



# TIRITIRI MATANGI ISLAND

## COMMON COASTAL BIRDS - BREEDING SURVEY

**Spring-Summer  
2017-2018**

### *Survey Report for 2017-2018 breeding season:*

*Year five of Survey*

*Observations were made during 10 one day visits to the island between 14 September and 14 December. The primary observer was assisted by a second observer on 3 occasions (Mike & Oscar). Each visit was only long enough to allow some areas to be monitored before the ferry departure. Most of the main sites were counted on 3 or 4 occasions, and from the same viewing stations that have been used in the previous seasons.*

- 1. RED BILLED GULL** Breeding pairs are estimated to be around 300 this year. Birds congregated in 3 areas: (1) Curl Rock and nearby low cliff outcrops, where there were between 100 & 115 pairs, (2) Bach Garden rocks, which held between 110 & 120 pairs, and (3) Promontory flats below Seat Promontory where about 80 pairs reared young.
- 2. BLACK BACKED GULL** The 4 main sites used in previous years were again occupied by several pairs and, for the first time in this survey, a fifth site was discovered, below Papakura Pa, holding 5 nesting pairs. It seems probable that this large rock at Papakura Point has been used in previous years, suggesting counts in those years were underestimated by the number at this site. Other pairs bred singly at various points along the coastal cliffs. The five small colonies held an estimated total of 33 pairs out of an overall estimate for the island of 42 pairs.
- 3. PIED SHAG** Pied shags continue to use the cliff-side trees above Emergency Landing as a roost and nest location. Reconstruction, and some new construction, produced 12 nests, all occupied at some point. Sitting birds and fledglings were present on all occasions and it appears that young were raised in at least 10 of these nests. Observations were insufficient to assess the separate outcome of each nesting pair. One nest was occupied by a Little Shag – not observed here in previous seasons.
- 4. LITTLE SHAG** A single bird occupied a nest among the Pied Shag. Breeding here is likely but not demonstrated from these limited observations. Two birds were also noted using the trees at the Five Rocks site off the North East Bay track, and one perching on the Wharf jetty. It seems likely at least one pair have again bred on Tiritiri Matangi.
- 5. REEF HERON** A single sighting of Reef heron on the north-east coast was made during survey visits. Although this is near where they nested in 2013-2014, there were no other sightings and no evidence of breeding was found.

6. **WHITE FRONTED TERN** Observations indicate terns nesting on Tiritiri this year. The numbers noted provide only a conservative estimate because sitting only began in late November and survey visits were not possible beyond mid-December. At that point small colonies were establishing at three sites. Nesting numbers may well have built up some more after that time. Based on the observations up to the final survey visit, nesting was undertaken by 60 plus pairs.
7. **CASPIAN TERN** No breeding on Tiritiri was noted.

## COMMON COASTAL BIRDS - BREEDING SURVEY 2017-2018

**Survey Purpose:** The intention is to measure population fluctuations and trends among the common coastal species that utilise Tiritiri Matangi. Annual counts commenced in the 2013-14 breeding season. Conclusions for the 2017-18 season are shown above and their supporting data shown below.

**Map:** The island map shows the regular viewing stations and locations of the main rock areas. Papakura Pa is noted on the map but without its site number, 10.

**Field observation:** Most sightings were made by scanning cliff faces and off-shore rocks from established observation stations using a 20x telescope and 8x binoculars. Some counts only recorded 'sitting' birds. As the season advanced nesting material was very evident for many of the sitting birds. When red-billed gull chicks began to appear counts were generally terminated because the mobility of chicks and adults reduced the reliability of count results.

**Evaluation of data:** Field notes were entered into the tabular format recorded below. Estimating breeding numbers has relied upon averaging counts over 2 or 3 visits during the peak period of incubation and hatching, with some adjustment if other counts and apparent trends show significant variance.

**Text Notes:** Where 'sitters' are recorded with two numbers (EG: 4+4) the second number will refer to a family group. In a few instances where a count has been made in sections on a single site, the section count and total are shown in the same column cell. Eg: 3 + 2 + 4 = 9. The abbreviation, 'w ch', indicates, 'with chick'. The term, 'sentinel', refers to adults apparently overseeing young which may be out of sight.

**Species included:**

Red billed gull. Black backed gull. White fronted Tern. Caspian Tern. Pied Shag. Little Shag. Reef Heron.

## Viewing Stations:

1. Fog Horn Shed - eastern slope below shed - beside cliff top pohoutakwa  
- North to **Curl Rock**, South to **Twin Peak**.
- 1A. Far Seat - north to **Bay rock**, south-east to **Twin Peak**.
2. Bach Garden - cliff top garden - north to coastal rocks sitting south-east of Seat promontory - **Bach Garden rocks**.
- 2A. East Coast track bend - high point of path to Seat Promontory  
- south to **Curl Rock** and nearer **cliff edge rock**.
3. Seat Promontory - by two seats - north to rocks running NE of Emergency Landing (Fisherman's Point) – **Emergency Landing Pinnacles**.  
- on cliff-top at NE extreme of grass - looking below to **Rock Flats**.
- 3:2 Arches Outcrop  
- end of rocky promontory between The Arches and Fishermans Bay  
- looking Southeast to **Emergency Landing Pinnacles** (north face only)
4. Emergency Landing - rocky shore looking up to trees on northern cliff face.
5. Pohutukawa Promontory - promontory running east of Pohutukawa Cove  
- accessed from U bend on track – viewing from bottom of grass slope:  
- looking below to East & NE at **Promontory Rocks** platform.
6. Pohutukawa Cove - on SE point by 'rock stack' - looking NW and East.
7. North East Bay Track - grass slope east of track at its halfway level between junction with east Coast track and the wetlands sign  
- down slope behind flax looking NE to Five **Rock Cluster**
8. Little Hobbs Beach - access path at northern end  
- looking to the **Reef** beyond the wharf.
9. North West Point – down zig-zag path from NW bend of Ridge Road track  
- **Beach Rock & Chimney Stone**.
10. Papakura Pa Point – At end of path behind bushes to left of tall tree  
- westerly outcrop.





18 Oct	21	10	31	18			
29 Oct	15	13	30	26			
9 Nov	22	12	30	23			
16 Nov	22	14	32	13	13	7	
14 Dec						10	
Totals	80	49	123	80	13	17	
Average	20	12	31	20	13	9	
Assessed		14		15		8	

*SUMMARY: This face of Curl rock below the ridge not visible from Fog Horn Shed viewpoint. The rock faces seen here estimated to hold 35 - 40 breeding pairs.*

VIEWING SITE : →	FAR SEAT VIEW TO FOG HORN BAY - Site 1:1					
VIEWING DATE ↓	<b>North east Rock</b>		<b>Cliff face</b>		NOTES	
	<i>Total</i>	<i>Sitting</i>	<i>Total</i>	<i>Sitting</i>		

*SUMMARY: No bird use of cliff face observed from this vantage point. No breeding recorded.*

VIEWING SITE : →	BACH GARDEN - Site 2 <i>36.602911 x 174.899045</i>												
VIEWING DATE ↓	<b>North rock 1</b>		<b>North rock 2</b>		<b>North rock 3</b>		<b>North rock 4</b>		<b>North rock 5</b>		<b>Whole site</b>		<i>Notes</i>
	<i>Total</i>	<i>Sitting</i>	<i>Total</i>	<i>Sitting</i>	<i>Total</i>	<i>Sitting</i>	<i>Total</i>	<i>Sitting</i>	<i>Total</i>	<i>Sitting</i>	<i>Total</i>	<i>Sitting</i>	
18 Oct	75	37	36	17	44	22	75	21	3	0	233	97	
29 Oct	90	52	27	17	48	30	41	20	1	0	206	119	Average with Oscar
11 Nov											150	121	Oscar's count
16 Nov	86	50	32	20	43	29	23	12	0	0	184	111	Some chicks

Totals	251	139	95	54	135	81	139	53	4	0		
Average	84	46	32	18	45	27	46	18	1	0		
Assessed		50		18		28		15		0		111

*SUMMARY: A busy colony estimated to hold between 110 and 120 nesting pairs.*

VIEWING SITE : →	SEAT PROMONTORY - Site 3																
VIEWING DATE ↓	Main Cliff & Thumb rock		EL Pin 1		EL Pin 2		EL Pin 3		EL Pin 4		EL Pin 5		EL Pin 6		Whole site		Notes
	Total	Sitting	Total	Sitting	Total	Sitting	Total	Sitting	Total	Sitting	Total	Sitting	Total	Sitting	Total	Sitting	
18 Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
29 Oct	0	0	0	0	0	0	0	0	5	2	0	0	0	0	5	2	<i>Av w Oscar</i>
16 Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

*SUMMARY: No permanent occupation of the rock pinnacles or adjacent cliff. No breeding here.*

VIEWING DATE ↓	Promontory Flats (rocks below NE cliff face) <i>36.601554 x 174.898495</i>		Notes
	Total number	Sitting	
18 Oct	141 + 16 = 157	79 + 8 = 87	<i>Larger nos at west end narrows, smaller nos at SE end of near ridge rock. On nest materials.</i>
29 Oct	?	97	<i>Obvious nests west end. None at SE ridge. Count with Oscar.</i>
16 Nov	97	66	<i>Some chicks visible. Some sentinel adults!</i>
14 Dec	?	?	<i>Lots of fledglings now in colony</i>

Totals	254	250	
Average	127	83	
Assessed		80	

*SUMMARY: Dense occupation of the western end of the near flats below the new seat. Most nests clearly visible – about 80 breeding pairs.*

VIEWING SITE : →	ARCHES OUTCROP - Site 3:2
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VIEWING DATE ↓	EL Pin (seaward face W) – sequence as viewed inshore to offshore 36.599595 x 174.897698
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	Main Cliff & Thumb rock		Inshore rock		EL pin 1 masking 2		EL pin 4 behind 7		EL pin 3		EL pin 5 masking 6		Whole Site		Notes
	Total	Sitting	Total	Sitting	Total	Sitter	Total	Sitter	Total	Sitter	Total	Sitter	Total	Sitting	
18 Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
27 Oct	0	0	0	0	20	2	11	1	1	0	26	3	58	6	<i>from seat north of Arches</i>
29 Oct	0	0	0	0	9	2	7	3	0	0	0	0	16	5	<i>from Arches outcrop</i>
16 Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

*SUMMARY: Birds seen in this area may have been prospecting but it appears none remained to nest.*

VIEWING SITE : →	LITTLE HOBBS BEACH - Site 82
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VIEWING DATE ↓	Wharf Bay Rocks	Notes
	Total number	Sitting

<i>SUMMARY: Regular monitoring throughout the season indicated this area, as in previous years, used only for resting. No breeding here.</i>			
<i>OVERALL SUMMARY: Breeding pairs are estimated to be around 300 this year. Birds congregated in 3 areas: (1) Curl Rock and nearby low cliff outcrops – between 100 &amp; 115, (2) Bach Garden rocks – between 110 &amp; 120, and (3) Promontory flats below Seat Promontory – around 80 pairs.</i>			

<b>TIRITIRI MATANGI ISLAND</b>		<b>COMMON COASTAL BREEDING BIRDS</b>		<b>SURVEY 2017 -2018</b>	
SPECIE :	<b>BLACK BACKED GULL</b> <i>Larus dominicanus</i>				
<b>LOCATIONS OF BREEDING BIRDS</b>					
VIEWING SITE : →	CHINAMANS BAY    - <i>Site 1:2</i>				
	<b>Bay Island</b>		<b>Southerly Face</b>		<i>Notes</i>
	<i>Total number</i>	<i>Sitting</i>	<i>Total number</i>	<i>Sitting</i>	
<i>SUMMARY: No nesting observed here.</i>					
VIEWING SITE : →	BACH GARDEN    - <i>Site 2</i>				
VIEWING DATE ↓	<b>Rocks East of Seat Prom ( adjacent NE prom rocks)</b>				
	<i>Total number</i>		<i>Sitting</i>		
9 Nov	1		1		<i>Bird on nesting materials on Bay Rock.</i>



16 Nov	1	1	As above.
<b>Average</b>	<b>1</b>	<b>1</b>	
Assessed		1	

*SUMMARY: 1 pair reared young on Bay rock, as last year.*

VIEWING SITE : →	SEAT PROMONTORY - Site 3		
VIEWING DATE ↓	<b>Promontory Rocks</b> (below NE cliff face)		<i>Notes</i>
	<i>Total number</i>	<i>Sitting</i>	
14 Sept	6+6+7 + 2 = 21	1+0+1 + 1 = 3	<i>Count over 3 flats and near ridge</i>
18 Oct	3+3+3 = 9	2+1+0 = 3	<i>Count over 3 flats – Main grassy, middle and bare top, running SE to NW</i>
29 Oct	3+2+5 = 10	1+1+2 = 4	<i>Count with Oscar</i>
16 Nov	4+4+2 = 10	2+2+2 = 6	
30 Nov	4+4+3 = 11	1+2+1 = 4 + 1 with chick = 5	
14 Dec			<i>Some fledglings with adults</i>
Totals	61	22	
<b>Average</b>	<b>12</b>	<b>4</b>	
<b>Assessed</b>		<b>5</b>	

*SUMMARY: 5 pairs bred here - a reduction on last year's 8 nests.*

VIEWING SITE : →	ARCHES OUTCROP - Site 3:2			
VIEWING DATE ↓	<b>Main Cliff to NW</b>		<b>Main Cliff to East</b>	
	<i>Total number</i>	<i>Sitting</i>	<i>Total number</i>	<i>Sitting</i>

27 Oct			2	0	

*SUMMARY: No birds observed using this area.*

VIEWING SITE : →	POHUTUKAWA PROMONTORY - Site 5			
VIEWING DATE ↓	<b>Rocky Point</b>			
	<i>Total number</i>	<i>Sitting</i>		
27 Oct	18	0	<i>Low cloud and persistent drizzle. Birds flushed as cliff edge approached.</i>	
9 Nov	14	2	<i>Only 2 birds visible on nest materials plus 3 standing guard &amp; 11 birds emerging to circle.</i>	
30 Nov	16	6-8 ?	<i>At least 10 circling &amp; mobbing whilst 6 remained standing sentinel</i>	
<b>Average</b>	<b>16</b>	<b>5</b>		
<b>Assessed</b>		<b>6</b>		

*SUMMARY: Breeding numbers are difficult to assess here because most nests are not visible from the viewing area. The agitated response of birds indicates some nesting, and the observation of two sitting birds on the upper level of the rocks confirms this. Total numbers wheeling in response to the observer and apparently present over several visits suggests 6-8 pairs. Assessed at 6 pairs for the island's total count.*

VIEWING SITE : →	POHUTUKAWA COVE - Site 6				
VIEWING DATE ↓	<b>Lower Cliff Slope</b> <i>N end of Pohutukawa Prom flats</i>		<b>Cove West End Cliff</b>		<b>Notes</b>
	<i>Total number</i>	<i>Sitting</i>	<i>Total number</i>	<i>Sitting</i>	
27 Oct	4	1	2	0	<i>Low cloud and persistent drizzle</i>
9 Nov	3	2	6	3	<i>N end sitters additional to nests observed from Pohutukawa Prom Point</i>

30 Nov	0	0	4	1	
<b>Average</b>	<b>3</b>	<b>2</b>	<b>4</b>	<b>2</b>	
<b>Assessed</b>		<b>2</b>		<b>2</b>	

*SUMMARY: The north west point of the Cove appeared to hold 2 nesting pairs. Looking south east to the northern end of the flats suggest 2 pairs nesting that may not be seen from Pohutukawa Promontory (Site 5). 4 pairs assessed for the island total.*

VIEWING SITE : →	NORTH-EAST BAY TRACK - Site 7														
VIEWING DATE ↓	Five Rock Cluster														
	<b>Rock 1 (far Right)</b>		<b>Rock 2</b>		<b>Rock 3</b>		<b>Rock 4 (twin peak)</b>		<b>Rock 5 (in-shore)</b>		<b>Cliff Base</b>		<b>= Whole site</b>		<b>Notes</b>
	<i>Total number</i>	<i>Sitting</i>	<i>Total number</i>	<i>Sitting</i>	<i>Total number</i>	<i>Sitting</i>	<i>Total number</i>	<i>Sitting</i>	<i>Total number</i>	<i>Sitting</i>	<i>Total number</i>	<i>Sitting</i>	<i>Total number</i>	<i>Sitting</i>	
14 Sept	1	0	0	0	0	0	3	0	0	0			4	0	
27 Oct	4	1	9	4	0	0	3	2	0	0	2	1	18	8	
9 Nov	1	1	7	4	0	0	6	4	1	1	1	1	16	11	
30 Nov	3	2+1w ch	6	2	0	0	5	2+1w ch	2	1	1	0	14	9	
<b>Total</b>	<b>9</b>	<b>5</b>	<b>22</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>9</b>	<b>3</b>	<b>2</b>	<b>4</b>	<b>2</b>			
<b>Average</b>	<b>2</b>	<b>2</b>	<b>7</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>			
<b>Assessed</b>		<b>3</b>		<b>2</b>		<b>0</b>		<b>3</b>		<b>1</b>		<b>0</b>			

*SUMMARY: Estimated as 9 pairs*

VIEWING SITE : →	PAPAKURA PA POINT - Site 10													
VIEWING DATE ↓	<b>Westerly rock outcrop</b>							<b>Notes</b>						

	<i>Total number</i>	<i>Sitting</i>	
9 Nov	11	5	5 nests with sitting birds visible.
<b>Assessed</b>		<b>5</b>	

*SUMMARY: Access to a viewing point, through bushes at the end of the path to the Pa site, was only discovered by the observer this year. The inaccessibility of the rock outcrop suggests it has been in regular use over earlier breeding seasons. 5 pairs were clearly well established on nesting materials.*

VIEWING SITE : →	NORTH WEST POINT - Site 9				
VIEWING DATE ↓	<b>Point Rock</b>		<b>Beach chimney-stone</b>		Notes
	<i>Total number</i>	<i>Sitting</i>	<i>Total number</i>	<i>Sitting</i>	
27 Oct	13	5 (6?)	2	1	
<b>Assessed</b>		<b>5</b>		<b>1</b>	

*SUMMARY: 6 nests visible as last year.*

### ADDITIONAL BLACK-BACK RECORDS

VIEWING DATE ↓	VIEWING SITE ↓	Observation	Deduction
14 Sept	<b>Pa Point north of Hobbs Beach</b>	6 birds wheeling in flight, seemingly territorial.	<i>Birds from North West Point ?</i>
27 Oct	<b>Seat north of Arches – near east rock</b>	2 birds, one sitting on nesting materials	<i>One nest</i>
27 Oct	<b>Pa site – rocky shore below</b>	2 birds on rocks	<i>(see below 14<sup>th</sup> Dec)</i>
29 Oct	<b>Twin Peak rock – Fog horn viewpoint</b>	4 birds present	<i>(See 16<sup>th</sup> Nov)</i>
9 Nov	<b>NE Bay – Bay rock</b>	1 bird on nest materials	<i>(see 30<sup>th</sup> Nov)</i>
9 Nov	<b>NE Bay – north point</b>	2 birds on cliff, 1 possibly sitting	<i>(see 30<sup>th</sup> Nov)</i>
16 Nov	<b>Twin Peak rock – Fog horn viewpoint</b>	4 birds in bay, 1 on nest on cliff flat below view point	<i>One nest</i>
30 Nov	<b>NE Bay – Bay rock</b>	1 bird on nest	<i>One nest</i>

30 Nov	<b>NE Bay – north point</b>	2 birds on cliff	<i>One nest possibly</i>
8 Dec	<b>South coast of island from Kayak</b>	2 birds on low cliff beside empty nest. Agitated by approach – both diving and alarm call	<i>One nest</i>
13 Dec	<b>NE Bay – Bay rock</b>	1 bird with 2 chicks	<i>(As above 30<sup>th</sup> Nov)</i>
14 Dec	<b>Hobbs Beach – north point rocks</b>	2 birds with 3 chicks on low cliff at point	<i>One new family</i>
<i>SUMMARY: Likely that each of these 6 solitary pairs raised young. The observation of a pair on the south coast was a first visit to this location in the 5 years of this survey.</i>			
<b>OVERALL SUMMARY:</b> The breeding total for the year is estimated at 42 pairs. Loose groups continue to use 5 sites - the flat rocks below Seat Promontory, the low flats at the end of Pohutukawa Promontory, the five rocks off N E Bay track, the west coast rocks at North-west Point and below the Papakura Pa site. Solitary nesters vary in location from year to year so some may have been overlooked, especially in areas not visible from land.			

<b>TIRITIRI MATANGI ISLAND</b>		<b>COMMON COASTAL BREEDING BIRDS</b>	<b>SURVEY 2016 -2017</b>
SPECIE :	<b>PIED SHAG</b> <i>Phalacrocorax varius</i>		
<b>LOCATIONS OF BREEDING BIRDS</b>			
VIEWING SITE : →	<b>SEAT PROMONTORY - Site 3</b>		

	<i>Total number</i>	<i>Sitting</i>	<i>Notes</i>
14 Dec	32		Count of all birds in nest tree (28) and nearby small tree (4).

VIEWING SITE :  
→

EMERGENCY LANDING - Site 4

	<i>Total number</i>	<i>Sitting</i>	<i>Notes</i>
18 Oct	?	?	Low tide. Some new nesting material & new nest locations. 1 Little Shag nest. 13 nests, 12+ occupied.
16 Nov			12 nests visible, 7 occupied. Several fledglings perched with adults

**SUMMARY:** *The occupation of nests suggest 10 or 11 pairs attempted breeding. Successful rearing of young was probably achieved by at least 9 pairs.*

OTHER SIGHTINGS

DATE	LOCATION	OBSERVATION	
9 Nov	NE Bay beach	23 birds present on shore line (usually only present in single figures)	

TIRITIRI MATANGI ISLAND

COMMON COASTAL BREEDING BIRDS

SURVEY 2016 -2017

SPECIE :

**LITTLE SHAG**

*Phalacrocorax melanoleucos*

LOCATIONS OF BREEDING BIRDS

VIEWING SITE :

NORTH-EAST BAY TRACK - Site 7

<b>Five Rock Cluster</b>			
	<i>Total number</i>	<i>Sitting</i>	<i>Observation</i>
30 Nov	2		1 adult on tree top on Rock 4 (old nest site) & 1 adult in dense pohutokawa on Rock 5
VIEWING SITE → EMERGENCY LANDING - Site 4			
	<i>Total number</i>	<i>Sitting</i>	<i>Observation</i>
VIEWING DATE ↓			
18 Oct	1	1	First obs. of Little Shag on nest at this site.
<b>SUMMARY:</b> No observation of successful breeding, but the sitting bird in October indicates attempted breeding. Birds present throughout the breeding season on both east and west coast suggest at least one or more pairs occupy territory on the island.			

<b>TIRITIRI MATANGI ISLAND</b>		<b>COMMON COASTAL BREEDING BIRDS</b>		<b>SURVEY 2016 -2017</b>	
SPECIE :		<b>REEF HERON</b> Egretta sacra			
<b>LOCATIONS OF BREEDING BIRDS</b>					
VIEWING SITE : →		NORTH-EAST BAY TRACK - Site 7			
		<b>Five Rock Cluster – Rock 2</b>			
		<i>Observation</i>			

OTHER SIGHTINGS		
Date	Location	Observation
9 Nov	Pohutukawa Promontory	Single bird rose from rocks below Black-backed gulls nesting site to fly NW along coastal strip.
<i>SUMMARY: No indication of breeding observed on Tiritiri this year.</i>		

WHITE-FRONTED TERN NEXT

TIRITIRI MATANGI ISLAND	COMMON COASTAL BREEDING BIRDS	SURVEY 2016 -2017
SPECIE :	<b>WHITE FRONTED TERN</b> Sterna striata	





VIEWING SITE →	SEAT PROMONTORY - Site 3																		
	<b>Promontory Rocks</b> (below NE cliff face)							Notes											
VIEWING DATE ↓	<i>Total number</i>				<i>Sitting</i>														
18 Oct	44 + 35 = 79				0				<i>Birds resting in two sections of the narrow flats at west end. Viewed from new seat.</i>										
30 Nov	13				6+				<i>Birds on south end of nearest ridge-rock below end of Prom.</i>										
14 Dec	60+				4 + 15+ ? = 19+				<i>4 on ridge-rock, others on base face of grassy flat, some well under vegetation. Few seem settled, some still mating; difficult to sort sitters from resters or prospectors.</i>										
Average	51				17														
Assessed					15														
VIEWING SITE →	ARCHES OUTCROP - Site 3:2																		
VIEWING DATE ↓	<b>EL Pin (seaward face W)</b>																		
	<b>Main Cliff &amp; Thumb rock</b>		<b>EL Pin 1 (Inshore rock)</b>		<b>EL pin 2</b>		<b>EL pin 3</b>		<b>EL pin 4</b>		<b>EL pin 5</b>		<b>EL pin 6</b>		<b>Whole Site</b>		<b>Notes</b>		
	<i>Total</i>	<i>Sitting</i>	<i>Total</i>	<i>Sitting</i>	<i>Total</i>	<i>Sitting</i>	<i>Total</i>	<i>Sitting</i>	<i>Total</i>	<i>Sitting</i>	<i>Total</i>	<i>Sitting</i>	<i>Total</i>	<i>Sitting</i>	<i>Total</i>	<i>Sitting</i>			
VIEWING SITE →	EMERGENCY LANDING - Site 4																		
	<b>Promontory Rocks</b> (below NE cliff face)																		
VIEWING DATE ↓	<i>Total number</i>				<i>Sitting</i>														

VIEWING SITE : →	BACH GARDEN - Site 2												
VIEWING DATE ↓	North Rock 1		North Rock 2		North Rock 3		North Rock 4		North Rock 5		Whole Site		Notes
	Total	Sitting	Total	Sitting	Total	Sitting	Total	Sitting	Total	Sitting	Total	Sitting	
18 Oct							2	1			14	1	12 on wet rocks
11 Nov											1	1	Oscar's count
16 Nov					3	2					3	2	
<b>Assessed</b>						2						2	

VIEWING SITE : →	LITTLE HOBBS BEACH - Site 8			
VIEWING DATE ↓	Wharf Bay Reef			
	Total number	Sitting	Notes	
27 Oct	130+	0		

OTHER SIGHTINGS			
DATE	LOCATION	OBSERVATION	
30 Nov	South end from mown ring	Cliff to NE of narrow ridge view point held 26 birds + 6 on sea rocks. 8 or 9 likely sitters (+ far side of rock?)	8
8 Dec	South end from mown ring	32 birds in immediate vicinity. 19 sitting.	19
14 Dec	South end from mown ring	35+ birds present, 28 appeared to be sitting, some clearly on nesting material.	28
<b>Average</b>			18
<b>Assessed</b>			25

<p><b>Summary:</b> Observer visits terminated in mid-December when mating and nesting was clearly underway but it appeared that bird pairing was not complete. It seems likely the estimated numbers at mid-December are lower than the potential number of pairs at the peak of breeding. Assessed numbers are restricted to the observations made, giving a conservative estimate of 60 plus pairs.</p>			
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<b>TIRITIRI MATANGI ISLAND</b>		<b>COMMON COASTAL BREEDING BIRDS</b>		<b>SURVEY 2016 -2017</b>	
SPECIE :	<b>CASPIAN TERN</b> <i>Sterna Caspia</i>				
<b>LOCATIONS OF BREEDING BIRDS</b>					
VIEWING SITE : →	LITTLE HOBBS BEACH   - <i>Site 8</i>				
	Total number	Sitting	Notes		
27 Oct	2	1	<i>Birds present 10.30am &amp; 3.30pm – sitting or resting?</i>		
Summary: No breeding birds observed.					

<b>TIRITIRI MATANGI ISLAND</b>		<b>COMMON COASTAL BREEDING BIRDS</b>		<b>SURVEY 2016 -2017</b>	
<b>MISCELLANEOOUS RECORDS</b>					

SPECIES	LOCATION	DATE	OBSERVATION
Variable Oystercatcher	North end of Hobbs Beach to Pa Point	14 Sept	6 birds in chasing behaviour
Variable Oystercatcher	South of Hobbs Beach	14 Sept	2 birds on coastal rocks
Variable Oystercatcher	Hobbs Beach	27 Oct	Pair nesting in usual location
Variable Oystercatcher	Wharf reef	27 Oct	Single bird sitting in grassy mount area
Variable Oystercatcher	Little Hobbs Beach	27 Oct	2 birds stood separately on coastal rocks
Variable Oystercatcher	South of Hobbs, south facing shingle	13 Dec	2 birds behaving defensively
Variable Oystercatcher	North East Bay – north end	13 Dec	2 birds with chick
Variable Oystercatcher	Hobbs Beach – north bay two	14 Dec	1 adult with chick
Variable Oystercatcher	Hobbs Beach – north point rocks	14 Dec	2 birds
<p><b>SUMMARY:</b> <i>Incomplete data, but at least 3 breeding pairs on the walkable coast from south of the wharf to north of Hobbs Beach. One pair at NE Bay. A total of 4 confirmed pairs. A further 3 or more likely at other less observed locations.</i></p>			