

TIRITIRI MATANGI ISLAND COMMON COASTAL BIRDS - BREEDING SURVEY

Spring-Summer 2016-2017

Survey Report for 2016 -17 breeding season:

Year four of Survey

Bird counts were undertaken during 8 visits to the island from 29 September through to 22 December. All observations were made from the same land based viewing stations used in the previous season. Greater attention was given to the southern sites due to numbers of Red-billed gull and White-fronted tern. Visits to more northerly sites were restricted to the early and later parts of the breeding cycle of Black-backed gull. Estimation of their numbers relies on limited data.

- 1. RED BILLED GULL Red-billed gulls numbered around 250 265 breeding pairs this year. Nesting birds were concentrated in 3 areas of inshore rock with others on coastal cliffs and outcrops, all in the southern third of Tiritiri's east coast. The largest grouping at Curl rock was the most difficult to assess due to crevices and ground-cover obscuring some nesting areas, plus the need to view from 2 locations. Numbers appeared to lie between 75 and 85 pairs here and an additional 25 pairs on the nearby cliff, where most nest were distinctly visible. Near 60 pairs nested in the area observed from the Bach Garden and round onto the rock flats below Seat Promontory, the most northerly point used this year. And another 60 pairs used the rock in the bay, and its adjacent cliff face, viewed from Far Seat looking north toward the Fog Horn shed. Twin-peak rock, east of Far Seat and the most southerly nesting area held between 35 and 40 pairs. Total numbers are less than last season (approx. 340 pr) but more than the previous two years (each approx. 100). The rock pinnacles just north of Emergency Landing were not used at all, unlike the previous 3 breeding seasons.
- 2. BLACK BACKED GULL Nesting birds were present at 4 main sites as in previous years: North-east Bay track rocks held at least 8 pairs, North-west point had 5 or 6 pairs, Seat Promontory also had 8 pairs, and Pohutukawa promontory held at least 6 pairs. Other pairs bred singly at various points along the coast cliffs. The limited data supports a minimum number of 35 breeding pairs.
- 3. PIED SHAG Pied shags continue to use the cliff-side trees above Emergency Landing as a roost and nest location. The presence of young at different stages of development suggests breeding takes place throughout most or all of the year. Between August and December, 7 nests were utilised and young birds raised in at least 6 of these.
- 4. LITTLE SHAG Limited visits to the site off North-east Bay track suggest that a pair of Little shag again held territory here, and the presence of a young bird with the adult pair on 22nd December strongly indicate successful breeding in the immediate vicinity, as in previous years.
- 5. **REEF HERON** There were no sightings of Reef heron during survey visits. In the 4 years of this survey only in the 2013-14 season has breeding been demonstrated with young being fed at the North-east Bay track site.

- 6. WHITE FRONTED TERN

 Nesting appears to have commenced in late November with numbers increasing though most of December. At most locations sitting birds were clearly visible on a shallow mat of dry grasses. Small numbers were sitting within pockets of vegetation especially at the rocks viewed from the Bach Garden, and some were hidden along the cliff face adjacent to Curl rock. Conservative assessments in these areas could mean more breeding pairs were present than the count of 106 indicates. Of the previous 3 breeding seasons only 2014-15 showed any breeding on Tiritiri and no more than 10 pairs. This year breeding pairs must number between 100 and 120 pairs.
- 7. CASPIAN TERN Although birds were seen on a few occasion there was no evidence of loyalty to any particular area and no sign of nesting.

COMMON COASTAL BIRDS - BREEDING SURVEY 2016-2017

Survey Purpose: The intention is to measure population fluctuations and trends among the common coastal species utilising Tiritiri Matangi. Annual counts commenced in the 2013-14 breeding season. Conclusions for the 2016-17 season are shown above and supporting data below.

Map: The island map in this report has been updated to show the location of the main rock areas used for nesting, as well as indicating regular viewing stations.

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. Unlike previous seasons, most counts only recorded 'sitting' birds. As the season advanced nesting material was very evident for many of the sitting birds. When chicks began to appear they were, as far as possible, counted with siblings and any accompanying adult as a single family unit and added to the number of birds that appeared to be still sitting and without chicks.

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 show significant variance.

Text Notes: Where 'sitters' are recorded with two numbers (EG: 4+4) the second number will refer to a family group. Abbreviations used to indicate this: 'ch fam' indicates a unit identified as a family comprising an adult with a chick or chicks, or a separated group of fledglings. 'ch' = chick. 'sep' = separate family. 'w' = with. 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

Species included:

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

Viewing Stations:

- 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.



TIRITIRI	MATANGI IS	LAND (COMMON	COASTAL BE	REEDING B	IRDS S	URVEY DATA 2016 -2017
SPECIE:	RED	BILLED GUL	L Larus no	ovaehollandia	2		
			LOCATIO	NS OF BREED	ING BIRDS		
VIEWING SITE : →				FOG HORN SH	ED - Site 1		
		ck (to N) × 174.899820		pposite Rock x 174.899676		Rock (to SE) x 174.900260	
	Total number	Sitting birds	Total number	Sitting birds	Total number	Sitting birds	Notes
29 Sept	22	0					
6 Nov	108 ?	66		32	44	35	Blustery wind.
11 Nov	?	53	42	26	?	41	
18 Nov					52	47 + 6 ch	
3 Dec	?	22 + 43 ch fam	?	10 + 7 ch fam	46	12 + 14 ch fam	
9 Dec		6 + 38 ch fam		18 + ch fam		25 ch fam	Families quite dispersed
22 Dec						12 ch fam	Counted from far Seat
		55-60		25		35-40	Averaged, adjusted totals
SUMMARY: Ve	egetation on Curl ro	ck obscures some ne	sting areas and pro	vides shelter for you	ng chicks. Counts	in these 3 areas sug	ggest 115-125 breeding pairs.
VIEWING SITE : →			EA	ST COAST TRACI	K BEND - S	ite 1	
	Curl Ro	ck (to S)	Small Cliff	-edge Rock			
	Total number	Sitting birds	Total number	Sitting birds			

29 Sept	29	4				
11 Nov	?	30	;	14		
18 Nov	?	22	?	11		
3 Dec	50	6 + 12 ch fam	29	7		
9 Dec		22 ch fam		10 ch fam		
22 Dec		18 ch fam		10 ch fam + 1 sit?		
		22		10		Averaged, adjusted totals

SUMMARY: This face of Curl rock below the ridge not visible from Fog Horn Shed viewpoint. The 2 rocks seen here held 32 breeding pairs

VIEWING SITE	FAR SEAT VIEW TO FOG HORN BAY - Site 1:1											
: → VIEWING DATE ↓	North	east Rock	C	liff face	NOTES							
	Total	Sitting	Total	Sitting								
11 Nov	?	69	?	14								
18 Nov	68	60 + 13ch	0	0								
3 Dec	69	8 + 18 ch fam	18	2 + 5 ch fam								
9 Dec		3 + 32 ch fam (70 chick)		2 + 8 ch fam (16 chick)	Hard to count partially dispersed family groups							
22 Dec		37 chick families		8 chick families								
		35-40		10	Averaged, adjusted totals							

SUMMARY: At least 35-50 pairs breeding here.

VIEWING SITE:		BACH GARDEN - Site 2												
\rightarrow		36.602911 x 174.899045												
VIEWING DATE	North	rth rock 1 North rock 2 North rock 3 North rock							North rock 5 Whole site Notes					
\	Total	Sitting	Total Sitting Total Sitting Total Sitting Total Sitting Total Sitting											

11 Nov											0	0	
18 Nov											12	5	
3 Dec	8	4	24	11	0	0	17	7	19	11	80 +	33	
9 Dec												22+nest	
22 Dec	2	1	35	18	2	1	11	6	18	8	68	34	
		1		15		1		6		10		33	Av. adjusted totals

SUMMARY: Shared use of these rocks with White-fronted tern

VIEWING SITE : →		SEAT PROMONTORY - Site 3															
VIEWING DATE ↓		n Cliff mb rock	EL P	Pin 1	EL P	Pin 2	EL P	Pin 3	EL P	Pin 4	EL F	Pin 5	EL P	Pin 6	Who	le site	Notes
	Total	Sitting	Total	Sitting	Total	Sitting	Total	Sitting	Total	Sitting	Total	Sitting	Total	Sitting	Total	Sitting	
29 Sept															0	0	
6 Nov															0	0	
11 Nov															0	0	
3 Dec															0	0	

SUMMARY: No birds observed making any use of the rock pinnacles and adjacent cliff.

		SEAT PROMONTORY - Site 3										
VIEWING DATE ↓	Promontory Flats (r 36.601554 x	·										
	Total number	Sitting										
6 Nov	15	6+	A 7 th pair seen mating. Nests all at NW end of flats.									
18 Nov	60	22	Dry grass nests with sitting adult clear to see in rock niches.									

3 Dec		80						.7		Nests	all at NW	end of fl	lats.			
22 Dec			25				ļ	5		Presui	med your	ng birds a	lready dis	spersed.		
							2	5 Averaged, adjusted totals								
SUMMARY:	Most ne	ests cleari	ly visible -	- about 25	5 breedin	g pairs.										
VIEWING SITE : →		ARCHES OUTCROP - Site 3:2														
VIEWING DATE ↓				E	L Pin (seawar	d f		– sequ 36.599595			d insho	re to o	ffshore	!	
		n Cliff mb rock	Insho	re rock	-	oin 1 king 2		_	oin 4 ind 7	EL p	oin 3		oin 5 king 6	Who	le Site	Notes
	Total	Sitting	Total	Sitting	Total	Sitter		Total	Sitter	Total	Sitter	Total	Sitter	Total	Sitting	
SUMMARY:	No birds	using this	area.													
VIEWING SITE :							L	ITTLE H	IOBBS E	SEACH	- S	Site 8				
VIEWING DATE ↓		Wharf Bay Rocks											Notes			
		Total number			Sittir	ng										
SUMMARY:	Regular n	monitoring	g through	nout the se	eason ind	licated thi	is a	 rea only เ	used for r	esting. N	o breedin	ng here.				
OVERALL SUMN pairs may be on up on the previo	seaward	rock face	s, but the	ese numbe	ers comp	are with lo	and					-				ts. Some additional rear's high count but

TIRITIRI	MATANGI ISLAND	СОМ	MON COAST	AL BREEDING BIR	DS SURVEY 2016 -2017
SPECIE :		BLACK	BACKED GU	LL Larus dominio	anus
		LOCA	TIONS OF BREE	DING BIRDS	
VIEWING SITE: →		_	CHINAMANS B	AY - Site 1:2	
	Bay Island		South	erly Face	Notes
	Total number	Sitting	Total number	Sitting	
SUMMARY:	No nesting observed here.				
VIEWING SITE: →			BACH GARD	EN - Site 2	
VIEWING DATE ↓	Rocks East of Seat	Prom (adjacent I	NE prom rocks)		
	Total number		Sitting		
11 Nov	1		1	Single nest on Bay Rock	
18 Nov	1		?		
3 Dec	2		1	Single nest on Bay Rock	
9 Dec	2		0		
22 Dec	2		1	Adult bird with large down	y chick on Bay rock. Plus 1 sitting on R2 section
SUMMARY:	1 pair reared young on Bay roo	ck, as last year.			

VIEWING SITE: →				SEA	AT PROMONTORY - Site 3
VIEWING DATE ↓	Promonto	ory Rocks (pelow NE cliff face)		Notes
_	Total numbe	er	Sitting		
2 Sept	12		?		3 birds sat throughout observation period
29 Sept	22		1 (maybe 2)		2 fishermen on northern end of rocks
22 Oct	2		0		
6 Nov	6+4+5 = 15	5	3+1+3 = 7		Counting rocks from right to left
18 Nov	15		4+2+3 = 9		Counting rocks from right to left
3 Dec	6+4+7 = 17	7	2&1ch+2+2&1ch =	8	Counting rocks from right to left
9 Dec	3 + 3 + 5 = 1	11	2 + 1 + 1&2 sep ch =	- 6	
22 Dec	5 + 5 + 6 = 1	16 1	&2ch+1&1ch+ 0&3c	:h=8	Ch=chick group (range1-3 per group)
SUMMARY:	8 pairs definitely b	red, a 9 th may	have done so.		
VIEWING SITE				٨١	ARCHES OUTCROP - Site 3:2
\rightarrow				A	ARCHES OUTCHOF - Site 5.2
VIEWING DATE ↓	Main Cliff	to NW	Main Cliff	f to E	East
	Total number	Sitting	Total number	Si	Sitting
SUMMARY:	No birds observed	l using this are	ea.		
VIEWING SITE: →			POH	HUTU	JKAWA PROMONTORY - Site 5
VIEWING DATE		Rocky Poi	nt		

↓			
	Total number	Sitting	
29 Sept	2	0	
22 Oct	9	0	
6 Nov	12	4/5	
22 Dec	22	?	6 standing on rock ledge reluctant to move. 16 flying, agitated, diving & crying.

SUMMARY: No visits to this site were made during the peak period of mid-November to mid-December. Numbers present and response to disturbance suggests several pairs were breeding. Based on this limited evidence, and the use of this site in previous years it seems likely that at least 6 pairs bred. No attempt was made to climb down the ledges where it is assumed nests were located.

VIEWING SITE: →			P	OHUTUKAWA (COVE - Site 6
VIEWING DATE ↓	Lower Cliff Slope N end of Pohutukawa Prom flats		Cove Wes	t End Cliff	Notes
	Total number	Sitting	Total number	Sitting	
29 Sept	0	0	4	1	
6 Nov	3	1/2	8	2/3	5 birds on upper level, 3 lower. Also 2 on cliff below stack rock
22 Dec	0	0	7	1w2ch	6 birds on upper level – stood resting? Ad w chicks lower level.

SUMMARY: At least one pair, probably two bred here.

VIEWING SITE: →	NORTH-EAST BAY TRACK - Site 7
VIEWING DATE	Five Rock Cluster

	Rock Rig		Roc	:k 2	Roc	k 3	Roc (twin		(in-sl	ck 5 nore)	Cliff E	Base	= Who	le site	Notes
	Total number	Sitting	Total number	Sitting	Total number	Sitting	Total number	Sitting	Total number	Sitting	Total number	Sitting	Total number	Sitting	
29 Sept	1	0	3	1	0	0	4	1	0	0					+4 flying at R4
22 Oct	6	1	5	0	0	0	4	1	0	0	2	1	17	3	
6 Nov	3	0	7	4	0	0	5	2	2	1	2	1	19	8	
22 Dec	4	1+ 1w2ch	3+ 15fly	0	1	0	6 suggest 2/3 fam	0	0	0	1	1	>30		Young dispersed or in cover?
		1		3		0		2		1		1		8	
SUMMARY:	Again	very limit	ed eviden	ce, but su	ggesting (about 8 p	airs bred.								
VIEWING SITE : →		LITTLE HOBBS BEACH - Site 8													
VIEWING DATE ↓		,	Wharf B	ay Ree	f		Notes								
	To	otal numb	per		Sitting										
SUMMARY:	No bre	eding hei	re												
VIEWING SITE: →							NORTH	WEST P	TNIC	- Site	9				
VIEWING			Point R	ock			Be	ach chi	mney-st	tone			/	Votes	
DATE ↓	Tot	al numbe	r	Si	tting		Total nui	mber		Sitting					
11 Nov		9			4		2			1	4	clearly o	n nests + 2	possible	sitters on P. Roo
									1						

		ADDITIONAL BLACK-BACK RECORDS	
VIEWING DATE ↓	VIEWING SITE ↓	Observation	Deduction
22 Oct	NE Bay	2 noted on northern point	5
6 Nov	Cliff adjacent Twin-peak Rock	1 BB Gull sitting	2
6 Nov	NE Bay	3 on N point, 1 may be sitter + 1 sitter on Bay rock	5
6 Nov	Original 3.2 Site (tree seat)	2 present on rock to West, 1 sitting.	3
11 Nov	Coast from Hobbs to NW Point	1 pair on sea close to shore	No mobbing along here suggests no breeding
11 Nov	Grass point south of Wharf	I BB Gull sitting	1
11 Nov	Cliff adjacent Twin-peak Rock	2 BB Gull present, 1 sitting	2
18 Nov	Twin-peak rock	1BB Gull	
18 Nov	Grass point south of Wharf	1 BB Gull on nest	1
3 Dec	Cliff towards Curl rock from Fog Horn	1 BB Gull on nest	4
3 Dec	Grass point south of Wharf	1 BB gull sitting	1
9 Dec	Pa point north of Hobbs	1 sitting BBG + mate nearby, 2 others diving low	Suggest 2 pairs with nesting territory
9 Dec	Grass point south of wharf	1 BB gull sitting	1
9 Dec	Cliff adjacent Twin-peak rock	1 BB gull with chick	2
22 Dec	Original 3.2 Site (tree seat)	1 BB Gull stood sentinel	3

SUMMARY: Likely that each of these 5 solitary pairs raised young - at Grass Point, cliff adjacent to Twin-peak rock, Tree seat, cliff towards Curl rock and NE Bay. Pa point may have supported an additional 2 pairs but without further corroboration these have not been included.

OVERALL SUMMARY: Assessing the numbers of Red-billed gull and White fronted tern consumed most of the time available during visits to Tiritiri Matangi. Because these species were concentrated in the southern half of the east coast, opportunities to check progress of Black-backed gull breeding at the more northerly sites was limited to a few dates early and late in their breeding cycle. Estimated numbers are therefore less reliable than is desirable and, possibly lower than actual. Around 40 pairs is probable but the limited data supports just 35 pairs.

TIRITIRI	MATANGI ISLAND		COMMON	COASTAL	BREEDING	BIRDS	SURVE	EY 2016 -2017			
SPECIE:	PIED SHAG	Phalac	rocorax varius								
			LOCATIONS	OF BREEDI	NG BIRDS						
VIEWING SITE : →			SEA	T PROMONTO	DRY - Site	3					
	Total number	Sittin	g			Notes					
29 Sept	12	6	6 n	ests appeared occi	upied and a possib	le 7 th obscured from	viewing point i	may also be in use			
6 Nov	19	7		Bi	rds present on 7 ne	ests. Possibly 8 nests	constructed.				
VIEWING SITE :		EMERGENCY LANDING - Site 4									
	Total number	Sittin	g			Notes					
2 Sept	14	5+		5 nests clearly vi	sible and occupied,	, a 6 th nest possible ii	n close proximi	ty to another			
22 Oct	18	7		7 0	ccupied nests. 12	birds in tree and 6 or	n nearby rocks				
SUMMARY: throughout mos	Pied shags continue to use the tor all of the year. Between A						nent suggests i	breeding takes place			
			OTH	HER SIGHTING	SS						
DATE	LOCATION			O	BSERVATION						
22 Oct	Wharf Reef			6 birds	resting on shingle	?					
	NE Bay			3 birds	s resting on beach						
11 Nov	Wharf Reef			6 birds pre	esent on southern	reef					
18 Nov	Twin-peak rock			1	bird present						
18 Nov	Bay below Garden bad	h		1	bird present						
22 Dec	Dead tree at southern point	NE Bay		1 bir	d perched at top						

TIRITIRI I	MATANGI ISLANI	D C(COMMON COASTAL BREEDING BIRDS SURVEY 2016 -2017							
SPECIE:	LITTLE SHAG	Phalacroc	orax melanoleucos							
·		LC	OCATIONS OF BREEDING BIRDS							
VIEWING SITE :			NORTH-EAST BAY TRACK - Site 7							
	Five Rock (Cluster								
	Total number	Sitting	Observation							
29 Sept	2		2 adults flying between rock perches, meeting up at Rock 4 when	re one dropped on seaward side of tree						
6 Nov	1		I bird perched in pohutokawa on Rock 2.							
22 Dec	3		Adult perched in tree Rock 2. Imm perched in tree Rock on 4, lat	er joined by second adult bird.						
VIEWING SITE →			EMERGENCY LANDING - Site 4							
VIEWING DATE \downarrow	Total number	Sitting	Observation							
SUMMARY: In .	snite of the limited number	of visits the prese	nce of a free flying young bird with an adult on 22 December indicates	successful breeding by resident nair						

TIRITIRI	MATANGI ISLAND	COMMON COASTAL BREEDING BIRDS	SURVEY 2016 -2017
SPECIE:	REEF HERON E	gretta sacra	
		LOCATIONS OF BREEDING BIRDS	
VIEWING SITE : →		NORTH-EAST BAY TRACK - Site 7	
		Five Rock Cluster – Rock 2	
		Observation	
SUMMARY: No	e-sightings of this specie during surv	vey visits.	

WHITE-FRONTED TERN NEXT

TIRITIRI	MATANGI	ISLAND	COMM	ION COAS	TAL BREEDIN	IG BIRDS	SURVEY 2016 -2017
SPECIE :	WHITE	FRONTED	TERN Sterr	na striata			
			LOCATIO	NS OF BREE	EDING BIRDS		
VIEWING SITE : →				FOG HORN S	SHED - Site :	1	
VIEWING DATE ↓	Curl Roc	ck (to N)	Notes				
	Total number	Sitting	Total number	Sitting	Total number	Sitting	
3 Dec			16	4 +	18	11	More birds hidden along Cliff base
9 Dec			22	8 +		18	2 nests on Twin-peak with chick
22 Dec						14	Counted from Far Seat
				8		16	Estimated total of nesting pairs
				,		-	
VIEWING SITE : →			FAR SEAT	VIEW TO FOO	HORN BAY -	Site 1:1	
VIEWING DATE ↓		North E	East Rock		Cliff I	ace	Notes
	Total n	number	Sittir	ng	Total number	Sitting	
3 Dec	()	0		2	1	
9 Dec					3	2	
22 Dec						2	
						2	Estimated total of nesting pairs
			1		l		
VIEWING SITE				SEAT PROMON	NTORY - Site	· 3	

VIEWING DATE ↓	El	L Pin 1		EL Pi	n 2	EL P	in 3	El	Pin 4	,	EL P	in 5	EL	Cliff	Base		note ock	Notes
•	Tota numb		ting	Total number	Sitting	Total number	Sitting	Total numbe		ting	Total number	Sittin	_	tal nber	Sitting	Total number	Sitting	
24 Sept														3	0			
28 Nov													(0	0			
VIEWING SITE →							SE	AT PR	OMO	NTOR	Υ -	Site 3	3					
		Promo	ntory	Rocks	below N	E cliff face	<u>:</u>)						٨	Votes				
VIEWING DATE ↓		Total nu	ımber			Sitting												
6 Nov		2				0					2	birds re	esting a	t NW e	nd of flo	at rocks		
18 Nov	8 ?								2	birds rest	ing at	NW end	, and	6 flying	south acr	oss bay		
3 Dec	3 + 8 2 + 4 The 3 at NW end, the 8 on right end of nearest of flat rock							cks viewe	d from east	end of prom								
9 Dec		21	-			9												
22 Dec		5+	20			3 + 15		Lower	numbe	er at N	W end, hi	gher no	ow spred	ad a lit	tle furth	er onto e	astern top o	of narrow roc
-						18						Estim	ated to	tal of r	nesting p	airs		
VIEWING SITE →							Δ	RCHES	OUT	CROP	P - Sit	e 3:2						
VIEWING DATE ↓								EL Pi	n (sea	awar	d face V	V)						
		n Cliff		Pin 1 ore rock)	EL	pin 2	EL p	L pin 3 EL pin 4 EL pin 5 EL pin 6 Whole Site						Notes				
	Total	Sitting	Total	_	Total	Sitting	Total	Sitting	Total	Sitt	ing T	otal	Sitting	Total	Sittin	g Tota	Sitting	
VIEWING SITE	\rightarrow						Eľ	MERGE	NCY I	AND	ING ·	- Sit	te 4					

	Promontory Rock	KS (below NE cliff face)	
VIEWING DATE	Total number	Sitting	
\downarrow			

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 Nov											183		1–5 left to right	
3 Dec	2	0	45	21	42	18	4	0	24	12	117+133	51	133 on wet rocks	
9 Dec	1	0	42	24	40	21	4	2	18	9	105	56		
22 Dec	3	1	24	22	33	24+	3	2	20+	11	83	60		
		1		24		24		2		11		62	Estimated totals	

VIEWING SITE : →			LITTLE HOBBS BEACH - Site	28
VIEWING DATE ↓	Wharf B	ay Reef		
	Total number	Sitting	Notes	
2 Sept	30 +		Resting between fishing flights	
29 Sept	140 +		Most using Whangapaoroa side of rocks – resting	Viewed from ferry 10.30am
6 Nov	7		Birds alighting between fishing forays.	Viewed from ferry 10.30am

SUMMARY: Nesting appears to have commenced in late November with numbers increasing though most of December. At most locations sitting birds were clearly visible on a shallow mat of dry grasses. Small numbers were sitting within pockets of vegetation especially at the rocks viewed from the Bach Garden, and some were hidden along the cliff face adjacent to Curl rock. Conservative assessments in these areas could mean more breeding pairs were present than the count of 106 indicates. Breeding population probably between 100 and 120 pairs.

		OTHER SIGHTINGS	
DATE	LOCATION	OBSERVATION	
22 Oct	Shag Rock	150 + birds resting on distant rock	

TIRITIRI MATANGI ISLAND		COMMON	COMMON COASTAL BREEDING BIRDS				
SPECIE:	CASPIAN TERN	Sterna Caspia	Sterna Caspia				
LOCATIONS OF BREEDING BIRDS							
VIEWING SITE : →	LITTLE HOBBS BEACH - Site 8						
	Total number	Sitting	Notes				
29 Sept	2	2 adults resting on grass plateau @ 11.00am One on shingle at 3.30pm					
22 Oct	2	1 bird sitting on grass plateau					
18 Nov	2		2 Birds flying over Bach Garden bay towards Hobbs beach				

MISCELLANEOOUS RECORDS

SPECIES	LOCATION	DATE	OBSERVATION
OYSTERCATCHER	Wharf Reef	22 Oct	2 birds on reef shingle + 2 on coastal edge
OYSTERCATCHER	Hobbs Beach	22 Oct	2 with 1 sitting outside taped area
OYSTERCATCHER	Seat Prom. Flat rocks – SE end	6 Nov	2 birds present
OYSTERCATCHER	South of Wharf	6 Nov	2 birds present at corner point
OYSTERCATCHER	Wharf Reef	11 Nov	2 birds present
OYSTERCATCHER	Hobbs Beach	11 Nov	2 birds, 1 sitting within taped off area
OYSTERCATCHER	North of Hobbs	11 Nov	2 birds on rocks
OYSTERCATCHER	North West Point	11 Nov	2 birds present
SPOTTED SHAG	Wharf Reef	11 Nov	Sighting of possible single bird flying south
OYSTERCATCHER	Seat Prom. Flat rocks – SE end	3 Dec	Single bird sitting
OYSTERCATCHER	Seat Prom. Flat rocks – SE end	9 Dec	Single bird sitting moving to show 2+ eggs
OYSTERCATCHER	Hobbs beach	9 Dec	1 pr with 2 young & 1 pr distraction behaviour & agitated
OYSTERCATCHER	South of wharf	9 Dec	1 pair at point agitated and distracting

SUMMARY: A tentative record of breeding pairs indicates at least 6 pairs in the areas watched. The island possibly supports 10 or more breeding pairs?