



2015 Report.

December 2015.



Alexander, Swampy and their two offspring – 25th October 2015. Photo John Crispin.

Compiled by Damon Bridge

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Section 1

1.1 Population Stats / Survival estimates

Table 1. Population Summary table.

A: Total population of 'known alive' released birds at start of year – Jan 1 st 2015.	76
B: Total known alive 'flock population' ie released birds plus unringed and juvenile individuals measured at Jan 1 st 2015. (<i>no juvs in flock</i>)	76
C: Maximum possible population of released birds at start of year (include missing <1yr) measured at Jan 1 st 2015.	79
D: Maximum possible 'flock population' - max possible number of released birds plus any unringed and juvenile individuals at the start of the year at Jan 1 st 2015	79
E: Total population of 'known alive' released birds at end of year 31 st Dec 2015	74
F: Total population of 'known alive' released birds at end of year 31 st Dec 2015 plus known surviving juveniles from the year– the 'flock population'.	78
G: Maximum possible population of released birds (including birds missing <1yr) measured at end of year Dec 31 st 2015	75
H: Maximum possible population of released birds (including birds missing <1yr) plus known surviving juveniles measured at end of year Dec 31 st 2015	79
I: Total adults known to have died during year Jan 1 st - Dec 31 st 2015 (<i>none known</i>)	0
J: Total adults moving into 'unknown >1yr' status during period Jan 1 st - Dec 31 st 2015 (<i>Mennis, Pepper, Mistymoor</i>)	3
K: Total adults moving in 'unknown <1yr' status during period Jan 1 st - Dec 31 st 2015 (<i>Gilbert</i>)	1
L: Total chicks fledged / recruited into the population Jan 1 st – Dec 31 st 2015	4
M: Percentage change in released birds over the year – known to be alive (A-E)/A x 100)	-2.63%
N: Percentage change in released birds over the year – maximum possible (C-G)/C x 100)	-5.06%
O: Percentage surviving from original release of 93 – known (E/93 x 100)	79.6%
P: Percentage surviving from original release of 93 – maximum (G/93 x 100)	80.6%
Q: Percentage recruitment into start of the year known population (L/A) x100	+5.26%
R: Percentage recruitment into start of the year maximum population (L/C) x 100	+5.06%
S: Percentage change in flock population - known to be alive (F-B)/B x 100)	+2.63%
T: Percentage change in flock population - maximum (H-D)/D x 100)	+0.00%
Summary: Survival rate has been high this year, with only one bird thought to have been lost to the project (Gilbert). The four chicks recruited into the population has increased the total flock population by 2.63%	

Graph 1. South-west crane population

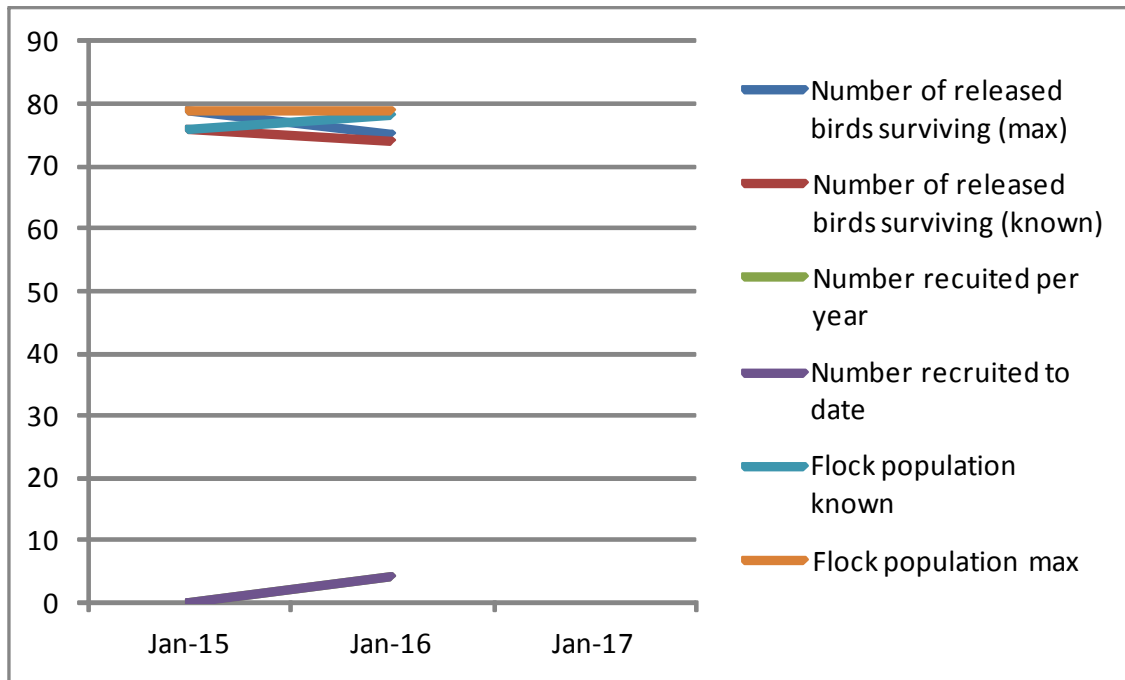


Table 2a. Survival per year group - Start of year (Jan 1st 2015)

Category	2010	2011	2012	2013	2014	TOTAL
Number released	20	17	19	20	17	93
Dead - known cause	1 Jack	1 Gizmo	1 D2	1 Sven	0	4
Dead - unknown cause	1 Howard	0	1 Jess	1 Whgrye	2 Yerebk Humbug	5
Dead - combined	2	1	2	2	2	9
Unknown status - missing < year	1 Mennis	1 Pepper	0	1 Mistymoor	0	2
Unknown status - missing > year	2 Vince Clarence	3 Mildred Trinny Charlie	0	1 Frieden	0	7
Missing - combined	3	4	0	2	0	9
Possibly Alive (Maximum)	17	13	17	17	15	79
Known Alive	16	12	17	16	15	76
% survival per year – known/possible	80-85%	71-76%	89%	80-85%	88%	82-85%

No	Name	Combo	m/f	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	SUM	
10	Mennis	BlGrRe	M	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	M1	
11	Chris	BkBlRe	F	AE	AE	AE	AE	AE	AE	AE	AE	AE	AE	AE	AE	KA	
13	Twinkle	BkYeRe	F	AL	AL	ND	AL	ND	AL	AL	ND	AL	ND	AL	ND	KA	
15	Wendy	WhBlRe	F	AE	AE	AE	AE	AE	AE	AE	AE	AE	AE	AE	AE	ND	KA
17	Vince	WhGrRe	F	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	M1	
18	Squidgy	GrYeRe	F	AE	AE	AL	ND	AE	ND	ND	ND	AE	AE	AE	AE	KA	
19	Cosmo	GrBkRe	M	AL	ND	ND	ND	ND	ND	AL	ND	AL	AL	ND	ND	KA	
21	Ruby	WhBkRe	F	AE	AE	AE	AE	AE	AE	AE	AE	AE	AE	AE	AE	KA	
22	Tamsin	ReBkRe	F	AL	AL	ND	ND	ND	ND	ND	ND	ND	AL	AL	AL	KA	
23	Reg	ReYeRe	F	AL	AL	AL	ND	AL	AL	ND	ND	AL	AL	AL	ND	KA	
25	Sedge	WhYeRe	F	AE	AE	AE	AE	AE	AE	AE	AE	AE	AE	AE	AE	KA	
26	Lofty	ReBlWh	M	AL	AL	AL	ND	ND	AL	ND	ND	AL	AL	AL	ND	KA	
27	Wally	ReYeWh	M	AL	AL	AL	ND	AE	ND	ND	AL	ND	AL	AL	ND	KA	
28	Christmas	BkBlWh	F	AL	AL	ND	ND	AL	AL	ND	ND	AL	AL	AL	AL	KA	
29	Timmy	ReBkWh	M	AL	AL	AL	AL	AL	AL	AL	ND	ND	AL	AL	ND	KA	
30	Legend	WhReWh	M	AL	AL	AL	AL	AL	AL	ND	ND	ND	AL	AL	AL	KA	
31	Albert	WhBlWh	M	AL	AL	AL	AE	ND	ND	AL	ND	AL	AL	AL	AE	KA	
32	Charlie	WhYeWh	M	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DE	
33	Pepper	WhGrWh	M	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DE	
35	Beatrice	BlReWh	F	AL	AL	AL	AE	AE	ND	ND	ND	ND	AE	AE	ND	KA	
37	Swampy	BlYeWh	F	ND	ND	AL	ND	ND	ND	ND	AL	ND	AL	ND	ND	KA	
38	Trinny	YeReWh	F	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	M1	
39	Elle	YeBlWh	F	AL	AL	AL	AL	AL	AL	ND	ND	ND	AL	AL	ND	KA	
40	Mildred	BkGrWh	F	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	M1	
41	Gerald	YeBkWh	M	AL	AL	ND	AL	AL	ND	ND	ND	ND	AL	AL	ND	KA	
44	Flash	GeBkWh	F	AL	AL	AL	ND	AL	ND	ND	ND	ND	AL	AL	ND	KA	
45	Pippa	GrReWh	F	AL	ND	AL	ND	ND	ND	AL	ND	AL	AL	AL	ND	KA	
47	Phelps	ReYeBl	M	AL	AL	AL	AE	AE	ND	ND	AL	AL	AL	AL	ND	KA	
48	Easter	ReGrBl	F	AL	AL	AL	ND	AE	ND	ND	ND	ND	ND	AL	AL	KA	
49	Gibble	ReBkBl	F	AL	AL	AL	ND	ND	AL	ND	ND	AL	AL	AL	ND	KA	
50	Elizabeth	WhReBl	F	AL	AL	AL	AE	ND	ND	ND	ND	AL	AL	AL	AL	KA	
52	Chocolo	BkGeBl	M	ND	AL	ND	ND	ND	ND	ND	ND	ND	AL	ND	ND	KA	
53	Alexander	WhBkBl	M	AL	ND	AL	ND	ND	AL	AL	AL	ND	AL	ND	ND	KA	
54	Midnight	BlReBl	M	ND	AL	ND	ND	ND	ND	ND	ND	AE	AL	AL	ND	KA	
56	Evie	BlYeBl	F	ND	AL	AL	ND	AE	ND	ND	ND	ND	AL	AL	AE	KA	
58	Haribo	BlBkBl	M	ND	AL	ND	AL	ND	AL	ND	ND	AL	AL	AL	ND	KA	
60	Wycliffe	YeWhBl	M	AL	AL	AL	AL	AE	AE	AE	ND	AL	AL	AL	AL	KA	
61	Willow	YeGrBl	M	AE	AE	AE	AE	AE	AE	AE	AE	AE	AE	AE	AL	ND	KA
62	Wiz	BkYeBl	M	ND	AL	AL	ND	AL	ND	AL	ND	AL	AL	AL	ND	KA	
63	Shadow	GrReBl	M	AL	AL	AL	ND	ND	ND	ND	ND	AL	AL	AL	AL	KA	
64	Maple	GrWhBl	F	AL	AL	AL	ND	AE	AE	AE	ND	AL	ND	AL	ND	KA	
65	D2	GrYeBl	M	DE	DE	DE	DE	DE	DE	DE	DE	DE	DE	DE	DE	DE	
66	Margaret	GrBkBl	F	ND	AL	AL	AL	AL	ND	ND	AL	AL	AL	AL	ND	KA	
67	Jasper	BkReBl	M	AL	AL	AL	ND	AL	AL	ND	AL	AL	ND	AL	ND	KA	
68	Jess	YeBkBl	F	DE	DE	DE	DE	DE	DE	DE	DE	DE	DE	DE	DE	DE	
69	Pickles	BkWhBl	M	AL	AL	AL	ND	ND	AL	ND	ND	ND	AL	AL	ND	KA	
70	Cherry	ReWhYe	F	AL	AL	AL	AL	ND	ND	AL	ND	AL	ND	AL	AL	KA	
71	Cotton	ReBlYe	F	AL	AL	AL	AL	AL	AE	AE	ND	AE	AE	ND	AE	KA	
72	Waterwing	ReGrYe	F	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	KA	
74	Acorn	WhReYe	F	AL	AL	AL	AL	AL	AL	AL	ND	AL	AL	AL	AL	KA	
76	Wh-gr-ye	WhGrYe	M	DE	DE	DE	DE	DE	DE	DE	DE	DE	DE	DE	DE	DE	
77	Billy	WhBkYe	M	AL	AL	AL	AL	AL	AL	AL	ND	AL	AL	AL	AL	KA	

No	Name	Combo	m/f	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	SUM
79	Excalibird	BlWhYe	F	AL	AL	AL	ND	ND	AL	AL	ND	ND	AL	AL	AL	KA
80	Viridor	BlReYe	F	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	ND	KA
81	Bop-Bop	BlBkYe	F	AL	AL	AL	AL	AL	AL	AL	AL	ND	AL	AL	ND	KA
82	Skye	YeReYe	F	AL	AL	AL	ND	AL	AL	AL	ND	ND	AL	AL	AL	KA
83	Stowford	YeWhYe	M	AL	AL	AL	AL	AL	AL	AL	AL	ND	AL	AL	ND	KA
84	Sven	YeBlYe	M	DE	DE	DE	DE	DE	DE	DE	DE	DE	DE	DE	DE	DE
85	Stanley	YeGrYe	M	AL	AL	AL	ND	AL	AL	AL	AL	ND	AL	AL	AL	KA
86	Bombus	YeBkYe	M	AL	AL	AL	ND	ND	AL	AL	ND	ND	AL	AL	AL	KA
87	Manfred	GrReYe	M	AL	AL	AL	AL	AE	AL	AL	AL	AL	AL	AL	AL	KA
88	Buttercup	GrWhYe	F	AL	AL	AL	ND	AE	AE	AE	ND	AE	AE	AE	ND	KA
89	Cookie	GrBkYe	F	AL	AL	AL	AL	ND	AL	AL	ND	AL	AL	AL	AL	KA
90	Frieden	BkReYe	F	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	M1
91	Oakie	BkWhYe	M	AL	AL	AL	ND	ND	AE	AE	ND	AE	AE	ND	AE	KA
93	Mistymoor	BkGrYe	M	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	M1
94	Chip	ReWhBk	F	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	ND	KA
95	Pecky	ReBlBk	M	AL	AL	AL	AL	AL	AL	AL	AL	ND	AL	AL	AL	KA
96	Soar	ReYeBk	M	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	KA
97	Ted	BkYeBk	M	AL	AL	AL	AL	AL	AL	AL	ND	ND	AL	AL	AL	KA
98	Patience	WhReBk	F	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	KA
100	Century	WhYeBk	F	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	KA
102	Dillon	BlReBk	M	AL	AL	AL	AL	ND	AL	AL	ND	AL	AL	AL	AL	KA
103	Rosa	BlWhBk	F	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	KA
104	Sherbert	BlYeBk	F	AL	AL	AL	AL	ND	AL	AL	AL	ND	AL	AL	AL	KA
105	Kia	WhBlBk	F	AL	AL	AL	AL	AL	AL	AL	AL	ND	AL	AL	AL	KA
106	Ye-re-bk	YeReBk	M	DE	DE	DE	DE	DE	DE	DE	DE	DE	DE	DE	DE	DE
107	Diamond	YeWhBk	F	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	AL	KA
108	Gary	YeBlBk	M	AL	AL	AL	AL	AL	AL	AL	ND	ND	ND	AL	AL	KA
109	Cleg	BkGrBk	M	AL	AL	AL	AL	AL	AL	AL	AL	ND	AL	AL	AL	KA
110	Pepé	GrReBk	M	AL	AL	AL	AL	AL	AL	AL	AL	ND	AL	AL	AL	KA
113	Ziggy	BkReBk	F	AL	AL	AL	AL	AL	AL	AL	ND	ND	AL	AL	ND	KA
114	Humbug	BkWhBk	F	DE	DE	DE	DE	DE	DE	DE	DE	DE	DE	DE	DE	DE
115	A&S chick	XXX	U						AL	AL	AL	AL	AL	ND	AL	KA
116	A&S chick	XXX	U						AL	AL	AL	AL	AL	ND	AL	KA
117	M&W chick	XXX	U						AE	AE	AE	AE	AE	AE	AE	KA
118	M&G chick	XXX	U						U	U	U	AE	AL	AL	ND	KA

1.3 Breeding attempt summary – 2013-2015

	2013	2014	2015	2016	2017
No. potential pairs at breeding age (3yrs+)	7	13	17	25	
Territorial pairs	1	5	16		
% of potential pairs that formed territories	14%	38%	94%		
No. pairs making confirmed nesting attempts	1	2	7		
No. pairs making probable nesting attempts	0	0	2		
% of potential pairs that made nesting attempts	14%	15%	53%		
Confirmed nesting attempts - including re-lays	2	4	11		
max/min no. eggs laid from confirmed attempts	2-4	6-8	15-22		
No. known pairs reaching hatch stage	1	1	4		
Hatched chicks	1	2	6-7		
Fledged chicks	0	0	4		

1.4 Location of confirmed and probable breeding attempts and outcomes, cause of losses

Name of pair	Location	Length of incubation	Reason for loss at egg or chick stage	Number of eggs laid (1-2)	Number of chicks hatched (1-2 if unknown)	Number of chicks fledged
Confirmed Pairs						
Minnie & Wendy	WWT Slimbridge, Gloucestershire	Full	1 chick lost at 1 week old. Cause unknown. Suspected predation.	2	2	1
Alexander & Swampy	Private land nr. Ilchester, Somerset	Full	No loss	2	2	2
Midnight & Gemma	Private land nr. Swindon, Wiltshire	Full	No loss (although not known if 1 or 2 egg clutch)	1-2*	1-2	1
Legend & Elle 1	RSPB West Sedgemoor, Somerset	15 days	Clutch lost at night. Cause unknown. Suspected predation.	1-2*	0	0
Legend & Elle 2	RSPB West Sedgemoor, Somerset	9 days	Clutch lost at night. Cause unknown. Suspected predation.	1-2*	0	0
Bart & Ruby 1	WWT Slimbridge, Gloucestershire	3 days	Clutch lost or abandoned. Cause unknown.	1-2*	0	0
Bart & Ruby 2	WWT Slimbridge, Gloucestershire	Full	Egg infertile and added. Removed by staff.	1	0	0
Timmy & Michaela 1	RSPB West Sedgemoor, Somerset	3 days	Clutch abandoned by pair – possibly due to location in another pair's territory.	1-2*	0	0
Timmy & Michaela 2	RSPB West Sedgemoor, Somerset	10 days	Partial predation – 1 egg broken by corvids at 4 days following human disturbance. 2 nd egg abandoned or predated at 10 days.	2	0	0
Timmy & Michaela 3	RSPB West Sedgemoor, Somerset	Full	Chick lost at 22 days old – cause unknown.	1-2*	1	0
Wycliffe & Maple	RSPB Otmoor, Oxfordshire	28 days	Both eggs predated at hatch by Mink or Otter.	2	0	0
Probable pairs						
Cosmo & Pippa	Private land nr. Martock, Somerset	-	-	-	-	0
Gerald & Flash	RSPB West Sedgemoor, Somerset	-	-	-	-	0

*confirmed as sitting, and incubation taking place, but nest not visited so unable to determine if sitting on 1 or 2 egg clutch.

1.5 Detail of breeding, territorial and other pairs

Confirmed (7)

- **Alexander (2012 male) & Swampy (2011 female)** fledged 2 chicks on private land near Ilchester, Somerset. Incubation began approx 10th April, hatching around 10th May, fledging July 22nd 2015. Family with two chicks back within the main Somerset flock on 10th September. The nest site was within a small (80m x 30m) reedbed adjacent to (but separate from) an open water body of approx 100m x 25m. The water depth in the reedbed was not measured but was assumed on a visit post hatch, to have been around 10-15cm only during the incubation period. (Refer to photo 4 in appendix). The chicks were raised in semi-improved, initially ungrazed, and then lightly grazed pasture land, and semi-improved rough meadow with some (limited) feeding in an arable maize field also. Refer to photos 10-14 in appendix). The pair would have remained undisturbed by people throughout incubation, and disturbance during chick rearing was very limited.
- **Minnie (2010 male) and Wendy (2010 female)** fledged 1 chick at Slimbridge on the '100acre'. (Refer to photo 15 & 16 in appendix) The first chick died or was predated at just over a week old. Incubation began 13th April, hatching 13th May fledging on August 14th 2015. The fledged chick damaged its top mandible on 11/09 but continued to survive through the autumn. It doesn't appear to be causing a problem with feeding – but is of concern. More detail in section 2.1. The nest was on the shallow edges of a well vegetated channel with approx 1-2 feet deep in early March and lower water levels by May.
- **Midnight (2012 male) & Gemma (2010 female)** fledged 1 chick on private land in Wiltshire - news only received on 18/08/2015. (Refer to photo 17 in appendix). The chicks was seen flying on 15th Aug, with chick rearing observed by the farmer 'throughout June', so it seems likely the chick hatched at the end May with a laying date towards the end of April. The 3 birds were seen flying into Cotswold Water Park on 13th September. The location of the nest site is unknown (although thought to have been within a pool) but much of the chick rearing is known to have taken place within some weedy areas of former game-cover crop on relatively dry land.
- **Timmy (2011 male) & Michaela (2010 female)** hatched a single chick on West Sedgemoor on 12th June, and raised it until 5th July, where it was lost at 22 days – cause unknown. This was this pair's third nesting attempt this year. Incubation began on 14th May. This nest was in a relatively short - approx 10-15cm vegetation - in a hay-cut and after-grazed mire community field with taller patches (30-40cm) of blunt flowered rush. The nest site was not visited, but would have been in 5-10cm water at the most. The nest was however, quite close (approx 5-10m) from a nearby ditch.

The pair's first attempt, on West Sedgemoor began incubation on 7th April, with the nest abandoned, and then predated by crows on 10th April after 3 days incubation. The abandonment is thought to be due to location of nest in another crane pair (Legend and Elle's) territory. This nest was in the corner of a junction of two wide ditches (so

surrounded by water on two sides) within a metre or two of the ditch edge in emergent typha and sedges. It would have been surrounded by 10-20cm of water and some very soft ground and tall vegetation on the non-open water sides.

The pair began their second attempt incubation period on 23rd April. This nest suffered a partial predation by crows (or possibly ravens) after a disturbance incident on 27th April. The pair continued incubating a remaining egg then appeared to abandon this nest on 4th May after 10 days incubation. This nest was in a wet hay meadow amongst blunt-flowered rush. It was not hidden at all, as the blunt flowered rush is quite sparsely spread, around 20-30cm tall at most. The nest was visible from metres away and would have been very obvious to an aerial predator. There was around 5cm of water around nest and across field, although there were deeper and shallower spots. The ditch levels were very high (at field level) all around the nesting field with the ditches only 20m from the nest. (Refer to photo 1 appendix)

- **Wycliffe (2012 male) & Maple (2012 female)** began incubation of 2 eggs at Otmoor Reserve in Oxfordshire in mid May. The eggs were predated at/around hatch date in mid June – thought likely Mink or Otter. The nest was within a reedbed on a small island surrounded by deep water on all sides. (Refer to photo 6 in appendix)
- **Legend (2011 male) & Elle (2011 female)** made two breeding attempts on West Sedgemoor. Incubation began on 13th April, with the birds off the nest on the morning of 28th after 15 days incubation. Cause of loss unknown but suspected nocturnal predator. This nest was within a dense, tall sedge field (approx 40-60cm) that had not been grazed or cut in the previous season. Approx 10-15cm of water covered the whole field when visited following egg loss. (Refer to photo 2 in appendix)

Incubation of the second clutch began on 14th May, with the birds, again off the nest on the morning of 23rd May after 9 days incubation. Cause of loss is unknown but suspected nocturnal predator. This nest site was not visited but was within a much shorter mire community field (cut and grazed the previous year) with vegetation height approx 15-30cm. The nest would have most likely been in very shallow (5cm) of water at most. Legend and Elle's territory and off-duty feeding area included a large pool with well vegetated emergent vegetation that would appear to have made a much more suitable breeding zone. For some reason this was not selected as a breeding site.

- **Bart (2010 male) and Ruby (2010 female)** made two breeding attempts at WWT Slimbridge, both unsuccessful. Initial incubation began on 8th May, with the nest failing due to either abandonment or predation after 3 days on 11th May. This nest was within the top new piece and was on raised ground made with cuttings from a forage harvester dumped in a mound within a patch of hard rush.

A second clutch (of one egg) was laid within the Southlake area at WWT Slimbridge, with incubation taking place from 15th June. The pair sat for over 30 days and the nest was visited by ground staff to find a single addled (infertile) egg. The nest was on the west side of small dry island, well vegetated with nettles.

Probable (2)

- **Cosmo (2010 male) & Pippa (2011 female)** are suspected of making a breeding attempt in on private land near Martock, Somerset. The pair were in the vicinity from early spring and throughout May on single birds were being seen. The pair had reappeared by late June however, with no chicks present, so it is not known at what stage their breeding attempt ended in failure.
- **Gerald (2011 male) & Flash (2011 female)** were seen acting territorially on West Sedgemoor and then disappearing for large periods. A pair of unidentified cranes were also seen on occasions near a particular part of the moor, and in early June an empty (recently abandoned?) crane nest was found the same location (photo 5 in appendix). This pair are thought to have made the nest, but it is unknown what stage of breeding they reached. No chicks were thought to have been reared. The nest was within dense 1m high sea club rush (*Scirpus maritimus*) and adjacent to large block of dense, 1.5m high bullrush (*Schoenoplectus*) and a water depth of 10-20cm surrounding the nest.

Other territorial pairs (7)

- **Haribo (2012 male) & Twinkle (2010 female)** were occupying a territory on West moor earlier in the Spring - then disappeared for a bit but then re-appeared as a pair on West Sedgemoor - feeding and mingling with group of non-breeders
- **Wally (2011 male) & Easter (2012 female)** were in east Somerset for 2-3 weeks in May, they returned to the Levels and Moors but then headed back to the same location. No breeding occurred this year.
- **Lofty (2011 male) & Gibble (2012 female)** were at Newport Wetlands on a couple of separate occasions during the early spring. Gibble was then identified in mid May on West Sedgemoor but then both were back at Newport Wetlands again at the end of May and into June. They are though not to have made a breeding attempt this year, and were seen together back in Somerset in August.
- **Monty (2010 male) and Chris (2010 female)** were present at WWT Slimbridge all spring and summer, but did not breed this year.
- **Willow (2012 male) & Sedge (2010 female)** were present at WWT Slimbridge all spring and summer, and were briefly seen involved in nest building activity, but have not bred this year.
- **Stanley (2013 male) and Skye (2013 female)** turned up in various places during the spring and summer - always in others' company - including on a couple of occasions through the spring at the Coombe Hill Meadows nature reserve in Gloucestershire.
- **Jasper (2012 male) and Regina (2010 female)**. These two birds were seen behaving as a pair on a number of occasions in Somerset through the Spring but particularly in one part of

West Sedgemoor which appeared to be their territory. They were also, however, sometimes in the company of Christmas Shoes (2011 female). They did not make a breeding attempt.

Possible pairs (1)

- **Chocolo (2012 male) and Tamsin (2010 female).** Both these birds were missing all spring and summer - and they are thought to be a pair based on their behaviour in 2014. A pair have been reported on occasions on private land near Ash - which may or may not be this pair. Both birds were re-sighted in early October back on the Somerset Levels with the main flock and without any chicks.
- A colour-ringed pair of cranes were also reported on 03/06/2015 at lat/long 52.889223 - 2.416106 to the east of Market Drayton, between the villages of Hales and Chipnall in Staffordshire. This pair were sadly not identified.

Paired project birds with non-project birds (1)

- **Beatrice (2011 female)** is paired up with an unringed bird and spent summer at the Ouse Washes, Cambridgeshire. She was photographed there in mid August. She remained at the Ouse Washes through the autumn and into the winter. (refer to photo 9 in appendix)

1.6 Individual bird summary table for all 93 released birds

Bird id no.	Name	Sex	Tag	Tag outcome	Ring combo	Annual summary 2015	Annual breeding outcome	Breeding outcome to date	Date of death	Other removal from programme
2010 release year										
1	Clarence	M	GPS, RT	GPS data logger malfunction – ceased to work Sept 2010 Radio tag ceased summer 2011. Thought to be still wearing back pack when missing August 2013.	bl-wh-re	Went missing August 2013. No further sightings.	-	-	?	Missing Aug 2013
2	Gemma	F	RT	Radio tag ceased to function summer 2011.	re-wh-re	Seen pairing up with Midnight (2012 male) in February. Disappeared in early Spring with no re-sightings until alerted by private landowner to presence of pair of cranes with chick in late August in Wiltshire. Landowner mentioned that pair had been first seen there in February. Identified as Gemma and Midnight and their 1 fledged chick in early September. On Aller Moor, Somerset with chick on 20 th September 2015.	1 chick fledged, Wiltshire.	2015: 1 fledged chick		
3	Minnie	M	GPS, RT	GPS data logger malfunction – ceased to work Sept 2010 Radio tag working poorly March 2012. Still wearing back pack in March 2014. Thought to be still wearing Back Pack when missing in November 2015	re-gr-re	Remained at Slimbridge throughout 2015. Initially appeared to be paired with Sedge – but in March paired with Wendy (another 2010 female) and made successful breeding attempt. From mid/late October onwards, he was not seen with Wendy and the dependent chick. Not re-sighted during November and December.	2 chicks, 1 fledged, 1 failed to fledge. Slimbridge, Glos.	2015: 1 fledged chick, 1 chick died pre-fledge		
5	Gilbert	M	GPS, RT	GSP data logger malfunction – ceased to work Sept 2010	ye-wh-re	Went missing from early January 2015	n/a	2014: 2 eggs - failed to	?	Missing Jan 2015

Bird id no.	Name	Sex	Tag	Tag outcome	Ring combo	Annual summary 2015	Annual breeding outcome	Breeding outcome to date	Date of death	Other removal from programme
				Radio tag ceased summer 2011. Back pack absent - Sep 2013.		following severe leg injury (probable break).		hatch		
6	Michaela	F	RT	PTT removed Feb 2011 after problem with gait	gr-bl-re	Following the loss of Gilbert (2010 male) her previous partner, Michaela spent much of February in the presence of the pair Legend and Elle. She then paired up with Timmy (2011 male) and made 3 breeding attempts on West Sedgemoor, and remained in Somerset throughout the year.	3 breeding attempts. 2 clutches failed to hatch. 1 chick from 3 rd attempt - failed to fledge. West Sedgemoor, Somerset.	2014: 2 eggs (failed to hatch) 2015: 1 chick (failed to fledge) and 2 clutches (failed to hatch)		
7	Bart	M	PTT	PTT ceased Dec 2012 and then intermittent in March 2013. Stopped fully by June 2013.	re-bl-re	Remained at Slimbridge throughout the year and made two breeding attempts with Ruby (2010 female), partner of at least 2 years. Egg infertile for 2 nd year.	2 breeding attempts, both failed to hatch. Slimbridge, Glos.	2014: failed to hatch 2015: failed to hatch		
8	Jack	F	RT	Radio tag functioning when died	ye-bk-re	Died November 2010 (flew into wires)	-	-	18/11 2010	
9	Monty	M	RT	Radio tag ceased to function summer 2011.	bk-gr-re	Remained at Slimbridge for the whole year. Paired with Chris (2010 female) some mating and nest building in March (Martin Smith hide) and again in May (Tack piece) but no breeding attempt made this year. With Chris ill for a period in late Summer, seemed to form partial pair bond with Sedge (2010 female)	No breeding attempt this year	2013: 1 chick died at 1-2 days. 2014: 2 chicks, failed to fledge. 2015: 0		

Bird id no.	Name	Sex	Tag	Tag outcome	Ring combo	Annual summary 2015	Annual breeding outcome	Breeding outcome to date	Date of death	Other removal from programme
10	Mennis	M	GPS, RT	Radio tag ceased summer 2011. Still wearing backpack March 2014.	bl-gr-re	Missing all year. Unknown whereabouts - last seen in November 2014	Unknown	2014: Paired with Swampy- no known attempt		Missing November 2014
11	Chris	F	GPS, RT, ECO	Radio tag working poorly March 2012. Capture July 2012 at Slimbridge. Re-fitted with GPS data logger and radio tag. GPS data logger failed Jan 2013. Radio tag failed by summer 2014. Radio tag removed on recapture in August 2014, along with back pack. ECOTONE GPS tag fitted at recapture in August 2015	bk-bl-re	Spent the entire year at Slimbridge. Paired with Monty (2010 male) in the Spring with some mating and nest building in March (Martin Smith hide) and again in May (Tack piece) but no breeding attempt made. Was recaptured very underweight at the end of July and treated for worms, blood samples taken. Seemed to be having problem keeping water-proofed. Also 4 x broken primaries that were eventually pulled by staff to enable re-growth. Flying again in early September.	No breeding attempt this year	2013: 1 chick died at 1-2 days. 2014: 2 chicks, failed to fledge. 2015: no attempt		
13	Twinkle	F	PTT	PTT ceased to function 19 th October 2011 Causing gait problem/irritation to leg winter 2012/13 and Spring/Summer 2013. Intermittent gait problems in 2015.	bk-ye-re	Paired with Haribo (2012 male) again this year, and spent a lot of time on Westmoor in the early part of the Spring, but no breeding attempt made to our knowledge.	Held territory, no known breeding attempt	None		
15	Wendy	F	RT	Radio tag ceased to function summer 2011	wh-bl-re	Wendy spent most of the year at Slimbridge apart from a few days in February in Somerset when she was in the company of Willow (2012 male) and appeared to be paired up. Once at Slimbridge in late February/March she remained with Willow and was seen	2 chicks, 1 fledged, 1 failed to fledge. Slimbridge, Glos.	2015: 1 fledged chick, 1 chick died pre-fledge		

Bird id no.	Name	Sex	Tag	Tag outcome	Ring combo	Annual summary 2015	Annual breeding outcome	Breeding outcome to date	Date of death	Other removal from programme
						mating in early March. However- she eventually paired with Minnie (2010 male) and made a successful breeding attempt - her first.				
16	Howard	F	RT	Radio tag signal enabled rings to be found Jan 2011	ye-bl-re	Died November 2010. Remains found - cause unknown.	-	-	05/11 2010	
17	Vince	F	RT	Radio tag ceased to function summer 2011	wh-gr-re	Went missing May 2013 – no further sightings	-	-	?	Missing May 2013
18	Squidgy	F	RT	Radio tag ceased to function summer 2011	gr-ye-re	Squidgy came and went between Somerset and Slimbridge in the early part of the year and possibly formed a pair bond with Shadow (2012 male). Seen at Slimbridge in early April and with Shadow in Somerset mid April but back at Slimbridge late April and recorded there early and mid May. Confirmed at Slimbridge during Autumn of 2015.	No breeding attempt this year, unpaired.	None		
19	Cosmo	M	RT	Radio tag ceased to function summer 2011	gr-bk-re	Cosmo appears to have paired with Pippa (2011 female) again this year, and made a likely breeding attempt. The pair were seen again without young from mid June and remained in Somerset for the rest of the year.	Probable breeding attempt likely failed at egg stage. Private land near Martock, Somerset.	2015: Probable breeding attempt, failed to hatch eggs.		

Bird id no.	Name	Sex	Tag	Tag outcome	Ring combo	Annual summary 2015	Annual breeding outcome	Breeding outcome to date	Date of death	Other removal from programme
21	Ruby	F	PTT	PTT ceased Dec 2012 but intermittent in early Spring 2013. PTT removed when caught at moult, July 2013. Original radio tag ceased to function summer 2011. New radio tag fitted in July 2013, still working March 2014. Not checked during 2015 so radio tag status unknown.	wh-bk-re	Remained at Slimbridge throughout the year and made two breeding attempts with Bart (2010 male) partner of at least 2 years. Egg infertile for 2 nd year.	2 breeding attempts, both failed to hatch. Slimbridge, Glos.	2014: failed to hatch 2015: failed to hatch		
22	Tamsin	F	RT	Radio tag ceased to function summer 2011.	re-bk-re	Present in Somerset and at Slimbridge in the early months of the year often in the company of Chocolo (2012 male) but not sighted since March 2015 when last seen clearly in a pair with Chocolo. Re-sighted in early October with Chocolo on Aller Moor.	No chicks produced. Not known if bred, thought to be have been paired with Chocolo	Unknown		Missing since March 2015
23	Reg	F	RT	Radio tag ceased to function summer 2011.	re-ye-re	Remained in Somerset throughout the year.	No breeding attempt this year, possibly paired with Jasper.	None		
25	Sedge	F	PTT	PTT stopped working in Dec 2012, and was intermittent through Spring 2013, stopping working fully by mid June 2013.	wh-ye-re	Remained at Slimbridge throughout the year. Appeared to be paired with Minnie (2010 male) at the start of the year, but with Minnie then breeding with Wendy, she paired up with Willow (2012 male), and did make some rudimentary nests. However she also seemed interested in Monty (2010 male) in the autumn, when Chris was ill. Appeared to form pair bond with	Some tentative nest building but no breeding attempt this year	None		

Bird id no.	Name	Sex	Tag	Tag outcome	Ring combo	Annual summary 2015	Annual breeding outcome	Breeding outcome to date	Date of death	Other removal from programme
						Stanley in late September at Slimbridge. In Somerset for a few days at start of November, but back at Slimbridge by 5 th Nov – with Willow.				
2011 release year										
28	Christmas Shoes	F	RT	Radio tag ceased to function summer 2013.	bk-bl-wh	Seen in the company of Jasper (2012 male) and Regina (2010 female) on numerous occasions through the Spring. Not believed to be paired up. Spent whole year in Somerset. Appeared paired with Jasper in October 2015.	No breeding attempt this year	None		
26	Lofty	M	GPS, RT	GPS data logger failed Sept 2012. Radio tag ceased to work winter 2012/13. Still wearing back pack, November 2015	re-bl-wh	Recorded in late February at Slimbridge with Gobble and Beatrice. At Newport wetlands with Gobble and Beatrice and then Somerset Levels in early March and back in Gwent and also at Ryalls Farm, Glos with Gobble at the end of March. Seen again with Gobble in South Wales in late May and early June. Back in Somerset in late Summer through Autumn .	No known breeding attempt this year	None		
27	Wally	M	GPS, RT	GPS data logger failed Sept 2012 Radio tag ceased to work winter 2012/13. Still wearing back pack, November 2015	re-ye-wh	Paired up with Easter Beans (2012 female) early in the year – acting as a pair in Somerset in early March. Then seen as pair on private land near Templecoombe from early April. Remained there into May – returning to Somerset for latter part of the	No breeding attempt this year	None		

Bird id no.	Name	Sex	Tag	Tag outcome	Ring combo	Annual summary 2015	Annual breeding outcome	Breeding outcome to date	Date of death	Other removal from programme
						summer and autumn.				
32	Charlie	M	GPS, RT	GPS data logger failed Sept 2012 Radio tag ceased to work winter 2012/13. Still wearing back in Sep 2013 when went missing – Oct 2013.	wh-ye-wh	Went missing – October 2013. No further sightings.	-	-		Missing Oct 2013
31	Albert	M	RT	GPS data logger failed Sept 2012, Radio tag ceased to function summer 2013. Back pack fallen off - Sept 2013.	wh-bl-wh	Flew to Slimbridge in February seen on and off and then again in late March – possibly in the company of Beatrice (2011 female). Recorded again at Slimbridge in early May but back in Somerset for late summer/autumn. Back at Slimbridge in December with Evie – a possible pair?	No breeding attempt this year	None		
33	Pepper	M	RT	Radio tag ceased to function summer 2013.	wh-gr-wh	Went missing – January 2014. No further sightings.	-	-		Missing Jan 2014
29	Timmy	M	RT	Radio tag ceased to function summer 2013.	re-bk-wh	Paired up with Michaela (2010 female) in the latter part of the Spring and made 3 breeding attempts. Present in Somerset throughout the year.	3 breeding attempts. 2 clutches failed to hatch. 1 chick from 3 rd attempt - failed to fledge. West Sedgemoor, Somerset.	2015: 1 chick (failed to fledge) and 2 clutches (failed to hatch)		

Bird id no.	Name	Sex	Tag	Tag outcome	Ring combo	Annual summary 2015	Annual breeding outcome	Breeding outcome to date	Date of death	Other removal from programme
30	Legend	M	RT	Radio tag working (just!) still in December 2015	wh-re-wh	Paired up with Elle (2011 female) in early part of year, although Michaela (2010 female) also present with the pair for much of February. The pair plus Michaela occupied a territory from early February. Legend then went on to make 2 breeding attempts with Elle	2 breeding attempts, both failed at egg stage. West Sedgemoor, Somerset.	2015: 2 clutches, both failed at egg stage		
39	Elle	F	GPS, RT	GPS data logger failed Sept 2012 Radio tag still working (just) in October 2015. Back pack shifted and in odd position first noted in Feb/March 2015. Still wearing back-pack in odd position – November 2015.	ye-bl-wh	Paired up with Legend (2011 male) in the early part of the year and occupied at territory from early February. Went on to make 2 breeding attempts and remained in Somerset throughout the year.	2 breeding attempts, both failed at egg stage. West Sedgemoor, Somerset.	2015: 2 clutches, both failed at egg stage		
35	Beatrice	F	GPS, RT	GPS data logger failed Sept 2012 Radio tag ceased to function summer 2013. Still wearing back pack when photographed in October 2015.	bl-re-wh	Recorded in late February at Slimbridge with Lofty and Gobble and then early March in South Wales with the same birds. Recorded late March at Slimbridge with Albert (2010 male) and Phelps (2012 male) and records of her at Slimbridge in early April and again in early May. She was then seen with an unringed bird near Thrapston, Northamptonshire on 15 th May, and then at the Ouse Washes on 18 th . She remained in Norfolk/Cambs through right through summer autumn and winter, mainly at the Ouse Washes. Initially along with five other unringed birds, and from October onwards with just the one with whom she was seen mating.	No breeding attempt this year.	None		

Bird id no.	Name	Sex	Tag	Tag outcome	Ring combo	Annual summary 2015	Annual breeding outcome	Breeding outcome to date	Date of death	Other removal from programme
41	Gerald	M	GPS, RT	GPS data logger failed Sept 2012 Radio tag ceased to work winter 2012/13. Still wearing back pack when sighted in January 2015. Still wearing back pack November 2015	ye-bk-wh	Paired with Flash (2011 female and his sibling) early in the year, the pair are believed to have made a nesting attempt on West Sedgemoor. Still paired and present in Somerset through the late summer and autumn.	Possible nesting attempt on West Sedgemoor, Somerset. Failed to raise any chicks	2015: Suspected nesting attempt – no chicks fledged.		
44	Flash	F	RT	Radio tag ceased to function summer 2013.	gr-bk-wh	Paired with Gerald (2011 male and her sibling) early in the year, the pair are believed to have made a nesting attempt on West Sedgemoor. Still paired and present in Somerset through the late summer and autumn.	Possible nesting attempt on West Sedgemoor, Somerset. Failed to raise any chicks	2015: Suspected nesting attempt – no chicks fledged.		
43	Gizmo	M	RT	Taken by fox in Dec. Radio tag enabled body to be located.	gr-ye-wh	Taken by fox December 2011, following illness.	-	-	10/12 2011	
40	Mildred	F	RT	Out of study area - Radio tag unknown.	bk-gr-wh	Went missing September 2011 after sighting in Kent. No further sightings.	-	-	-	Missing Sept 2011
38	Trinny	F	GPS, RT	GPS data logger failed Sept 2012 Radio tag ceased to work winter 2012/13. Thought to have still been wearing back pack when went missing April 2013.	ye-re-wh	Went missing April 2013. No further sightings.	-	-	-	Missing April 2013
37	Swampy	F	RT	Radio tag fell off May 16 th 2012 and located on Aller Moor by signal.	bl-ye-wh	Only seen briefly in March and then unaccounted for much of the spring. Found to be paired with Alexander and	2 chicks fledged on private land near Ilchester, Somerset.	2015: 2 chicks to fledging		

Bird id no.	Name	Sex	Tag	Tag outcome	Ring combo	Annual summary 2015	Annual breeding outcome	Breeding outcome to date	Date of death	Other removal from programme
						successful breeding attempt made on Kingsmoor. They were both back in with the main flock and their two chicks on Aller Moor in early September 2015. Feeding with family on Kingsmoor maize stubbles in late Nov/early Dec.				
45	Pippa	F	RT	Radio tag ceased to function summer 2013.	gr-re-wh	Pippa was seen paired with Cosmo (2010 male) again this year, and made a likely breeding attempt on private land on the Levels and Moors. The pair were seen again without young from mid June and remained in Somerset for the rest of the year.	Probable breeding attempt likely failed at egg stage. Private land near Martock, Somerset.	2015: Probable breeding attempt, failed to hatch eggs.		
2012 release year										
47	Phelps	M	GPS, RT	Back-pack partly fell off and was removed by hand autumn 2012 Radio tag ceased to function Nov 2014.	re-ye-bl	Recorded from mid to end March at Slimbridge with Evie, Cotton and Oakie and again at Slimbridge in early May. In Somerset for rest of year. Does not appear to be paired up.	No breeding attempt made this year	None		
48	Easter Beans	F	RT	Radio tag ceased to function Oct 2013.	re-gr-bl	Paired up with Wally (2011 male) early in the year – acting as a pair in Somerset in early March. Then seen as pair on private land near Templecoombe from early April and remained there into May – returning to Somerset for latter part of the summer and autumn.	No breeding attempt made this year	None		

Bird id no.	Name	Sex	Tag	Tag outcome	Ring combo	Annual summary 2015	Annual breeding outcome	Breeding outcome to date	Date of death	Other removal from programme
49	Gibble	F	GPS, RT	GPS ceased to function 19 th December 2013. Radio tag stopped Nov 2014. Still wearing back pack when sighted in November 2015.	re-bk-bl	Recorded in late February at Slimbridge with both Lofty (2011 male) and Beatrice (2011 female) . Recorded at Newport wetlands with Lofty and Beatrice again in early March (as well as in Somerset) then back in Gwent and also Ryals Farm Glos, with Lofty only at the end of March. Gibble and Lofty were seen again together in South Wales in late May and early June, and back in Somerset for the remainder of the year.	No known breeding attempt this year	None		
50	Elizabeth Royal	F	PTT	Satellite tag ceased to function 27/07/2014.	wh-re-bl	Recorded at Slimbridge from mid March to end March – and in Somerset for the remainder of the year. Does not appear to be paired with any particular bird.	No breeding attempt made this year	None		
52	Chocolo	M	RT	Radio tag known failed in October 2015 – could have failed over the summer.	bk-gr-bl	Appeared at Slimbridge in February along with Tamsin (2010 female) and other birds. Last seen clearly in a pair with Tamsin in Somerset in mid March – but unsighted since. . Re-sighted in early October with Tamsin on Aller Moor.	Not known if bred. No fledged chicks produced. Thought to be have been paired with Chocolo	None		Missing since March 2015
53	Alexander	M	PTT	PTT Satellite tag ceased to function 19/12/2013.	wh-bk-bl	Early indications did not suggest Alexander was paired with Swampy (2011 female) but the pair bred on private land on Kingsmoor and went on to fledge two chicks. They were both back in with the main flock and	2 chicks fledged on private land near Ilchester, Somerset.	2015: 2 chicks to fledging		

Bird id no.	Name	Sex	Tag	Tag outcome	Ring combo	Annual summary 2015	Annual breeding outcome	Breeding outcome to date	Date of death	Other removal from programme
						their two chicks on Aller Moor in early September 2015. Feeding with family on Kingsmoor maize stubbles in late Nov/early Dec.				
54	Midnight	M	PTT	Satellite tag ceased to function 15/04/2014.	bl-re-bl	Seen pairing with Gemma (2010 female) in February in Somerset. Disappeared in early Spring after sighting at Slimbridge in early April with no re-sightings until alerted by private landowner of presence of pair of cranes with chick in late August in Wiltshire. Landowner said that pair were first present in February. Identified as Gemma and Midnight and their 1 fledged chick in early September. On Aller Moor, Somerset with chick on 20 th September 2015.	1 chick fledged, Wiltshire.	2015: 1 fledged chick		
56	Evie	F	RT	Radio tag failed autumn 2015 .	bl-ye-bl	Evie was seen at Slimbridge in March and again in April. She disappeared for much of the summer but was seen again in mid September in Somerset. It is not known if she was paired with another bird during her absence. She was recorded back at Slimbridge in December with Albert – a possible pairing ?	No known breeding attempt	None		
58	Haribo	M	GPS,RT	GPS ceased to function Dec 2013. Radio tag ceased to work Mar 2014. Back-pack straps seen hanging low in late October 2015. November re-sightings	bl-bk-bl	Paired with Twinkle (2010 female) again this year, and spent a lot of time on Westmoor in the early part of the Spring, but no breeding attempt made to our knowledge.	Held territory, no known breeding attempt	None		

Bird id no.	Name	Sex	Tag	Tag outcome	Ring combo	Annual summary 2015	Annual breeding outcome	Breeding outcome to date	Date of death	Other removal from programme
				recorded him without backpack.						
60	Wycliffe	M	GPS, RT	GPS ceased to function Oct 2013. Radio tag failed over summer 2015. Not functioning by October 2015. Still wearing back pack when sighted in November 2015.	ye-wh-bl	Paired up early in the year with Maple (2012 female) . Sighted in Oxfordshire from late April together with Maple, where a breeding attempt was made. Recorded back in Somerset from late July.	2 eggs incubated to hatch date, then predated, Otmoor, Oxfordshire.	2015: 2 eggs failed to hatch		
61	Willow	M	GPS, RT	GPS ceased to function Oct 2013. Radio tag ceased to function by Oct 2013. Still wearing back pack when sighted in November 2015.	ye-gr-bl	Appeared paired up with Wendy (2010 female) in February in Somerset and mating seen in March when both birds were at Slimbridge. Willow then paired with Sedge (2010 female) but did not go on to make a serious breeding attempt. Came back to Somerset for a few days in early November (with Sedge) but back at Slimbridge by 5 th .	Some tentative nest building but no breeding attempt	None		
62	Wiz	M	RT	Radio tag ceased to function by Oct 2013.	bk-ye-bl	Wiz remained on the Somerset Levels and Moors throughout the year, being seen on an off through the summer. He is not thought to be paired up.	No breeding attempt made this year	None		
63	Shadow	M	GPS, RT	GPS stopped during Summer 2014. Radio tag ceased to function by Oct 2013. Back pack appears to have been	gr-re-bl	Shadow seemed to form a tentative pair bond with Squidgy (2010 female) in March but remained alone on the Levels and Moors during the summer. He is currently not thought to be paired	No breeding attempt made this year	None		

Bird id no.	Name	Sex	Tag	Tag outcome	Ring combo	Annual summary 2015	Annual breeding outcome	Breeding outcome to date	Date of death	Other removal from programme
				partly shed – straps seen dangling and tangled around legs from July through to October 2015. Still wearing back pack when sighted in November 2015 with straps hanging low		with any particular bird.				
64	Maple-Glory	F	RT	Radio tag ceased to function by Oct 2013.	gr-wh-bl	Paired up early in the year with Wycliffe (2012 male) . Sighted in Oxfordshire from late April together with Wycliffe, where a breeding attempt was made. Recorded back in Somerset from late July.	2 eggs incubated to hatch date, then predated, Otmoor, Oxfordshire.	2015: 2 eggs failed to hatch		
65	D2	M	RT	Radio tag working when found dead on March 31 st 2013.	gr-ye-bl	Died March 2013. Remains found following severe leg injury and then presumed predation by fox	-	-	31/03 2013	
66	Margaret	F	RT	Radio tag ceased to work over summer 2015. Not functioning by October.	gr-bk-bl	Margaret remained in Somerset for the year. She is not known to have paired up with any particular bird.	No breeding attempt made this year	None		
67	Jasper	M	GPS,RT	Radio tag ceased to function Oct 2013. GPS data logger ceased to function Dec 2013. Still wearing back pack when sighted in November 2015.	bk-re-bl	Jasper appeared often in the company of Regina (2010 female) and Christmas (2011 female) during the spring and appeared to occupy a territory on West Sedgemoor. No breeding attempt was made, however. In October, appeared to be paired with Christmas Shoes.	No breeding attempt made this year	None		

Bird id no.	Name	Sex	Tag	Tag outcome	Ring combo	Annual summary 2015	Annual breeding outcome	Breeding outcome to date	Date of death	Other removal from programme
68	Jess	F	RT	Radio tag working when found dead on 11 th Nov 2013.	ye-bk-bl	Found dead, September 2013. Scavenged by predator on Aller Moor. Cause of death unknown.	-	-	01/09 2013	
69	Pickles	M	RT	Radio tag ceased to function by Oct 2013.	bk-wh-bl	Pickles remained in Somerset throughout the year. He is not known to have paired up with any particular bird.	No breeding attempt made this year	None		
2013 release year										
70	Cherry	F	ECO	Ecotone tag stopped working Dec 2013.	re-wh-ye	Part of Somerset non-breeding flock. Not yet paired up. 2015 spent on Somerset Levels and Moors apart from brief visit to Slimbridge in early April 2015. Seen over Cotswold water park with Bop-Bop and Billy in early May.	No breeding attempt made this year – 2yr old bird	None		
71	Cotton	F	GPS, RT	GPS ceased to function Oct 2014. Radio tag not assessed – TBC if still working. Not known if still wearing backpack.	re-bl-ye	Seen at Slimbridge in March and again in late April. Seen mating with Oakie (2013 male). Photographed over Bisceter Wetlands Oxfordshire in early May (although possibility it was Waterwing and not cotton) with Oakie and Skye. Cotton seen (with Oakie) again at Slimbridge in mid June , mid July and through the autumn.	No breeding attempt made this year – 2yr old bird	None		

Bird id no.	Name	Sex	Tag	Tag outcome	Ring combo	Annual summary 2015	Annual breeding outcome	Breeding outcome to date	Date of death	Other removal from programme
						Appeared paired with Oakie in late September at Slimbridge where she remained to the end of the year.				
72	Waterwing	F	RT	Radio tag working Dec 2015 but recorded as weak	re-gr-ye	Part of Somerset non-breeding flock. Not yet paired up. 2015 spent largely on Somerset Levels and Moors but also recorded at Slimbridge in early May. Appeared to form a pair bond with Manfred in the autumn. Recorded at Slimbridge in late September but in Somerset in latter part of the year.	No breeding attempt made this year – 2yr old bird	None		
74	Acorn	F	RT	Radio tag working Dec 2015.	wh-re-ye	Remained in Somerset throughout the year. Not yet paired.	No breeding attempt made this year – 2yr old bird	None		
76	wh-gr-ye	M	GPS,RT	Radio tag working when died, Nov 2013. Tag used to locate remains.	wh-gr-ye	Died November 2013. Cause unknown. Rings and remains found on West Sedgemoor	-	-	01/11 2013	01/11 2013
77	Billy	M	RT	Radio tag working Dec 2015.	wh-bk-ye	Seen over Cotswold water park with Bop-Bop and Cherry in early May but in Somerset outside of this period.	No breeding attempt made this year – 2yr old bird	None		
79	Excalibird	F	RT	Radio tag working intermittently March 2015 failed by end of summer 2015.	bl-wh-ye	Recorded for the first time at Slimbridge in late April along with Cotton and Oakie but in Somerset for the rest of the year. Not yet paired .	No breeding attempt made this year – 2yr old bird	None		

Bird id no.	Name	Sex	Tag	Tag outcome	Ring combo	Annual summary 2015	Annual breeding outcome	Breeding outcome to date	Date of death	Other removal from programme
80	Viridor	F	RT	Radio tag working Dec 2015.	bl-re-ye	Recorded at Slimbridge in early May but in Somerset for the remainder of the year. Not yet paired.	No breeding attempt made this year – 2yr old bird	None		
81	Bop-Bop	F	GPS,RT	GPS ceased to function 20 th May 2014. Radio tag still working Dec 2015. Still wearing back pack when sighted in November 2015.	bl-bk-ye	Visited Slimbridge in April 2015 and seen over Cotswold water park with Cherry and Billy in early May and back at Slimbridge soon after. Remained in Somerset for the rest of the year. Towards the end of the year, appeared to pair up with Bombus.	No breeding attempt made this year – 2yr old bird	None		
82	Skye	F	ECO	Ecotone tag stopped working Dec 2013.	ye-re-ye	Skye seemed to pair up with Stanley (2013 male) in the early part of the year in Somerset. They were then seen together as pair at Slimbridge early April and then back in Somerset as pair on Northmoor and West Sedgemoor. They were then photographed together at Coombe Hill Meadows nature Reserve, Glos. on 24th April, again in May and then in early June. Also the pair were seen at Elmore, Glos. in early June. Strangely Skye was photographed over Biscester Wetlands Oxfordshire in early May with Cotton (or possibly Waterwing) and Oakie. She was seen again in Somerset from mid July with Stanley.	No breeding attempt made this year – 2yr old bird	None		
83	Stowford	M	RT	Radio tag working Dec 2015.	ye-wh-ye	Stowford picked up a bad limp in the early part of the year but it had cleared up by late May. He remained in	No breeding attempt made this year – 2yr old bird	None		

Bird id no.	Name	Sex	Tag	Tag outcome	Ring combo	Annual summary 2015	Annual breeding outcome	Breeding outcome to date	Date of death	Other removal from programme
						Somerset throughout the year and does not appear to be paired up with any particular bird.				
84	Sven	M	GPS,RT	GPS and Radio tag working when euthanased March 2014.	ye-bl-ye	Collision injury lead to euthanasia at RSPCA March 2014. Injuries suggested probable powerline or other obstacle	-	-	08/03 2014	
85	Stanley	M	RT	Radio tag working Dec 2015.	ye-gr-ye	Stanley seemed to pair up with Skye in the early part of the year in Somerset. They were then seen together as pair at Slimbridge early April and then back in Somerset as pair on Northmoor and West Sedgemoor. They were then photographed together at Coombe Hill Meadows nature Reserve, Glos. on 24th April, again in May and then later in early June. Also the pair were seen at Elmore, Glos. in early June. They returned to Somerset together from mid July – Stanley, sadly with a bad limp. Limp gone by late August, Stanley then recorded at Slimbridge in late September – appeared to be paired with Sedge.	No breeding attempt made this year – 2yr old bird	None		
86	Bombus	M	RT	Radio tag ceased to function Nov 2014.	ye-bk-ye	Visited Slimbridge briefly in April 2015, but remained in Somerset for the rest of the year. Towards the end of the year appeared to pair up with Bop-Bop.	No breeding attempt made this year – 2yr old bird	None		

Bird id no.	Name	Sex	Tag	Tag outcome	Ring combo	Annual summary 2015	Annual breeding outcome	Breeding outcome to date	Date of death	Other removal from programme
87	Manfred	M	ECO	Ecotone ceased to function August 2015.	gr-re-ye	Being the only 2013 bird with a functioning remote GPS tag we have established that he flew to Slimbridge in late April before returning on 4 th May. He then flew up again on 13 th May, returning on 15 th . Manfred remained in Somerset throughout the rest of the year. In August he was seen displaying with Waterwing (2013 female) and appears to be forming a pair bond with this bird.	No breeding attempt made this year – 2yr old bird	None		
88	Buttercup	F	RT	Radio tag not assessed .	gr-wh-ye	Recorded at Slimbridge in April and then again in July and September. Possibly remained at Slimbridge throughout the summer seen there in the autumn. Positive id at Slimbridge in late September and November.	No breeding attempt made this year – 2yr old bird	None		
89	Cookie	F	RT	Radio tag ceased to function Jan 2015.	gr-bk-ye	Seen at Slimbridge for the first time in April 2015 and again in early May. Recorded in Somerset for most of the year outside of this period. Not yet paired up.	No breeding attempt made this year – 2yr old bird	None		
90	Frieden	F	RT	Radio tag working, although possibly failing when birds went missing, Dec 2013.	bk-re-ye	Went missing December 2013. No further sightings.	-	-		Missing Dec 2013
91	Oakie	M	RT	Radio tag ceased to function May 2014.	bk-wh-ye	Seen at Slimbridge in March and again in late April. Seen mating with Cotton (2013 female). Photographed over Bisceter Wetlands Oxfordshire in	No breeding attempt made this year – 2yr old bird	None		

Bird id no.	Name	Sex	Tag	Tag outcome	Ring combo	Annual summary 2015	Annual breeding outcome	Breeding outcome to date	Date of death	Other removal from programme
						early May with Cotton (or possibly Waterwing) and Skye. Oakie seen with Cotton again at Slimbridge in mid June, mid July and through the autumn. Appears paired with Cotton in late September at Slimbridge where he remained till the end of the year.				
93	Misty Moor	M	RT	Radio tag ceased to work March 2014. Bird went missing May 2014.	bk-gr-ye	Went missing May 2014. No further sightings.	-	-		Missing May 2014
2014 release year										
94	Chip	F	RT	Radio tag ceased to work over Summer 2015.	re-wh-bk	Spent the year on the Levels and Moors	Juvenile bird	None		
95	Pecky	M	GPS,RT	Radio tag working Dec 2015. Backpack still functioning Dec 2015.	re-bl-bk	Spent the year on the Levels and Moors	Juvenile bird	None		
96	Soar	M	RT	Radio tag working Dec 2015.	re-ye-bk	Spent the year on the Levels and Moors	Juvenile bird	None		
97	Ted	M	RT	Radio tag failed November 2015.	bk-ye-bk	Spent the year on the Levels and Moors	Juvenile bird	None		
98	Patience	F	GPS,RT	Radio tag working Dec 2015. Backpack still functioning Dec 2015.	wh-re-bk	Spent the year on the Levels and Moors	Juvenile bird	None		

Bird id no.	Name	Sex	Tag	Tag outcome	Ring combo	Annual summary 2015	Annual breeding outcome	Breeding outcome to date	Date of death	Other removal from programme
100	Century	F	RT	Radio tag working Dec 2015.	wh-ye-bk	Spent the year on the Levels and Moors	Juvenile bird	None		
102	Dillon	M	GPS,RT	Radio tag ceased to work during summer 2015. Backpack still functioning Dec 2015.	bl-re-bk	Spent the year on the Levels and Moors	Juvenile bird	None		
103	Rosa	F	RT	Radio tag working Dec 2015.	bl-wh-bk	Spent the year on the Levels and Moors	Juvenile bird	None		
104	Sherbert	F	GPS, RT	Radio tag failed – end Nov/December 2015 . Backpack still functioning Dec 2015.	bl-ye-bk	Spent the year on the Levels and Moors	Juvenile bird	None		
105	Kia	F	GPS,RT	Radio tag working Dec 2015. Backpack still functioning Dec 2015.	wh-bl-bk	Spent the year on the Levels and Moors	Juvenile bird	None		
106	Yellow Red Black	M	GPS, RT	Radio tag working when found dead in November 2015 Backpack still functioning when found dead in November 2015.	ye-re-bk	Found dead in Nov ember 2014. Likely died around 25 th Oct. Body not scavenged – rotted in field, Post mortem inconclusive as to cause of death. Unlikely predation. Leg injury observed.	-	-	05/11 2014	
107	Diamond	F	RT	Radio tag working Dec 2015.	ye-wh-bk	Spent the year on the Levels and Moors	Juvenile bird	None		

Bird id no.	Name	Sex	Tag	Tag outcome	Ring combo	Annual summary 2015	Annual breeding outcome	Breeding outcome to date	Date of death	Other removal from programme
108	Gary	M	RT	Radio tag working Dec 2015.	ye-bl-bk	Spent the year on the Levels and Moors	Juvenile bird	None		
109	Cleg	M	ECO	Ecotone tag working Dec 2015.	bk-gr-bk	Spent the year on the Levels and Moors	Juvenile bird	None		
110	Pepé	M	RT	Radio tag working Dec 2015.	gr-re-bk	Spent the year on the Levels and Moors	Juvenile bird	None		
113	Ziggy	F	RT	Radio tag fell off in late November 2015. Still working an retrieved from Hambridge block, West Sedgemoor.	bk-re-bk	Spent the year on the Levels and Moors	Juvenile bird	None		
114	Humbug	F	RT	Radio tag working when found dead in November 2015.	bk-wh-bk	Found dead on West Sedgemoor Nov 2014. Scavenged by predator. Cause of death unknown.	-	-	03/11 2014	

2.1 Deaths, diseases, incidents, missing birds 2015

Table of deaths and missing birds from release to date

DATE OF EVENT	AGE OF BIRD AT TIME OF EVENT	DESCRIPTION	BIRD IDENTIFICATION / NAME
06/11/2010	6mths 1 wk	Missing, remains found Jan 2011, unknown cause of death	Yellow Blue Red Howard
18/11/2010	6 mths 3 wks	Flew into wires, Stathe	Yellow Black Red Jack
06/09/2011	4 mths 4 days	Flew to Kent – never seen again to date.	Black Green Red Mildred
10/12/2011	7 mths 3 days	Taken by fox following illness – remains found partly buried	Green Yellow White Gizmo
31/03/2013	10 mths 2 wks	Likely cause of death - taken by fox following broken leg	Green Yellow Blue D2
06/04/2013	23 mths	Went missing, unknown status	Yellow Red White Trinny
10/05/2013	36 mths 1wk	Missing – possibly pre or during moult, unknown status	White Green Red Vince
31/07/2013	38mths 1 wk	Missing post moult, unknown status	Blue White Red Clarence
23/10/2013	29 mths	Went missing, unknown status	White Yellow White Charlie
01/11/2013	5 mths and 3 wks	Found dead on West Sedgemoor Unknown cause of death	White Green Yellow White Green Yellow
11/11/2013	18 mths 1 wk	Found dead on Aller Moor Unknown cause of death	Yellow Black Blue Jess
20/12/2013	7 mths 4 days	Found dead on West Sedgemoor. Unknown cause of death	Black Red Yellow Frieden
27/01/2014	33 mths	Went missing, unknown status	White Green White Pepper
08/03/2014	9 mths 3 wks	Collision injury, broken wing, euthanased	Yellow Blue Yellow Sven

01/05/2014 (approx)	11 mths 1 wk	Went missing, unknown status	Black Green Yellow Mistymoor
24/10/2014	5 mths 3 wks	Died following leg or other injury. Cause of death or injury unknown	Yellow Red Black Yellow Red Black
03/11/2014	5 mths 3 wks	Died – suspected predation, following leg injury and deterioration	Black White Black Humbug
15/11/2014 (approx)	4yrs 6mths 2 wks	Went missing, unknown status	Blue Green Red Mennis
05/01/2015 (approx)	4 yrs 8mths 3 wks	Went missing, unknown status following long-term leg injury and deterioration in condition	Yellow White Red Gilbert

Deaths, Injuries, diseases, and issues with particular birds

2010 cohort:

Yellow White Red – Gilbert

Gilbert's condition was reported on in the previous annual report. He went missing in January (believed to have perished) following a protracted serious leg injury through the winter.

Black Blue Red – Chris. (Five year old female)

On 31st July, Chris was observed in the outdoor duckery at Slimbridge and was chased to scare her away. However, she was unable to fly off and was caught. She was very and she had also broken 4 primaries on her right wing so possibly wouldn't be able to fly far. She may have had a collision to result in these breakages. There were obvious stress bars on the unbroken primary so possibly they broke at corresponding weak points. Her tertials and secondaries looked new and in good condition implying newly moulted - but her primaries looked old. There was no other obvious signs of injury, so she was treated with Ivermectin, Appertex and Amoxycillin (1.2ml) and a blood sample was taken for haematology and chemistry testing, and sera kept in freezer. Cloacal and buccal swabs were also taken for reovirus screening. Her Radiotag was replaced, and she was released into the back of the Rushy Pen. Extra food (crane pellet) was provided during this period, which she took. She remained in the Rushy pen for all of August, but was seen in poor condition seemingly unable to effectively water-proof herself and no sign of her shedding her broken primary feathers, but no longer emaciated. In late August, results from the lab came back showing presence of nematodes. On 4th September Chris was recaptured in the Rushy pen and her broken primary feathers (four from right wing, one from left) were plucked to allow them to re-grow. An 'Ecotone' GPS tag was fitted to her leg and she was put back in the Rushy pen.

On 10th September, more lab results were returned showing that Chris' kidney enzyme levels had gone down but her white blood cells had all gone up - not massively but noticeably. It was possible that there was an infection - or perhaps her health had now improved, and her body was actually able to get her immune response going.

On 22nd September her Ecotone tag recorded her as being outside of the Rushy pen – so clearly able to fly and on her way to recovery. She remains paired with Monty.

This is the second year that Chris has been under-weight and ill during the summer months – in 2014 this occurred during her moult period.

Questions also remain about Chris's apparent tameness/reduced fear of human beings compared to other birds. This leads to a tendency for her to feed in captive bird areas such as the duckery where risks of disease are higher and she comes into closer contact with people. She appears to be somewhat habituating to human presence and this needs to be kept a close eye on in the future.

Minnie

Minnie's whereabouts are currently unknown. He has not been resighted at Slimbridge since mid October and his chick appears to be being reared by Wendy alone when seen frequently through November and December.

2011 cohort:

Yellow Blue White – Elle. (4 year of female)

Elle's back-pack mounted GPS data-logger appears to have shifted on her back to be positioned on her left hand side just above her wing-joint. This was first noted in early February and initially it was though the back-pack was in the process of being shed. However, it has persisted in this position and was still there in September. No good sightings have been had since then to confirm if she is still wearing the logger. It does not appear to affect her in flight, and breeding neither, as she made two nesting attempts this year with Legend. It also doesn't seem to be bothering her (ie she is not constantly fiddling with it). (Refer to photo 8 in appendix)

Yellow Black White – Gerald. (4 year old male)

Gerald was first noted as looking very 'scruffy' in early August. It is particularly noticeable on the right hand side of his body- and it is thought that his back pack straps might be trapping some feathers, or causing the scruffy appearance.

2012 cohort:

Green Red Blue – Shadow. (3 year old male)

Shadow appears to have a problem with the back-pack straps of his GPS data-logger. This was first noted on August 7th, with the straps of the back-pack dangling low and seeming to be stuck around the upper part of his legs. (Refer to photo 7 in appendix) This was still the case at the re-sighting in September and mid September, but although he was seen in Oct, Nov, and Dec it has not been possible to confirm whether there is still an issue with it.

Blue Black Blue – Haribo. (3 year old male)

Haribo was photographed on 25th October 2015 with his back pack straps dangling beneath him indicating that the straps had broken, but the tag had not fully fallen off. Photograph 25. in appendix. A good sighting has not been had since to confirm if he is still wearing the back pack.

2013 cohort:

Yellow White Yellow – Stowford. (2 year old male)

In Marchn 2015, Stowford picked up a limp and was recorded as limping throughout the spring on the Somerset Levels and Moors. The cause is unknown. By June, the limp seemed to have disappeared, and he appears to have made a full recovery.

Yellow Green Yellow - Stanley. (2 year old male)

Stanley was first noted as having a bad limp in mid July. This persisted through August and September, but has not been noted since, and he is assumed to have made a full recovery.

White Black Yellow – Billy. (2 year old male)

Billy was noted as limping in mid August, but by early September, there was no sign his limp and he appears to have made a full recovery.

2014 cohort:

No issues.

2015 juveniles:

The fledged offspring of Minnie & Wendy was first noted as having the end third of his top bill broken on 11th September. Its injury is symptomatic of the bird having got its bill caught in something and then injuring it while twisting the bill to get it out. The injury is likely to cause a much reduced foraging capability and also a reduced ability to preen properly. This may mean that feather lice and other parasites are not properly removed and these will then build up and the feather damage will lead to reduced waterproofing and reduced insulation. These will both then lead to a need for greater energy to keep warm, and increased feed intake. This will be hard for a bird with a damaged bill. Observations through October seemed to indicate that it continued to feed 'normally' and it was photographed in mid October (photo 16 in appendix). Indications in early November were that it was largely being fed by Wendy – its mother. Minnie seems to have deserted the two birds or is absent, however it has also been seen feeding for itself and it was alive at the end of 2015.

Section 3. Breeding protection, intervention, and monitoring summary

3.1 Breeding protection – description and effort

Crane monitoring with a volunteer team was carried out through February and March, giving early indications of pair-bond formations and obvious pairings. This was supplemented by monitoring searches and observation of pairs by Amy (WWT aviculturalist employed to March 31st) and Damon (employed through the RSPB's Nature Recovery Unit). Much effort was put into searching for breeding pairs following reports of the presence of cranes from birders and members of the public

as well as looking at known areas from previous years, and territorial pairs were found on West Sedgemoor, Westmoor and (initially) on Wetmoor. The pairs were observed from a distance every few days to establish at what point they started to incubate - and the first day of incubation was determined. On other areas birds were not known about until later in the breeding season. The pair on Kingsmoor were only known about after a local contact tip-off and subsequent observations found the pair to already have small chicks; and the pair in Wiltshire were only known about following a report from a farmer after the chick had fledged. Follow up searches of other areas where pairs of cranes were reported proved fruitless. Wetmoor was thought to hold no pairs this year, and the wetland area of private land near Martock, a pair was present, but it was not possible to locate the nest site.

Once nesting was confirmed on West Sedgemoor, a day-light hour watch from a secret elevated viewing point at the edge of some RSPB-owned woodland was initiated covering the period from dawn to dusk. This was mainly covered by volunteers, with Damon also contributing to the monitoring effort. This watch was designed to do the following:

- Keep a record of whether the birds were still incubating, establishing length of successful incubation.
- Keep a record of any instances when the birds were disturbed or alarmed and/or off the nest, establishing the level of disturbance the nesting birds were exposed to.
- Keep a record of any day-time predation attempts and establish what the cause was.
- Keep a record of any interactions with other cranes in the area.
- Able to contact a member of staff to intervene or apprehend anyone trespassing or disturbing the birds deliberately or unwittingly. (There was just one instance of the latter).
- To protect the cranes from possible egg-collection attempts.

It was also possible to record change-overs and the length of individual birds' incubation periods was recorded.

The home-range territories of the two pairs on West Sedgemoor was also recorded, and these were mapped.

In total, volunteers carried out a total of 1,044 hours of watches, with an intention to cover dawn to dusk, 7 days per week during incubation. Nearly all of this time was spent observing two pairs of cranes on West Sedgemoor. Some volunteers carried out the observation in pairs, others were lone-working. A total of 752 hours of crane incubation, chick rearing or breeding behaviour were observed between 25th March and 5th July by the 33 volunteers. Just under half of this was undertaken by 4 volunteers, two working together, and two working on their own – ie there was a big difference between individual volunteer's efforts/involvement.

3.2 Interventions during incubation

3.2.1 Trail-cameras

Trail-cameras were purchased to enable remote recording of nests. These cameras record stills and video, and transmit images via mobile phone network to a computer (or mobile). The battery life

lasts for well over a month, and card storage size ensures that there is no need to re-visit the camera once positioned. However, it was decided that locating these at or near the nest posed too high a risk of the adults deserting. Instead, a camera was positioned on a drove (track) in Somerset pointing at a fox-proofed gateway and only entrance way into the nesting field of Legend & Elle and then, when this nest had failed, moved to a position on an access drove that lead towards Timmy & Michaela nesting site. At Slimbridge, one was installed to view over a likely access point for predators interested in approaching Ruby & Bart's first nesting attempt, and also on a gateway near to Minnie & Wendy's breeding area. The cameras proved a very useful way of establishing the presence or otherwise of ground predators such as foxes. In addition they were able to record the reaction of predators to the deterrent mesh-screening and proved the effectiveness of this, and they also enabled the efficient targeting of predator control work at West Sedgemoor.

3.2.2 Anti-fox mesh screening and electric fencing

Mesh screening and electric fencing was installed on the only gate-way into the nesting field of Legend and Elle on West Sedgemoor on 15th April - 2 days after the pair were known to be incubating. This was done during the day – and the incubating bird was observed from the vantage point. The incubating bird sat tight throughout the setting up of the mesh (which took approx 20 minutes). The sitting bird was in long vegetation and could not see the vehicle or the person setting up the mesh. The only way into the nesting field for a ground predator was then either to jump or swim the perimeter ditches. They are thought too wide for a fox to jump. The trail cam positioned pointing at the gateway recorded both badgers and foxes going up to the gate and then turning away, unable to pass through into the field.

Similarly, at the second attempt of the first pair of cranes Timmy & Michaela, mesh screening and electric fencing was driven down towards the main gateway off the drove into the nest field on 27th April – four days after incubation had commenced. When approx still 600m from the nest, the observers saw the sitting crane leave the nest. This nest was in much shorter vegetation, and the vehicle and person setting up the mesh was almost certainly the cause of the disturbance. After a phone-call to this effect (after approx 30secs off the nest) the vehicle and person immediately started to back away down the drove, but at approx 1min off the nest, a corvid species (either raven or crow) was seen to drop into the nest start pecking around. The incubating crane returned after 10 mins off the nest, and was seen to immediately remove a damaged egg and dump it 50m from the nest. It then returned and continued to incubate the (presumably) intact other egg. However, both birds were seen off the nest for periods of 20 mins or so later that day, and they were quite unsettled for the following couple of days. The fox-deterrent mesh-screening was finally installed instead after dark, when there was no risk of aerial predators, on 30th April. The pair went on to incubate the single egg until 4th May before either abandoning it, or it being predated. The pair were off their nest for four hours from dawn but then returned to the nest, removed an egg or egg-shell – (not possible to tell which).

The second attempt of the second pair was close to the first pair's nest, and although it would have been possible to block gateways with some mesh to prevent casual access by ground predators, it was decided not to risk potential disturbance of both pairs.

In the autumn, anti-fox mesh was installed on gateways to the created crane breeding zones on Northmoor (Mitchell's); Kings Sedgemoor (Williams') and Moorlinch (Coombes'). This is to deter foxes from setting up home within the breeding zones – and has the capacity to be easily electrified to provide further protection when a pair is detected starting to establish a nest site within the zone.

3.2.3 Predator control

Foxes were controlled from 07/01/2015 – 28/04/2015 on West Sedgemoor as part of the reserve work programme for breeding waders with the additional control through April specifically for the cranes. Night vision equipment was used by the contractor. A total of 18 foxes were shot on the reserve and perimeter of the moor (13 dogs and 5 vixens) over 42 nights in total. Sightings recorded on the trail camera enabled targeting of specific times of day/night when foxes were being seen.

There is a high level of fox and crow control carried out on the land adjoining the area where Alexander and Swampy hatched and raised their chicks, as the land-owner runs a commercial pheasant and partridge shoot. The level of predator control on the neighbouring land (where the cranes spent most of the time) is, however, not known.

The level of predator control at the Wiltshire site is unknown – but as the cranes were raised mainly in a game-cover strip, it could be assumed that some level of predator control is in place.

3.3 Ringing of chicks

A team was established capable of carrying out the ringing of crane chicks across the Somerset Levels and moors in 2015. This was headed up by Alison Morgan (a BTO qualified and very experienced ringer who has had experience crane catching and ringing with Beate Blahy's ringing team in the Schorfheide-Chorin Biosphere Reserve, Brandenburg, Germany) ; Amy King (the most experience crane-chick handler in the UK and trainee BTO ringer); Damon Bridge (experience of catching and ringing crane chicks with both Kranichschutz Deutschland in Meklenberg, Germany as well as Beate Blahy's ringing team in the Schorfheide-Chorin Biosphere Reserve, Brandenburg, Germany and local, on-the-ground knowledge and landowner contact – plus help from other trained BTO volunteers, WWT and RSPB staff. It was decided, however, that the risk of altering the fortunes of the first and only successful breeding pair Somerset were too high, and ringing was not undertaken.

In future years, Alison Morgan and BTO helpers are likely to be available, but Damon and Amy's availability is currently unknown. Alison has a number of BTO metal crane rings in stock .

Any future chicks should be ringed using the EUCWG convention of Black Blue Black on left leg, and three colour combo on the right leg. It is suggested that GREEN is used as the bottom colour for all future 1st generation chicks, distinguishing them from all the released birds.

21 colour combinations with green as the bottom colour are available. A spreadsheet of combinations is kept at Dewlands Farm. A selection of colour rings are also stored here.

3.4 Re-sightings monitoring

Monthly re-sightings monitoring was carried out by staff from January through to August, and then the method was changed to enable volunteers to lead on this from now on. A dedicated team of volunteers now carry out the monitoring over the Wednesday to Sunday at either the end or beginning of each month, with another volunteer responsible for the data entry onto the re-sighting spreadsheet on a monthly basis.

3.5 Release log

A daily log was kept by Damon throughout the year, where information was recorded on cranes movements, locations, sightings, and nesting stages and outcomes etc. Information on the birds at Slimbridge as well as in Somerset were maintained in the log and this has proved an invaluable tool enabling the compilation of this report.

3.6 Master Spreadsheet

A master spreadsheet was also maintained by Damon throughout the year. This is the master record of every egg collected through to death. It includes information on location of the original egg, transport and hatch dates, issues and any interventions during rearing and release date of each bird. It also contains information on what kit was fitted to each bird and its current status, the age at first moult, and details of any breeding attempts, location and outcome.

3.7 Data-downloads from GPS-tagged birds

During the early part of the year, Andrea Redondo and Jenny Pearson (PhD & MSc students) carried out the monthly data downloads. This was then continued by Damon and the volunteer team. This monthly task was handed over to the RSPB residential volunteer team at Dewlands Farm. The uploaded data is sent via Wetransfer file sharing site to Geoff Hilton at WWT Slimbridge and Andrea Redondo.

3.8 Protection kit

New equipment was purchased towards the end of the Viridor funded period to enable better quality monitoring and protection of cranes into the future. Two new Swarovski telescopes, tripods, mounts for digital cameras and digital cameras were purchased, along with a fishing shelter, and a set of back to back radios, and two weather-writers. WWT purchased 6 extra trail-cameras. Two of these are currently kept in Somerset.

Section 4. Habitat selection and use

4.1 Summary of crane use and the maintenance of created breeding sites

Created zone location	Year created	Use-able in Spring?	If not use-able, why?	Used?
Hatch pen-field West Sedgemoor (RSPB)	2009	N	Pen still in place. The pen was removed in summer 2015, so likely that this could be an appropriate site in 2016	N
Greylake f9 &10	2011	N	Vegetation height and water levels good, but too	N

(RSPB)			disturbed by RSPB staff carrying out wader monitoring	
Aller Moor (Hectors)	2012	N	Reed growth, (planted in 2013 and then again in 2014) is still getting established. Thought to be too open in the Spring to attract the cranes, but certainly quiet and undisturbed enough.	N
Walton Moor (Clarks)	2013	N	Water levels good during the spring, and largely undisturbed, but vegetation growth still low and not probably not enough cover	N
Northmoor/Aller (Mitchells)	2013	N	Used as a roost by cranes during Feb/March, and birds using fields adjacent to pool through the summer too. Pool area itself still too 'open' – not enough cover. Typha and reed is starting to colonize. Drier ground within the breeding zone was hay cut – leaving it very short in the Spring. This needs to be left long and just lightly grazed. Unfortunately it has been cut again this year. The landowner has been contacted.	N
Cossington Moor (Stradlings)	2013	N	Water levels good, disturbance levels thought to be low. Cranes not yet discovered the site. Plans to use decoys and some supplementary feeding nearby in winter of 2015/16	N
Hambridge West Sedgemoor (RSPB)	2014	N	Very open and bare – not enough cover. Gate and mesh to be installed.	
Broadway West Sedgemoor (RSPB)	2014	Y	Area used by moulting cranes, and also within the territory of nesting pair – but not used as a nesting area. Unknown as to why – but perhaps the recent-ness of the works and consequent bareness of parts of the pool prevented use. However- plenty of well-established longer vegetation also present and completely undisturbed.	N
Moorlinch (NE/Coombes)	2015	N/A	Not present in Spring 2015 – created in Summer.	N/A
Kings Sedgemoor (NE/Williams)	2015	N/A	Not present in Spring 2015 – created in Summer.	N/A

Section 5.

5.1 List of publications

Link: <http://fliplr.co/BIAZA/autumn-2015/#16>

Global Reintroduction Perspectives article on Crane Project submitted for publication in 2016..

5.2 Summary of press coverage

Jan

- 15th Jan Podcast on RSPB website re: cranes and climate change

Mar

- BBC Somerset – interviews with Damon, Amy and Liz (volunteer) re: hopes for breeding season
- BBC Radio Solent –interview with Michael Wilson (Community Officer) re: cranes in Somerset and breeding season

Apr

- Early April - small article in the Somerset County Gazette – 'hope that cranes may breed'
- Mid April - TV piece on ITV West – appeal for information on pairs of cranes by WWT

May

- 8th May - Good bit on the cranes in Somerset on "Dros y Ffyn" programme on S4C with Iolo Williams - 16 minutes in.

http://www.s4c.cymru/clic/e_level2.shtml?programme_id=519885901

- Mid May - Interview with Damon on BBC Radio Somerset – breeding season successes and failures.

Aug

- BBC radio 4 Tweet of the day – about Great Crane Project

<http://www.bbc.co.uk/programmes/b03dwyv9>

- Early August - Live interview on the Somerset cranes for BBC Somerset for 5 mins on the 5pm show.
- Piece in Daily Mail

<http://www.dailymail.co.uk/news/article-3187495/Take-project-bring-cranes-UK-Wild-chicks-born-UK-British-skies-time-four-centuries.html>

- Piece in Western Morning News

<http://www.westernmorningnews.co.uk/PICTURES-Cranes-air-Somerset-time-400-years/story-27563501-detail/story.html>

- Piece on BBC Gloucestershire

<http://www.bbc.co.uk/news/uk-england-gloucestershire-33806294>

- Piece in Scottish Daily Mail

<http://www.pressreader.com/uk/scottish-daily-mail/20150807/282192239705559/TextView>

Sep

- 2-page photo article in French children's magazine 'Wapiti' using Nick Upton's Nature PL images

<http://www.wapiti-magazine.com>

Appendix - Photos.



1. Timmy and Michaela's second attempt nest. Failed 04/05/2015. Photo Damon Bridge.



2. Legend and Elle's first attempt nest. Failed 28/04/2015. Photo Damon Bridge.



3. Fox deterrent fencing erected on only gateway to Legend and Elle's nest site.
Photo Damon Bridge.



4. Reedbed site of Alexander and Swampy's nest – 10m in from near edge. Taken 16/06/2015.
Photo Damon Bridge.



5. Likely failed nest of Gerald and Flash on West Sedgemoor - 17/06/2015. Photo Damon Bridge.



6. Wycliffe and Maple's nest in reedbed at Otmoor with predated egg in situ. Photo David Wilding.



7. Shadow (bird on the right) with back-pack straps between legs 01/09/2015. Photo Dave Chown.



8. Elle with malpositioned back pack. 23/09/2015. Photo Robin Morrison.



9. Beatrice at Ouse Washes, Cambridgeshire with possible (unringed) 'partner' – 23/09/2015.
Photo Pauline Gill.



10. Alexander & Swampy's two crane chick heads in the long grass. 06/07/2015.
Photo John Crispin.



11. One of the chicks with an adult on 17/07/2015. Photo John Crispin.



12. First seen flying on 22/07/2015. Photo John Crispin.



13. Both chicks flying with the adults on 27/07/2015. Photo John Crispin.



14. Alexander and Swampy with their two chicks in with the non-breeders 14/09/2015.
Photo Kevin Harris.



15. Minnie and Wendy's chick with either Minnie or Wendy at Slimbridge on 23/07/2015.
Photo James Lees.



16. Minnie & Wendy's chick "Beaky" in mid October. 1 month after injury to top mandible.
Photo James Lees.



17. Gemma & Midnight with their chick – Wiltshire 14/09/2015. Photo Nick Adams.



18. Newly created crane breeding zone on Kings Sedgemoor - 15/07/2015 Photo Damon Bridge.



19. Fox-proof deterrent fencing installed. 02/10/2015. Photo Damon Bridge.



20. Close up of fox-deterrent mesh. Photo Damon Bridge.



21. Newly created crane breeding zone on Moorlinch - 16/07/2015. Photo Damon Bridge.



22. Trail cam imaged of Timmy & Michaela a day before starting to incubate their third clutch.



23. Train cam image of fox on drove on West Sedgemoor 07/06/2015



24. Trail cam image of otter on drove on West Sedgemoor 05/06/2015



25. 26/10/2015 Haribo with back pack straps loose