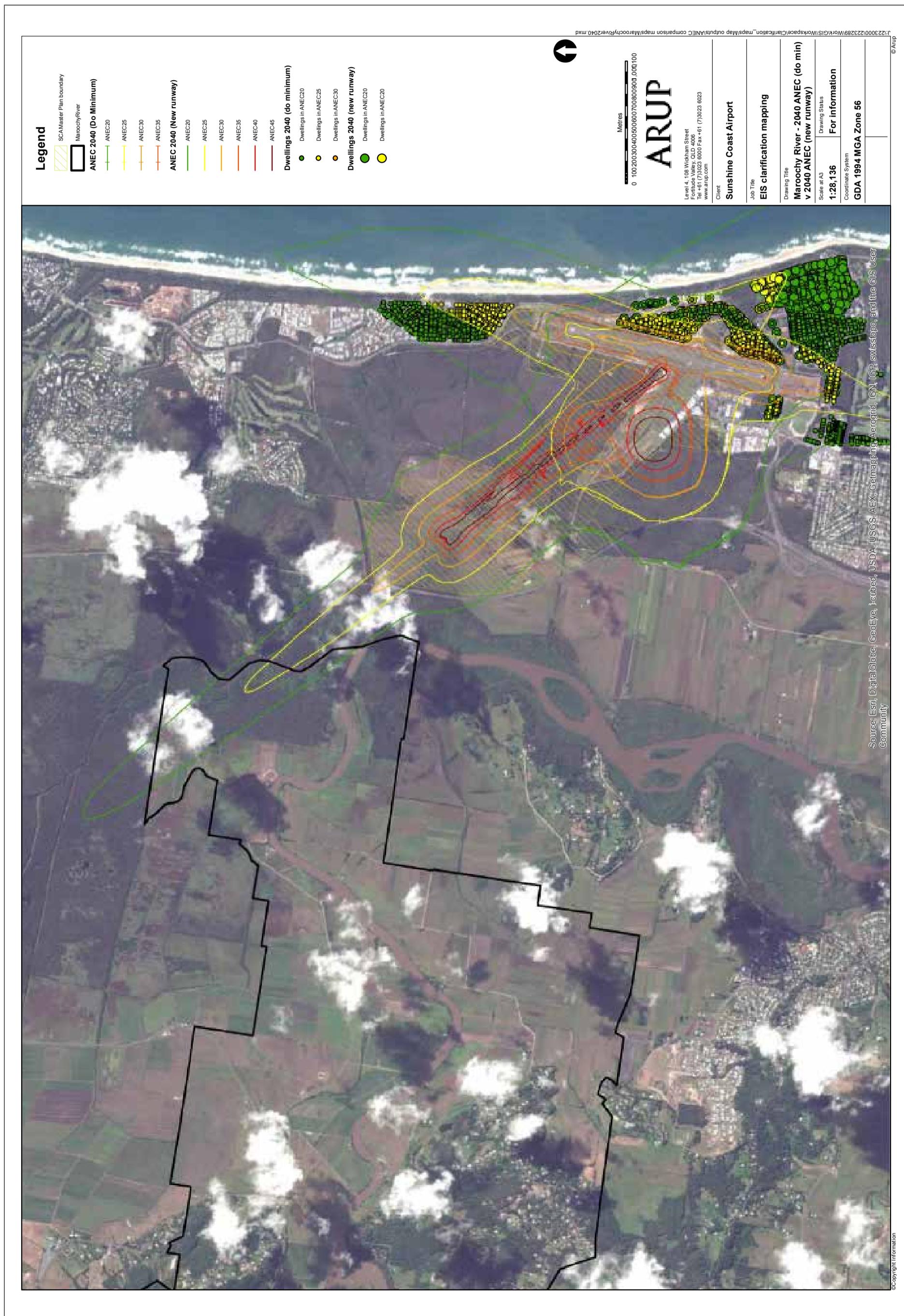


APPENDIX L

Additional aircraft noise maps and information (continued)



Additional aircraft noise maps and information (continued)



APPENDIX L

Additional aircraft noise maps and information (continued)

N70 suburb comparisons

Additional aircraft noise maps and information (continued)

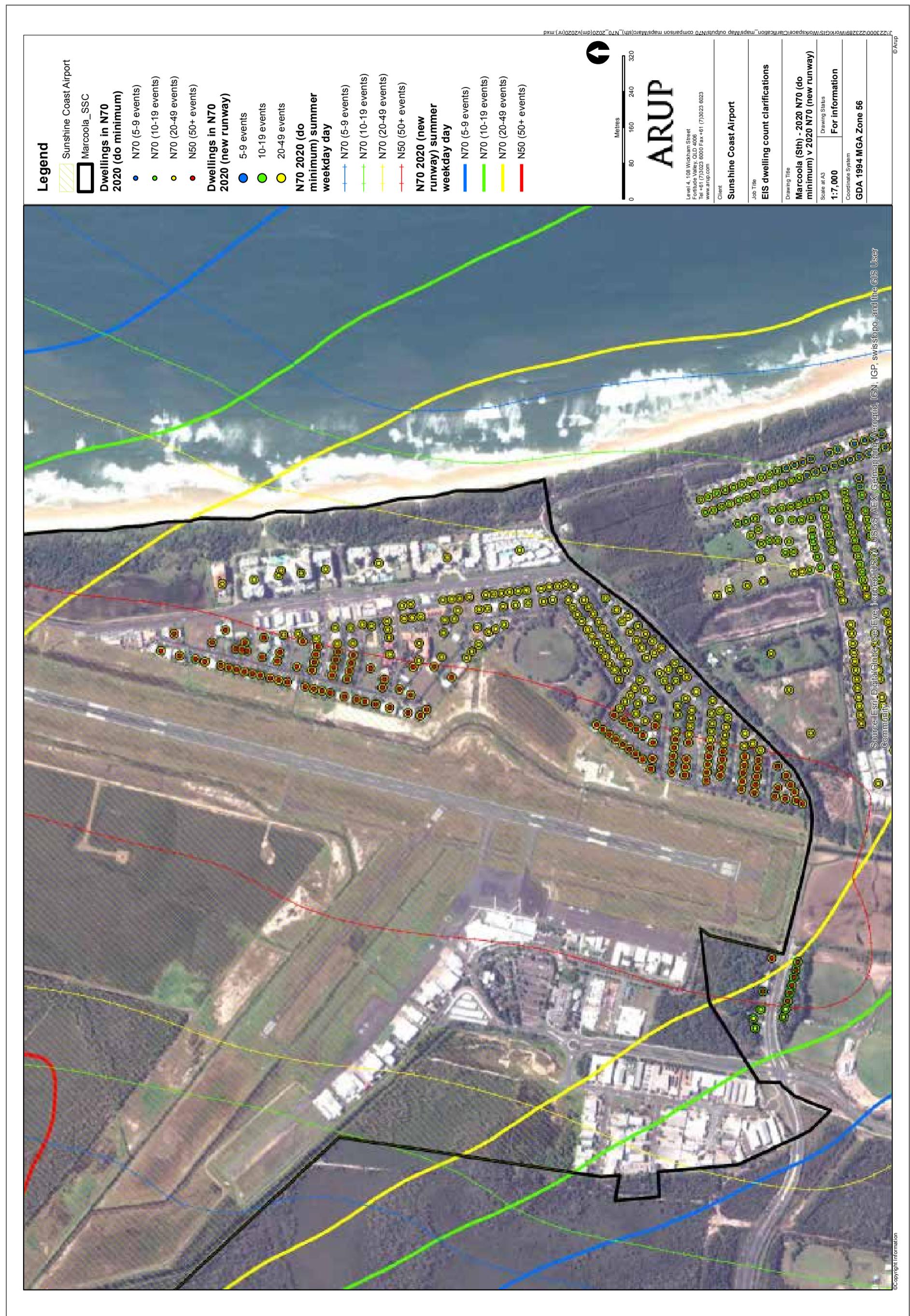


APPENDIX L

Additional aircraft noise maps and information (continued)



Additional aircraft noise maps and information (continued)

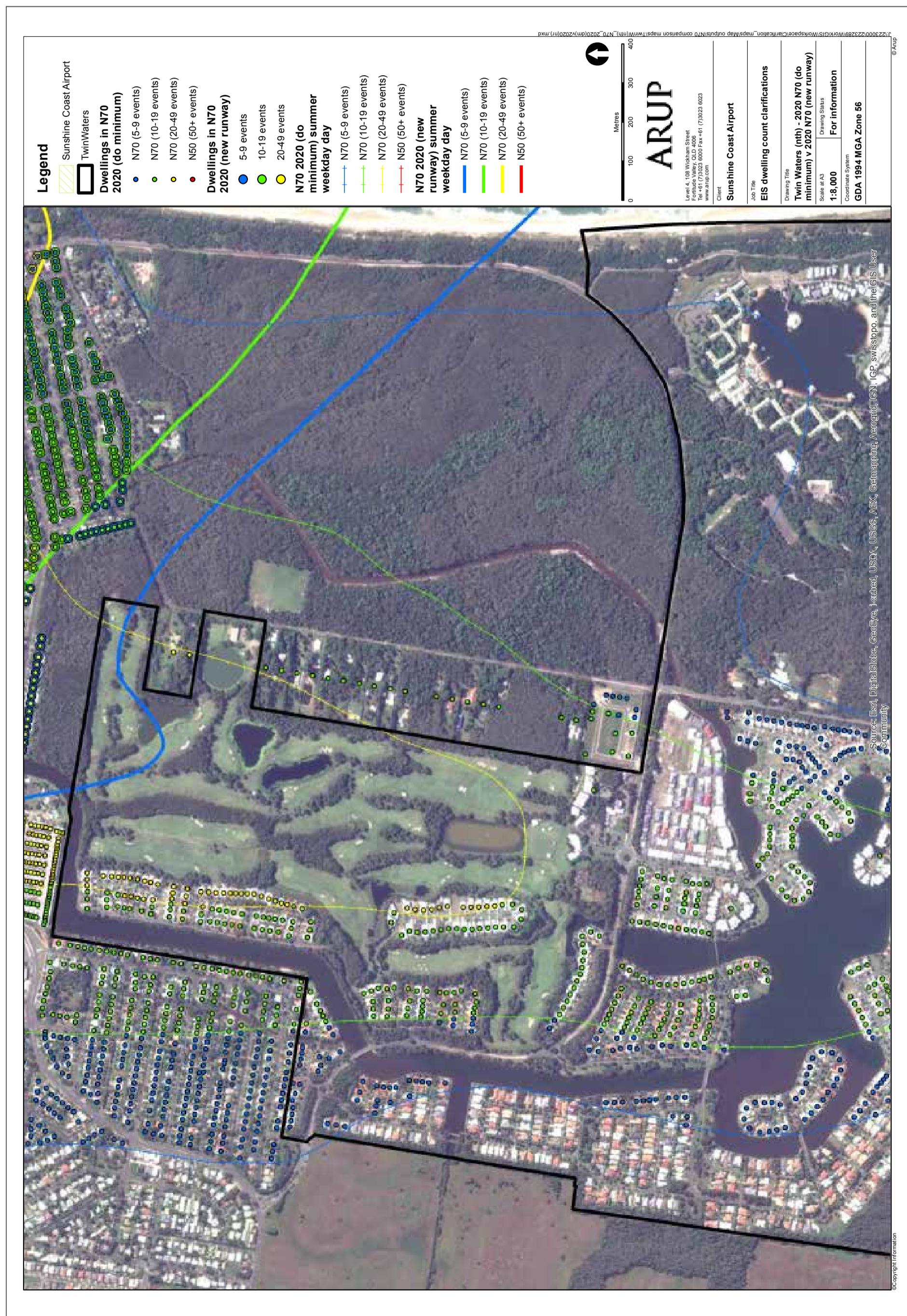


APPENDIX L

Additional aircraft noise maps and information (continued)



Additional aircraft noise maps and information (continued)

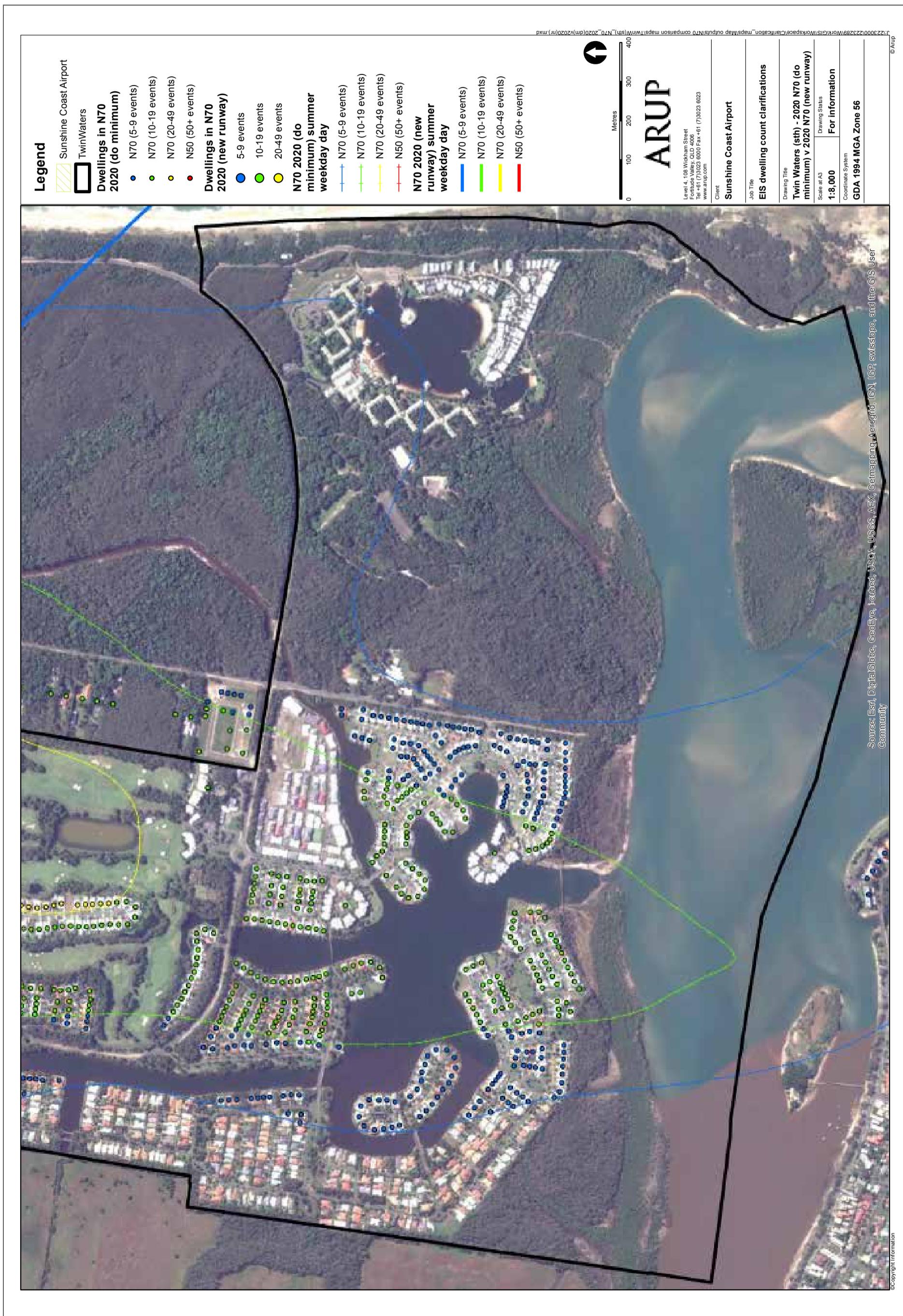


APPENDIX L

Additional aircraft noise maps and information (continued)

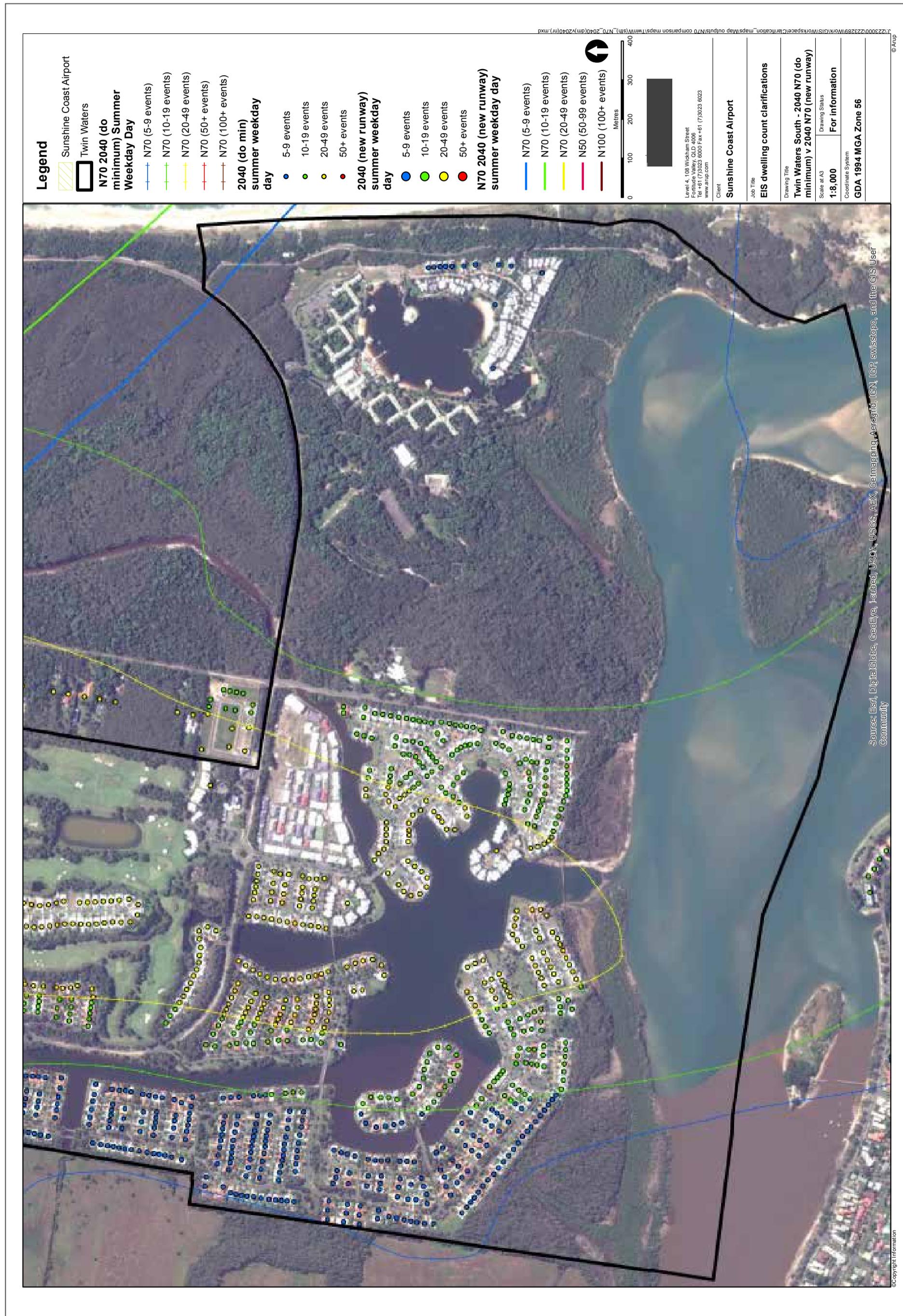


Additional aircraft noise maps and information (continued)



APPENDIX L

Additional aircraft noise maps and information (continued)



Additional aircraft noise maps and information (continued)



APPENDIX L

Additional aircraft noise maps and information (continued)



Additional aircraft noise maps and information (continued)



APPENDIX L

Additional aircraft noise maps and information (continued)



Additional aircraft noise maps and information (continued)

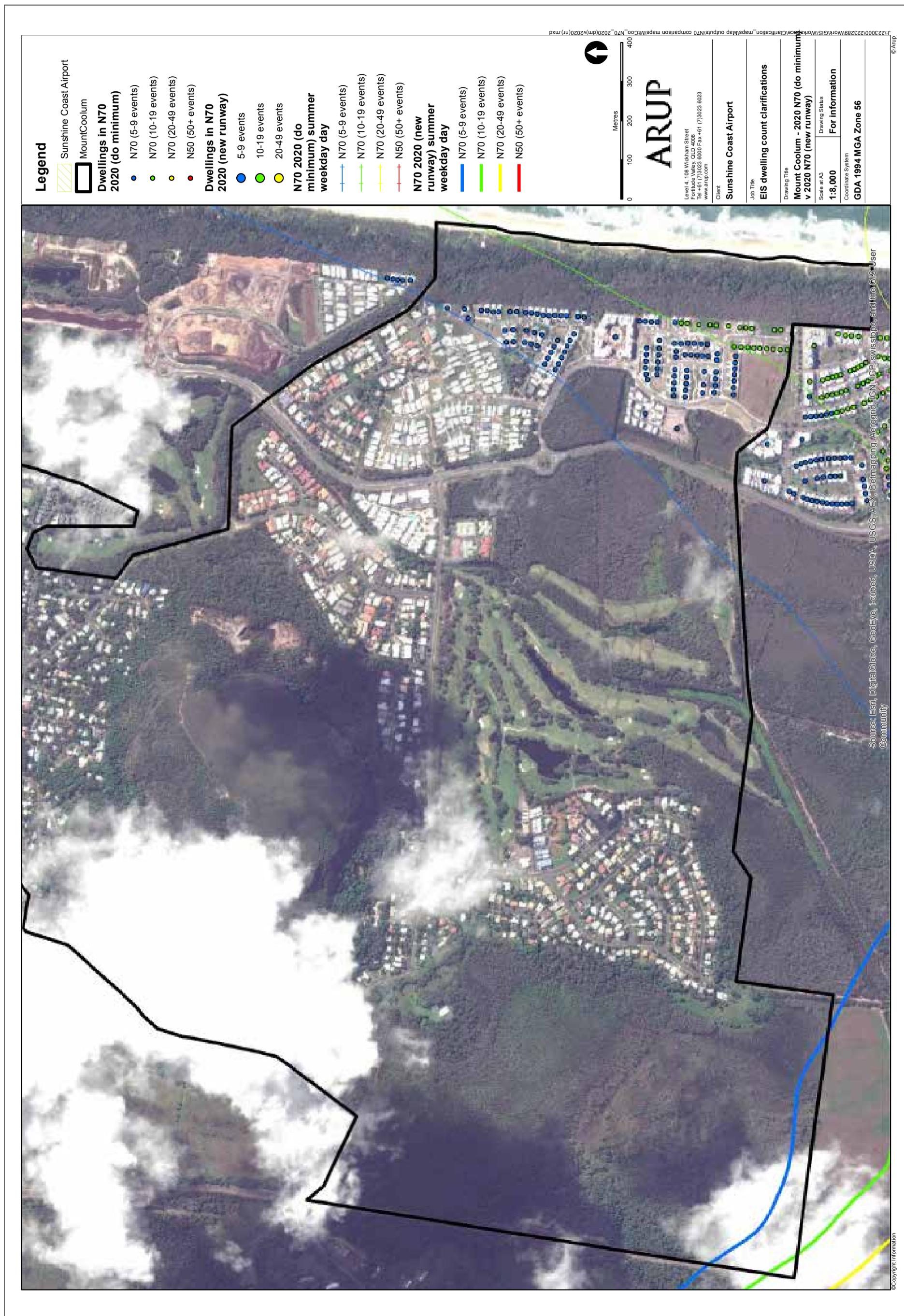


APPENDIX L

Additional aircraft noise maps and information (continued)

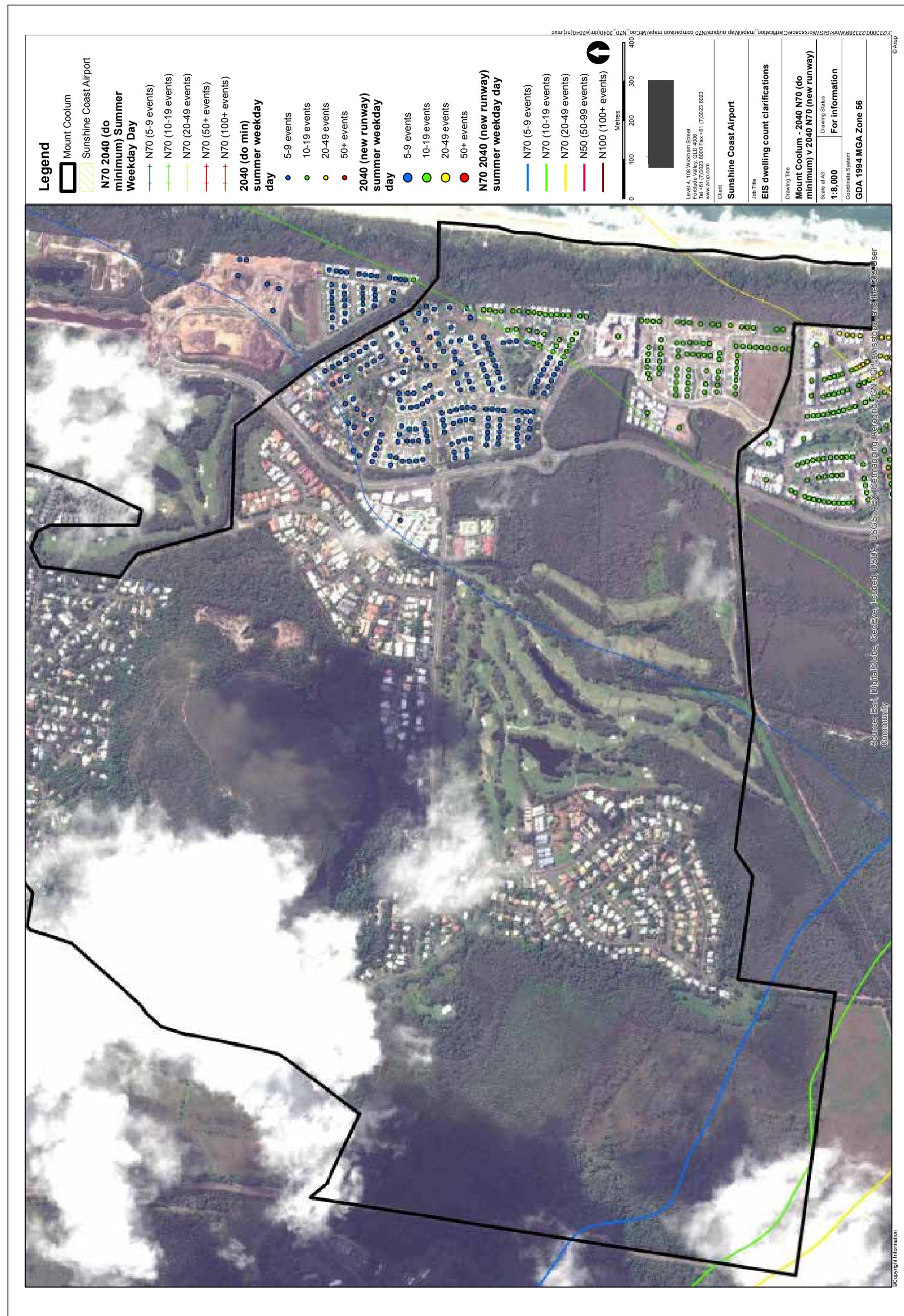


Additional aircraft noise maps and information (continued)

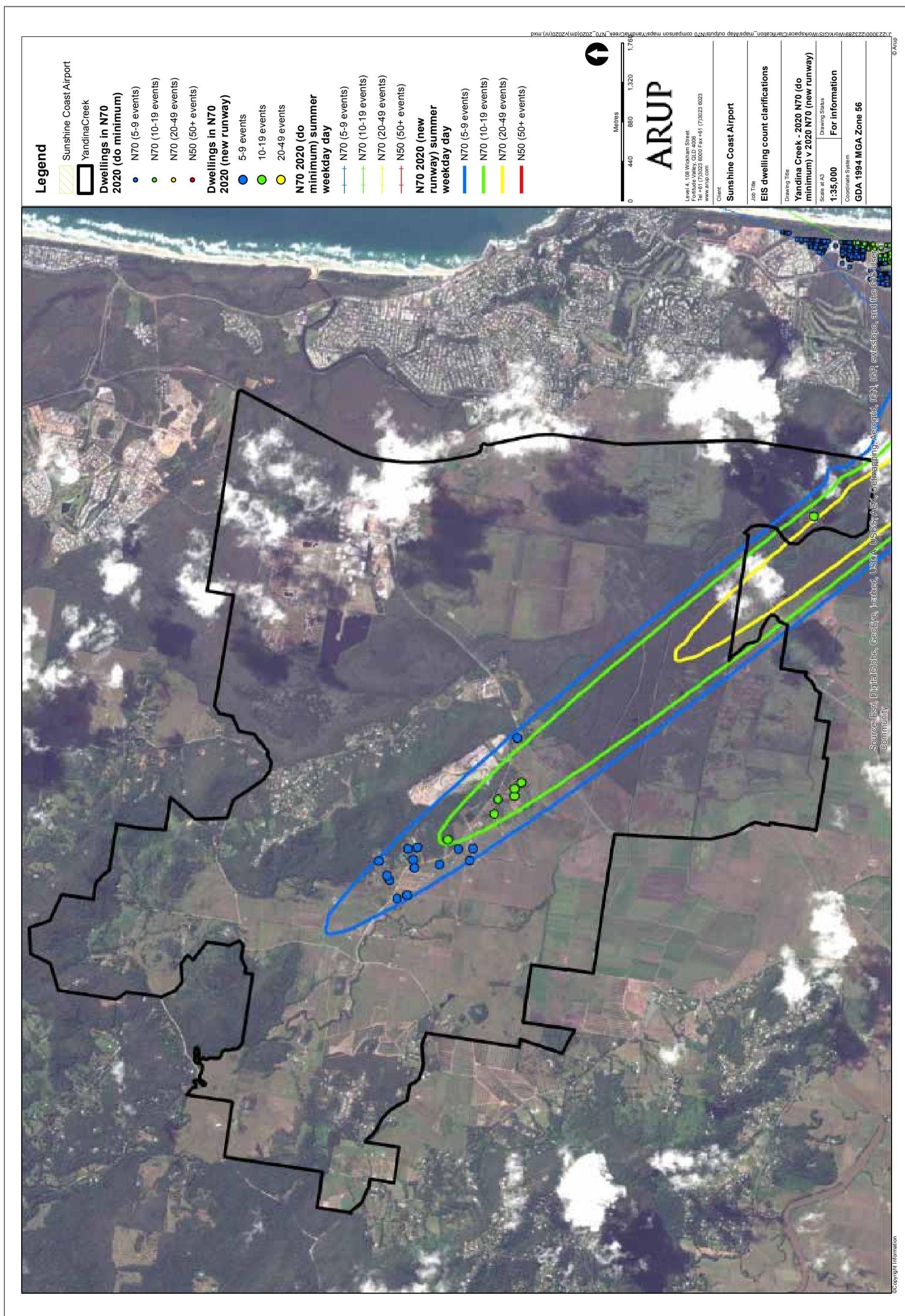


APPENDIX L

Additional aircraft noise maps and information (continued)

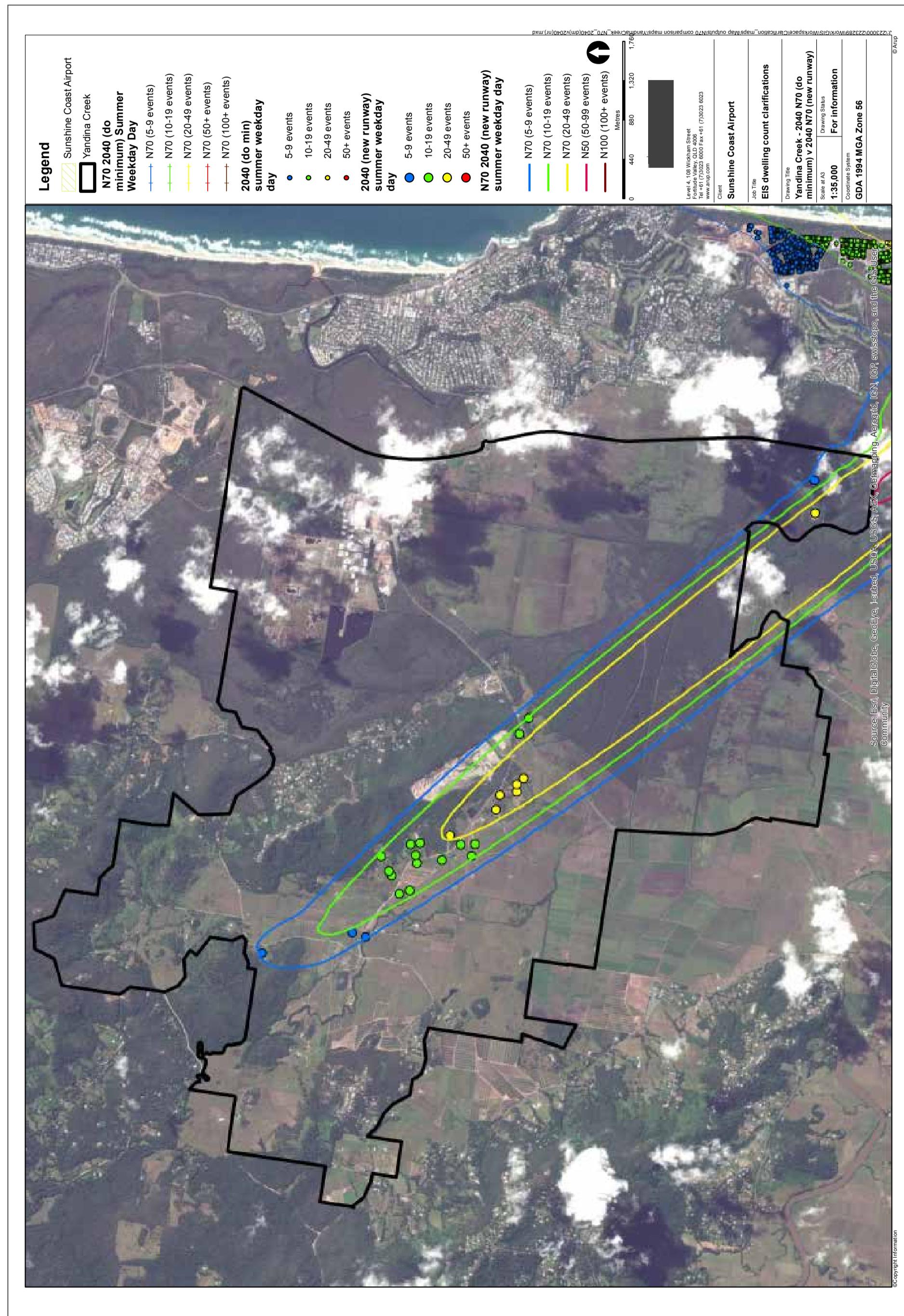


Additional aircraft noise maps and information (continued)



APPENDIX L

Additional aircraft noise maps and information (continued)



Additional aircraft noise maps and information (continued)

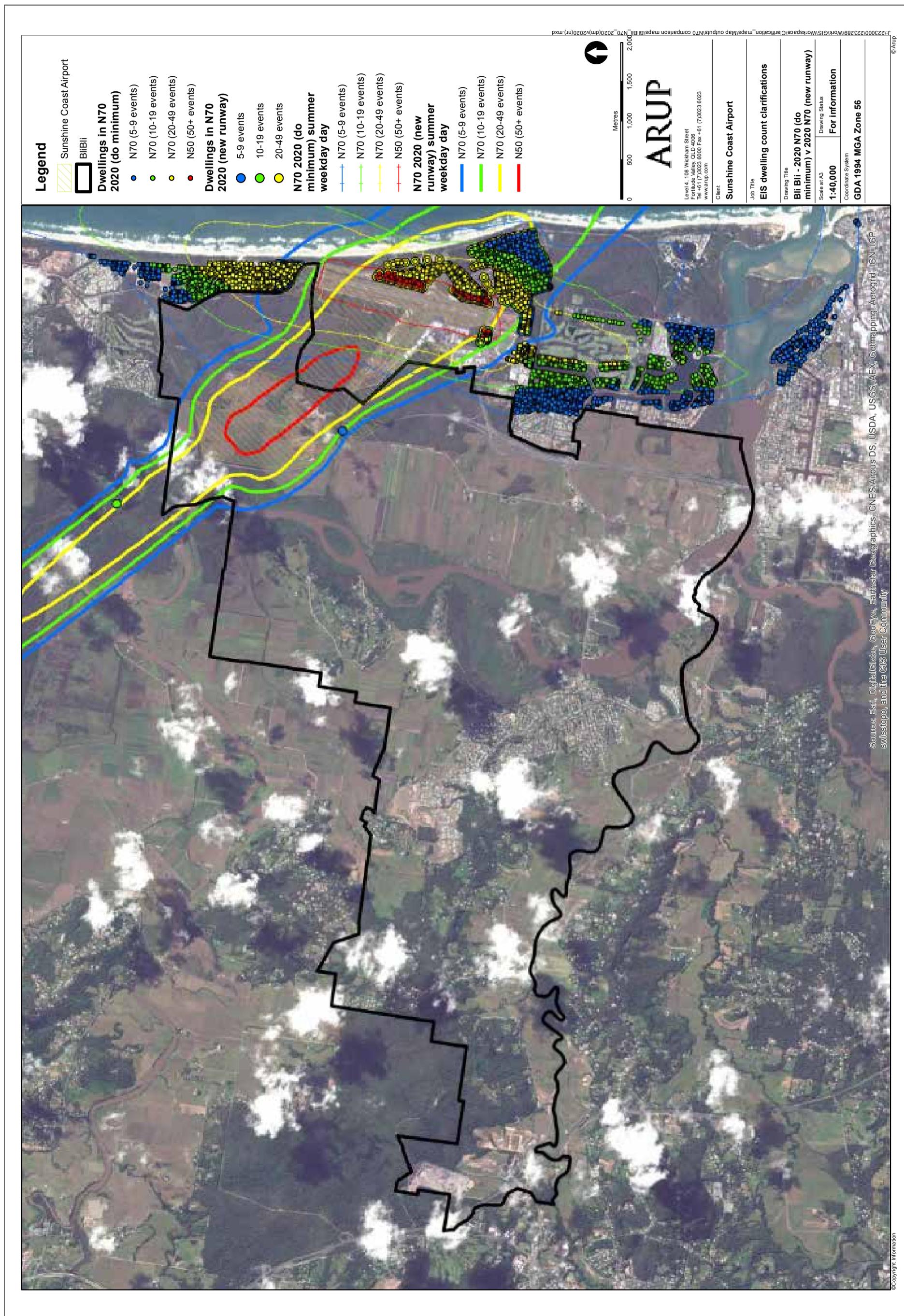


APPENDIX L

Additional aircraft noise maps and information (continued)

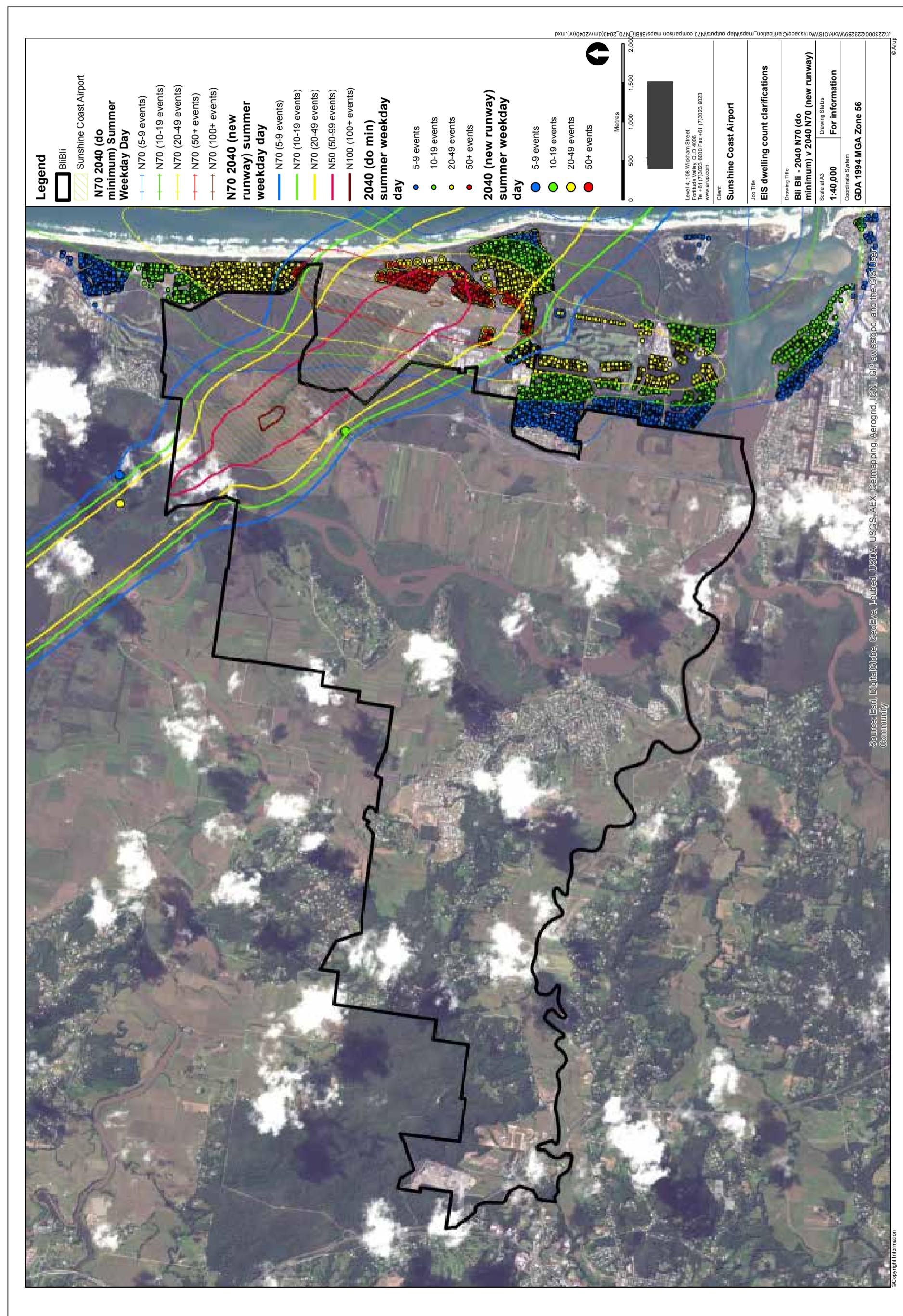


Additional aircraft noise maps and information (continued)



APPENDIX L

Additional aircraft noise maps and information (continued)



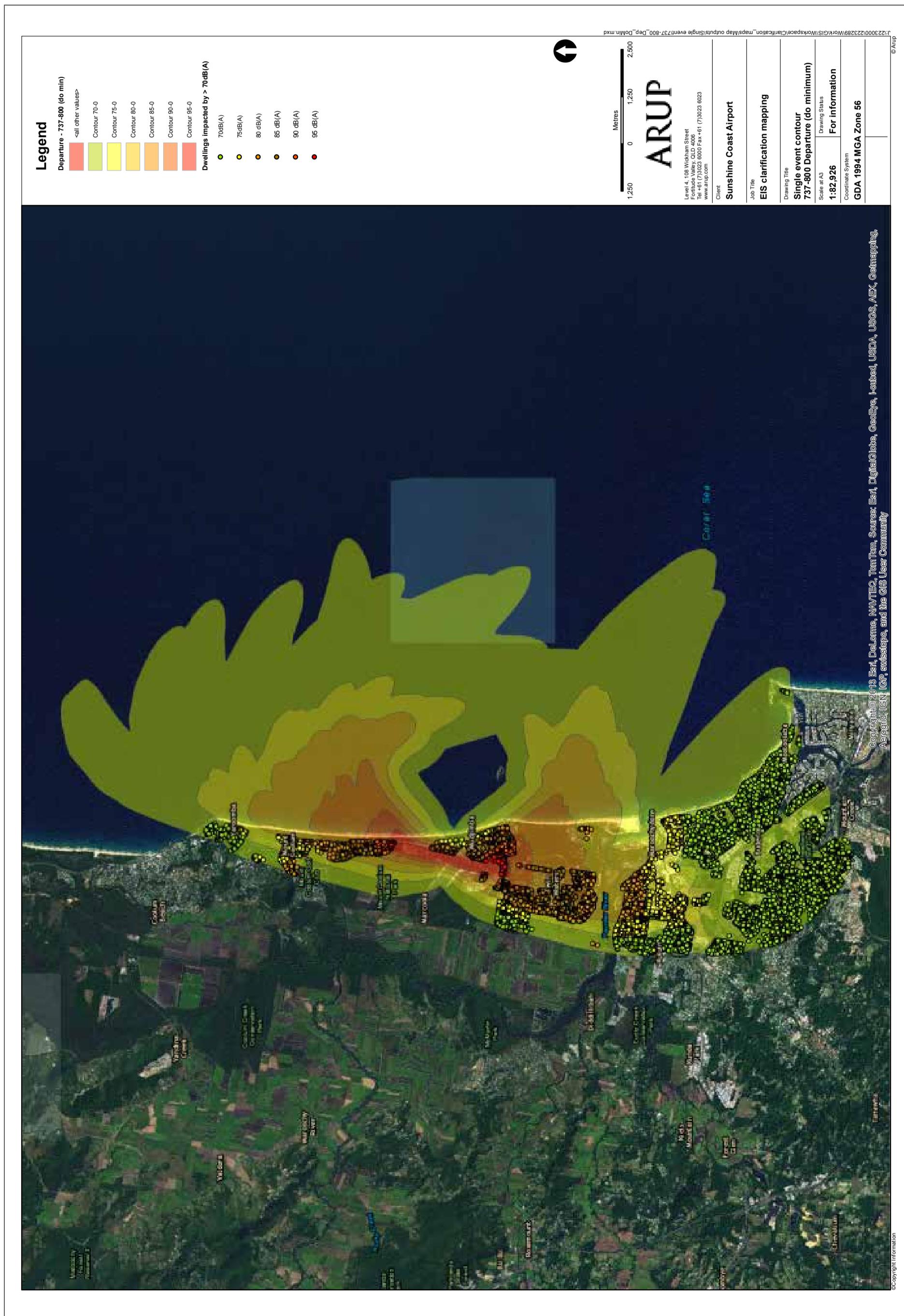
Single event contours

APPENDIX L

Additional aircraft noise maps and information (continued)



Additional aircraft noise maps and information (continued)

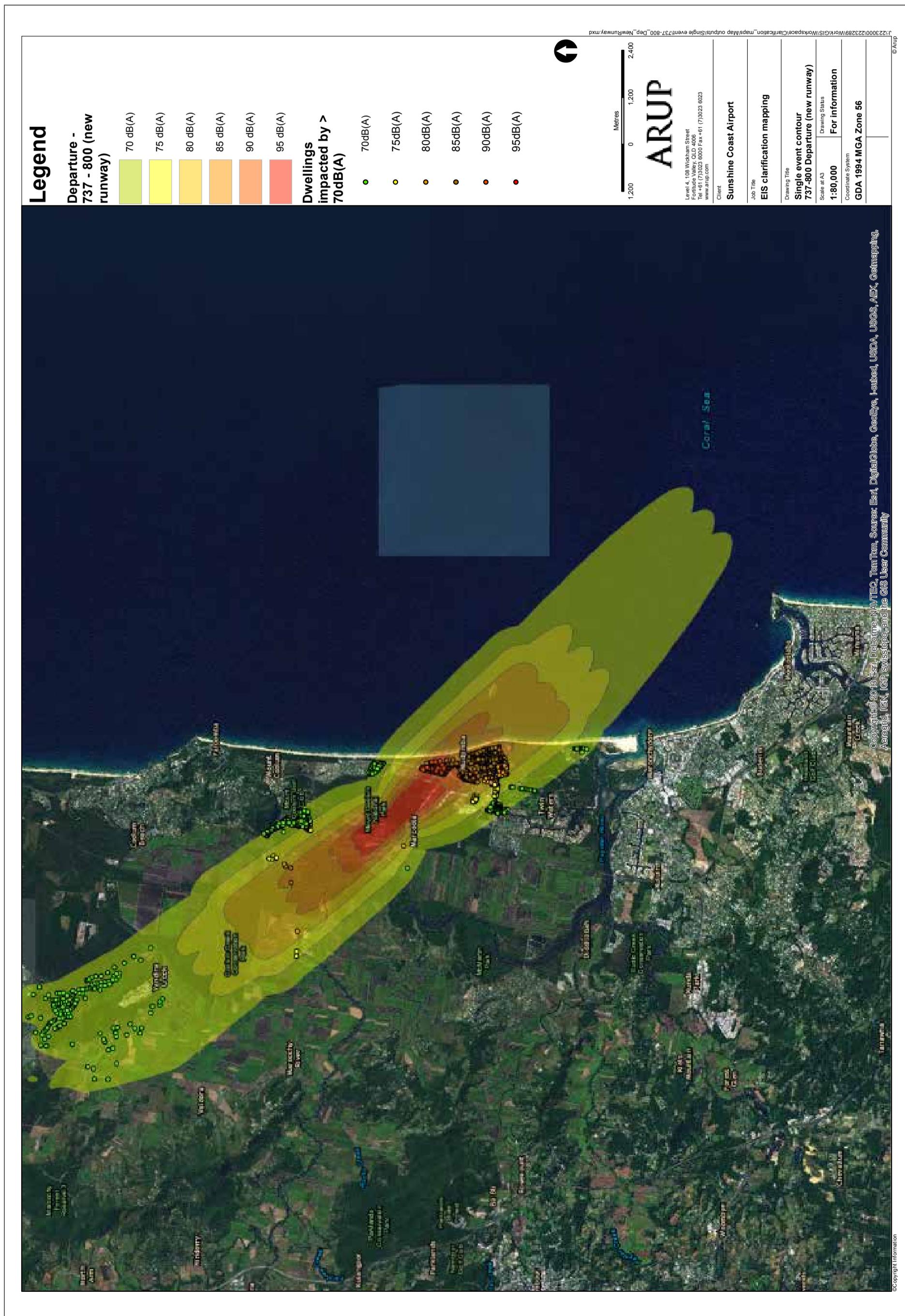


APPENDIX L

Additional aircraft noise maps and information (continued)



Additional aircraft noise maps and information (continued)



APPENDIX L

Additional aircraft noise maps and information (continued)

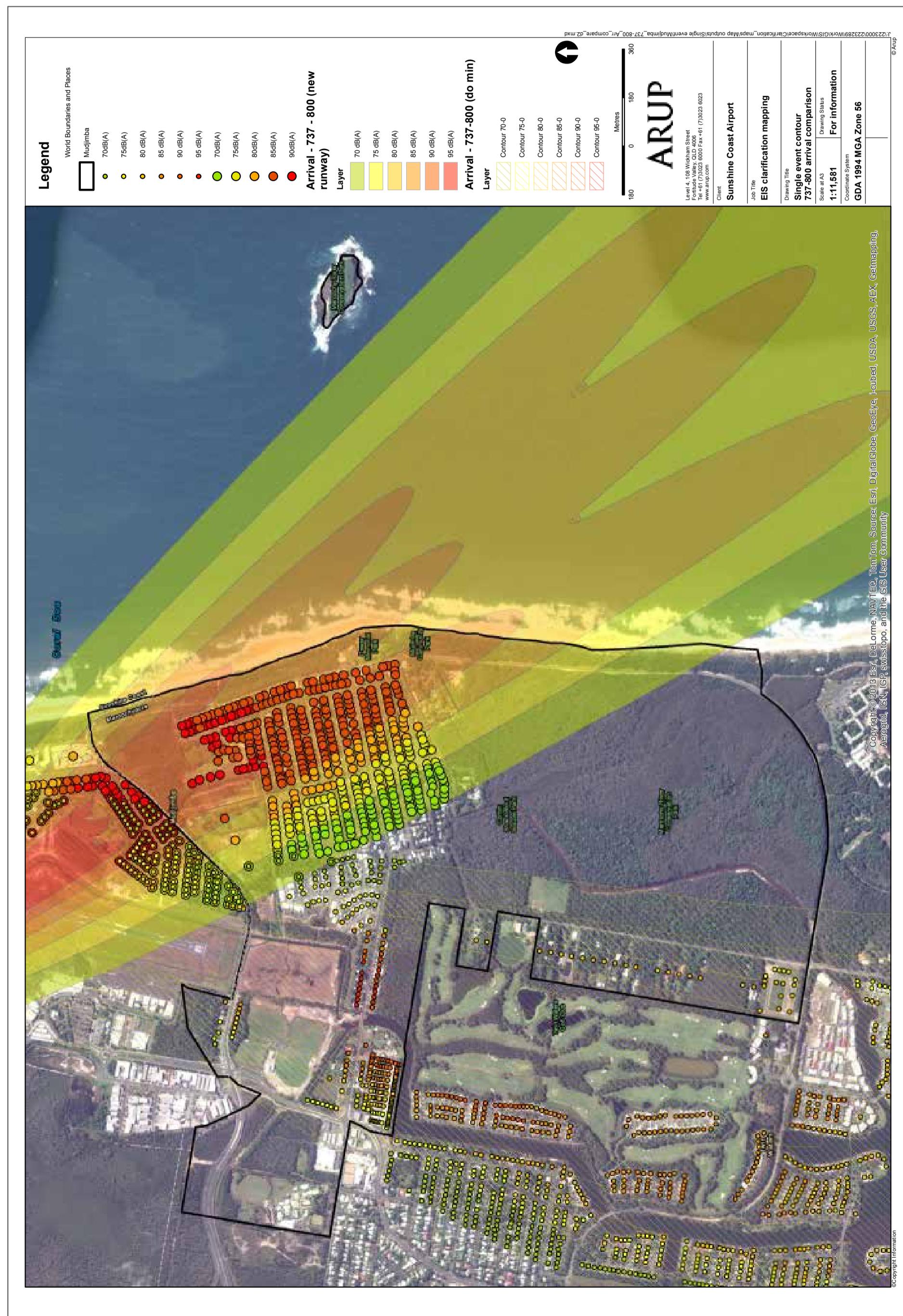
Single event comparisons

Additional aircraft noise maps and information (continued)

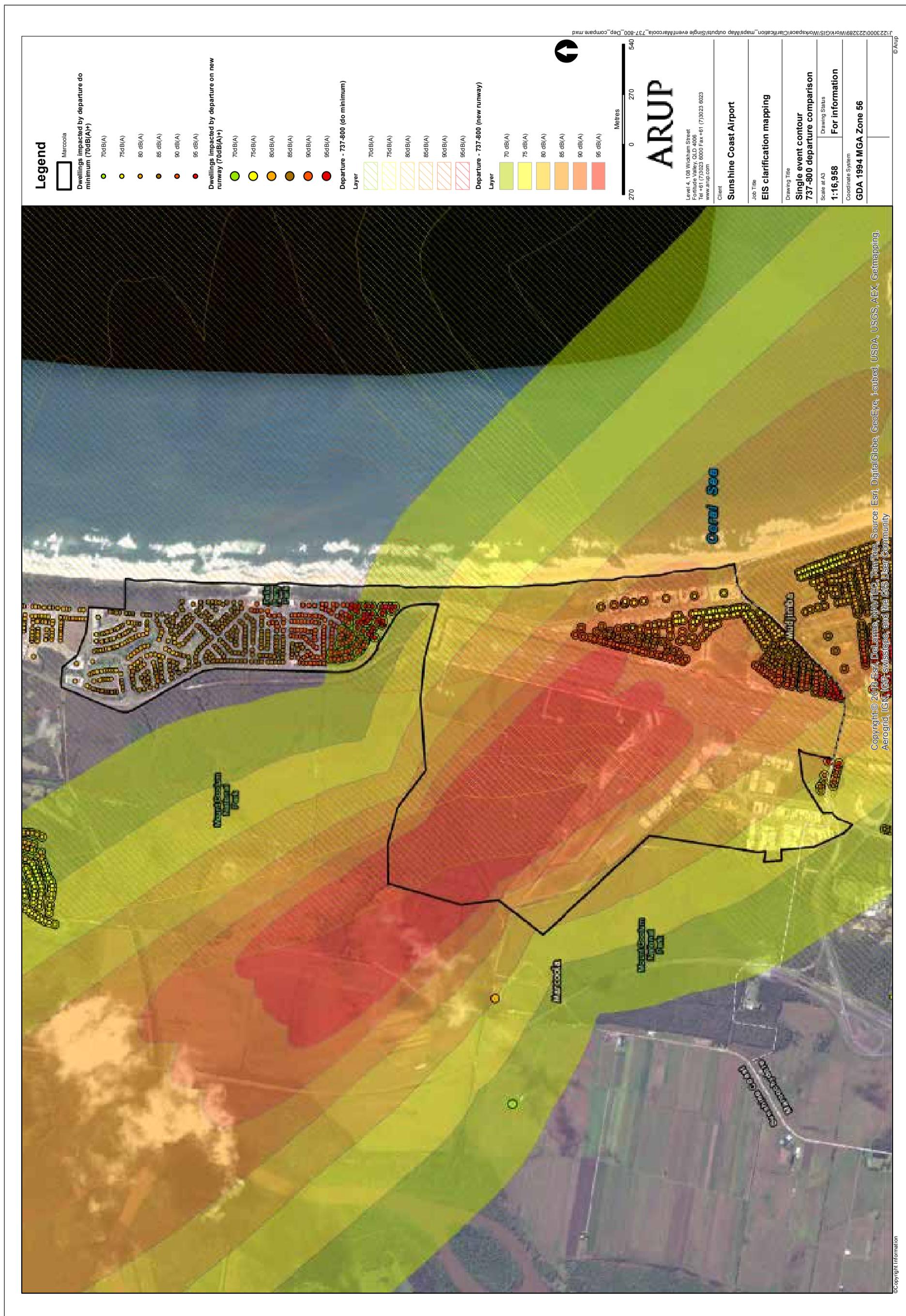


APPENDIX L

Additional aircraft noise maps and information (continued)

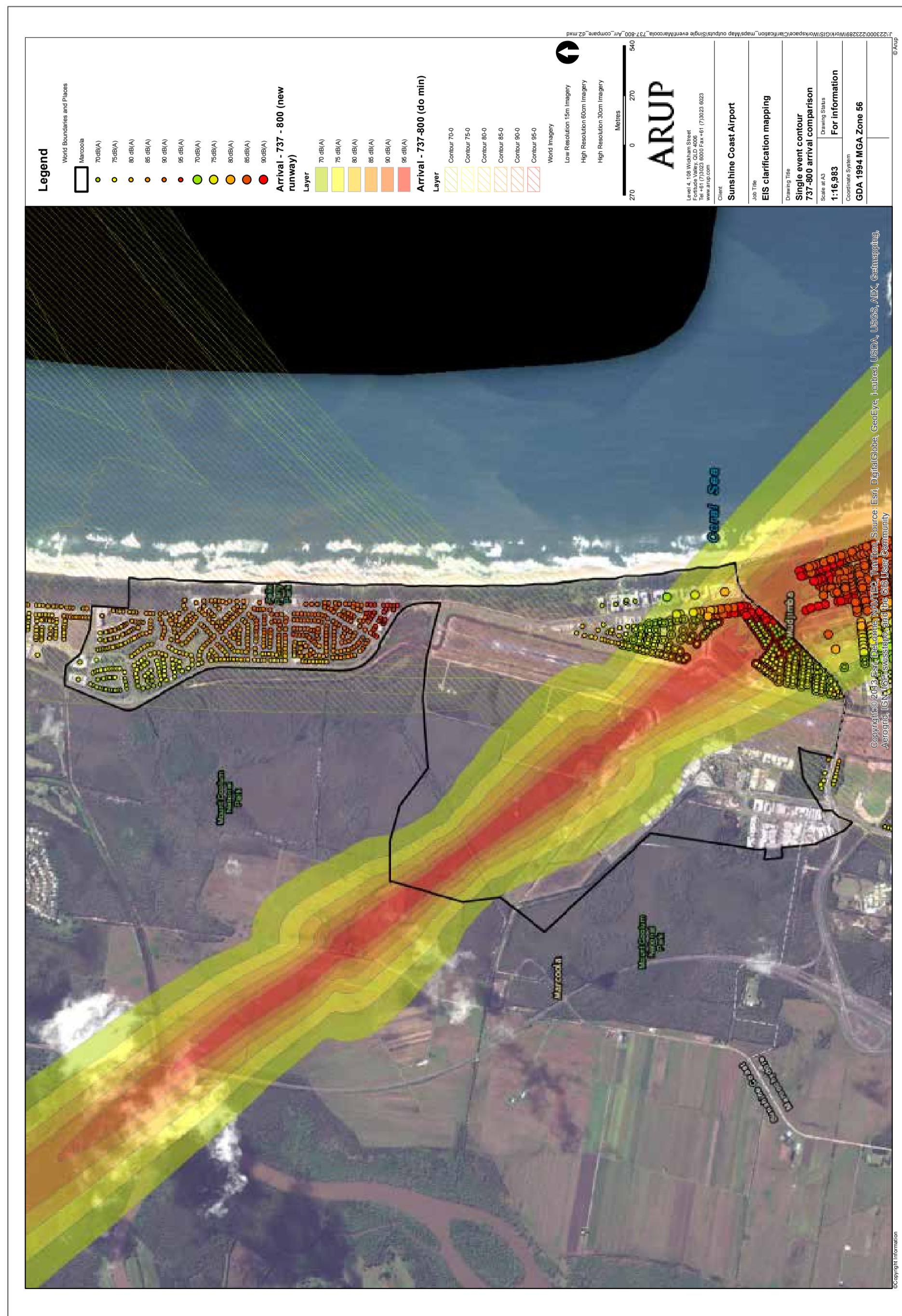


Additional aircraft noise maps and information (continued)



APPENDIX L

Additional aircraft noise maps and information (continued)

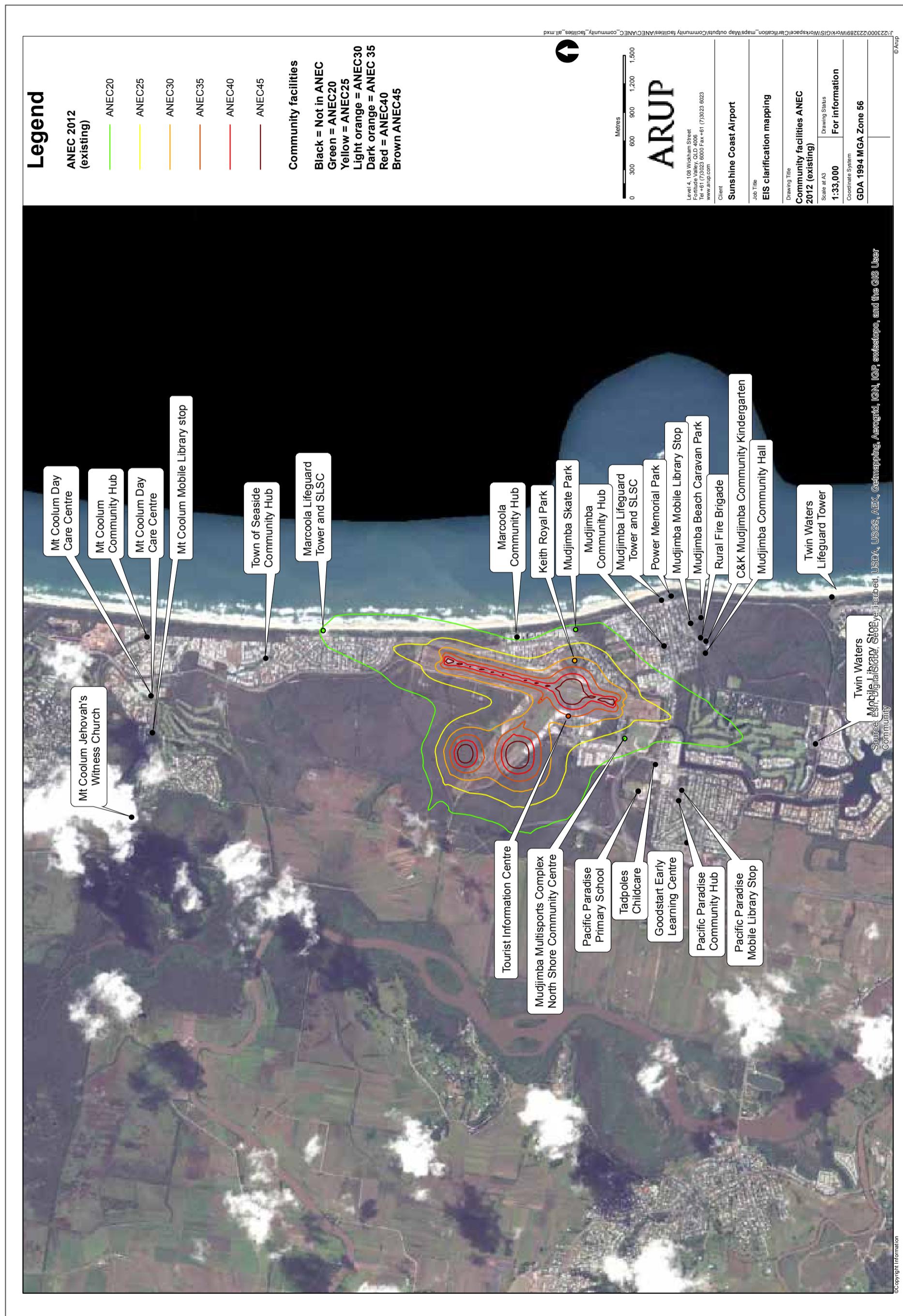


Community facilities

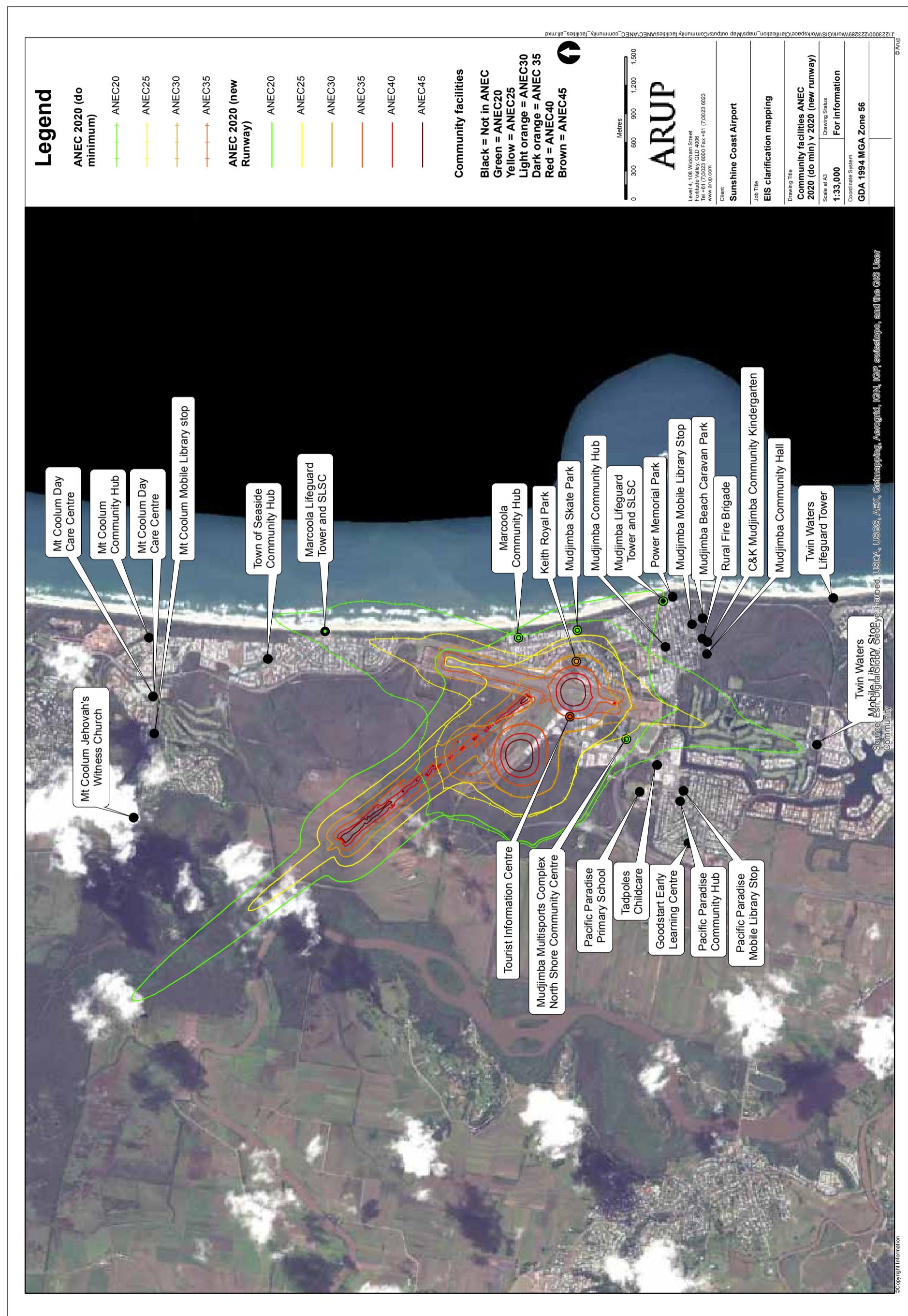
ANEC

APPENDIX L

Additional aircraft noise maps and information (continued)

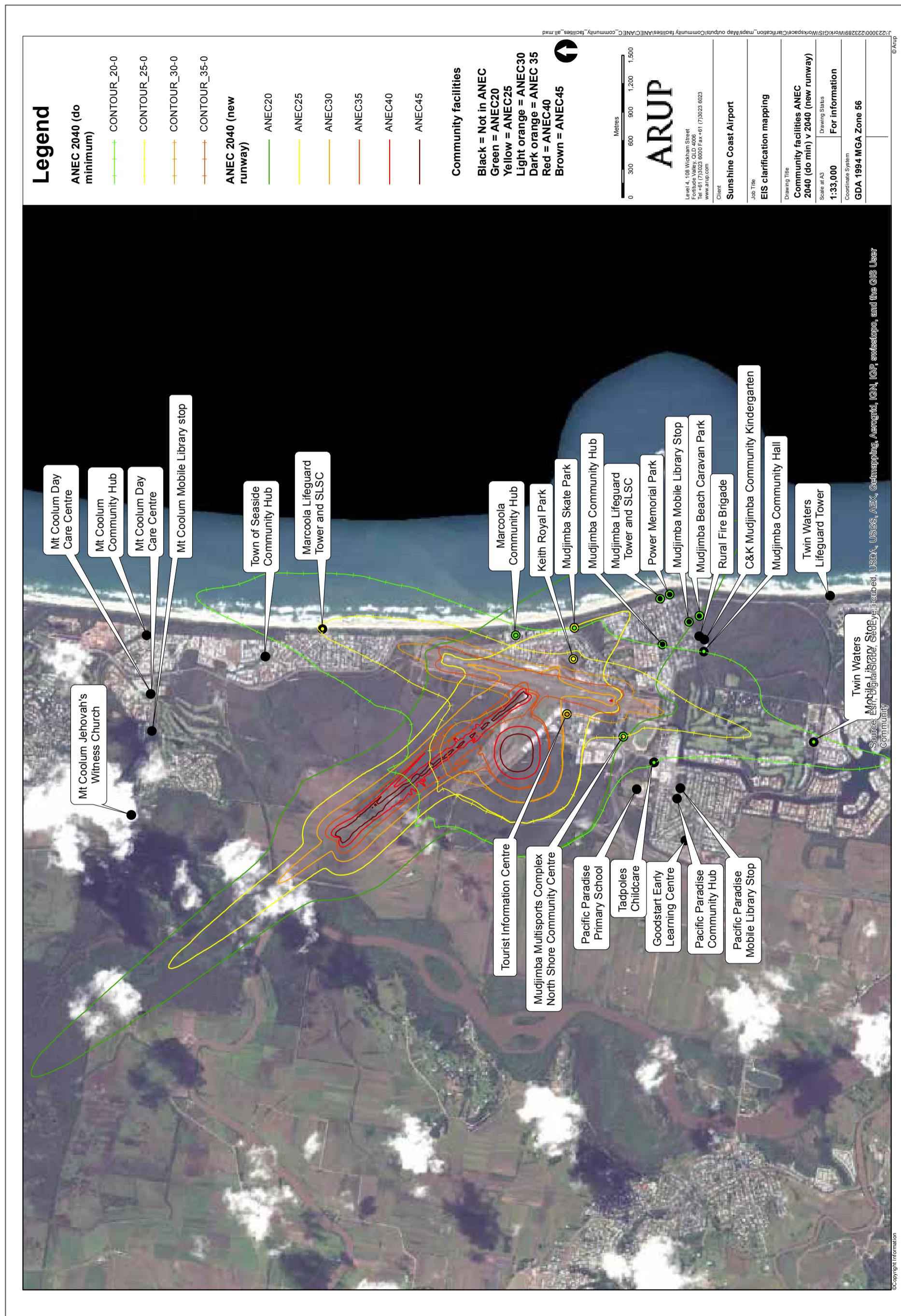


Additional aircraft noise maps and information (continued)



APPENDIX L

Additional aircraft noise maps and information (continued)

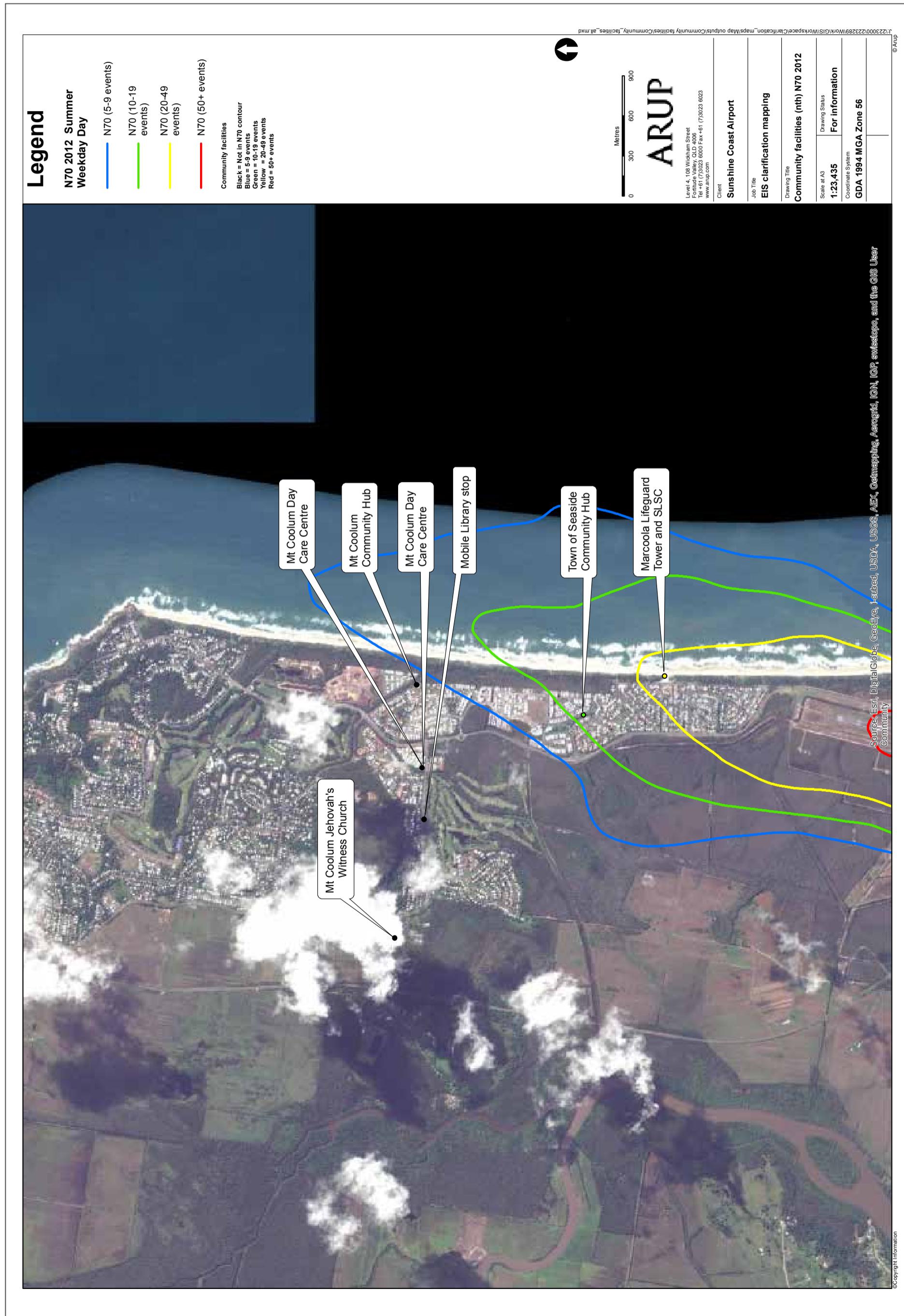


Community facilities

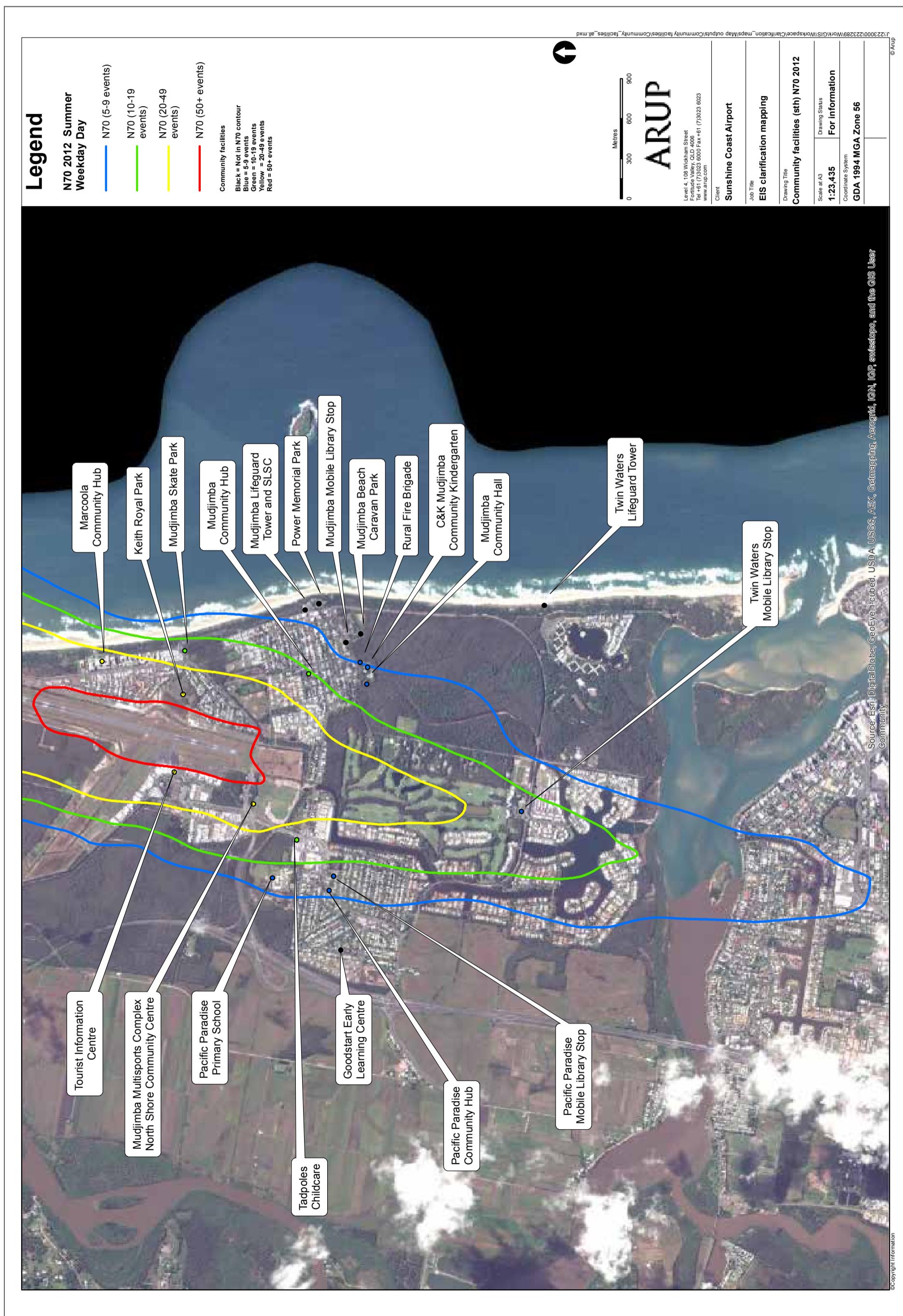
N70

APPENDIX L

Additional aircraft noise maps and information (continued)

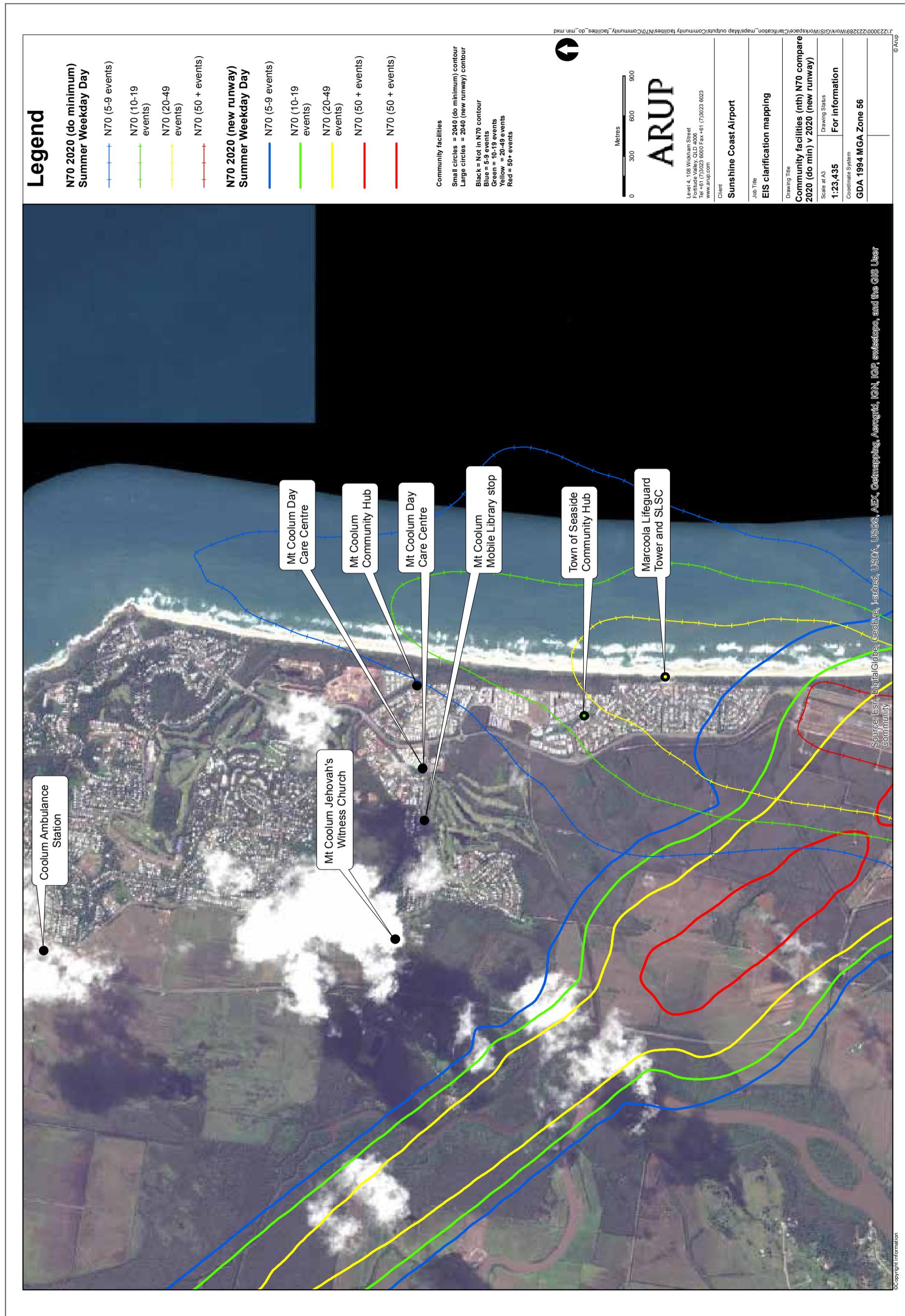


Additional aircraft noise maps and information (continued)

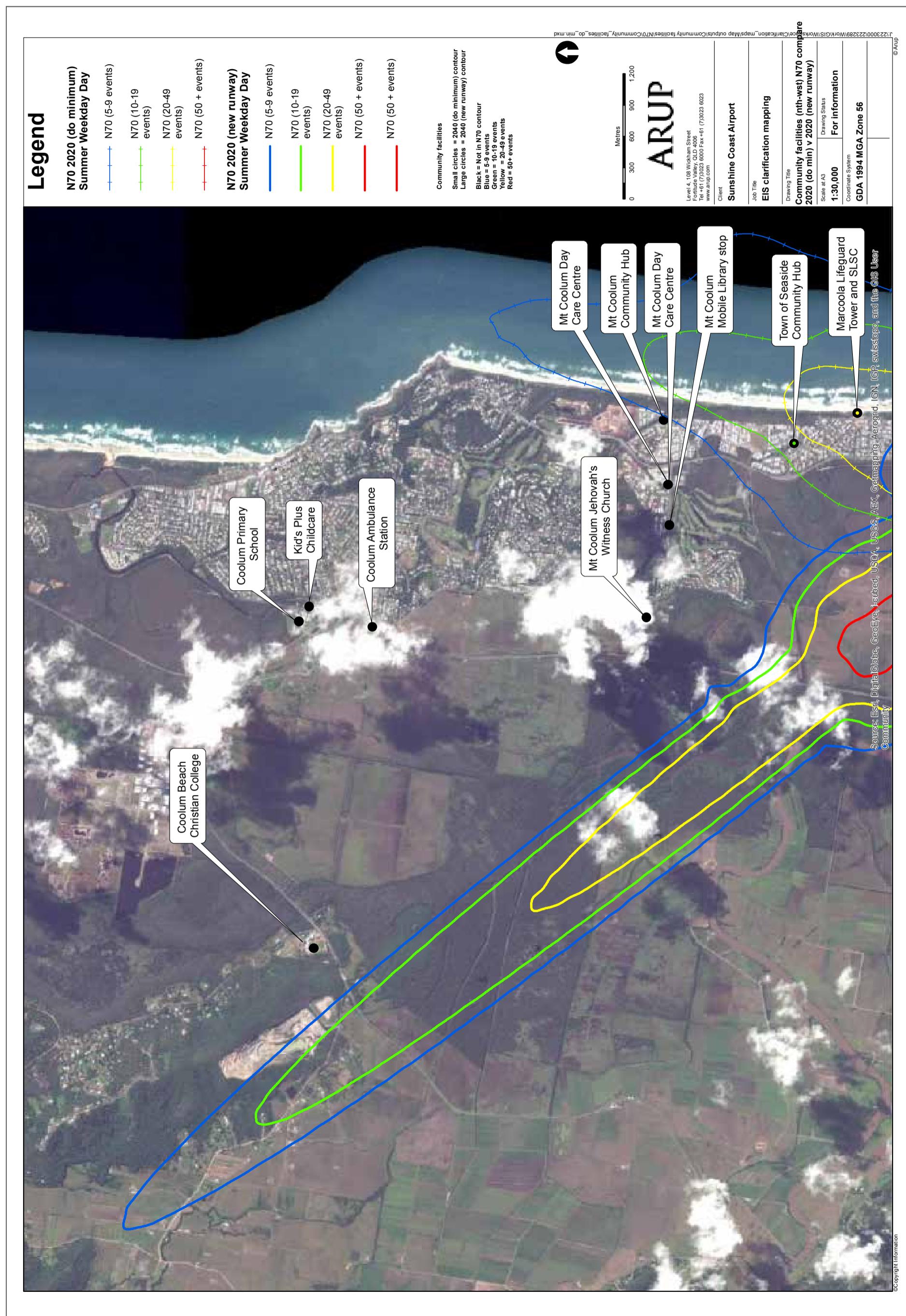


APPENDIX L

Additional aircraft noise maps and information (continued)

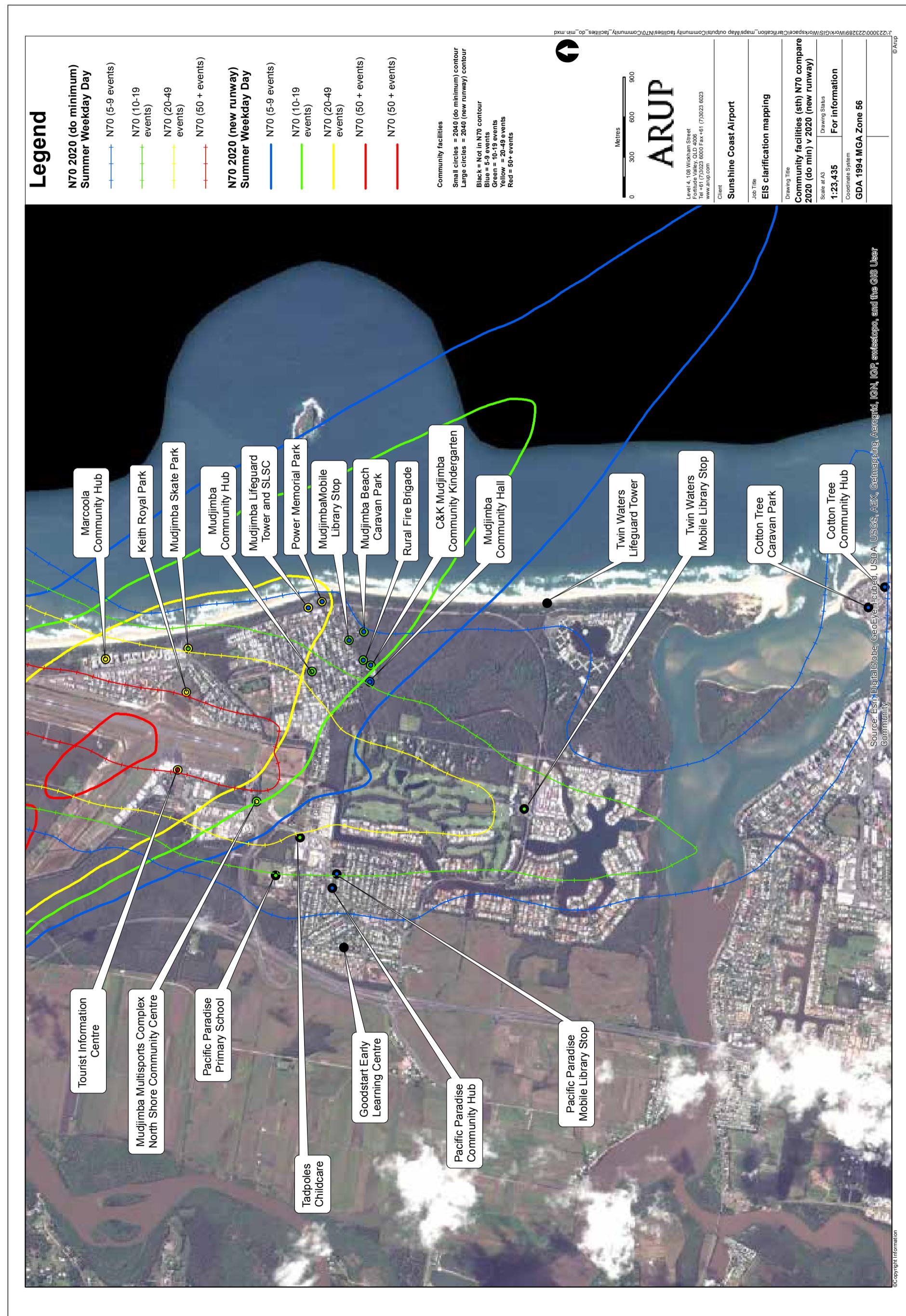


Additional aircraft noise maps and information (continued)

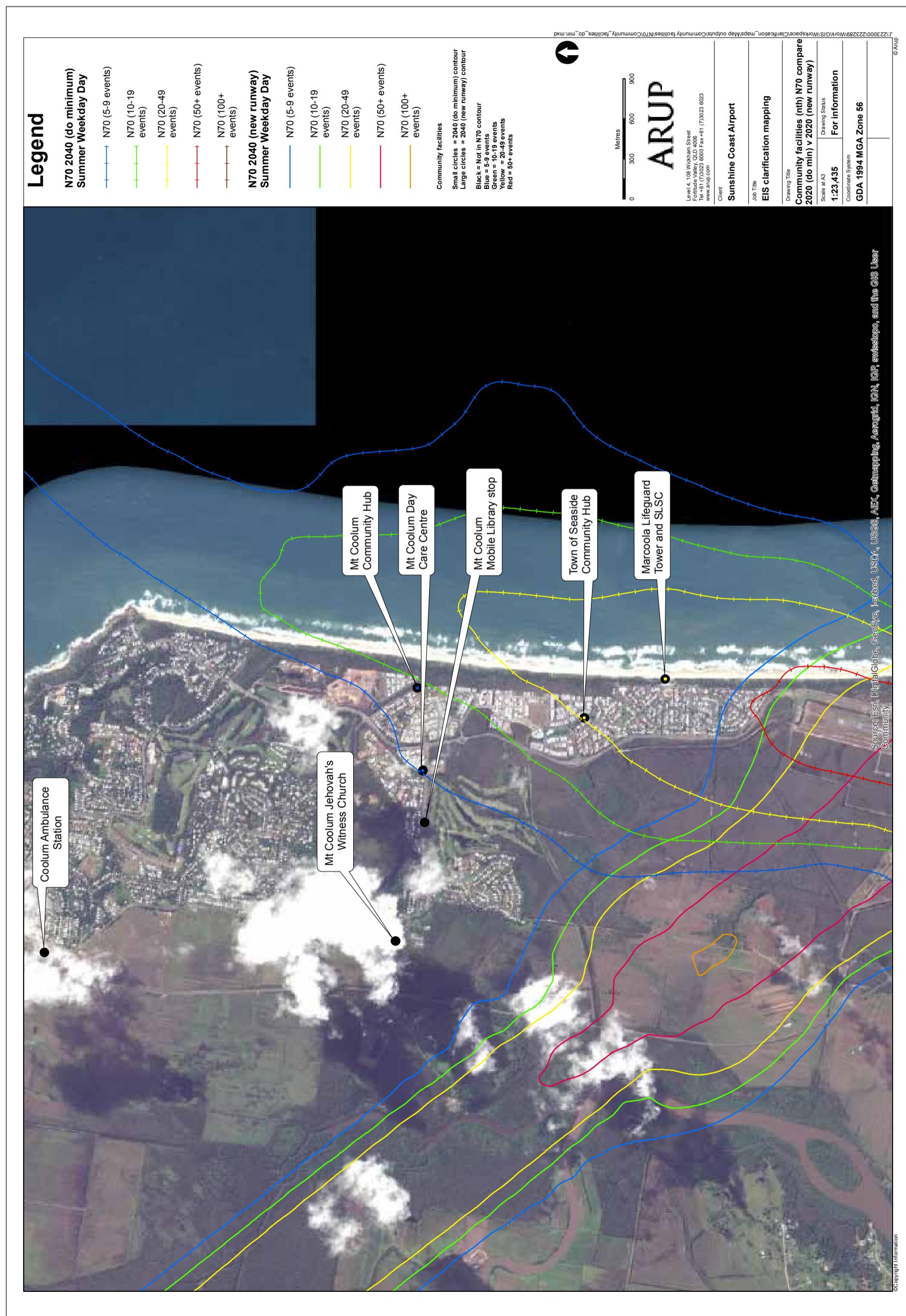


APPENDIX L

Additional aircraft noise maps and information (continued)

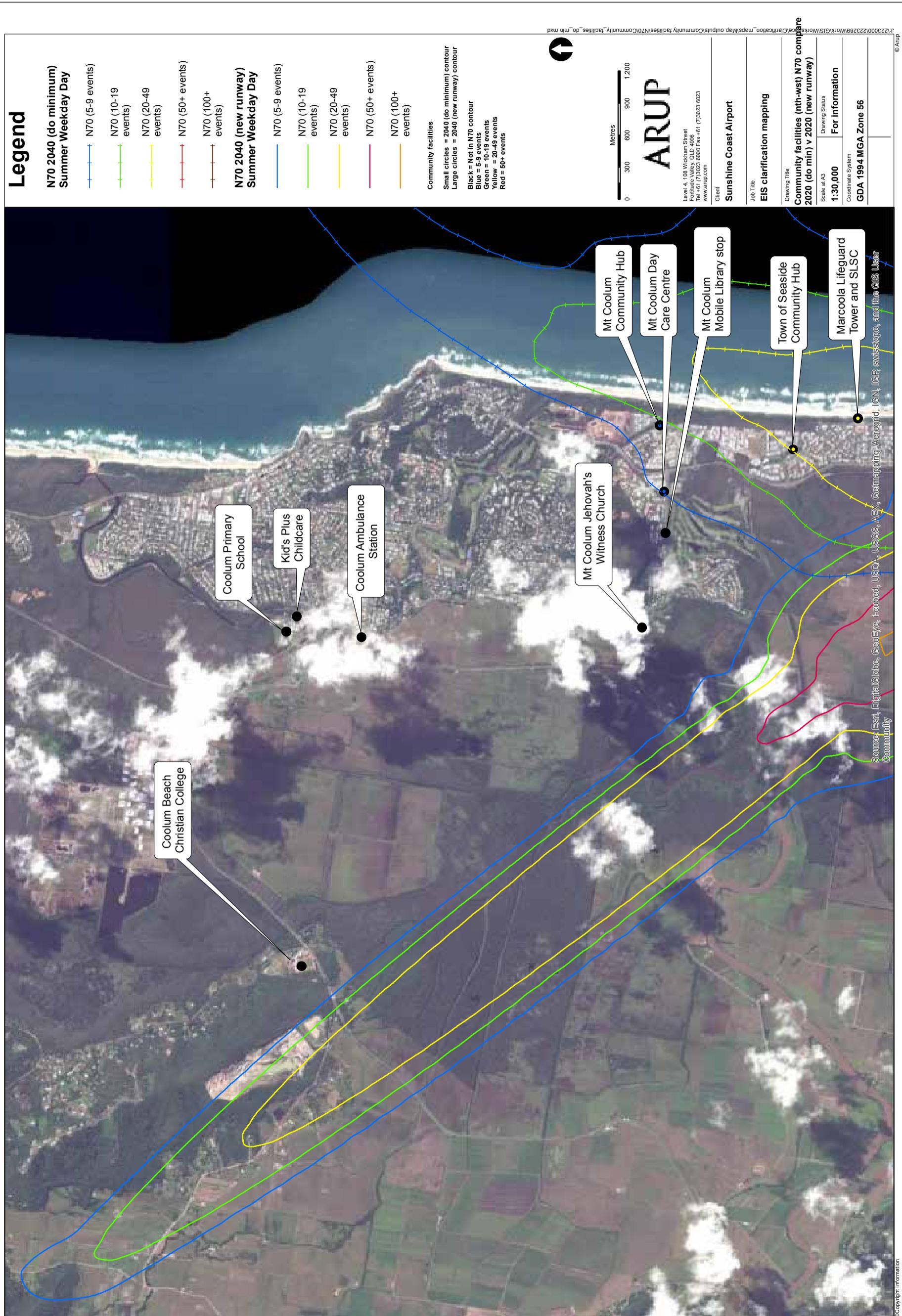


Additional aircraft noise maps and information (continued)

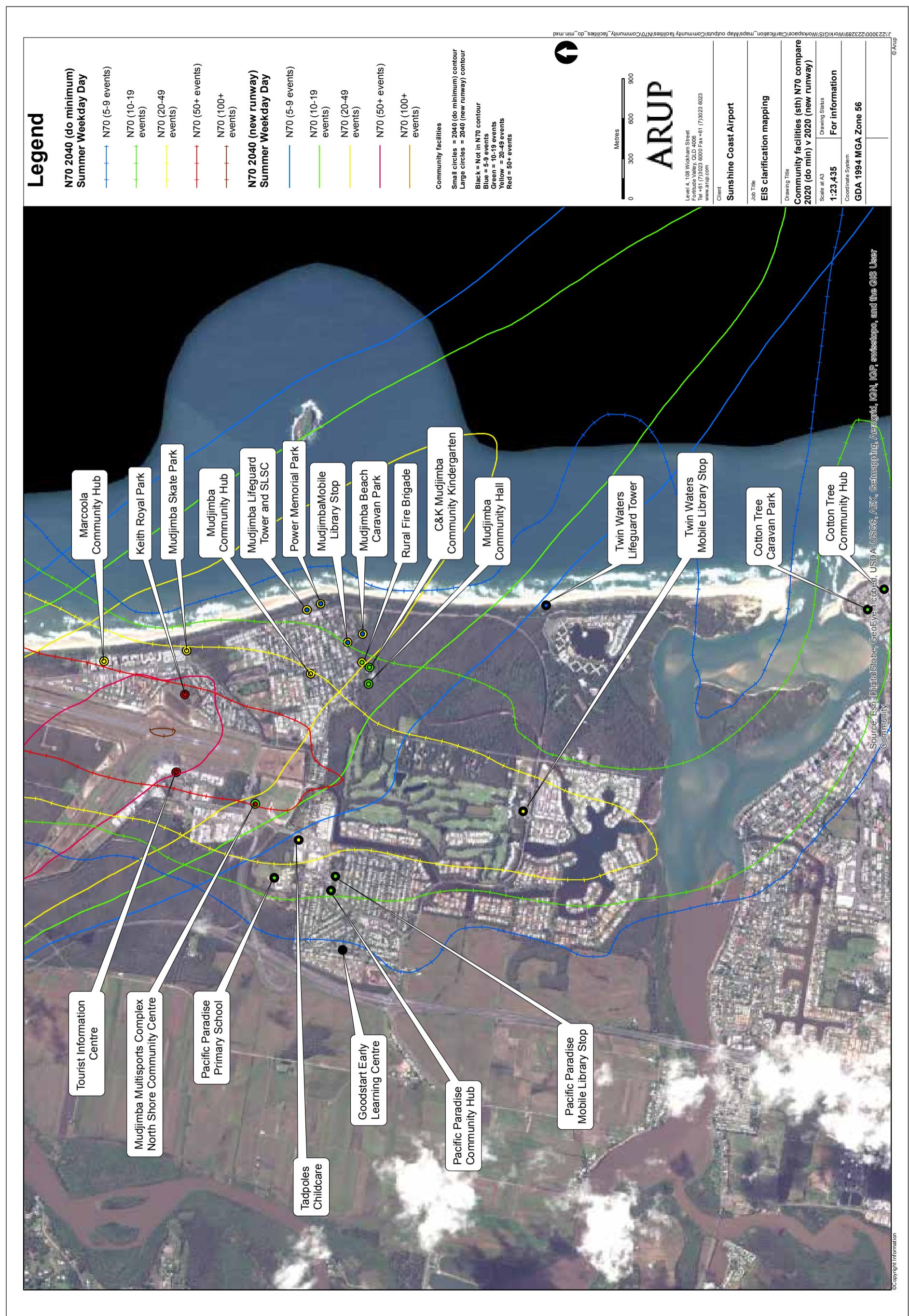


APPENDIX L

Additional aircraft noise maps and information (continued)



Additional aircraft noise maps and information (continued)

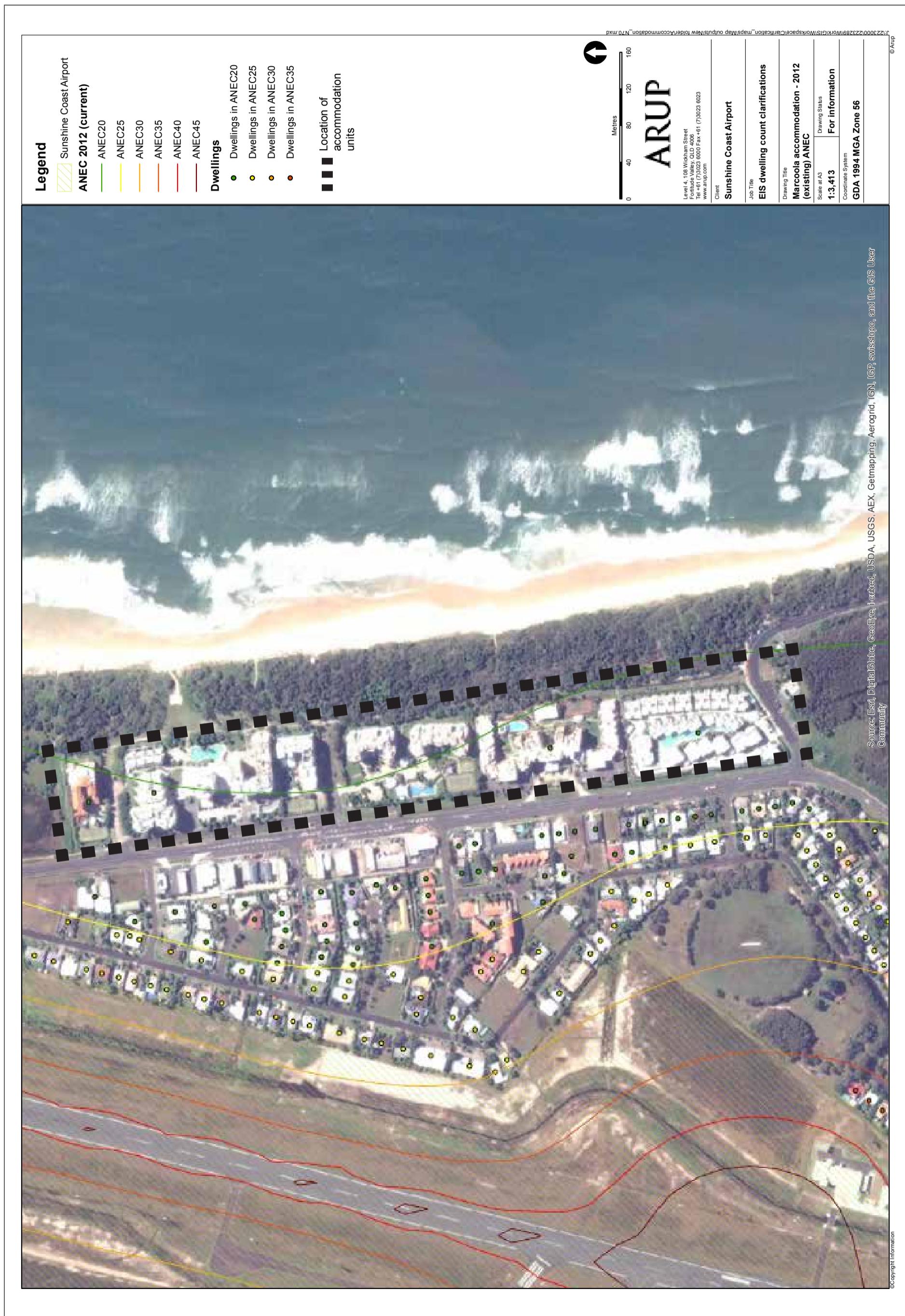


APPENDIX L

Additional aircraft noise maps and information (continued)

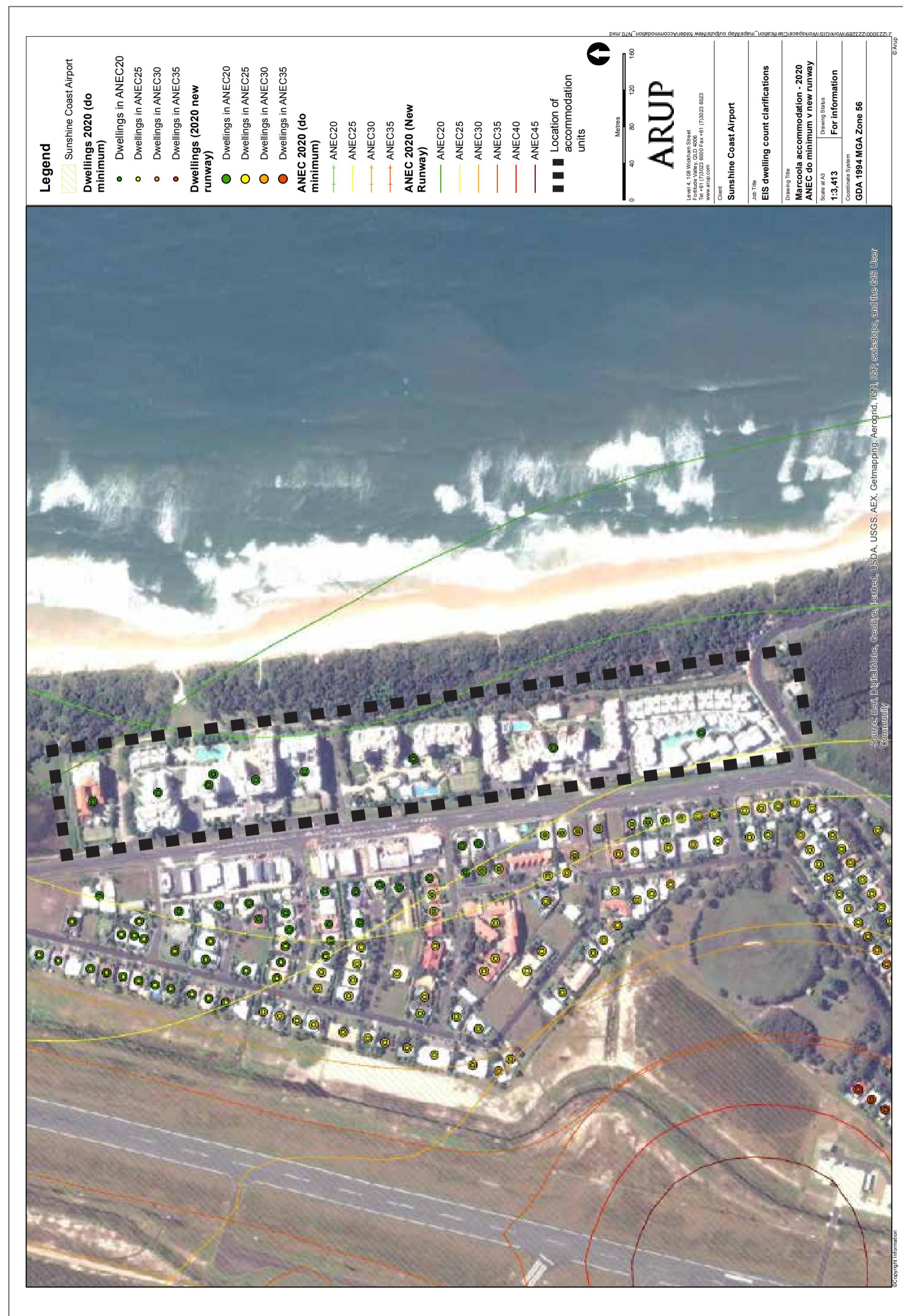
Accommodation ANEC

Additional aircraft noise maps and information (continued)

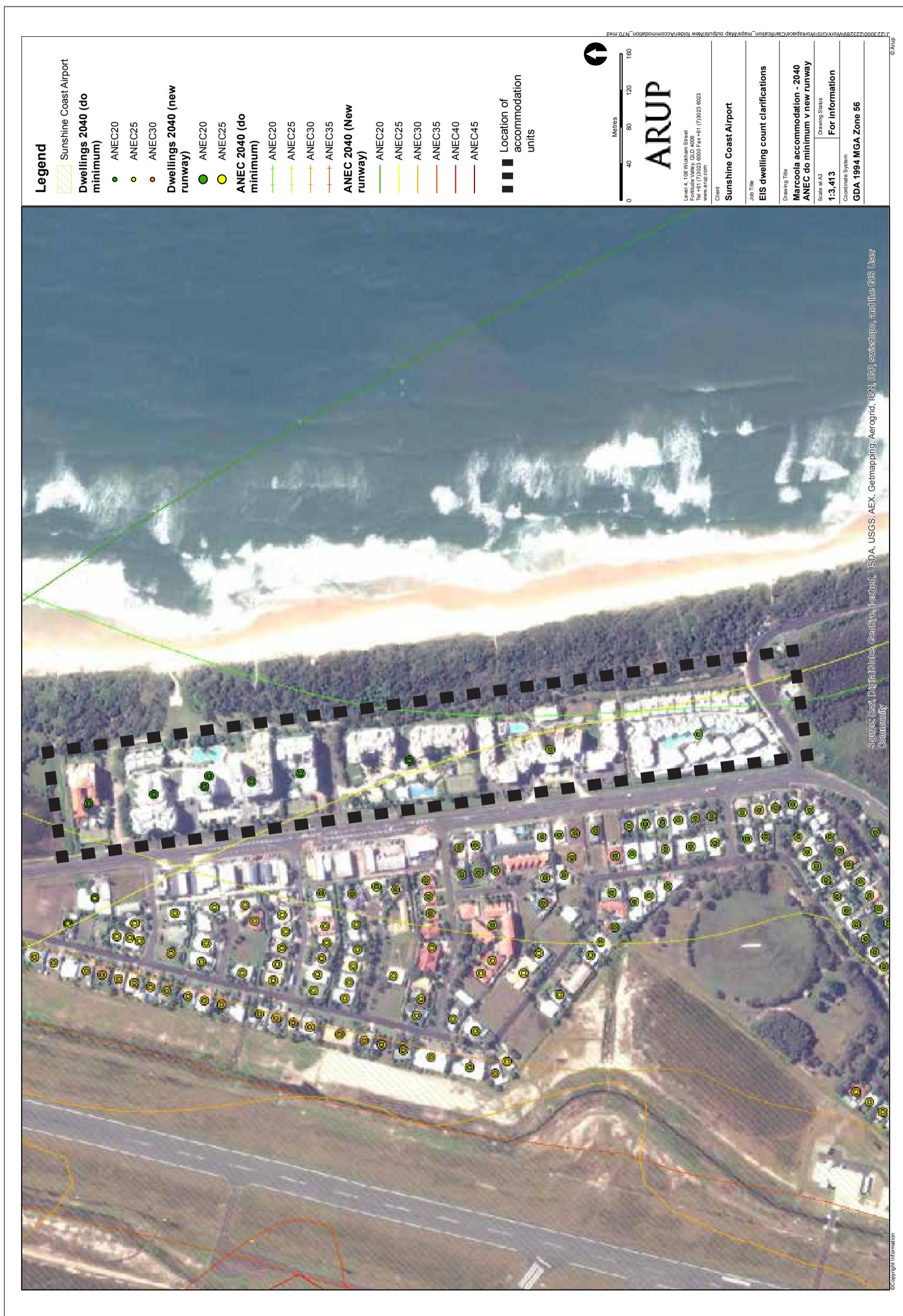


APPENDIX L

Additional aircraft noise maps and information (continued)



Additional aircraft noise maps and information (continued)

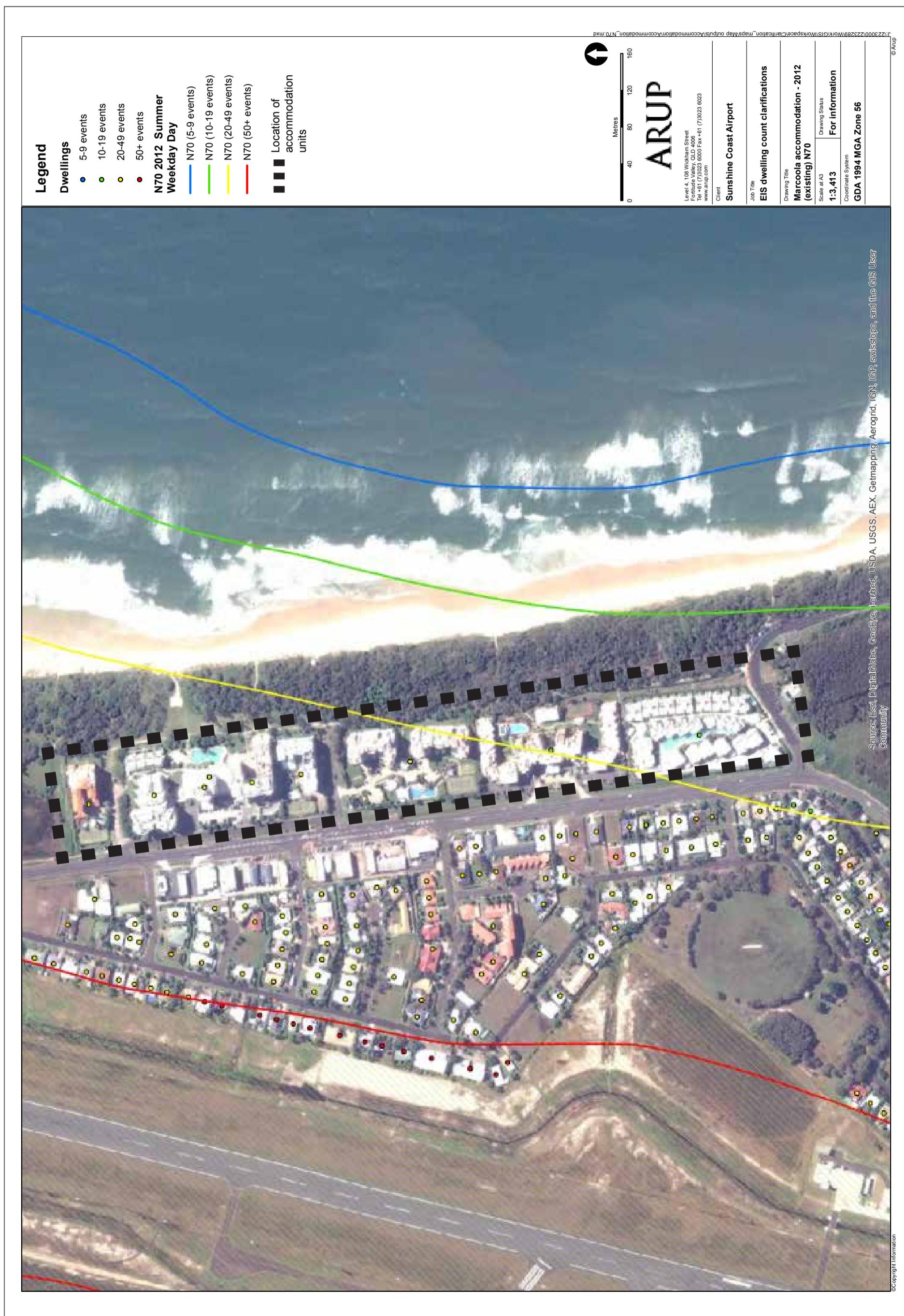


APPENDIX L

Additional aircraft noise maps and information (continued)

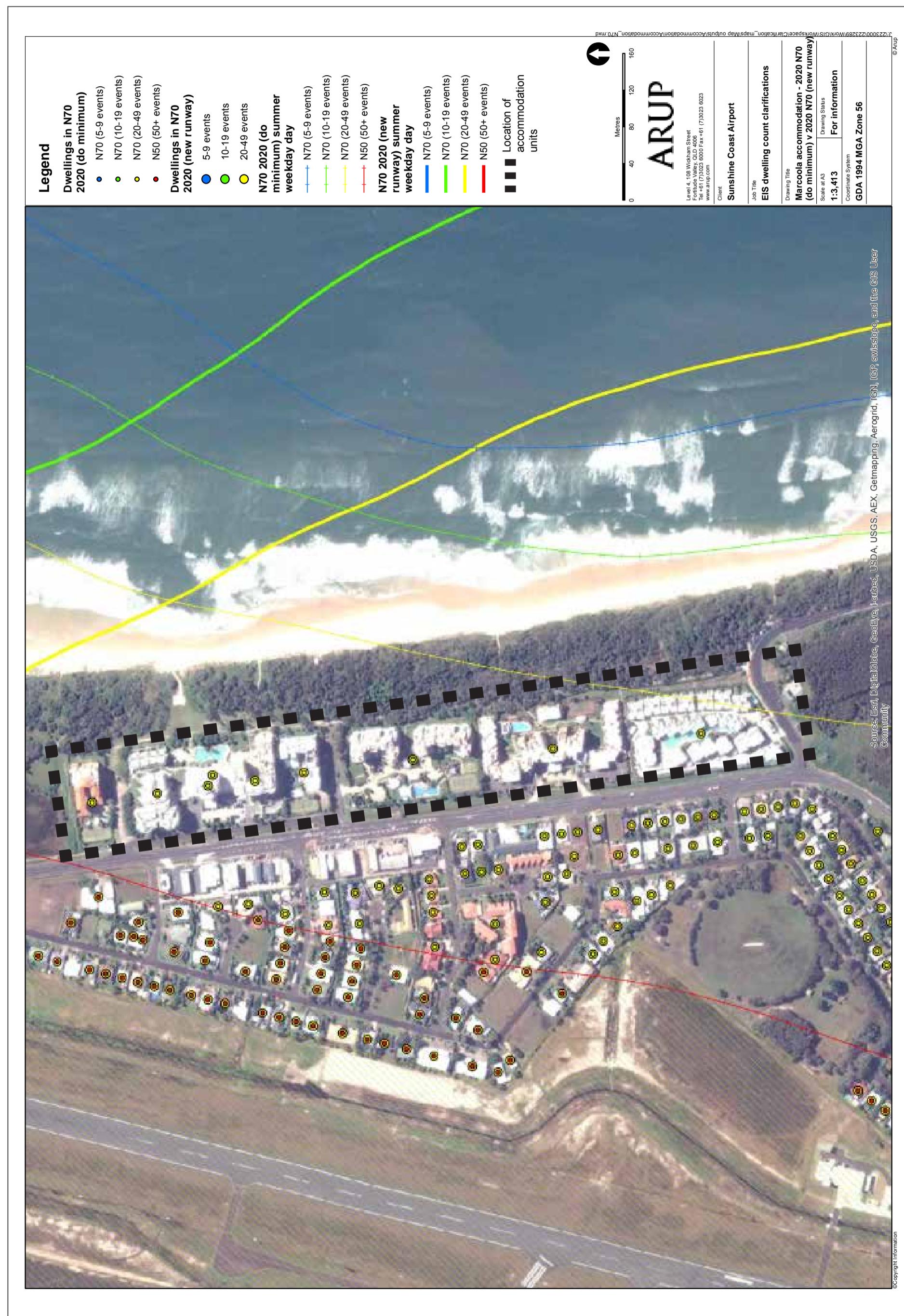
Accommodation N70

Additional aircraft noise maps and information (continued)



APPENDIX L

Additional aircraft noise maps and information (continued)



Additional aircraft noise maps and information (continued)

