Fint Set,

Date	41	12/20	)		Rain (0-5)	0	Temp	(1-6)	4	-		
ransect		dad			Wind (0-1)	O Temp (1-6) 4 2 Noise (1-3) 4 Variable		ith				
Observers	30	, Jer	mio, L	othe M	Cloud (0-4)	2						
ransect po	int				Time started	7.	1	Time	finish	ed	7.16	1
Species Seen		Heard Inside 25m		Outside 25m	Fly over					(Key or new) en points		
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taka K	aka	1			2							1
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Blackbird	-											
(akariki)	L. B	h.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- Selection of the Control of the Co	A secretary that is a second out to be	an fel description	-	ALL MOSSINGS	MUNITURE THE	DENTI LEVEN	BANK TABLETON AND	1
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Blackhi	-4	DQ I STORY		The second secon			100 miles	1	Table 1			
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Transect po	int	2			Time started	7.2	6	Time	finish	ed	7.32	
Species		Seen	Heard	Inside	Outside	Fly o	over	4 10 10 10 10 10 10 10 10 10 10 10 10 10			(Key or new)	
				25m	25m			betwe	een p	oints	Demonstrate to	ve
Konfell			1		4	AL					water By	
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Fantail			1	1	#						August 1	
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Grey Wa												

Transect point	3			Time started	7.44	Time finished
Species	Seen	Heard	Inside 25m	Outside 25m	Fly over	Additional birds (Key or new) recorded between points
K 1052		2	1	2		The state of the s
		,		,		manda and an analysis
B Brid	The last of	1	Par	1,		The second secon
Swillow	7,		1.	1.		
Sty Kah	7	1	4		(III) COLUMN	The second secon
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RBGUI						2
Starling						3
Pulcho						1
The state of the s	AN PROPERTY AND PROPERTY AND PROPERTY.	THE PERSON NAMED IN COLUMN	· 1000年1月1日 - 1000年1月1日 - 1000年1日 -	STORES CONTRACTOR DO SERVICE		4
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Transect point	4	Total Wall		Time started	7.53	Time finished 0 02
Fransect point Species	4 Seen	Heard	Inside	Time started Outside	7.53 Fly over	Time finished 8.02 Additional birds (Key or new)
		Heard	Inside 25m			Time finished & 02 Additional birds (Key or new) between points
		Heard		Outside		Additional birds (Key or new)
		Heard		Outside		Additional birds (Key or new)
		Heard	25m	Outside		Additional birds (Key or new) between points
Swaller	Seen	Heard		Outside		Additional birds (Key or new) between points
Swalling Chiffind	Seen		25m	Outside		Additional birds (Key or new) between points
Swally Chiffiel Melolio	Seen	Heard	25m	Outside		Additional birds (Key or new) between points
Swally Chiffiel Melolio	Seen		25m	Outside		Additional birds (Key or new) between points
Swally Chiffiel Melo	Seen		25m	Outside		Additional birds (Key or new) between points
becies  buttond  Swalling  Chiffinal	Seen		25m	Outside		Additional birds (Key or new) between points
Swally Chiffiel Melolio	Seen		25m	Outside		Additional birds (Key or new) between points
Swally Chiffiel Melolio	Seen		25m	Outside		Additional birds (Key or new) between points
bother - Swalley Chiffind Mulelio	Seen		25m	Outside 25m	Fly over	Additional birds (Key or new) between points
brieffiel  Swalley Chiffiel  Miletio  Ghach  Kakea  Warbler  P. Ghard  Ryfish  B. Grand	Seen	1 2 1 1 1 1 4 1 1	25m	Outside 25m	Fly over	Additional birds (Key or new) between points
becies  bether  bether  Swalley  Chiffinal  Malero  Spach  Kakea  Wabler  P. Synd  Rryfish  B. Grad	Seen	1 2 1 1 1 1 4 1 1	25m	Outside 25m	Fly over	Additional birds (Key or new) between points
becies  briffied  Swalling  Chiffiel  Mileto  Spich  Kakea  Warbler  P. Shoul  Rryfish  B. Grad	Seen	1 2 1 1 1 1 4 1 1	25m	Outside 25m	Fly over	Additional birds (Key or new) between points
brieffiel  Swalley Chiffiel  Miletio  Ghach  Kakea  Warbler  P. Ghard  Ryfish  B. Grand	Seen	1 2 1 1 1 1 4 1 1	25m	Outside 25m	Fly over	Additional birds (Key or new) between points
becies  briffied  Swalley  Chiffiel  Mileto  Ghach  Kakea  Warbler  P. S. Gurl  Ryfish  B. Grad	Seen	1 2 1 1 1 1 4 1 1	25m	Outside 25m	Fly over	Additional birds (Key or new) between points
becies  briffied  Swalling  Chiffiel  Mileto  Spich  Kakea  Warbler  P. Shoul  Rryfish  B. Grad	Seen	1 2 1 1 1 1 4 1 1	25m	Outside 25m	Fly over	Additional birds (Key or new) between points
becies  briffied  Swalley  Chiffiel  Miletio  Ghach  Kakea  Warbler  P. S. Gurll  Rryfish  B. Brind	Seen	1 2 1 1 1 1 4 1 1	25m	Outside 25m	Fly over	Additional birds (Key or new) between points

No SINDAY!

Transect point	5			Time started	8.11	Time finished 8.16
Species	Seen	Heard	Inside 25m	Outside 25m	Fly over	Additional birds (Key or new) recorded between points
Puheko Puheko Kaka Starling Unff	17 11 75 1	1		1	Market 1	Charles By Table
Puheko		2		2		
Kaka				1		
Starlin		1		10000		The second secon
chall,		1		1		10 1 10 10 10 10 10 10 10 10 10 10 10 10
Ghed	1		1			
Tui	2			2,		builty.
Smallan	4			2		They do think that will be
			Y Y	and the second s	C = 10 LH 64	being in Pater times " b"
					1	responding that the state of
			To Bring	A TOTAL STATE OF THE PARTY OF	produced to	And and by
				The state of the s	Talks-01	TOTAL PROPERTY OF
		A VA	Na	Thrush	- al	they almosant
			1	here		300.0
			Mys	127	None	
						Commence of the Commence of th
			1 2 2 2			Salara Salara - Links
					7/3/11	Later Maria Carlos Carlos
					1.10	Call Control of the C
			11/1/2		100	
						914
						Deserve The same
						1 39 5 Language 1
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						RESTRICTS NO. 1
ALLEN STREET	A Charles	The state of the state of	A STANLAND			

Any additional notes can be written down bottom of data sheet(s) e.g. If weather has a significant change during the transect: 'Rain has changed to a 3, time: 09:30, place: transect 3.

Species  Seen Heard Inside Outside 25m  Kererto Sadio 1  Tui   Addio 1  Kara   Adio 1  Kererto Sadio 1  Tui   Adio 1  Kererto Sadio 1  Kererto Sadio 1  Kara   Adio 1  Kererto Sadio 1  Kara   Adio 1  Kererto Sadio 1  Adio 2  Adio 1  Adio 2  Adio 1  Adio 2  Adio 3  Adio 3  Adio 3  Adio 4  Adio 3  Adio 4  Ad	Additional birds (Key or new) recorded between points
Receptor Starling Tui / Griff of the Control of the	recorded between points
Tui / Chilling Kaya / Chilling	
Reference (RP)  Johnstown Missels  The Sparrow  Farry 1   1   1    Rakadiki Skalank  Farry 1   1   1    Rakadiki Skalank  Farry 1   1   2   Reference  Ref	
Transect point 4  Species  Seen Heard Inside Outside Fly over 25m  Chifful 2  Chifful 3  Mullad 5  Charles 1  Charles 3  Mullad 5  Charles 1  Charles 3  Charles 4  C	
Blackbird Allad 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Blackbirdhulled 1 / Kakafiki Skylark 1 / Fantail P. Bird 1 / I / I / I / I / I / I / I / I / I /	
Fartfall P. Blad  untition Tai 1  Kfish  B. Teal  B. Brind  Transect point  Species  Seen Heard Inside 25m  Chiffind  Philipso  And Andrew  Charles  Charles	
Transect point  Species  Seen  Heard  Inside 25m  Chiffind  Pulses  Author  Charles	
Transect point  B. Teal  B. Transect point  Species  Seen Heard Inside 25m  Chiffiel  Sparray  Trui  Sparray  Trui  Sparray  Trui  Sparray  Trui  Sparray  Trui  Sparray  Trui  Time started  Fly over  25m  2  Mullad  Sparray  Trui  Tru	
Transect point  Species  Seen  Heard  Inside  25m  Chiffind  Pulses  All  Sparray  Trii  Sparray  Trii  Church  Time started  Outside  Fly over  25m  25m  Anny  Along way  Trii  Tr	
Transect point  Species  Seen Heard Inside 25m  Chiffind  Pulses  Sparray  Trii  Sparray  Trii  Sparray  Trii  Sparray  Trii  Sparray  Trii  Time started  Outside Fly over  25m  2  Mulland  Sparray  Trii	
Transect point  Species  Seen Heard Inside 25m  Chiffind  Pulses  Sparray  Trii  Sparray  Trii  Sparray  Trii  Sparray  Trii  Sparray  Trii  Time started  Outside Fly over  25m  2  Mulland  Sparray  Trii	1
Species Seen Heard Inside Outside Fly over 25m 25m 2  Chiffind 2 2 2 3 1 3 3 1 3 4 1 4 1 4 1 4 1 4 1 4 1 4 1	,
Species Seen Heard Inside Outside Fly over 25m 25m 2  Chiffind 2 2 2 3 1 3 3 1 3 4 1 4 1 4 1 4 1 4 1 4 1 1 1 1	
Species Seen Heard Inside Outside Fly over 25m 25m 2  Chiffind 2 2 2 3 1 3 3 1 3 4 1 4 1 4 1 4 1 4 1 4 1 1 1 1	AND THE PERSON NAMED IN POST OF THE PERSON
Species Seen Heard Inside Outside Fly over 25m 25m 2  Chiffind 2 2 2 3 1 3 3 1 3 4 1 4 1 4 1 4 1 4 1 4 1 1 1 1	mast sales
Species Seen Heard Inside Outside Fly over 25m 25m 2  Chiffind 2 2 2 3 1 3 3 1 3 4 1 4 1 4 1 4 1 4 1 4 1 1 1 1	
Species Seen Heard Inside Outside Fly over 25m 25m 2  Chiffind 2 2 2 3 1 3 3 1 3 4 1 4 1 4 1 4 1 4 1 4 1 4 1	Time finished 9.45
Cheffind 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
Pullad  Sparray  Trie  3  C. Warb  II  Myrah  II  III  III  III  III  III  III  I	Additional birds (Key or new) between points
Prihapa 3 1 3  Mullard Fl  Sparray D many a long way The 3  C. Warb I I I  Myrah I I I	
Mullard Fl Sparray  This  G. Wash  Myrah  My	1 1 1 1
Ciwarb 1 1 1 1 1	1 400 100
Ciwarb 1 1 1 1 1	away - guess n = 10
Myrah ,, 1	
Oran jan	the state of the s
	(A)

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7	1	22

Transect point	3		(8)	Time started	957	Time finished	9.57
Species	Seen	Heard	Inside 25m	Outside 25m	Fly over	Additional bird recorded betw	s (Key or new)
Chellouch		2		2			
Cheffish Bird		a 1					
K frohe		2		2			ALEM TO THE
Tili	1	2		2	119	Mark Market	
Puk							
Myneh						1	
Shag LB						2	
steglar						1	
9 werble	-					1	
	-	-					
							1 19/19/11
				-			
Wall To the second							
		A				Mary Ellipha	
	1						
Transect point	军 =			Time started	10.05	Time finished	10.10
Species	Seen	Heard	Inside 25m	Outside 25m	Fly over	Additional birds between points	
Starley		#		a (101)			
Grey wat	March 1	13	The Layer of	3			The Later of
Chaffort	1 491 74	2	131 1	2	bus		The state of
/ namine	of the state of	1		m	31		
Silvereye		1	1				
Tui	1			1			
Fan taul Mallard Kahr Puk Kfishe Skylarh Mynsh L B Shag Rahe		1	1				
Mallad		1	A STATE OF THE PARTY OF THE PAR	1			Man Harry
Kahn	1			1	10		
Puk		1		1		Maritim	Labour III
Klishe		1		1			March 19
Skylach		1		1		The state of the s	THE REAL PROPERTY.
Mynch						1	
L B Shag						1	
Rahed						1	

Transect point	1			Time started	10.17	Time finished 10.22	
Species	Seen	Heard	Inside 25m	Outside 25m	10.17 Fly over	Additional birds (Key or new) recorded between points	
9 Juch		(	1			Otoka architek	
Til		1	1			The state of the s	
Silverge Keren Kfish Giwart Kales Yeshi H.	1	1		1		331 - 1001	
Silverge		1	1	1		Blanch Blanch	
keren	1			(		The state of the s	
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g wart		1		1			
Kake	1		1			The second second	
Yeller H.		2		2			
Skylah		1			I I I I		
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						18 10 10 10 10 10 10 10 10 10 10 10 10 10	
			•		1		
THE RESERVE							

Any additional notes can be written down bottom of data sheet(s) e.g. If weather has a significant change during the transect: 'Rain has changed to a 3, time: 09:30, place: transect 3.

Guarny Replo Tukey. Vehick HH

## Comments on Bird Count 4/12/20 John Ogden.

The Medlands transect along the main road was very noisy - both times (7.11–8.16AM and 9.27 – 10.22 AM). There were vehicles passing during every count – on average 2.5 vehicles per minute! This was very distracting. Also noises from quarry, people talking (not us!), hammering, and planes. Impossible to wait a minute between these noises.

## Suggestion; Do transects on Sundays in future.

## Recording methodology.

Despite much agonising over it - we think the recording data sheet is still rather complicated and liable to error. Our group method was for each of us to listen and jot down what we heard saw on a separate sheet then collate it all at the end of the 5 mins. Otherwise, if 2 observers were telling a recorder what they heard, how far away it was, and if it was a new individual of a previously recorded species – this was a further distraction from the job of listening.

So on our sheets a species is *listed once only* at any 5 min count, and again between points only if it was one of the four target species or a species not recorded at the last 5 min count. Thus in our first set point 1

Tui was seen and heard at Outside 25m, but these were the same bird, hence recorded as 1 Outside 25m

Kaka was also seem and heard > 25 m, but these were different birds, thus recorded as 2 Outside 25m

At point 4, two different Pukekos were heard, but only one was within 25m At point 5 (2<sup>nd</sup> set – repeat transect) A greenfinch was both heard and seen, once within 25m

On our sheets numbers throughout refer to the number of different individual birds.

The data 'inside 25m' is the only data used to estimate density. The other data (outside 25m) are used to estimate frequency. The frequency would be based on the 10 point data (both inside and outside). Additional 'between point' data can be used to add any species for the site otherwise missed. It is not clear to me how the additional between point data for the key species or species not seen at the last point can be used. This needs discussion in the light of how it was used in the analyses last year.

The 'fly over' data is not different from the 'outside 25m' data, and these should be amalgamated, getting rid of one column in the data sheet.

The 'seen' and 'heard' columns could also be elimninated if 's' or 'h' was added to the numbers in the 'Outside' and 'Inside' columns, but if Serena has a spread sheet she can use this may not be necessary – however, we (The Medlands Lot) think that if the data sheet is simplified there will be fewer 'entry errors'.

It would be valuable to get Serena's input on this, but in the end we need to think what the outcome is – what is the most relevant and reliable data?

Density is clearly best – **IF** it can be obtained reliably when 'conspicuousness' is so important in its estimation.

Frequency is very simple and has fewer assumptions, but it is also less able to pick up abundance changes especially at both low and high actual densities.