

# Waders and Waterfowl of Poole Harbour

January 2007- February 2008

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## Introduction

In 1984 a detailed survey of the Waders and Wildfowl of Poole Harbour was undertaken by D.R. Collins (RSPB) for BP (Development) Ltd. The survey covering winter/spring 1984/85 and autumn/winter/spring 1985/86 was designed to assess Wader and Waterfowl populations and their distribution in the harbour in the light of possible oil production.

In 2006, Mark Constantine decided that another time had elapsed since this survey and it was time for another one. To make it directly comparable, the same methodology was to be used.

This report presents the findings of this survey, undertaken from January 1<sup>st</sup> 2007 to 28<sup>th</sup> February 2008.

## Objectives

The main objectives were as follows

- a. Location and monitoring of roost sites
- b. Assessment of the relative importance of inter-tidal feeding areas
- c. Assessment of numbers and distribution of open water species
- d. Additional assessment of Gull roost numbers

## Methodology

Collins divided the harbour into two sets of count areas, one for inter-tidal species and the other for open water species. These divisions were followed in this survey.

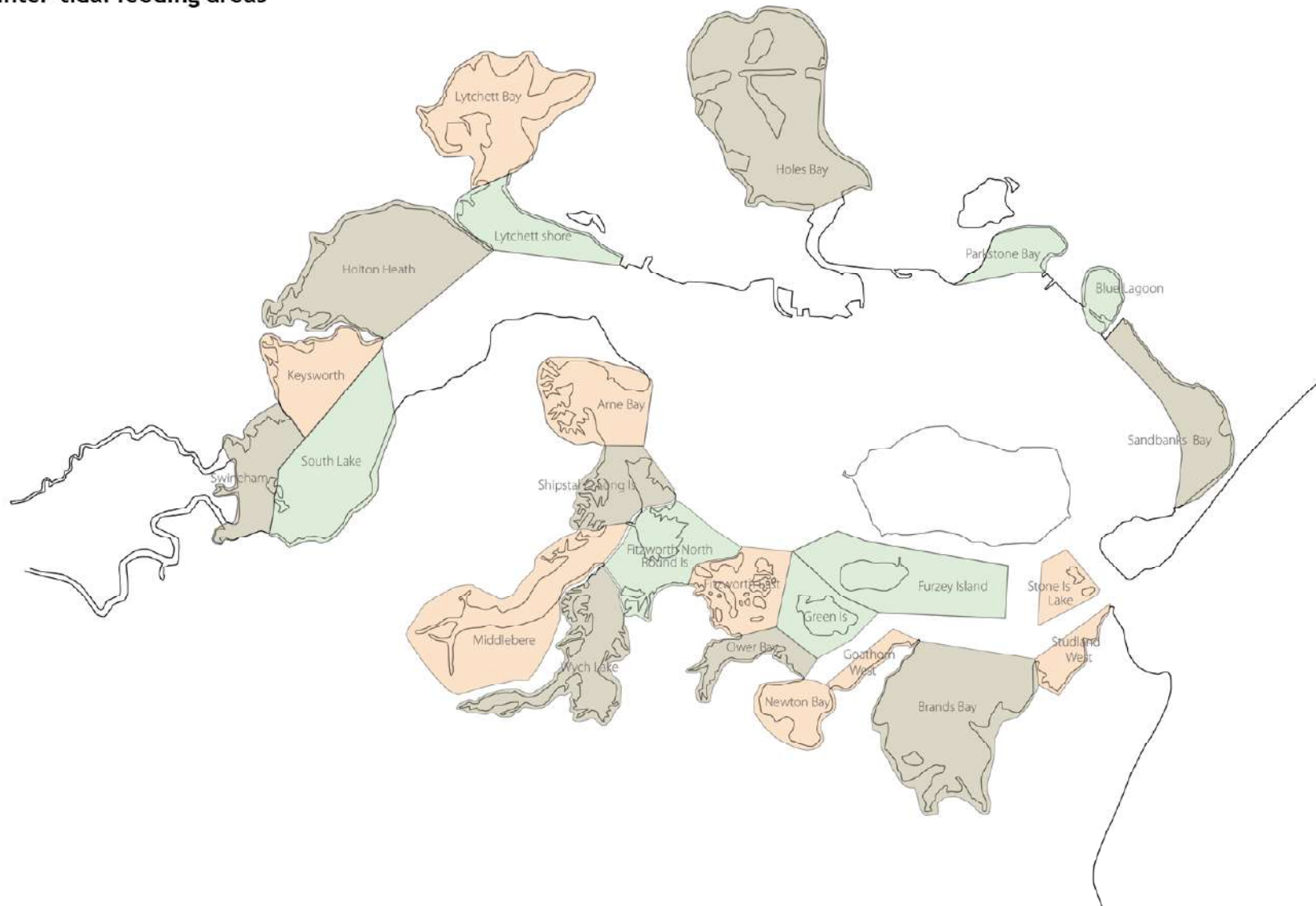
The inter-tidal areas were visited on a cyclical basis with two cycles being completed every month.

Open water counts were once a month.

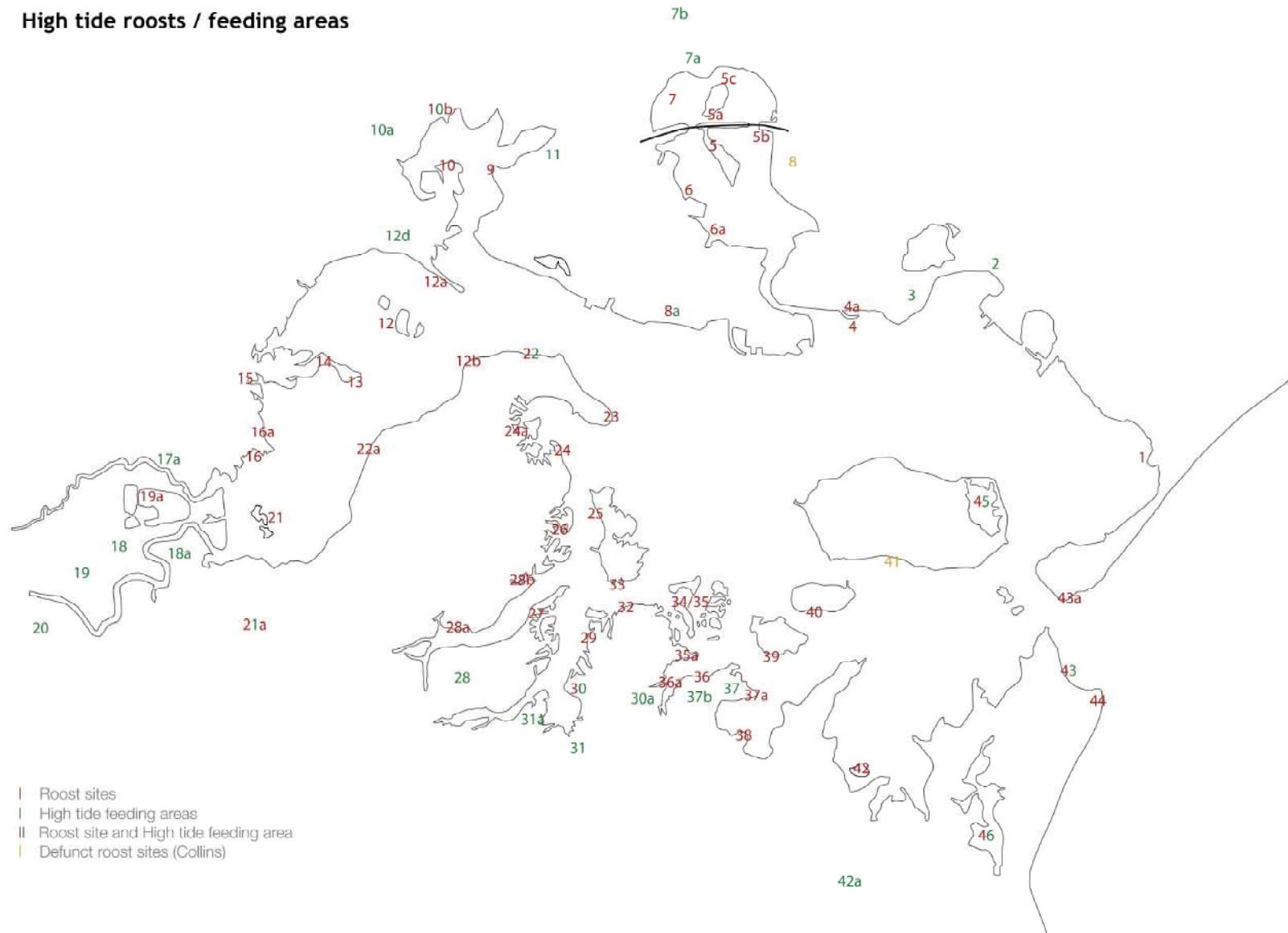
Collins also identified 44 regular roost / high tide feeding sites which were visited once a month. These plus an additional 31 other sites since discovered were visited once a month during this survey.

During the visits, incidental Gull counts were also made throughout the survey plus an additional full months surveying in March 2008. The results of which will be published in a separate report.

## Inter-tidal feeding areas



### High tide roosts / feeding areas



## Key to map

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1	Sandbanks Bay	12d	H. Heath fields
2	Parkstone playing fields	13	Keyworth Point spit
3	Baiter	14	Keyworth Point
4	Poole Quay breakwater	15	Keyworth saltmarsh N
4a	Quay pontoons	16	Keyworth saltmarsh S
5	Holes Bay central	16a	Keyworth saltmarsh central
5a	Holes Bay Pergins S	17	Keyworth fields
5b	Holes Bay embankment	17a	Lower Piddle Valley
5c	Holes Bay Pergins N	18/19	Wareham Meadows
6	Holes Bay SW N	18a	Ridge Moors
6a	Holes Bay SW S	19a	Swineham gravel pits islands
7	Holes Bay UCP <i>spartina</i>	20	Wareham Meadows SW
7a	Holes Bay UCP fields	21	Giggers Island
7b	UCP bypass fields	21a	Wareham Moors
8	Holes Bay reclamation area	22	Gold Point
8a	Hamworthy park beach	22a	Arne north shore
9	Lytchett Bay SE spit	23	Patchins Point
10	Lytchett Bay SW <i>spartina</i>	24	Arne spit
10a	Lytchett far fields	24a	Arne <i>spartina</i>
10b	Lytchett Pools	25	Long Island sand bar
11	Turlin Moor playing fields	26	Shipstal <i>spartina</i>
12	Holton Heath Islands	27	Middlebere Point
12a	H. Heath Wood Bar Looe	28	Middlebere Farm
12b	Russel Quay	28a	Middlebere <i>spartina</i>
12c	Holton beach	28b	Coombe Heath saltmarsh

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29	Wych NE
30	Wych E
30a	Shotover Moor
31	Wych SE
31a	Wych fields
32	Fitzworth North
33	Round Island
34/5	Fitzworth East <i>spartina</i>
35a	Ower spit
36	Ower <i>spartina</i>
36a	Shotover Creek
37	Cleavel field
37a	Cleavel spit
37b	Ower fields
38	Newton <i>spartina</i>
39	Green Island <i>spartina</i>
40	Furzey Island beach
41	Brownsea south shore
42	Brands Bay <i>spartina</i>
42a	Greenlands Farm
43	Shell Bay
43a	Haven Hotel groynes
44	Pilots Point

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Black: Original Collins sites

Blue: Additional sites now used

Orange: Collins sites no longer used

## Species Accounts

- Important Waders
- Important Wildfowl
- Other Important species
- Systematic list of other species

These sections are as Collins with each species dealt with approximately in descending order of abundance.

## Important Waders

### Dunlin

#### Distribution

The most important feeding area as far as high counts were concerned was Fitzworth East with a maximum count of 2900 birds. Second was Brand's Bay with a maximum count of 2740 and third was Middlebere with 1955. Brand's Bay high counts were due mainly to the presence of the *spartina* roosting islands where large feeding flocks would occur for short periods just prior to roosting. As the tide dropped birds would occasionally feed initially but soon leave the area. It was particularly popular in between the double high tides when some important limited feeding could be obtained. The large counts at Middlebere were invariably at the far north eastern corner of the recording area, where it intersected the Wych Channel. In fact, the main feeding area was basically centred on the Wych Channel where it bordered Middlebere, Wych Lake, Shipstal/Long Island and Fitzworth North/Round Island, (extending east to encompass Fitzworth East) in the lowest part of the tides. The deep channel was an important source of food as birds gravitated to this area as they followed the retreating tide out. Consequently, many of the maximum counts obtained in each count area invariably involved the same birds just moving around the count areas.

Site	Jan / Feb 07	Mar - May	Aug - Oct	Nov 07 - Feb 08
Fitzworth East	2900	148	195	2200
Brand's Bay	2740	232	241	1040
Middlebere	800	6	8	1955
Fitzworth North/Round Island	435	64	192	1745
Wych Lake	1600	40	490	716
South Lake	1257	0	175	1350
Newton Bay	700	17	75	1283
Holton Heath	1000	0	45	800
Arne Bay	569	27	62	850
Swineham	750	1	0	700

*Table 1. Inter-tidal monthly maxima (survey maximum count in red)*

The total number of Dunlin using the harbour in the second winter period was down roughly 25% on the numbers for the first winter period.

Dunlin were the most mobile of the waders in the harbour and many of the maximum counts as far apart as Brand's Bay and South Lake regularly involved the same birds as they swiftly moved through the areas in their relentless search for food.

A usual routine would start from the Brownsea roost and head south west or west towards the Fitzworth area. The first stop was quite often Newton Bay which has the first areas of exposed mud, from here Ower Bay could also be visited but again not for long. The main stop was Fitzworth East. From here birds would also then move to Wych Lake, Middlebere, Shipstal/Round Island and Arne Bay, usually in ever decreasing numbers with the maximum count for outliers such as Arne Bay being 850 birds.



Birds at Arne were also regularly seen flying over the peninsula to South Lake which was also an important area with a maximum of 1600 birds here in Feb 07. Birds from here also strayed into Swineham (max 750).

Many of the areas may only be visited by the birds for short periods at a time and as there was not enough time available to count throughout the whole tidal cycle, some areas did have rather disparate counts. Arne Bay is a good example of this with consecutive counts of 569, 14, 27, 318, 21, 850, 2 and 100.

During autumn passage in September and October, Wych Lake recorded the two highest counts of 490 and 470, during this time the next highest count was 241 at Brand's Bay.

### Roosting

The most important roost site is Brownsea Lagoon, with a maximum count of 4123 in the first winter period. On a spring high tide it is basically the only roost site in the harbour with the *spartina* areas being inundated. On one occasion 1020 birds roosted at the Quay Breakwater.

At low or secondary high tides the main flock would often use the *spartina* islands at Brand's Bay instead of Brownsea lagoon. Here the birds will restlessly wait for the tide to drop, often swirling around in large flocks landing then going up again repeating this until they finally fly out over or around Goathorn heading for the Fitzworth area. On occasion birds would stay in the Brand's Bay area for a short while to feed, rarely staying throughout the low tide.

To the north, birds will also feed at Baiter on the grass if there is standing water and use the Breakwater or occasionally Blue Lagoon sea wall for roosting.

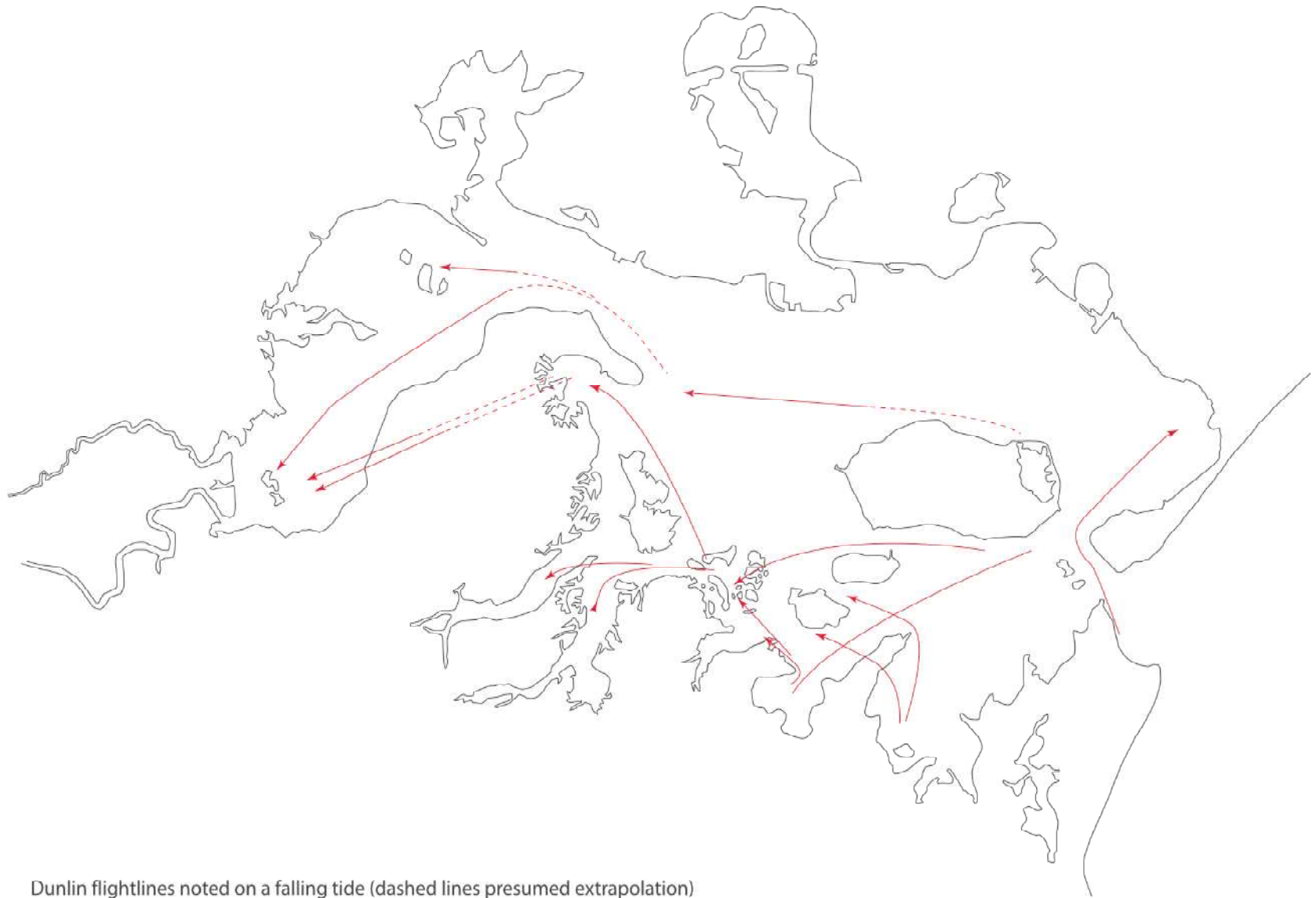
In the second winter period up to 3000 birds were seen at Shell Bay, a traditional area that was not used at all in the first winter period. Also recorded at Pilots Point in the second winter period with 103 on 8th November.

On the rising tide, birds will often pre roost at various *spartina* areas, particularly Fitzworth East and Green Island. Here birds will reform into larger flocks before moving off to the roost site proper which is normally Brownsea.

Will pre roost on *spartina* islands at Brand's Bay moving out of the Bay in the direction of Brownsea only when the *spartina* is inundated. Also noted doing this in Newton Bay.

Birds from the South Lake occasionally stopped off at Holton Heath islands and Wood Bar Looe before eventually moving off in the direction of Brownsea.

Will also occasionally use these areas as post roost sites presumably when the tide is not quite low enough for feeding.



Dunlin flightlines noted on a falling tide (dashed lines presumed extrapolation)

### Comparison with Collins

Comparison to Collins survey is made more difficult due to the difference in results between the two winter periods during this survey, with lower numbers occurring in the second winter period. Below is a table showing 3 sets of figures.

Site	Jan/Feb 07	Nov 07- Feb 08	1984/85
Fitzworth East	2900	2200	1600
Brand's Bay	2740	1040	1000
Wych Lake	1600	716	1000
South Lake	1257	1350	1500
Holton Heath	1000	800	2500
Swineham	750	700	Under 1000
Fitzworth North/Round Island	435	1745	1500
Middlebere	800	1955	2250
Holes Bay	104	215	1300
Lytchett Bay	2	120	1750

*Table 2. Comparison of inter-tidal monthly maxima*

For both winter periods, Fitzworth East hosted larger numbers than in 1984 /85 as did Brand's Bay, just. Some areas are clearly not as important as in 1984 /85 notably Lytchett Bay, Holes Bay and Holton Heath. High tide roosts and feeding areas have changed significantly since 1984 /85. Pilots Point is no longer a regular roost site with only a handful of low counts during this survey. There is also no longer a roost at Holes Bay due to the bypass, and the regular flock of 1500 birds at Wareham Meadows is long since gone. Clearly, Brownsea Lagoon's importance as the main roost site takes on more significance due to the lack of suitable alternatives.

High tide roost / feeding area	Jan - Mar 07	Nov 07- Feb 08	1984/85
Pilot's Point	10	103	4500
Brand's Bay	2800	1040	2500
Fitzworth East	81	700	2000
Holes Bay	9	0	2000
Fitzworth North/Round Island	8	0	700
Brownsea Lagoon	4123	3001	660
Baiter	500	0	1500
Wareham Meadows	0	1	1500

*Table 3. Comparison of high tide roost/feeding area monthly maxima*

## Black-tailed Godwit

### Inter-tidal distribution

During the first winter period, Holes Bay was the only feeding area where significant numbers were recorded with up to 1000 birds there. Rather oddly, many places recorded no birds at all in Jan and Feb 07. The only significant count away from Holes Bay was at Brand's Bay on 4<sup>th</sup> February during an exceptionally low spring tide when 650 flew in to feed in the main channel at the entrance to the bay.

Inter-tidal site	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
Arne Bay	0	65	4	720	0	0	12	-	142	43	90	102	150	94
Brand's Bay	0	650	0	3	17	0	122	141	18	262	177	111	30	232
Fitzworth East	0	4	27	1	0	0	0	10	0	58	0	17	13	0
Fitzworth North/Round Island	0	0	440	69	0	0	3	98	757	410	185	36	17	76
Holes Bay	998	205	1122	244	27	1	48	172	295	202	333	500	422	960
Holton Heath	0	0	0	642	0	6	0	0	12	11	1	320	0	80
Lytchett Bay	0	0	5	683	8	0	0	2	12	23	36	759	1	2
Middlebere	0	0	120	309	0	0	315	514	400	0	164	9	0	0
Newton Bay	0	15	33	1	0	0	0	53	8	55	39	286	74	325
Ower Bay	0	0	28	205	0	0	0	16	4	62	34	65	93	127
Shipstal/Long Island	0	0	0	100	0	0	2	0	50	42	17	4	30	12
South Lake	0	0	1	28	0	0	18	23	202	882	1250	1400	743	240
Swineham	0	0	610	302	0	0	38	71	31	680	256	1400	940	300
Wych Lake	0	0	330	679	0	0	83	158	364	571	0	4	6	115

Table 4 Inter-tidal monthly maxima (survey maximum in red)

March saw the start of the spring passage. During this month many more areas became important.

Numbers at Holes Bay only increased by around 10%. However, Middlebere, Wych Lake, Fitzworth North/Round Island and Swineham who had all recorded nil birds in Jan and Feb had maximum counts of 120, 330, 440 and 610 birds. By April, migration was in full swing and five areas recorded their highest counts of the survey. Most dramatic increases were Lytchett Bay rising from a max of 5 birds in Feb to 683. Holton Heath went from nil birds to 642 and Arne Bay from a previous max of 65 in Feb to 720 birds. Ower Bay and Shipstal/Long Island also recorded three figure numbers with none in Jan and Feb.

Spring passage birds seem more eager to feed, they are very restless and can be regularly seen flying around in search of the best tidal conditions. Extended feeding is also made possible by the differential in tide times between the harbour entrance and the western end of the Wareham channel.

As the tide rises, they will continue to feed sometimes up to their bellies in water and when they do have to roost they will often choose the nearest bit of *spartina*.

In May, the drop in numbers was even more dramatic than the rise, when numbers for all areas plummeted with the highest count of the whole month being 27 at Holes Bay. Holton Heath and Holes Bay were the only sites to record birds in June.

No sooner had the spring passage birds left, the autumn passage birds began to arrive with 35 birds at Middlebere on 6<sup>th</sup> July (including 3 birds of the nominate race *limosa*). Numbers continued to rise through July, August September and October with maximum numbers being recorded in December.

The second winter period was completely different to the first, with many sites recording three figure counts. South Lake became the most important area with up to 1400 birds, which was in total contrast to the first winter period where only 1 bird was seen from January to March. Swineham was the next most important area which also recorded up to 1400 birds, again none in Jan and Feb of the first winter period. Holes Bay, although relegated to third place, had a similar amount of birds to the first winter period.

Other areas to benefit in the second winter period were Newton Bay, Ower Bay and Arne Bay.

## Roosting

Roost site	Jan 07	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 08	Feb
Brownsea Lagoon	-	169	105	257	47	16	104	104	1095	1617	1600	1650	2240	1380
Upton CP <i>spartina</i>	5	25	-	422	-	-	-	-	-	-	-	-	-	820
Brand's Bay <i>spartina</i>	-	-	-	-	-	-	3	-	-	255	-	-	-	-
Swineham gravel pits	-	-	-	-	-	-	-	-	2	-	3	-	165	-
Arne Bay <i>spartina</i>	-	-	-	-	-	-	-	-	-	-	9	100	-	-
Pergins Island	-	12	-	80	-	-	-	-	-	-	-	-	-	13
Fitzworth East <i>spartina</i>	-	-	-	1	-	-	2	12	3	-	-	-	-	-
Newton Bay <i>spartina</i>									8	10	2			

Table 5. High tide roost monthly maxima for sites used at least 3 times during survey (survey maximum in red)

For most of the year, Brownsea Lagoon was virtually the only roosting area. The maximum count was 2240 recorded in January 08. At high tide during the first winter period, small numbers were also occasionally seen in the Holes Bay area with up to 25 birds roosting at Upton Country Park *spartina*. During the second winter period, away from Brownsea, 100 birds were seen roosting at Arne Spit on 21<sup>st</sup> December, 165 at Swineham Gravel pits on 6<sup>th</sup> January 08 and throughout February 08 many birds decided to use Upton Country Park *spartina* islands with 820 birds there on 6<sup>th</sup>.

During the first winter period, no birds were encountered at Lower Frome Valley. In the second winter period 84 birds were seen on 20<sup>th</sup> November.

After heavy rain and extensive flooding in December a maximum of 655 birds were recorded on 10<sup>th</sup> with 54 still there on a much reduced flooded area on 30<sup>th</sup> and not seen subsequently. If there is no flooding no birds will be seen. On a few occasions birds were seen to leave the Swineham area on the rising tide and fly up the Frome Valley only to return again some minutes later and continue into the harbour. The flooded areas at eastern end of Frome valley were not always used.

Occasionally, seen feeding at Baiter during wet weather. In second winter period seen using fields just to north of Upton CP to feed.

Brownsea Lagoon numbers were pretty undramatic during the first eight months of the survey. However things started to pick up in September with a high count of 1095 on 28<sup>th</sup>. From October to December roost numbers were pretty consistent at around 1600 birds, however from late Jan things began to change.

On 25<sup>th</sup> Jan, Brownsea Lagoon's count rose to 2240, however on the next visit on 9<sup>th</sup> February the high tide roost count was just 1 bird! In fact from the end of January nearly all of the regular feeding sites recorded no Blackwits at all.

On 2<sup>nd</sup> Feb the mystery was solved when 2000+ birds were discovered in the Lower Avon Valley making use of the extensive flooding there. It wasn't long though before they began to return. On 6<sup>th</sup> Feb a flock of 150 birds were observed coming in from the east into Upton CP, an extrapolation of the flight line suggested they were returning birds from the Avon Valley. An hour later a high tide roost count at Upton CP revealed 811 birds roosting on the *spartina* islands.

By 13<sup>th</sup> Feb, the Avon Valley flock was down to 600 birds corresponding with an increase in numbers in the Poole Harbour area. What was also interesting was the returning bird's change of roost site preference, preferring to stay around the *spartina* islands of Upton CP. The count of 1 bird at the Brownsea Lagoon roost was 3 days after the return of 800 birds to Upton CP.

On 23<sup>rd</sup> Feb, numbers were near to normal again at Brownsea Lagoon, with 1380 birds counted at the high tide roost. Some 170 birds, however, were still using Upton CP despite a tide of 2.3 metres putting them up to their bellies in water. Presumably, as they were nearing the migration period it was something to do with saving energy.

Evidence of movement between Poole and Christchurch Harbour was provided by a colour ringed bird seen at Brownsea Lagoon on the 19<sup>th</sup> Jan and then on Stanpit Marsh on 26<sup>th</sup>.

A ringed bird seen at Brand's Bay on 19<sup>th</sup> Feb (a Poole Harbour regular for the past 6 years) has also been recorded feeding in the Avon Valley.

### Flightlines

Fly in large flocks from Brownsea roost directly to Middlebere and Wych Lake usually at quite a height and without deviation. Occasionally noted to carry on high over Middlebere in direction of South Lake. Also fly over Baiter from Brownsea in the direction of Holes Bay.

Birds from Holes Bay were also noted to fly off west in the direction of Lytchett Bay on a falling tide.

On 14<sup>th</sup> Nov, birds were observed flying from Brownsea to the Middlebere/Wych area towards dusk to presumably feed in the dark.



Birds feeding at South Lake seen to depart to the south east in large flocks on the rising tide in the direction of Middlebere possibly for further feeding as Middlebere is one of the last areas of the harbour to retain exposed mud. A few days later in similar tidal conditions these same birds left high to the east / north east over Arne and toward Brownsea to roost.

On 13<sup>th</sup> Nov, all 1200 birds present flew off high east/north east toward Brownsea on the rising tide in 3 large flocks. They certainly prefer to move together.

As a general rule, whilst feeding at Middlebere, birds will, along with all the other waders follow the tide out as it drops and end up at the mouth of the area. However, on 26<sup>th</sup> Nov, 470 birds in 4 flocks were seen to head high west/north west in the direction of South Lake instead. This fits in neatly with birds coming from South Lake on the rising tide, which are thought to be birds looking for extra feeding. Also fly directly from Brownsea to Newton Bay.

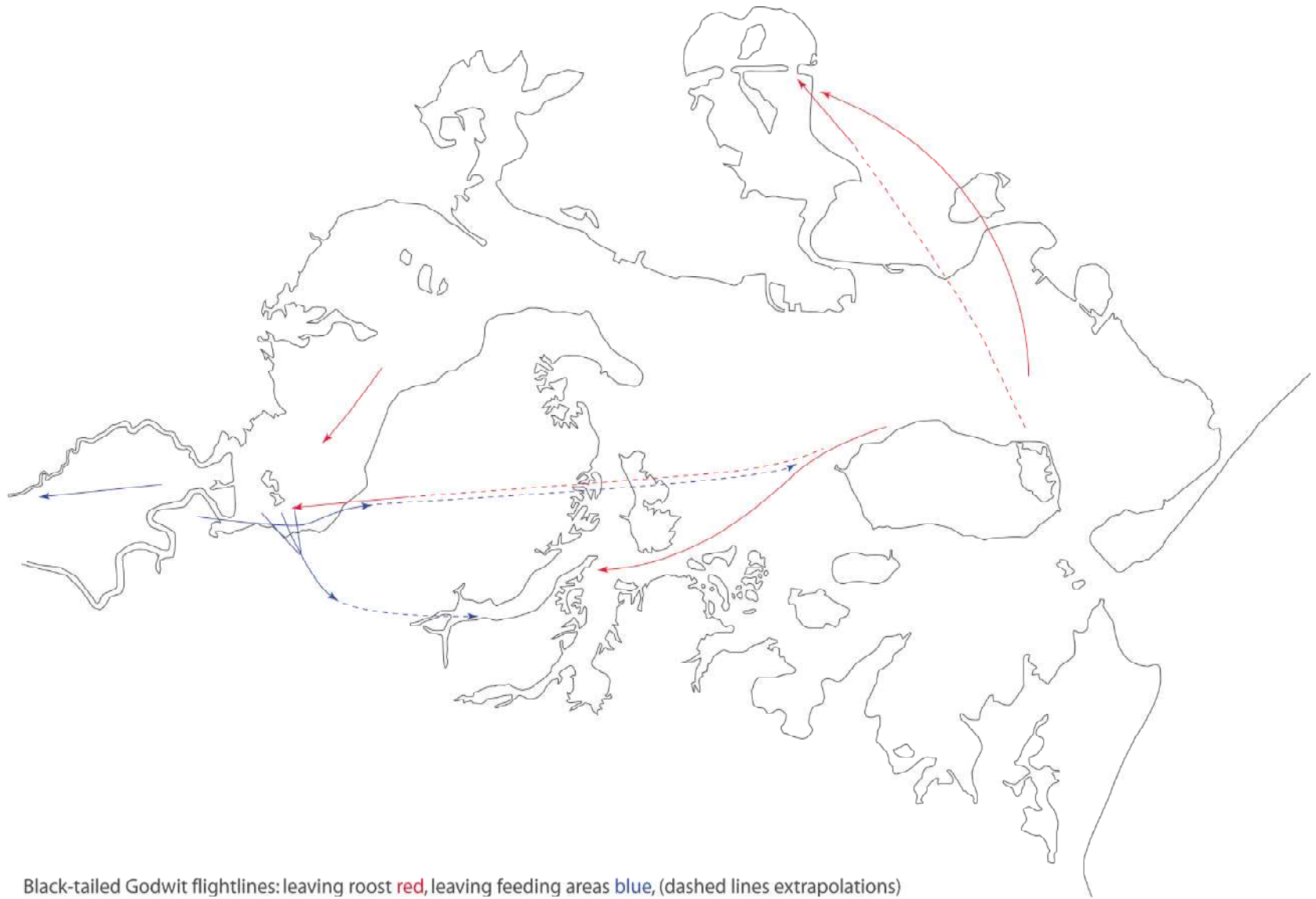
Passage birds using Holton Heath regularly seen commuting to Lytchett Bay on a rising tide (normally around 1m and rising).

### Feeding patterns

As high tide retreats, Blackwit will fly to the top end of Middlebere to begin feeding as this has the first exposed mud in the area. As the tide goes out they will follow it out to the mouth of the area. When the tide reaches approximately 1m they will have joined the birds that have been making their way out of Wych lake in the Wych channel. Below 1m mud here becomes quite extensive and these birds will then gravitate to Fitzworth North as new mud appears there.

This whole area becomes more important at this time as mud only becomes extensive here during the lowest part of the tidal range when other areas have already dried out.

During the rising tide, the birds will get pushed back again into the Middlebere and Wych channels, working their way back to the head of the channel. In the autumn, birds don't seem to linger as long at this time. At Wych Lake, birds were noted to leave in small parties before the mud had disappeared making a bee-line for Brownsea, gaining enough height to clear any obstacles rather than flying in between the islands as many other waders do. Birds feeding at Arne Bay will also all move south towards Shipstal/Long Island and Round Island as the tide rises continuing on to Wych Lake and Middlebere.



Black-tailed Godwit flightlines: leaving roost red, leaving feeding areas blue, (dashed lines extrapolations)

## Comparison with Collins

Feeding site	1984/5	Jan - Apr 07	Aug 07 - Feb 08	Up / Down on 1984/5
Holes Bay	200	1122	960	+
Lytchett Bay	Between 0 and 100	683	759	+
Wych Lake	558	679	571	+
Brand's Bay	104	650	262	+
Holton Heath	167	642	320	+
Swineham	Between 0 and 100	610	1400	+
Fitzworth North/Round Island	493	440	757	+
Middlebere	500	309	514	+
Ower Bay	Between 0 and 100	205	127	+
Newton Bay	444	33	325	-
South Lake	135	28	1400	+
Fitzworth East	200	27	58	-
Wareham Meadows	280	0	2	-
Arne Bay	Between 0 and 100	720	150	+
Brownsea Lagoon	200	257	2240	+

*Table 6. Comparison of inter-tidal monthly maxima*

As can be seen, many areas show a significant increase in numbers compared to the 1984/5 survey. The main gains being Swineham and South Lake areas. Holes Bay and Lytchett Bay also had significantly more birds. Fitzworth East and Newton Bay

were the only inter-tidal areas down on 1984 /85. However, the most dramatic drop was at Wareham Meadows where a maximum of 2 birds were seen during the entire survey which given the general increase in overall numbers is pretty poor.

## Avocet

### Distribution

The three most important inter-tidal feeding areas were Middlebere, Wych Lake and Fitzworth North/Round Island followed some way behind by Holes Bay. In fact, Avocet are quite choosy in their choice of feeding areas with these 4 areas being the only ones regularly recording over 75 birds in the first winter period, with birds only occasionally straying into neighbouring areas. It has been suggested that this distribution could be related to the distribution of the Amphipod (Mud) shrimp *Corophium Volutator* which was found to occur almost exclusively in the Middlebere and Wych Lake areas (Thomas, Caldow 2004)

Site	Jan 07	Feb	Mar-Jul	Aug	Sep	Oct	Nov	Dec	Jan 08	Feb 08
Fitzworth North/Round Island	600	0	0	0	6	270	780	892	432	470
Wych Lake	850	500	0	0	2	480	231	309	383	191
Fitzworth East	32	10	0	0	0	840	0	9	170	17
Middlebere	794	452	0	0	3	33	600	17	628	366
South Lake	0	0	0	4	0	0	590	420	0	1
Shipstal / Long Island	0	0	0	0	0	0	72	372	74	4
Ower Bay	0	2	0	0	0	272	0	3	1	0
Lytchett Bay	73	0	0	0	0	0	158	107	0	0
Holes Bay	80	114	0	0	0	0	42	150	36	41

Arne Bay	10	55	0	0	0	0	75	75	110	0
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Table 7. Inter-tidal monthly maxima (survey maximum in red)

At the beginning of the second winter period in November and December, birds were recorded more regularly in other areas, namely Fitzworth East, South Lake and Lytchett Bay.

Brownsea Island is the most important combined roosting and feeding area. During the core winter months it is mainly used as a high tide roost, however times of passage see birds stay throughout the tidal cycle able to find enough to food to sustain them.

Brownsea Lagoon	Jan 07	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 08	Feb
		612	27	3	2	3	34	185	703	1247	800	670	565	187

Table 8. Brownsea Lagoon monthly maxima (survey maximum in red)

Counts for both winter periods were consistent with an average of around 620 birds. Numbers dropped off quite quickly by the middle of February and only 27 birds were left on 21<sup>st</sup> March 07, with 2 or 3 birds hanging around from April to June. The first returning birds were recorded on 11<sup>th</sup> July. From here numbers increased at every high tide visit.

11 <sup>th</sup> July	9
15 <sup>th</sup> July	17
29 <sup>th</sup> July	24
1 <sup>st</sup> August	66
30 <sup>th</sup> August	185
9 <sup>th</sup> September	230
12 <sup>th</sup> September	261
23 <sup>rd</sup> September	338
28 <sup>th</sup> September	703
12 <sup>th</sup> October	1150
29 <sup>th</sup> October	1247

The first winter maximum was surpassed in the third week of September, and went on to more than double this count by 29<sup>th</sup> Oct. It was thought that perhaps a larger number of birds would be using the harbour in the second winter period, however it soon became apparent that a good proportion of these birds were on passage and passing through. Perhaps they moved onto Devon. In fact, the average number of birds during the second winter period was in the end slightly down, to around 580 birds.

Interestingly, during passage all the birds present from July until 10<sup>th</sup> September remained at the Lagoon throughout the day, with the first 3 birds noted at Middlebere on that date and the first 2 at Wych Lake on 11<sup>th</sup> September. The usual to-ing and fro-ing from roost site to inter-tidal feeding site didn't really get underway properly until October.

A similar thing occurred late winter when after 27<sup>th</sup> Feb no birds at all were seen at their traditional winter feeding sites although the last to leave Poole Harbour didn't leave until April.

During the autumn, passage birds were recorded at three sites where they had been previously unrecorded during the first winter period: Brand's Bay, Ower Bay and Green Island. As is the way with many passage waders passing through Poole Harbour, many untraditional sites are used as they perhaps don't know the optimum feeding areas.

### Roosting

The vast majority of birds roosted at Brownsea Lagoon. The *spartina* at Upton Country Park was regularly used and could host up to 85 birds.

On quite a few occasions birds were actually seen roosting on the water like ducks. Seemingly quite happy to sit out the tide, particularly if it was after first low of the double highs.

### Movements

In winter, fly directly from Brownsea Lagoon to Wych Lake and Middlebere at low level, usually passing in between Round Island and Fitzworth North/Round Island.

Were also seen moving south west past Russel Quay on a falling tide and were presumed to have come directly from Brownsea. Were also noted taking this route to South Lake on a rising tide, where there would still be some feeding available, presumably, birds that had earlier been feeding at Arne or perhaps Lytchett Bay. This is also where birds would sit out the 'lower' high water, waiting again for the tide to drop. Because of their ability to feed up to their bellies in water from here, feeding could begin as soon as the water started to drop.

At low water, the deep channels become important especially the larger one to the east of Round Island along with the main Wych channel. On 7<sup>th</sup> Nov at low tide birds were observed regularly to-ing and fro-ing between these two areas. In fact their movements within this area at low tide could be regarded as ‘restless.’

### Comparison with Collins

Such was the rarity of this bird in the early 80s, that in the Collins report Avocet only came under the heading of ‘Other species’. The maximum count during his survey was 29 at Brownsea Lagoon on 11<sup>th</sup> December. 5-17 birds also occasionally seen at Wych Lake and South Lake where birds “roosted on the pack ice at the mouth of the Piddle” I don’t think we are going to see that again!

## Oystercatcher

### Distribution

Most important area by quite some distance was Fitzworth North / Round Island. Here a maximum count of 570 birds was recorded in September. An average was also calculated using the 5 highest counts per area. Fitzworth North / Round Island came out on top again with 293 birds. This is even more remarkable when one considers the small size of the recording area. Arne Bay was the next most important area with the second highest count of 352 birds in Oct and a 5 count average also second highest with 190. The next two most important areas were Holton Heath and Sandbanks averaging 181 and 180 birds, respectively. Looking at the monthly averages, it becomes apparent that the autumn passage numbers are slightly higher than the core winter months indicating that some of these birds moved on in October.

Site	Jan 07	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 08	Feb	5 max average
Fitzworth North/Round Island	38	138	119	54	38	33	49	170	570	256	207	186	248	181	293
Arne Bay	74	117	58	8	17	9	28	-	122	352	147	181	147	107	190
Holton Heath	147	177	54	31	0	6	3	13	24	117	119	178	253	154	181
Sandbanks Bay	83	73	94	141	148	155	162	173	135	202	201	165	92	124	180
Wych Lake	187	102	18	6	6	22	18	49	11	25	8	148	53	30	108

Brand's Bay	63	26	49	12	36	25	44	35	108	74	126	122	104	74	106
Middlebere	132	35	42	17	25	40	29	17	15	14	119	91	121	44	101
Fitzworth East	50	50	45	39	9	17	2	15	89	148	133	30	64	66	100
Lytchett Shore	146	43	35	22	0	0	14	19	30	28	28	37	62	60	70
South Lake	18	42	7	18	31	3	7	12	27	62	77	99	48	40	66
Monthly Average	94	80	52	35	31	31	36	56	113	128	117	123	119	88	

Table 9. Inter-tidal monthly maxima (survey maximum in red)

#### Other areas

Holes Bay: consistently 70-85 birds in core winter months with 40-50 autumn passage

Shipstal/Long Island: 40-60 birds with max of 79 end of July

Furzey 45-55 birds with max of 81 in June

Parkstone Bay: 25-40 birds max of 74 Jan 08

Studland West: 20-45 birds max of 71 March 07

Goathorn West: 20-30 birds

Newton Bay: 15-30 birds with 45-85 second winter period

Green Island: 15-20 birds core winter months rising to 58 in Sept and 141 in Oct

Ower Bay: 10-20 birds

Swineham: very low counts 5-20 birds max of 32 early Oct

Lytchett Bay: Rather erratic counts with some core winter months 3-8 birds however 35-65 Nov and Dec



## Roosting

Site	Jan / Feb 07	Sep / Oct 07	Nov / Dec 07	Jan / Feb 08
Brownsea Lagoon	427	1075	1150	756
Arne Spit	642	180	240	290
Baiter (High water feeding)	384	0	614	506
Russel Quay (pre roost)	220	80	232	250
Long Island Sandbar	248	160	420	222
Furzey beach (pre roost)	55	230	0 (tide too high)	0 (tide too high)
Gold Point	136	103	113	116
Patchins Point	58	124	23	58

Table 10. High tide roost monthly maxima (survey maximum in red)

Most important roost site was Brownsea Lagoon with a max of 1150, in fact the top eight counts of the survey all occurred here. The next highest count was 642 at Arne spit in Jan 07. Third highest was Baiter with 614 birds feeding on the grass. Long Island sand bar was the next most important area with a max of 420 birds in Nov.

Some of the roost sites were in fact pre roost and occasionally post roost sites with many only being used for a limited amount of time mainly for preening. The main ones were Russel Quay with up to 250 birds, here birds from South Lake and Holton Heath would gather to preen before moving around the point to Patchins or on to Brownsea.

Furzey Beach with up to 230 birds is a stop-off between Brownsea and Fitzworth. At 'low' high tides could be used throughout the high tide also, the cut off point here was calculated to be around 2.1m. As soon as the tide went higher they would move off to Brownsea. On the return journey, birds would stop here again waiting for the tide to drop sufficiently before going to feed.

Fitzworth East *spartina* was also used by birds feeding in the near vicinity to preen etc before moving on to Brownsea Lagoon (max 192), as was Green Island *spartina* (max 153).

Birds at Brand's Bay also noted to gather on the *spartina* islands before eventually moving off to Brownsea. In fact Pre and Post roosts did seem to be a theme throughout the harbour.

Birds will make the trip from Brownsea to Sandbanks Bay in between the double highs.

### High tide feeding

At high tide, many birds also search out extra feeding at grassy areas. Baiter is the most important high tide feeding area, with particularly high numbers here during periods of bad weather and or heavy rain. On 5<sup>th</sup> December in such conditions 614 birds were recorded. In fact feeding was so good that many continued feeding here long after the tide had dropped.

Birds also use the Parkstone playing fields but only one count was recorded there possibly suggesting disturbance. Although there is disturbance at Baiter, the birds there seem fairly tolerant and just move to another part of the field. Parkstone field is much smaller and disturbance more concentrated leaving not a lot of room for manoeuvre.

At Parkstone, birds were noted using the grass in preference to the available mud in the bay, also when flushed would fly to the mud wait for the danger to pass then fly back to the grass to feed.

At Lytchett Bay more than double the amount of birds used the school playing fields to feed than the inter-tidal mudflats. The extra birds coming from Holton Heath which arrived from there as the tide rose.

Cleavel field on the southern shore is also a regular haunt, especially when it is flooded allowing the birds to bathe also. If flushed they will go to Ower *spartina* islands roost area to wait before returning.

On 9<sup>th</sup> Jan a bird was seen feeding on the central reservation of the Holes Bay road dual carriageway about 1 foot from the outside lane! I have heard of Jay walking....

Also 2 birds doing same on 1<sup>st</sup> Feb.

A partial albino provided a little insight into individual site preferences and movements. During the first winter period it was only seen feeding at Wych Lake and Fitzworth North/Round Island in January and twice at nearby Fitzworth East in February. It was only seen to roost on Brownsea. After disappearing for the summer, the bird returned again in August to spend another winter here where its preferences were exactly the same, never once being seen using any of the other inter-tidal areas.

This does seem to suggest that once an Oystercatcher has chosen its routine in the harbour it sticks to it.

## Comparison with Collins

Inter-tidal site	Winter 07- Spring 08	1984/85
Wych Lake	187	No significant count
Holton Heath	253	205
Sandbanks Bay	201	67
Fitzworth North/Round Island	248	194
Middlebere	132	No significant count
Arne Bay	352	250
Holes Bay	88	No significant count
Brand's Bay	126	110
Lytchett Bay	64	117
Fitzworth East	133	82
Newton Bay	87	80
Green Island	66	82

*Table 11. Comparison of inter-tidal maxima*

The sites with no significant count were sites that Collins deemed not important enough to enter into his tables so we can presume that numbers were lower than his lowest entered of 67. If this is the case, Wych Lake and Middlebere have become more important areas since 1984/85.

Sandbanks Bay is significantly up. Lytchett Bay is significantly down.

Roost	2007 -08	1984/85
Arne Spit	642	375
Brownsea Lagoon	1150	694
Baiter (HT feeding)	614	392
Furzey Island	230	300
Parkstone Fields	58	164
Shipstal/Long Island	420	620

*Table 12. Comparison of high tide area maxima*

As can be seen Brownsea Lagoon, Arne Bay and Baiter numbers have gone up and Furzey Shipstal/Long Island and Parkstone fields have gone down.

## Lapwing

Largest flock in first winter period was a poor 96 at Swineham Gravel Pits. The second winter period saw an encouraging increase to a maximum of 680 birds at Wareham Meadows in December.

Other notable counts were 390 at Middlebere and 320 at Wych Lake, both involving birds roosting on the mud. The islands at Swineham Gravel pits held up to 200 birds. Other inter-tidal roosting birds were seen at Ower Bay (up to 136), Brand's Bay (up to 96) Newton Bay (up to 70) and Lytchett Bay (up to 60).

Also noted roosting on *Spartina* notably Newton Bay (up to 65) and Brand's Bay (up to 50).

Wareham Meadows was the most important feeding area, with flocks of 500-680 being seen in the second winter period. Other places with over 50 birds seen were: Middlebere Fields (up to 265), Shotover Moor (up to 118), Greenlands Farm (90), Frome Valley (74), Holton Heath fields (70), Cleavel Field (66), Soldiers Road (56).

In 1984 /85, Collins estimated several thousand birds using the harbour and mentions a count of 3000, with 1000 at Wareham Meadows and 500 at Middlebere.

## Curlew

### Feeding distribution

Widely distributed throughout the harbour. The main feeding areas are shown in table below.

Site	Jan 07	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 08	Feb
Arne Bay	56	108	65	9	8	21	122	-	112	59	74	92	117	132
Brand's Bay	182	139	117	98	11	72	179	211	321	153	157	74	142	180
Fitzworth East	118	171	117	129	14	58	38	125	327	160	157	148	210	242
Fitzworth North/Round Island	15	98	120	64	5	62	149	-	119	55	115	116	119	213
Holes Bay	140	151	131	57	5	46	54	59	83	179	138	137	171	218
Holton Heath	257	224	148	63	0	66	203	334	244	186	184	199	226	213
Middlebere	73	78	29	6	3	26	178	171	74	139	69	39	91	114
South Lake	56	152	209	117	11	64	73	144	72	150	153	184	194	168
Swineham	126	237	108	29	1	14	26	36	24	24	47	147	88	79
Wych Lake	211	103	88	3	13	35	49	12	195	90	20	56	42	151
Average	123	146	113	57	7	46	107	137	157	119	111	119	140	170

Table 13. Inter-tidal monthly maxima (survey maximum in red). Only areas with counts over 100 included

The most important areas are Holton Heath, Brand's Bay and Fitzworth East. As for other waders the whole area in and around the Wych Channel that converges on the boundaries of Middlebere, Wych Lake and Fitzworth North/Round Island recording areas is also important.

The three maximum counts for all areas occurred in August and September being 334 at Holton Heath in August, second highest 327 at Fitzworth East in September and third 321 at Brand's Bay in Sept. It is noticeable that these peaks are in areas with major roost sites.

As would be expected, numbers dropped off as spring progressed, minimum numbers occurring from mid April until the first couple of weeks in May. From 15<sup>th</sup> April until 23<sup>rd</sup> May, no one place recorded more than 16 birds. The upturn in numbers, presumably initiated by failed breeders, was noticed as early as the last week in May, steadily increasing throughout June. By the end of July some of the important feeding areas had already recorded numbers exceeding winter maximums. Numbers continued rising in Aug and generally peaked in September.

The average monthly counts drop noticeably in Oct, Nov and Dec suggesting many birds were just passing through, however Jan and Feb figures were back to around the peak passage numbers.

Generally a good second winter period with counts in nearly every area up on the previous winter period, a few with the same numbers and only Swineham down.

### Roosting

Roost site	Max count
Arne <i>spartina</i>	530 (Sep)
Fitzworth East <i>spartina</i>	310 ( Jan)
Keysworth <i>spartina</i> (15)	255 (Feb)
Brand's Bay <i>spartina</i>	207 (Oct)
Middlebere <i>spartina</i>	130 (Sep)
Arne spit	111 (Nov)
Wych (30)	108 (Jan)
Holes Bay central <i>spartina</i>	50 (Jan)

Table 14. Most important Curlew roost sites

Most important roost sites were Arne Bay *spartina*, Fitzworth East *spartina* islands and Keysworth *spartina* banks.

As well as those above, a few other *spartina* roosts were scattered about the harbour. Each roost site seemed to have its own catchment feeding area with birds always heading in particular directions from the roosts. (see map below)

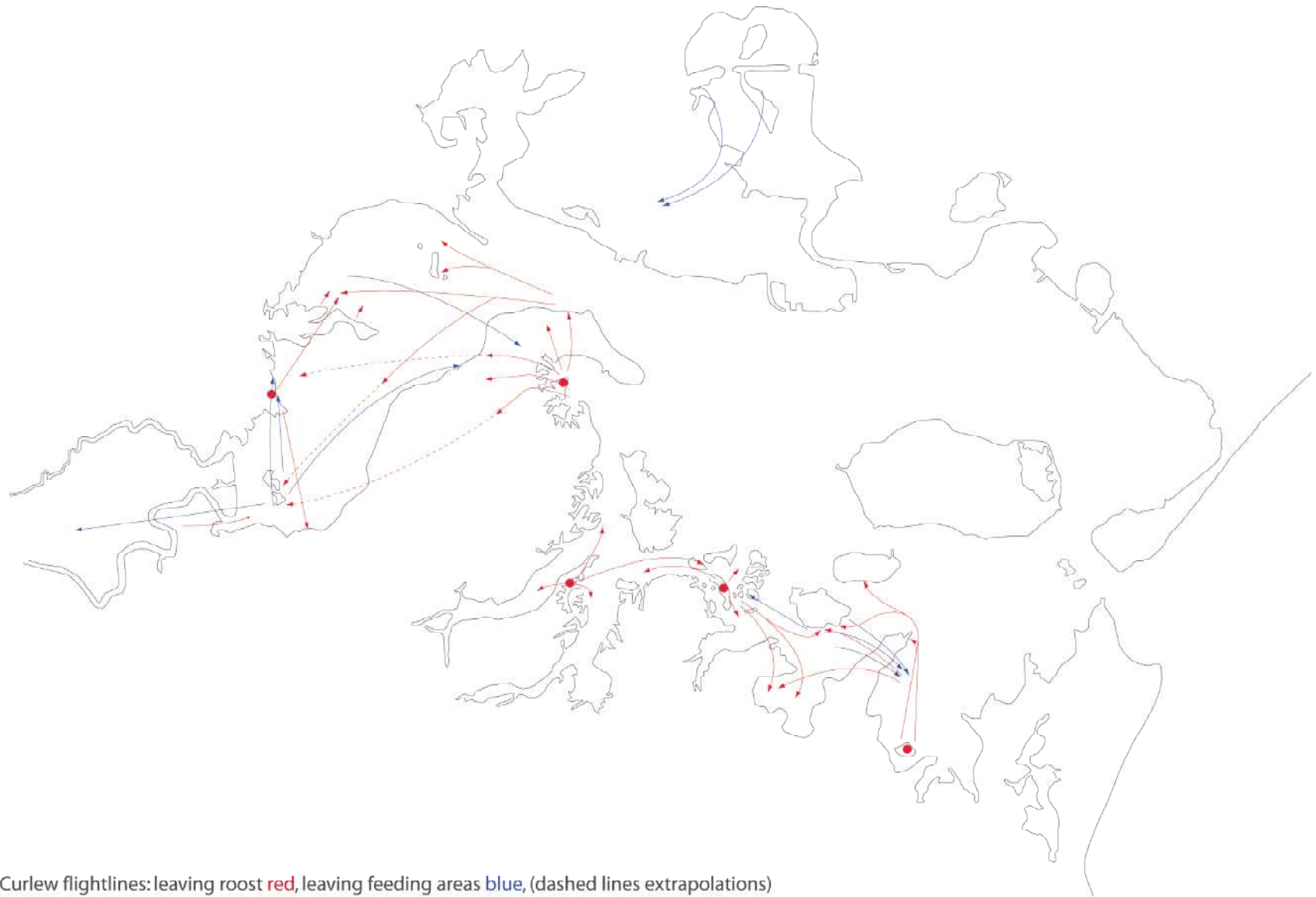
At Arne *spartina*, birds spiral out and head for places between South Lake and Lytchett Bay. The vast majority seemed to be on a westerly heading. Birds using this area will also roost at Keysworth *spartina* banks.

At Keysworth, there were several roosts in quite close proximity, the biggest being 15. Due to the tidal delay the first birds would arrive from Holton Heath and be well settled before birds began to join them later from Swineham and South Lake.

Middlebere Point (27) serves Middlebere, Wych Lake, Fitzworth North/Round Island and Shipstal/Long Island with some birds also reaching Fitzworth East and Arne Bay. Fitzworth East *spartina* (34/35) served Fitzworth East and North, Ower Bay, Newton Bay and the western part of Green Island. Brand's Bay *spartina* served Brand's Bay, Newton Bay Furzey, Goathorn and the eastern part of Green Island.

Birds from Brownsea would use Sandbanks Bay. Although not one of the major roost sites, numbers at Brownsea Lagoon were very consistent from middle of September to end of February with counts of 47, 44, 55, 55, 40, 51, 44, 51 and 42.

Birds at Holes Bay would use the central *spartina* however on some occasions birds were also seen to head in the direction of Keysworth *spartina* although could have conceivably gone to Arne Bay roost also which would be nearer.



Curlew flightlines: leaving roost **red**, leaving feeding areas **blue**, (dashed lines extrapolations)



## High tide feeding

Grass areas were also important to Curlew, with many birds extending their feeding times by visiting such areas at high tide.

High tide feeding area	Max count
Middlebere fields	159 (Mar)
Shotover Moor	140 (Jan)
Wych fields (31)	98 (Jan)
Wareham Meadows	94 (Jan)
Wych fields (31a)	86 (Dec)
Greenlands Farm	81 (Jan)
Upton CP fields	60 (Jan)
Lower Piddle valley	58 (Feb)
Upton bypass fields	56 (Nov)
Cleavel field	50 (Jan)
Keysworth saltmarsh	45 (Jan)
Lytchett Bay far fields	43 (Mar)

*Table 15. Most important high tide feeding areas*

Fields at Middlebere Farm were the most popular, also being used at low tide in preference to the inter-tidal area. At times birds would feed on the grass and roost on the mud! Shotover Moor had the next highest count.

The odd bird also liked feeding among the rocks at the base of Ballard cliffs, often seen coming in across Studland Bay from the north, perhaps the sightings involved just a single bird.

Only time seen feeding at the eastern end of Wareham Meadows was on 14<sup>th</sup> Jan during extensive flooding.

## Behaviour

Many Curlew stop feeding some time before the mud is covered by the incoming tide and will happily pre-roost on the mud for some time before moving to the roost site. On more than one occasion they were still there as the water lapped at their knees.

Returning birds from Wareham Meadows do not always get their timing correct and can be seen to arrive at Swineham before the mud has been exposed, having to redirect to Keyworth roost for a while. This can also happen at Sandbanks when a strong south westerly holds up the retreating tide, here birds will loaf on the beach or stand around in the shallow water, occasionally preening.

At Wych Lake, birds roosting in fields on the falling tide would fly onto the mud but then roost there some time before feeding. Curlew often left inter-tidal feeding sites long before mud disappeared.

## Comparison

Feeding site	Winter 07- Spring 08	1984/5 winter/spring
Holton Heath	257	190
Swineham	237	103
Wych Lake	211	count between 0 and 99
South Lake	209	240
Brand's Bay	257	176
Fitzworth East	242	165
Holes Bay	218	155
Fitzworth North/Round Island	213	304
Arne Bay	132	count between 0 and 99
<b>Average</b>	<b>219</b>	<b>170</b>

*Table 16. Comparison of inter-tidal monthly maxima*

All counts up on the 1984 /85 counts apart from Fitzworth North/Round Island and South Lake.

Roosting Site	Winter 07- Spring 08	1984/5 winter /spring
Arne Bay	350+	250
Fitzworth East	310	269
*Keysworth	255+	157
Brand's Bay	207	219
Middlebere Point	130	Not known but less than 150
Wych SE	98	Not known but less than 150
Brownsea Lagoon	51	166
Holton Heath Island	9	200
Ower Bay	7	150

Table 17. Comparison of roost site maxima

Since 1984 /85 there has been a change in distribution of roosting birds. *Keysworth spartina*, *Arne spartina* and to a lesser extent *Fitzworth East* have become more important whilst *Brownsea* has become less important with *Holton Heath islands* and *Ower Spartina* significantly less important.

High water feeding site	Winter 07- Spring 08	1984/85 winter/spring
Middlebere Farm	159	Not known but less than 150
Shotover Moor	140	0?
Wareham Meadows	94	158
Cleavel Field	50	200

Table 18. Comparison of high tide feeding area maxima

# Redshank

## Inter-tidal distribution

The most important winter feeding area in the harbour by some distance was Holes Bay where a max of 330 birds were counted in November. Taking an average of 6 maximum winter counts, Holes Bay averaged 284 birds. Next most important area was Lytchett Bay, averaging 120 birds and Newton Bay averaging 113 birds.

Site	Jan 07	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 08	Feb	CWM average
Holes Bay	211	303	118	47	0	51	80	323	520	328	330	205	284	371	284
Lytchett Bay	100	109	81	39	6	0	2	7	116	150	70	139	119	183	120
Newton Bay	80	86	75	30	2	5	20	91	134	115	63	119	183	148	113
Holton Heath	53	30	8	2	0	5	0	2	1	49	179	133	72	121	98
Brand's Bay	77	68	31	15	4	1	81	61	119	101	115	116	95	77	91
Ower Bay	18	20	27	16	3	10	8	38	66	119	75	127	130	26	66
Shipstal / Long Island	30	36	98	29	0	4	33	231	94	40	51	44	34	73	47
Fitzworth North/Round Island	2	1	39	17	2	14	13	8	135	6	30	49	91	73	41
Monthly average	71	81	60	24	2	11	30	95	148	113	114	116	126	134	

Table 19. Inter-tidal monthly maxima (survey maximum in red)

## Other areas

Goathorn West: Only recorded from October to February 40-50 birds, max of 54 in Dec and Jan  
Arne Bay: 20-50 birds max 61 in Dec  
Middlebere 20-50 birds core winter months, max 145 early August  
Wych Lake: 20-50 birds max 53 in Feb  
Green Island: 20-45 birds, max of 49 Feb 08  
Fitzworth East: 15-30 birds max 35 in March 07  
Furzey Island 15-25 birds, max 59 end of November  
Swineham: 10-20 birds, max 45 in January

Autumn passage was first detected at the end of June, with peak counts in September.

Half of the eight main areas recorded higher numbers during autumn passage than winter. The highest count of the survey was 520 birds on 15<sup>th</sup> Sept at Holes Bay, 190 more than the max winter count. One of the most dramatic was Shipstal/Long Island, which had a winter population of 30-50 birds in the first winter and 40-50 birds second winter, but a peak count of 231 on 30<sup>th</sup> July. Neighbouring Fitzworth North/Round Island also had its peak count during autumn passage, as did Brand's Bay.

There were also places which held regular winter birds but were unused during passage, for example Fitzworth East held around 30 birds during winter and only 1-3 birds from 14<sup>th</sup> July until 8<sup>th</sup> Oct. Furzey winter population 30-50 birds, with a max of 3 birds during Aug and Sept. Swineham 20-40 wintering birds, with none recorded from end of July until end of Oct. Brownsea Lagoon is much more important to passage birds. During the winter only a handful of birds are seen there but by the end of June birds begin to arrive. Numbers increased steadily peaking at 80 in September.

Although some of these passage birds clearly moved on, many stayed producing higher numbers in the second winter period than the first.

## Roosting

Site	max
Newton Bay	173
Upton Country Park	142
Shotover Creek	130
Brand's Bay	116
Lytchett Bay pools	108
Holes Bay SW (6)	52
Shipstal <i>spartina</i>	50
Lytchett Bay <i>spartina</i>	45
Pergins Island north	41
Ower <i>spartina</i>	39
Fitzworth East	36

*Table 20. Important roosting sites*

Most Redshanks roosted in *spartina*, the most important were at Upton Country Park, Newton Bay, Shotover Creek and Brand's Bay, all with at least 100 birds. The maximum count was 173 at Newton Bay. Assessing the numbers at Upton Country Park was particularly difficult due to the extensive nature of the *Spartina*, there were probably birds overlooked here.

Redshank travel the least distance from feeding site to roosting site of any of the waders.

As the tide rises, birds gravitate towards the *spartina* edges and feed there, when the water becomes too deep they simply jump into the nearest *spartina*. After the tide has risen still further, it is a quick flight to the main *spartina* roost areas. In most areas the *spartina* is still high enough to withstand the highest tides, however at Lytchett Bay this doesn't seem to be the case and here birds will gather at the main pool at the back of the Bay with a maximum of 98 birds counted.

Wind seems to be a factor in determining roost areas in certain parts of the harbour ie Lytchett Bay. Also 28 birds roosting on beach directly out of a brisk NW wind at Holton Heath and not previously recorded here.

On a 2.2m high tide, much of the favoured Newton Bay roost is flooded so birds use the less preferred site of Ower *spartina* (36) on the north shoreline of Ower Bay instead.

When the tide turns and begins to drop, Redshank tend to get restless and very vocal. Small flights to neighbouring *spartina* are made to check out the situation.

### Comparison

Redshank numbers seem to be around half of what they were in 1984 /85, not only that but they also seem to have significantly changed their habits. Collins saw these birds as highly mobile within the Harbour, with movements between Holes and Lytchett Bay and birds using Brand’s Bay and Fitzworth would roost on Brownsea Lagoon. During the present survey none of these things occurred. In fact, Redshank seemed to want to move as little as possible between feeding and roost sites. Brownsea did have Redshank at high tide but most of these birds were also there at low tide.

Site	Winter 07- Spring 08	1984/85 winter/spring
Holes Bay	330	500
Lytchett Bay	183	608
Shipstal/Long Island	98	Under 169
Newton Bay	183	103
Brand’s Bay	116	169
Holton Heath	179	451
Wych Lake	53	231
Fitzworth North/Round Island	91	170
<b>Average count</b>	<b>162</b>	<b>319</b>

Table 21. Comparison of inter-tidal maxima

## Roost comparison

Site	1984 / 85	2007 / 08
Arne Bay	350	26
Holton Heath Islands	250	20
Holes Bay	Several 100s	300+
Middlebere Point	150	20
Lytchett Bay	125	108
Brand's Bay	100	116
Green Island	100	4
Brownsea Lagoon	90	32
Keysworth Point	80	40
Newton Bay	Not known (below 80)	173
Shotover Creek	Not known (below 80)	130
Wareham Meadows (HT feeding)	250	0
Baiter (HT feeding)	63	6

*Table 22. Comparison of high tide roost site/ feeding area maxima*

Most important roost areas for 1984/85 were Arne Bay, Holes Bay and Holton Heath Islands. During this survey, Holes Bay and Newton Bay were the most important roost areas, with Arne Bay and Holton Heath Islands well down the list. Collins also noted large numbers of birds feeding at high tide at Wareham Meadows, as well as numbers at Baiter and a few other scattered grass sites. During this survey no birds were seen at Wareham Meadows, with only two records at Baiter with a maximum of 6 birds, and one record at Cleavel field of 23 birds during flooding.



Summering birds from mid April to mid June were disappointingly low. The main area of activity was the *spartina* area of Fitzworth East, where up to 19 birds were seen. The next highest count for any one area was 6 birds at Lytchett Bay. There were other displaying pairs scattered throughout the harbour, all records are in the table below.

Site	1986 estimated nesting pairs	2007 estimated birds present
Arne Bay	20-40	4-8
Lytchett Bay	20-40	6-12
Swineham	10-20	5-10
Brand's Bay	2-10	4-5
Fitzworth	2-10	21-30
Wych Lake	2-10	4-8
Ower Bay	Not noted	5-8
Holton Heath	Not noted	5-10
Wareham Moors	Not noted	4
Middlebere	Not noted	3-6
Holes Bay	Not noted	1-2

Table 23. Comparison of estimated summering Redshank

Collins birds are estimated breeding pairs, whereas this surveys counts are estimated birds present, the first figure representing the max count for that area the second one if they were all breeding birds with hidden sitting mate. Fitzworth and Ower Bay figures are not double because some of these birds were sitting with a bird in close attendance and so clearly a pair.

It is clear numbers are well down. Collins in 1986 estimated that there were 50-100 pairs in the harbour. A further comparison could be made with Collins' estimate for the Poole Harbour population in the first two weeks of May. He thought 150-200 birds. The maximum count in the summer period in 2007 was 62 birds.

## Grey Plover

### Feeding Distribution

First winter period Brand's Bay, Wych Lake and Fitzworth East most important feeding areas corresponding exactly with Dunlin with which they strongly associate. A flock of Dunlin flying between sites would more often than not have Grey Plover or two with them.

Interestingly, for both winter periods, numbers seemed to peak in February with some areas having significantly less birds in the preceding January.

Feeding area	Jan 07	Feb	Mar-Apr	Oct	Nov	Dec	Jan 08	Feb
Arne Bay	9	9	10	10	15	34	31	13
Brand's Bay	19	140	2	13	13	25	25	32
Fitzworth East	38	83	15	7	49	43	51	115
Fitzworth North/Round Island	0	20	8	0	10	11	10	107
Green Island	0	0	1	1	48	35	35	36
Holton Heath	18	20	1	21	15	37	41	29
Middlebere	56	40	10	6	0	41	40	44
Wych Lake	69	87	12	2	2	27	37	36
(Brownsea Lagoon HT)	-	160	18	75	85	135	187	235

Table 24. Inter-tidal monthly maxima including Brownsea high tide roost (survey maximums in red)

Second winter period, Fitzworth East was the most important area. In February, Fitzworth North/Round Island also had good numbers compared to zero in the first winter period.

No evidence of any spring peaks just a decrease in numbers from March toward the summer.

From 15th June until 6th Aug, a single bird was recorded at 3 inter-tidal areas and Brownsea Lagoon which could have been the same summering individual.

Autumn passage first noted on 10<sup>th</sup> Aug with 5 birds at Middlebere. By 10<sup>th</sup> Sept still only a max of 6 birds with 7 birds Brownsea Lagoon on 28<sup>th</sup> September.

### Roosting

Most important roost site was Brownsea Lagoon. During high spring high tides it is the only roost site. Max count for survey was 235 birds in February 08.

On 'lower' high tides many roosted on the *spartina* islands at Green Island, or at Brand's Bay *spartina* again in association with Dunlin. The only other roosts of note were the *spartina* islands off Fitzworth East and the *spartina* off of Ower.

On 14<sup>th</sup> Nov birds were seen pre-roosting on Arne spit with Dunlin then flew towards Brownsea.

## Comparison

Site	07 / 08	1984/85
Brand's Bay	140	90
Wych Lake	87	No significant count
Fitzworth East	115	55
Fitzworth North/Round Island	107	165
Holton Heath	41	118
Newton Bay	17	39
South Lake	0	85

*Table 25. Comparison of inter-tidal maxima*

Numbers on average only slightly down on Collins. The main feeding areas for 1984 /85 were Fitzworth North/Round Island, Holton Heath and Brand's Bay. Fitzworth East was also an important area, although the maximum count figure wasn't particularly high. This roughly ties in with this survey's findings, with the exception of South Lake and Holton Heath which are now significantly less important and Wych Lake which is now significantly more important. This pattern precisely matches Dunlin where the importance of Fitzworth East and Wych Lake has gone up and gone down for South Lake and Holton Heath.

Roosting Site	1984/85	2007 / 08
Studland/Pilot's Point	390	26
Brand's Bay	200	30
Fitzworth East	100	20
Brownsea Lagoon	70	235
Arne Spit	65	20
Ower Bay	50	24
Fitzworth North/Round Island	48	0

*Table 26. Comparison of roost site maxima*

Collins had a maximum count of 390 at Pilots Point, but this figure was considered exceptional, being a result of a large influx from the continent due to severe weather. He pointed to a max of 228 in the mild winter of 1984 (Harvey and Bradford). Either way, numbers for this survey were significantly down with no birds recorded here in the first winter period. Small numbers were however seen during the second winter period with up to 26 birds. Since 1984 /85, Brownsea Lagoon has become significantly more important for Grey Plover along with many other waders.

## Bar-tailed Godwit

### Distribution

Sandbanks Bay is the only winter feeding area in the harbour. In the first winter period, no birds were seen feeding away from this site. During the second winter period a single bird was regularly seen feeding at Studland West. The first winter maximum was 103 on 5<sup>th</sup> Jan. During the second winter period the maximum was 145. During winter all birds roosted at Brownsea Lagoon.

Below is a table recording the monthly maximums for Sandbanks Bay and Brownsea Island. As would be expected, they are very similar in the core winter months. During passage, numbers begin to differ with new arrivals not using the winter routine.

After a steady decline in numbers at Brownsea Lagoon from March, a small peak in May was evidence of passage birds moving through.

Site	Jan 07	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 08	Feb
Sandbanks Bay	103	86	54	33	9	0	0	1	6	23	87	133	145	141
Brownsea Lagoon		89	36	23	33	12	7	2	8	52	89	137	126	134

Table 27. Inter-tidal monthly maxima (survey maximum in red)

### Passage / Summer

As can be seen, the same increase in numbers was not noted at Sandbanks Bay in May. During this time, passage birds utilised other areas of the harbour for feeding. Ie Green Island (up to 18), Furzey Island (up to 10), Brand's Bay (4), Arne Bay,(2) and South Lake(1).

Choice of roost sites also became more flexible during spring passage to include Brand's Bay (max of 16) and Long Island (max of 16).

In June and July, a party of 14 birds were regularly recorded, however they were only ever seen using Green Island for feeding, with 5 birds venturing to Goathorn West on June 22<sup>nd</sup> and the odd bird seen at Ower Bay, Furzey Island and Fitzworth East in July. In June, all birds roosted at Brownsea Lagoon, however, in July birds were regularly recorded roosting at the *spartina* islands off of Fitzworth East. Down to 5 birds by August.

Autumn passage started around 12<sup>th</sup> Sept with 8 at Brownsea Lagoon. As with spring passage, autumn passage birds didn't seem to know the rules with an even wider variety of feeding sites being used. In Sept birds were recorded at Brand's Bay, Newton Bay, Holton Heath, Middlebere, Holes Bay, Arne Bay and even Lytchett Bay!

Peak numbers were in the last week of September and the first week of October. At this time up to 46 birds were recorded at Arne Bay, 31 at Brand's Bay, 20 at Lytchett Bay and 16 at Goathorn West.

During this time, Arne Spit and Brand's Bay *spartina* were popular roost sites with up to 46 birds roosting at Arne and 57 at Brand's Bay. Furzey Island beach roost and Fitzworth *spartina* islands also occasionally used.

On 16<sup>th</sup> Sept a party of 9 birds were seen feeding on the beach on the northern shoreline of Arne at high water.

### Movements / Behaviour

These birds certainly like to arrive at their feeding areas in plenty of time. Were seen to arrive at Sandbanks Bay whilst the tide was still 1.8 metres. Most birds would then wait around with some attempting to feed around the *spartina*.

During strong south west winds, waiting times are increased as the tide is held up by the wind with even late arrivals having to wait.

Will feed in the shallow water initially, sometimes remaining there even after the appearance of sand/mudflats.

On the return journey were noted to leave Sandbanks for Brownsea well before mud ran out.

Birds were not always in agreement as to when to leave, on more than one occasion birds were pushed off their particular feeding area by the tide or disturbed some would go to another area of exposed mud and some would just go straight to Brownsea Lagoon.

In September, when birds were also using other feeding areas a few birds were seen moving from Brownsea roost to post-roost on Furzey Island beach with Oystercatchers before moving on again to feed when tide had fallen sufficiently.

Will make the trip from Brownsea to Sandbanks Bay in between the double highs to get in a short spell of feeding, ie 80 birds there on 14<sup>th</sup> Nov when tide approx 1.7m (between highs of 2m and 1.9m).

On 9<sup>th</sup> Oct, most of the 57 birds roosting at Brand's Bay *spartina* as with Curlew preferred to fly out of bay to Green/Furzey Island on the dropping tide, leaving only 11 birds actually feeding there at low water.

### Comparison

In 1984/85, Sandbanks Bay was also the main feeding area. The max count in that winter period was 263 however the severe weather during that period was thought to be a factor. Around that time 50-100 birds were normal.

Although the main feeding area has remained unchanged, the main roost has changed more than once.

Prior to 1984, Sandbanks Bay was the main roost site. In 1984 a large roost was noted at Pilots Point for the first time by Harvey and Bradford (1984). In 2007, no birds roosted at Sandbanks Bay or Pilots Point. Presumably, all down to dieback of *spartina* at Sandbanks Bay and and higher disturbance levels at both sites. The birds now find sanctuary on Brownsea Lagoon.

## Knot

### Distribution

First winter period around 22 birds were using the harbour being only recorded at 5 inter-tidal sites. Single biggest inter-tidal count was 21 birds at Fitzworth East in Feb 07. The three most regular sites were Wych Lake, Fitzworth East and Brand's Bay with one record each for Fitzworth North/Round Island and Arne Bay.

Numbers held out until the first week of April. 1-2 birds regularly recorded from May until end of July which presumably were the same birds summering.

Site	Jan / Feb 07	Mar / Apr 07	Sept / Oct 07	Nov 07 - Feb 08
Sandbanks Bay	0	0	0	130
Fitzworth East	21	18	125	65
Shipstal/Long Island	0	0	0	97
Brand's Bay	16	1	95	83
Fitzworth North/Round Island	12	10	84	53
Arne Bay	4	18	37	12
Wych Lake	17	5	23	11
Brownsea Lagoon (roost)	22	8	143	88
Fitzworth East <i>spartina</i> (roost)	2	2	55	25

Table 28. Inter-tidal maxima (survey maximum in red)



Autumn saw a large increase in numbers in relative terms, in September 125 birds were recorded at Fitzworth East and all the regular areas saw big increases. A few birds also recorded at Middlebere and South Lake. The passage numbers were not just a flash in the pan and numbers remained high through the second winter period. During this time, however, the most important feeding area was Sandbanks Bay with up to 130 birds present, which was the total opposite of the first 10 months of the survey when no birds were recorded here at all.

Most important roost was Brownsea Lagoon, which recorded the highest counts of the survey in both winter periods. The actual maximum being 143 birds in September, which was an increase of 550% on the first winter period maximum. The next most popular roost was Fitzworth East *spartina* islands, with up to 55 birds here in September. Also used the *spartina* of Green Island, Brand’s Bay and Ower. Only recorded once at Shell Bay with 3 birds seen in Jan 08.

Whilst roosting, some birds were noted still attempting to feed whilst the water lashed against the banks of the *spartina* islands. Strongly associated with Dunlin and Grey Plover choosing to feed and roost at the same sites. Small flocks of Knot that were seen moving around the harbour always had a few Grey Plover with them.

### Comparison

Site	Winter 2007	Autumn 07-Winter 08	1984/85
Fitzworth East	21	125	179
Arne Bay	18	37	No info
Wych Lake	17	23	No info
Brand’s Bay	16	95	60
Fitzworth North / Round Island	12	84	150
Brownsea Lagoon	22	143	57
Sandbanks Bay	0	130	No info
Shell Bay/ Pilots Point	0	3	107

Table 29. Comparison of inter-tidal maxima

Most important feeding areas in the mid 80s were Fitzworth East, Fitzworth North/Round Island and Brand's Bay. This pattern also fits with this survey with the exception of the second winter period when Sandbanks Bay became an important feeding area.

The counts for the second winter period are much closer to the Collins survey but still slightly down. Collins mentioned that his counts were much higher than previous counts that had been recorded but put this down to the severe weather he encountered.

Roosting behaviour similar to mid 80s with the big exception being Pilots Point which was then the most important roost site, at spring tides holding up to 107 birds. In contrast there were no records of roosting birds here in 07/08.

## Ringed Plover

### Inter-tidal distribution

Studland West was by far and away the most important winter feeding area in Poole Harbour. During the first winter period this was the only place the 30 or so birds present were seen feeding, apart from a single record of 21 birds at Parkstone Bay.

The second winter period was very similar, with up to 34 birds being regularly recorded at Studland West. However very occasionally birds were also seen at historically more traditional sites with 9 at Parkstone Bay in November, 7 at Sandbanks Bay and 34 at Blue Lagoon in December and 20 birds at Arne Bay in Feb 08.

During spring passage a few birds turned up at unlikely places such as 5 at Wych Lake Lake in April.

In the summer the odd bird was seen at Arne Bay indicating a possibility of breeding.

Autumn passage birds were also recorded at more unlikely places, first of the early returners were 7 birds at Arne Bay on 30<sup>th</sup> July followed by odd birds at South Lake, Middlebere and Holton Heath.

In Sept and Oct birds also seen at Brand's Bay.

It seems that the wintering birds are trying to use Parkstone Bay but get flushed off. The birds that have been noted here were all near the start of the inter-tidal period disappearing soon after. Interestingly, birds regularly recorded here feeding in the dark which would again point to disturbance being a factor.

They do seem very particular about their feeding area ie on the very rocky part of the Studland West beach in the southern corner or the rocky spit by the boathouses

### Roosting

Shell Bay, Pilots Point and Quay Breakwater are the most important winter roost sites.

From Shell Bay and Pilots Point, it is a short trip around the corner to their favourite feeding area at Studland West.

Birds roosting on the Breakwater would make their first stop Parkstone Bay before soon moving on, sometimes stopping at Blue Lagoon where they then presumably carry on to Studland West.

During high winds recently the birds roosting at Shell bay were all sat low in the sand, facing the wind, eyes squinting, in their individual little hollows.

Seem to tolerate regular disturbance by walkers once they have chosen to sit out the high tide. Will not flush that easily but when they do will fly out across the bay and land at another part of the beach. If flushed again will fly out around the bay again and invariably go back to their original place.

Occasionally roosted at Patchins Point max of 6 there in March and Blue Lagoon breakwater.

Interestingly autumn passage birds have a completely different strategy basically roosting and feeding on Brownsea Lagoon.

### Autumn Passage

Passage numbers were much higher than wintering numbers.

The passage birds seem to go straight to Brownsea where they stay put, finding all they need in terms of feeding and roosting. First birds to arrive were a group of 7 on 30<sup>th</sup> July. By 14th Aug this number had risen to 65, peaking at 87 birds on 1<sup>st</sup> September, virtually 3 times the winter maximum count.

During this peak only 4 were seen at the traditional Studland West area at low tide, perhaps these were a few of the regular wintering birds returning.

### Comparison

The table below shows counts for 1984/85 and 2007/08.

The main difference noticeable is the change of preferred feeding area. Since Collins, Holes Bay and Lytchett Bay have been totally abandoned with most birds now only using Studland West.

The 15 counted at Parkstone Bay were one of only 3 records and the Sandbanks Bay 7 was the only record throughout the survey.

The large counts at Holes Bay were pre by-pass days, there was an area of reclaimed land on the eastern side which has now gone.

Site	1984/85 Winter	2007 / 08 Winter
Parkstone Bay	32	9
Sandbanks Bay	21	7
Holes Bay	16	0
Lytchett Bay	17	0
Studland West	0	34

*Table 30. Comparison of inter-tidal maxima*

Roosting Site	1984/85	2007/8
Holes Bay	100	No longer there
Shell Bay/Pilot's Point	45	37

*Table 31. Comparison of roost site maxima*

Collins reported that prior to his survey, the main roost site for this species regularly changed, ie 158 at Baiter in Jan 1981 and Holes Bay 100 in 1984. Up until that time, Pilots Point had also been one of the traditional roost sites with lesser numbers. During this survey the maximum count at any roost site was 21 at Baiter on 25<sup>th</sup> Jan, with the next count being 18 at Pilots Point / Shell Bay on 19<sup>th</sup> Feb. These birds were later seen roosting on rocks just east of the South Haven Hotel, presumably after having been flushed by walkers/dogs.

Open water areas



## Important Wildfowl

### Brent Goose

#### Distribution

The most important area was Middlebere Farm where an average of around 1000 birds used the surrounding fields during the first winter period. The second highest count, also in the first winter period was at Wych Lake, birds here were not regular and were usually just birds that had been flushed from Middlebere fields.

The next most important feeding areas were Baiter and Brand's Bay, although maximum numbers here were only around a quarter of those at Middlebere. At Brands, birds would also make use of the *spartina* areas to roost and preen at high tide.

Site	First winter	Second winter
Middlebere Farm	1006	645
Wych Lake OW	800	650
South Deep OW	8	562
Baiter HT3	247	265
South Lake OW	0	262
Studland Bay OW	26	254
Brand's Bay IT	226	245
Green Island	23	217
Stone Island Lake OW	207	147
Ower Bay	4	203
Fitzworth East	84	195
Sandbanks Bay	152	189
Swineham	0	170
Brand's Bay OW / HT 42	187	168
Holton Heath	0	151
Parkstone Bay	120	147
Fitzworth East <i>spartina</i> HT	132	120
Newton Bay	94	88
Goathorn West	43	81
Cleavel Field HT	56	32

Table 32. Brent distribution maximum counts (inter-tidal areas *brown*, high tide/other feeding areas *Blue*)

Sandbanks Bay is still a frequent haunt, although peak numbers were in the middle of March and middle of November, with core winter month numbers only just over a third of these. In 1984/85, Collins noted that this area was popular during spring low tides, where up to 75% of the total harbour population could be found. In the first winter period this percentage peaked at 15%.

There was a small population feeding on underwater plants at Pilots Point and in the southern end of Studland Bay, seemingly preferring this to the grass diet adopted by many of Poole's birds.

Stone Island Lake also occasionally held over 200 birds mostly around high tide.

Within the 1006 birds at Middlebere in the first winter period, only 6 were 1<sup>st</sup> winters.

In March, numbers began to decrease. During the last two weeks of March, South Lake became an important area. The maximum count of 140 birds was higher than any other area at this time. More interestingly, there hadn't been a single bird recorded here all winter. Sandbanks Bay also recorded nearly 3 times the usual numbers in March.

A single bird spent the summer in the Keyworth / Swineham area, apart from this bird the latest date was 19<sup>th</sup> April at Brand's Bay.

The next bird was seen on 29<sup>th</sup> August flying west over Swineham, it was followed for some distance until lost to view. This was presumably the summering bird. There was then a gap until the 7<sup>th</sup> October when 5 birds were seen at Brand's Bay.

Autumn passage birds also used areas which were otherwise unpopular during the winter. Holton Heath was a good example and had the highest count of the harbour in early November, with 151 birds and as with South Lake there were no records here for the whole of the first winter period.

South Lake was also popular on the return passage with up to 262 birds at the end of November with no birds recorded here from December onwards.

One did get the impression that birds were generally making their way slowly east through the harbour in the autumn / early winter. As mentioned, the main flocks at this time were at the western end of the harbour and on a few occasions birds were seen to leave the harbour mouth and continue east towards Hengistbury, which was not noted during the core winter months.



Another indication of this was the arrival of the Red-breasted Goose from the west. This does seem strange when one considers that they would invariably have come in from the east. Perhaps they were disillusioned with the Fleet!

Interestingly, no birds were seen at Middlebere in the second winter period until the middle of January, when 501 were counted. During the second winter period, numbers were down here peaking on just one occasion at 645. At the same time, numbers were up on the previous winter in the South Deep / Ower Bay / Fitzworth area with up to 562 birds here, compared to a maximum of 132 in the first winter period.

Studland Bay was also a more popular area in the second winter period. Particularly during stormy weather, when they could be seen getting thrown around by the breaking waves as they tried to feed on the plant material. This was when the maximum counts were achieved here.

There were a lot more first year birds around in the second winter period ie Baiter 5<sup>th</sup> Dec -103 birds, of which 13 were juvs (nearly 13%), compared with 6 in 1006 in Jan 07 (0.6%).

#### Daytime roosting

Will use *spartina* areas or just sit on the water. Highest numbers away from the Middlebere were 562 in South Deep, 187 at Brand's Bay *spartina* / open water and 132 Fitzworth East *spartina*.

Birds were noted regularly roosting on Keysworth *spartina* banks in winter and spring first winter period only.

#### Movements

Numbers seemed to be quite consistent at particular sites suggesting it was the same loyal birds. Some evidence of site changing was in evidence when a Red-breasted Goose spent time with the Brents. Although spending most of its time at Middlebere it was also noted once at Baiter.

A Black Brant also graced the Middlebere flock during the winter, this was also seen at Baiter and Wych Lake. Birds were seen to fly from Baiter to Sandbanks bay.

Difficult to say how many of the regular birds in the Studland area use Baiter to eat the grass, but a Pale-bellied Brent seen at Baiter may well have been the same bird seen at Studland Bay a couple of days later.

When flushed from Middlebere fields, birds would always fly straight to Wych Lake where they would sit on the water. Due to the similarity of Collins counts for Middlebere and Wych Lake, it is probable that this was the case then also.

Wych Lake was also used for bathing, frequently birds were noted flying in from the north, bathing for a while then flying off to Middlebere.

Middlebere birds visited the Fitzworth area but hardly used the once traditional field at Cleavel when here, preferring to sit on water. Perhaps they are now more regularly flushed in this area.

### Evening Roosting

The regular flock at Studland will sometimes roost in Studland Bay, after feeding on the shoreline they will gradually drift out into deeper water. However, the majority of the time they will join the roost at Brand's Bay. Birds regularly noted flying around Pilots Point to enter the harbour at dusk, sometimes landing on Stone Island first, other times continuing directly to Brand's Bay. Interestingly, they always seem take the coastal route through the harbour mouth to Brand's Bay and have never been seen to take the much shorter cross country route over Little Sea which would be much shorter.

### Comparison with Collins

Before the second world war, Brent Geese were numerous in the harbour. However, during the 1960s it was described as 'a vagrant'. Dixon (1966) The original crash was partly attributed to the virtual disappearance of *Zostera* (eel grass). Since then, numbers have been on the increase. The reason has been put down to a change of feeding habits and a dramatic increase in the world population.

Grass is now the staple diet in the harbour and is a fairly recent thing.

In 1983/84, 550 birds were recorded feeding at Cleavel Field (Harvey and Bradford). In 1984/85, birds were first recorded using the Middlebere fields and since then Baiter has also become an important feeding area.

The table below shows how the use of inter-tidal areas has declined, with a large drop in figures for Ower Bay, Newton Bay and Fitzworth North and, to a lesser extent Fitzworth East.

Site	Jan/Feb 07	Nov 07- Feb 08	1984/85
Middlebere fields	1006	645	500
Wych Lake OW	800	650	465
Baiter	247	265	0
Brand's Bay	226	245	311
Sandbanks Bay	152	189	421
South Lake	0	262	n/c
Fitzworth East	84	195	400
Green Island	23	217	206
Newton Bay	94	88	400
Cleavel Field	56	32	570
Ower Bay	4	203	570
Fitzworth North/Round Island	8	48	390

*Table 33. Comparison of maxima*

Cleavel field is no longer an important high water feeding area, the high count of 56 was the only time a relatively significant number of birds were seen here. When they were in this area they were usually on the adjacent water. Whether this was by choice or if they were constantly being flushed off Cleavel field is not totally clear. During the 1984/85, survey Baiter was not mentioned so presumably they were not there.

## (Black Brant)

Adult at Middlebere Farm and Wych Lake Jan and Feb 07. Also visited Baiter.

## (Pale-bellied Brent)

In November, one at Holton Heath with the newly arrived D-b Brents.

In December, singles at Shell Bay, Studland Bay, Goathorn West and Brand's Bay. In January 08 at least 2 birds (an adult and first winter) were seen at Baiter.

One at Fitzworth East in March

## Wigeon

### Distribution

Holes Bay and Holton Heath were by far the two most important areas.

During the first winter period, Holes Bay had the highest count of 465 birds. This was well beaten in the second winter period when 910 birds were counted.

Holton Heath's rise in numbers was just as dramatic, also nearly doubling to 834, in fact as can be seen every area noted quite a significant increase.

Site	Jan-Mar	Oct/Nov	Dec/Feb
Holes Bay	465	839	910
Holton Heath	281	669	834
Lytchett Bay	245	424	370
Little Sea	42	112	343
Arne Bay	202	258	240
Brownsea Lagoon	52	73	240
Brand's Bay	125	146	185
Wych Lake	51	181	76
Middlebere	70	167	65
Fitzworth North/Round Island	108	135	85
Ower Bay	2	50	124

Table 34. Wigeon feeding site maxima ( survey maximum in red)

Apart from the above, also recorded in 5 other areas:

Shipstal / Long Island: 20-50 birds

Newton Bay: 15-30 birds with a maximum of 37

Lytchett Shore: Maximum of 29

South Lake: 1-8 birds with a maximum of 37

Fitzworth East: One record of 38 birds

## Comparison

Site	1984 /85	2007 / 08
Holton Heath	2000	910
Frome Valley	900	37
Keysworth	600	800
Wych Lake	215	181
Fitzworth East	230	38
Little Sea	300	343
Brownsea Lagoon	160	240
Brand's Bay	130	185
Holes Bay	Less than 130	839

*Table 35. Comparison of maxima*

Collins noted that the numbers he had counted were higher than expected due to the severe weather of that winter. Holton Heath was clearly the most important area, with up to 2000 birds, however it is interesting that Holes Bay doesn't even get into his top 6. As this site was not included in Collins original table, we can assume that the count was less than 130. The increase since is presumably due to the big clean up here that occurred after 1985.

Frome Valley numbers were well down with up to 900 birds counted in 1984/85 compared to a maximum of just 37 in 07/08.

# Teal

## Distribution

Widely distributed throughout the harbour. Most important site by some margin was Holes Bay which had the 10 highest counts of the survey and a high count of 800 birds in December. Middlebere and Brand's Bay were also important sites, with numbers at Brand's Bay actually peaking in late September. It was interesting that there was such a difference in the two winter periods. The most obvious was the increase in numbers in the second winter period. For the top 11 sites there was an overall increase of 132% from the first winter period.

Holton Heath and Fitzworth North/Round Island recorded no birds for the first winter period and maximums of 257 and 162 birds in the second winter period.

Site	Jan / Feb 07	Sept / Oct	Nov 07 - Feb 08
Holes Bay	516	496	800
Brand's Bay	148	380	218
Middlebere	280	217	361
Arne Bay	43	152	337
Holton Heath	0	13	257
Newton Bay	34	126	245
Ower Bay	20	230	210
Brownsea Lagoon	74	171	143
Lytchett Bay	125	89	164
Fitzworth North/Round Island	0	0	162
Wych Lake	57	118	122
South Lake	0	200	0

Table 36. Inter-tidal feeding site maxima (survey maximum in red)

From the second week in April, most birds had moved on, with 1-10 birds being recorded apart from 41 on Brownsea Lagoon which oddly increased in May to 92 birds. The highest May count away from here was 3 at Little Sea. In June and July Wareham Moors had most of Poole's birds with up to 20.

First of the returning birds were noted in August, with Brownsea Lagoon again being the most important area. South Lake and Swineham also held up to 120 birds, rising to over 250 in September which was remarkable as neither place had previously recorded any birds up to this point in the survey.

Numbers at Holes Bay and Brand's Bay also increased quite rapidly in September.

No more birds were recorded at South Lake after October and no more at Swineham after early November.

### Roosting

Most Teal roosted in *spartina* and proved very difficult to count, although from the more intensely watched areas of Holes Bay and Middlebere it was clear that birds chose to roost in *spartina* areas very close to their feeding areas. No birds were recorded flying any sort of distance on the rising tide.

Birds from Brand's Bay were regularly seen flying to Little Sea but didn't appear there in large numbers presumably preferring to roost in the Brand's Bay *spartina*.

At Holes Bay in the north east sector, as the tide rose birds gravitated towards the south western corner. When the tide became too high some would jump into the nearest *spartina* bank but most would fly around the corner to roost at Upton Country Park.

A similar situation occurs in all the other important feeding areas, with birds making their way to the nearest area of *spartina*. The largest roosts were therefore near the most important feeding areas.

During high spring tides, many *spartina* areas become inundated by the rising water, when this occurs Teal can be seen roosting on the open water, many will then still remain active even indulging in some displaying. This was noted as early as 21<sup>st</sup> Jan. As the tide drops and the *spartina* reappears they will then roost.

In Collins report there was no mention of a roost at Middlebere. In 2007 this was one of the more important roosts with a maximum of 280 birds.



### Behaviour / Movements

Teal seem very casual about their feeding, on a falling tide they will remain asleep at their high tide roost for quite some time after the appearance of mud.

On some occasions, at the western end of Middlebere for example, the tide was fully out before the Teal put in an appearance. Even then some would resume their sleep on the mud!

Regarding movements, Collins was able to note that some birds at least moved around the harbour during the winter. This observation was possible due to the presence of a Green winged Teal which was noted at 5 different places. In 2007, a Green-winged Teal was also seen, however this one spent a grand total of 1 day in the harbour.

At South Lake as the tide rises and covers the mud, birds will upend to feed.

### Comparison

Comparing Collins counts with the first winter period of this survey numbers were generally down with the average of the top 5 inter-tidal sites in 1984/85 being 308 and for Jan / Feb 2007 it was 229. 2007/08 compared much more favourably with an average of 400 nearly 100 more than in 1984/85.

Middlebere is a much more important site than in 1984/85, as is Brownsea Lagoon and Lytchett Bay. Little Sea is no longer used by large numbers and Newton Bay and Wych Lake have also seen a drop.

Site	Jan-March 07	Nov 07- Feb 08	1984/85 winter/ spring
Holes Bay	516	800	600
Middlebere	280	361	68
Brand's Bay	148	218	215
Lytchett Bay	125	164	90
Brownsea Lagoon	74	143	55
Wych Lake	57	122	160
Newton Bay	34	245	383
Little Sea	24	29	300
Holton Heath	0	257	185

Table 37. Comparison of inter-tidal maxima

## Shelduck

### Distribution

Brand's Bay most important feeding area with the highest six counts of the survey and a maximum of 441 birds in January 08. Fitzworth East, Holes Bay and Holton Heath were the next most important areas.

Site	Jan/Feb 07	Mar/Apr	May-Jul	Aug/Sep	Oct- Dec	Dec - Feb 08
Brand's Bay	347	231	54	6	202	441
Fitzworth East	127	20	54	7	93	310
Holes Bay	182	91	68	6	94	297
Holton Heath	23	14	16	6	35	297
South Lake	17	117	133	8	188	61
Newton Bay	147	59	53	0	83	185
Fitzworth North/Round Island	102	129	32	7	270	183
Arne Bay	116	107	21	16	69	182
Swineham	58	84	156	11	68	74
Wych Lake	84	51	34	3	155	62
Middlebere	73	69	60	19	31	91
Brownsea Lagoon	237	222	125	32	55	218

Table 38. Inter-tidal monthly maxima (survey maximum in red)

From April, there begins a shift in distribution with more and more birds heading for the South Lake / Swineham area. This becomes particularly noticeable from May, where the highest counts are Swineham with 156 birds and South Lake with 131 birds, areas that only held a handful of birds in the core winter months. Brand's Bay highest count now down to 54 with Holton Heath at zero.

Around this time most birds were now feeding in pairs.

Wareham Moors was an important high tide roost for May and June with a maximum of 137 on 11<sup>th</sup> May.

In June 133 was highest count of the harbour by some margin at South Lake, however by mid July most of the birds had now left the harbour.

The highest single inter-tidal count in August was 11, 9 of which were youngsters. Other youngsters seen were 8 at South Lake, 7 at Wych Lake, 5 at Holton Heath, 4 at Brand's Bay, 4 at Fitzworth North/Round Island and 3 at Fitzworth East.

Birds began arriving back in the last week of September and into October. Again there was an interesting distribution in October with Wych lake being by far and away the most popular site. At the beginning of the month 155 birds were here with only 6 at Holes Bay. This theme continued through the month with up to 137 at Wych Lake. By the end of October South Lake was again back in business with 181 birds but Brand's Bay maximum was still only 31. Fitzworth North/Round Island also had up to 230 birds.

November into December saw things return to the usual winter distribution.

### Roosting

Shelduck either roosted on *spartina* or just sat on the open water.

Sites with the highest counts were South Lake open water area, Brand's Bay *spartina*, South Deep open water area, Brownsea Lagoon and Fitzworth East *spartina* all with over 200 birds.

South Lake OW	Brand's Bay OW	South Deep	Brownsea Lagoon	Fitzworth East <i>spartina</i>	Arne <i>Spartina</i>	Ower Bay OW	Coombe Heath Saltmarsh	Newton Bay OW	Ower Spit
414	360	293	237	206	198	192	190	184	120

*Table 39. Top 10 roost sites*

The Frome valley was also used when flooded, with up to 60 birds recorded here.

During the spring, the main roost for Shelduck in the South Lake area was Wareham Moors. First birds noted on 28<sup>th</sup> March, peaking at 137 in the middle of May. Last birds seen on 17<sup>th</sup> July with no other birds being recorded here for the rest of the year.

No birds were noted at Little Sea from Jan to March. However, birds were regularly noted from April to June in one area that contained a number of rabbit burrows suggesting breeding.

## Comparison

Numbers have dropped considerably since 84/85

Site	2007/ 08	1984/85
Brand's Bay	441	570
Holes Bay	297	600
Newton Bay	185	308
South Lake	188	211
Fitzworth North/Round Island	270	Less than 167
Fitzworth East	310	477
Arne Bay	182	Less than 167
Wych Lake	155	Less than 167
Lytchett Bay	68	586
Green Island	98	167
Ower Bay	91	193
Holton Heath	297	764

*Table 40. Comparison on inter-tidal maxima*

## Pochard

Little Sea is the only important area in the harbour. During the first winter period, a maximum count of 369 was achieved here. Three other records away from this site - a single bird at Swineham GPs on 14<sup>th</sup> February and 2 drakes at Holes Bay seen on 17<sup>th</sup> and 27<sup>th</sup> February.

Numbers down slightly in the second winter period, with 326 achieved at Little Sea. Swineham GPs held 10-14 birds from November to end of Jan dropping to 6 in February. Two records from Wareham Channel NW involved a singleton on 26<sup>th</sup> November and a drake that 'flew in from the north' on 8<sup>th</sup> February.

Historically, severe winters have produced the highest counts and this was certainly the case in 1984/85 when up to 1100 birds were counted at Little Sea. The two records at Wareham Channel NW don't seem so odd now as in 1984/85 up to 500 birds were recorded here.

## Pintail

Main area of concentration centred around Little Sea and Brand's Bay. Also Ower Bay an important area. Highest single count for the first winter period was 73 at Little Sea. In the second winter period, 291 were counted - a 400% increase. Many other sites also recorded an increase on first winter counts.

Site	Jan / Feb 07	Late 07 / Feb 08
Brand's Bay	64	127
Holton Heath	24	82
Newton Bay	41	62
Ower Bay	37	126
South Lake	4	20

*Table 41. Inter-tidal maxima*

## Gadwall

First winter period maximum of 18 birds at Swineham Gravel Pits, with the next highest count of 11 at Little Sea. During March, numbers increased to 39 at Swineham gravel pits, dropping again in April and May.

Some evidence of wandering in April and May when Lytchett, Middlebere, South Lake and Fitzworth North/Round Island all had their only records.

15 birds were at Wareham Moors on 6<sup>th</sup> June with a couple of pairs remaining throughout the month. Still 4-8 birds in July and August at Swineham GPs

First autumn passage birds arriving early September, with 26 on 10<sup>th</sup> at Little Sea already surpassing the previous winter maximum!

By December, numbers had reached 123 at Little Sea and 64 at Swineham GPs. In January 08, a new maximum of 138 birds was counted at Little Sea, representing a 1255% increase!

Brownsea Island also recorded a large increase from the first winter period, rising from 8 to 54 birds. Up to 8 birds also seen in the Frome Valley, 6 in Holes Bay in January and 2 at Holton Heath in Dec.

Birds from Swineham GPs were seen to visit Swineham inter-tidal area and Wareham Meadows on occasion.

## Shoveler

Highest three counts from Brownsea Lagoon with a max of 101 here 11<sup>th</sup> January 08. First winter period max of 82. Swineham GPs had the next highest count, with 70 on 30<sup>th</sup> December and a first winter max of 62.

Away from these two sites, the only other site of significance was Wych Lake with consistent maximums of 30 and 29 in each winter period.

Regular single figures at Little Sea, Holes Bay and Lower Frome Valley.

Passage birds in March and April regularly seen at Wareham Moors. Also seen at South Haven and Wareham Moors in May. Early returning bird to Swineham on July 17<sup>th</sup>, then a gap to 30<sup>th</sup> August for the next bird which was at Brownsea Lagoon with numbers building up from there.

Most unusual record was a female at Studland Bay on 5<sup>th</sup> November.

Numbers similar in both winters with a slight increase in the second winter period.

In 1984/85, the largest count was at Little Sea with 76, and for Brownsea Lagoon it was 47, which was much lower than expected as counts between 1980-83 where between 153 and 216. The Frome Valley also had a max of 26 and Wareham Meadows 18, compared with 4 and zero on this survey.

## Goldeneye

### Daytime feeding distribution

Widely distributed in the main winter months of January and February throughout the harbour.

The most popular area during the day was Hamworthy open water area, where a maximum of 49 birds were recorded on 6<sup>th</sup> February. Other popular areas were Lower Wych, with a maximum of 46 birds and Brand's Bay OW with up to 38 birds.

Hamworthy	Lower Wych	Brand's Bay	Stone Island Lake	Wareham Channel NW	Round Island	Wareham Channel NE	Brownsea South	Brownsea North
71	65	38	34	31	29	25	19	19

*Table 42. Top nine most important areas*

Main roost area was at Lower Wych which peaked at 65 on 15<sup>th</sup> Feb.



The highest total count was 71, which was again near roosting time on the border of Hamworthy and Lower Wych.

A large percentage of peak counts for individual regular areas were in January or early February, with the exception of Lower Wych where the peak was on 14<sup>th</sup> Feb. By March, there was a considerable drop in numbers with the highest count of the month being only 9 on the 5<sup>th</sup> at Brand's Bay OW.

Latest date: 2 females on 4<sup>th</sup> April at Brand's Bay.

The earliest returning bird was on 13<sup>th</sup> October at Swineham GPs.

### Comparison

Site	1984 /85	2007 /08
Lower Wych	150	65
Brownsea South	132	19
Wareham Channel NW	108	31
Brand's Bay	64	38
Upper Wych	45	16
Wych Lake	64	8
South Deep	51	13
Brownsea North	35	19

*Table 43. Comparison of maxima*

As can be seen, numbers well down in all areas on the 1984 / 85 survey.

## Great Crested Grebe

Widely distributed throughout the harbour. Most important daytime areas are Lower Wych, Wareham Channel NW and Hamworthy.

Roosted at Lower Wych along with other Grebes and Ducks, highest count 52 on 20<sup>th</sup> Jan. The highest daytime count was 32 on 14<sup>th</sup> Feb with 26 birds still there on 7<sup>th</sup> April and 16 on 23<sup>rd</sup> May.

On 21<sup>st</sup> Jan 43 birds roosted in Brand's Bay along with 5 Black-necked and 3 Slavonian Grebes. Only noted to do this once, on subsequent visits only the Black-necked Grebes were present.

Also small roost at Studland Bay where birds would join the local gull roost.

Interestingly, Round Island had only small numbers of birds in the core winter months but became more important in the last half of March, with 10 birds present on 21<sup>st</sup> and 17 birds on 29<sup>th</sup>. In April, numbers were back down again.

Site	Daytime 2007/8	1984 /85	Roost 2007/08	Roost 1984 /85
Lower Wych	32	n/c	53	41
Wareham Channel NW	41	12		
Hamworthy	26			
Round Island	23			
Brand's Bay	20			
Upper Wych	18	21		
South Deep	17			
Brownsea North	13			
Stone Island Lake	12			
Studland Bay	12			
South Lake	8	21		
Brownsea South	7			
Swineham gravel pits	5			
Wych Lake	5	21		
Sandbanks Bay OW	3			

*Table 44. Comparison of maxima*

Not a great amount of detail on Collins counts, but it is clear that in the mid eighties South Lake OW and Wych Lake OW were more popular and Wareham Channel NW less popular. Fairly similar numbers at the Lower Wych roost.

## Red-breasted Merganser

Most important areas were Brownsea South and neighbouring Stone Island Lake. The next most important area was Hamworthy and Lower Wych although the high count at Lower Wych did involve birds gathering to roost.

The high count of 40 at Studland Bay were roosting birds.

Brownsea South	111
Stone Island Lake	83
Lower Wych	80
Hamworthy	64
Upper Wych	58
South Deep	49
Sandbanks Bay	43
South Lake	41
Studland Bay	40
Brownsea North	34
Wareham Channel NW	34
Wareham Channel NE	24
Ower Bay	20
Holes Bay	19
Newton Bay	17
Parkstone Bay	17
Round Island	17
Brand's Bay	14
Lytchett Bay	13
Middlebere	10
Wych Lake	10

*Table 45. Most important area maximum counts*

## Comparison

Site	1984 /85	2007 /08
Lower Wych	300	80
Brand's Bay	110	14
South Deep	101	49
Brownsea North	82	34
Upper Wych	80	58
Wareham Channel South	70	*55
Brownsea South	67	111
Wych Lake	64	10
WCNE	48	24
Hamworthy	40	64
Stone Island Lake	59	83
Sandbanks Bay	35	43
<b>Average</b>	<b>88</b>	<b>52</b>

*Table 46. Comparison of maxima*

Numbers generally down on 1984 / 85 by some 40%. Collins did note that the area encompassing Brownsea South, Stone Island Lake and the northern part of Brand's Bay was consistently the most populated area. These areas had the largest counts in the 2007 /08 survey.

\*For some reason Collins decided to lump South Lake OW with Swineham OW and call it Wareham Channel South so the present surveys figure is a minimum count representing the maximum count in South Lake.

## Black-necked Grebe

First winter period maximum of 12 Studland Bay with 3 at Shell Bay. Maximum of 6 inside the harbour at Lower Wych with 3 at Stone Island Lake.

Last bird seen on 12<sup>th</sup> March at Stone Island Lake.

Second winter period first arrival 1 on 13<sup>th</sup> October at Swineham gravel pits.

At Studland Bay, 8 from 30<sup>th</sup> Oct, rising to 11 on 3<sup>rd</sup> Nov, 12 on 5<sup>th</sup>, 17 on 15<sup>th</sup> with a maximum count of 21 on 17<sup>th</sup>. After that date numbers ceased to increase. In November numbers recorded went down to around 7 or 8 birds. This was probably due to birds entering the harbour in bad weather or being under-recorded in the bad weather rather than birds moving on as on 12<sup>th</sup> December during a spell of good weather 20 birds were again present in the bay.

Inside the harbour, Stone Island Lake (maximum 7 birds) and Lower Wych (maximum 8 birds) were regular haunts. Also seen in Brand's Bay (maximum 6) with 2 birds seen at Round Island OW on one occasion and one at Hamworthy OW.

Regularly roosted at Studland Bay, Lower Wych and occasionally Brand's Bay.

## Comparison

The three main sites in 1984 /85 were also Studland Bay, Lower Wych and Stone Island Lake. Below is a table of maximum counts from both surveys.

Site	1984 / 85	2007 / 08
Studland Bay	13	21
Lower Wych	7	8
Stone Island Lake	5	7

*Table 47. Comparison of maxima*

Annual maxima of 40 were regular up to about 1964, declining to less than 12 in most years since 1970 (Prendergast and Boys 1983). During BoEE counts (1975-83), the highest average monthly count was 3.

During the Collins survey, things had improved with a maximum of 13 birds in Studland Bay which was similar to the 12 achieved in the first winter period of this survey. So 21 in the second winter period is particularly encouraging.

## Slavonian Grebe

Two birds regularly in Studland Bay. Highest count 3 birds roosting in Brand's Bay on 21<sup>st</sup> Jan.

Singletons strayed to Stone Island Lake, Brownsea South, South Deep, Lower Wych (where occasionally roosted) and Swineham GPs.

In 1984/85, up to 25 birds were using Studland Bay, with a maximum of 11 at Lower Wych.

## Great Northern Diver

Most regularly seen (in order of appearance): Studland Bay, Brand's Bay, Stone Island Lake, Brownsea South and South Lake.

Highest single count of 6 birds at Lower Wych OW towards dusk where they regularly roosted. Next highest 4 birds at Brand's Bay and 3 at Studland Bay. Up to 2 birds at Brownsea North, Sandbanks Bay, Shell Bay, Stone Island Lake and Poole Bay. Singletons at Brownsea South, Hamworthy, Newton Bay and South Deep.

Last birds seen were 2 on 30<sup>th</sup> March at Poole Bay. First for next winter period was one on 5<sup>th</sup> November at Studland Bay.

Very poor second winter period with a maximum of 2 birds at any one site. Only one February record involving a bird at Studland Bay on 7<sup>th</sup>. No further records anywhere.

## Scaup

First winter period very poor with only one bird at Little Sea.

Second winter period no birds at all at the traditional Little Sea site however the day was saved by Swineham GPs where up to 11 birds decided to spend the winter. During this time there were also regular sightings in Wareham Channel NW with up to 8 birds which were thought to involve the same birds. Only other record was a single bird at Studland Bay on January 7<sup>th</sup>.

## Other important birds

### Little Egret

Holes Bay most important area in all seasons. Holton Heath and Newton Bay have the next highest winter counts, widely distributed throughout harbour with many areas not in table below having around 1-6 birds.



Site	Jan / Feb 07	July / Aug	Sept / Oct	Nov - Feb 08
Holes Bay	14	55	58	18
South Lake	3	23	57	18
Brownsea Lagoon	2	31	55	3
Holton Heath	13	44	53	9
Brand's Bay	4	20	27	4
Newton Bay	9	24	15	6
Arne Bay	3	13	21	4

Table 48. Inter-tidal maxima (survey maximum in red)

By March, birds are getting scarcer, with lowest numbers recorded in April and May. By June, numbers are rising again but July sees a much more dramatic rise. This has proven to be a post-breeding dispersal of mainly young birds from the continent moving north west. This increase has a slow down in August, only to rise steeply again in September, which are the adults moving north west from the continent.

Numbers peak in Sept and Oct. In Nov, however, numbers fall as quickly as they had risen, returning to winter levels. This is thought to be due to birds returning to the continent to winter. It is also due to the change in feeding preferences in winter, as some birds move inland to feed in fields or use neighbouring fields instead of the inter-tidal areas. During some co-ordinated counts in July and Aug, the highest count achieved was 209 on 8<sup>th</sup> Aug. However, it would seem that if more counts were done in Sept and Oct an even higher total could probably be achieved.

Feeding at inter-tidal sites would become more frenetic as the tide dropped as birds were forced into the channels.

Daytime roosting areas were very wind dependent with *spartina* banks being very popular. Highest numbers seen at Keyworth, with up to 51 birds in mid September. Other high counts at Brand's Bay (29) and Holton Heath Islands (25).

Regular roost in Holes Bay *spartina* and trees at Upton Country Park.

## Cormorant

Highest numbers August to November, when large fishing flocks could be encountered, the largest of which were 280 in Wareham Channel NE. Other large flocks included 190 at South Lake OW and 150 at Brownsea South and Sandbanks Bay OW.

Main daytime roost site was Brownsea Lagoon with a max count of 226 at the end of October. Next largest roost count was 205 at Long Island Sand bar.

Fitzworth East and Brand's Bay *spartina* were also used, with up to 125 and 61 birds. On 10<sup>th</sup> Oct, 84 birds using jetty on Green Island. Will also use other various man made structures to dry out.

Between 400 and 500 birds spent the nights roosting at Brownsea Lagoon during the winter.

Regularly seen commuting between South Lake and Arne area. Also seen regularly commuting from Arne to Brownsea. On 24<sup>th</sup> Oct 48 birds flew north along the chain ferry road to the harbour entrance, then veered north east and headed in the direction of Bournemouth until went out of sight.

A few records of the race *sinensis*, namely at Holes Bay, Poole Park and Brownsea but probably more about.

## Shag

Maximum count in any one area was 10 at Studland Bay. Next highest was 8 in Poole Bay, with 7 at Brownsea North and Sandbanks Bay OW being the highest counts within the harbour. Up to 4 at Stone Island Lake with some straying into Brownsea South, with no birds any further west. Furthest west in the northern part of the harbour was Hamworthy, with up to 3 birds.

Fly-out observations only noted a max of 10 birds on 12<sup>th</sup> December.

The maximum fly-out number achieved by Collins was 89. Also Brownsea North was the most popular area inside the harbour, which tallies with this survey's findings although he didn't mention a specific number.

## Spoonbill

Site	Jan 07	Feb	Mar	Apr	May	Aug	Sep	Oct	Nov	Dec	Jan 08	Feb	Mar (Incidental)
Arne Bay	8.4.4	8	2							4	7, 5, 11	11	
Fitzworth East	1		3								4		
Brownsea Lagoon	4	1	1	1			4.1	26, 12	12	2	3	1.1	
Holton Heath	5	1											
Swineham	1							5					7
Shipstal/Long Island	1		7		1								
South Lake		7								8.6	4, 6	11	
Brand's Bay			3, 2		1								
Middlebere			4	3		1			1	1			9
Lytchett Shore										1			
Wych Lake											4		
Ower Bay											1, 3		
Newton Bay											1		

Table 49. All counts of Spoonbill (maximum count per site in red)

Arne Bay, Brownsea Lagoon and South Lake areas seem the most popular. Some trends can be seen, obviously the first is a winter bias with birds gradually reducing in numbers as the year progresses, resulting in an absence of birds in June and July. An early returning bird in August heralds the return. On 11<sup>th</sup> Oct, a party of no less than 26 birds arrived on Brownsea, by 29<sup>th</sup> Oct 14 had moved on and 12 then remain until at least 29<sup>th</sup> Nov. It seems as though at least 11 birds stayed throughout the second winter period.

In the months of December January and February, Arne Bay and South Lake were the most frequented areas, in September October and November no birds were seen at these sites, in fact all records for those 3 months were from Brownsea Lagoon.

12<sup>th</sup> Feb: Eight birds stood roosting on mud at 08.15 in the middle of Wareham Channel (opposite Turford point) at low water. Later, as the tide rose, birds still stood there up to their bellies in water eventually flying off some minutes later in the direction of Arne. At 10.15, 3 more birds flew up the channel in the direction of Arne.  
16<sup>th</sup> Feb, 10 birds roosting on Giggers island, later 7 of these flew onto mud to feed leaving the other 3 still preening.

## Rest of species

### Mute Swan

Highest numbers were mid July to mid September at South Lake OW, with a maximum count of 155 on 13<sup>th</sup> September. During the winter months the largest concentrations occurred in the lower Frome Valley. During the first winter period around 55-60 birds were regularly recorded, during the second winter period 65-70 birds.

Holes Bay also held around 55 birds in Nov and Dec. However, during the first winter period there was a maximum count of only 12.

Poole Park had the next highest count with 31 birds.

The large non / post breeding flock began to gather at South Lake as early as the end of April. Collins also reported very similar winter numbers in 1984 /85.

### Bewicks Swan

Two birds found in Lower Frome Valley on 20<sup>th</sup> Nov with 1 staying until 31<sup>st</sup> Jan at least.

### Black Swan

Two birds present at Wareham Meadows both winter periods, visiting Swineham gravel pits occasionally and South Lake once. Two at Little Sea on 5<sup>th</sup> April.

## Greylag Goose

Highest counts from Poole Park, with up to 27 birds there at any one time.

Next highest count 11 birds at Swineham gravel pits in November and December and 9 birds seen in the Lower Frome Valley.

Also up to 3 birds seen at Holes Bay.

Other records of 3 birds Wareham Moors, 2 Wareham Meadows and one at Holton Heath also 2 birds regularly frequented Ridge Moors looking almost wild!

Seem commuting from Frome Valley to Swineham GPS.

## Canada Goose

Widely distributed

Site	Jan/Feb 07	Mar/Apr	May/Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan 08	Feb
Holes Bay	73	6	14	2	2	21	14	4	21	73	60
Middlebere	93	41	95	167	0	0	0	3	0	0	0
Swineham gravel pits	182	52	13	12	12	25	110	182	175	191	123
Poole Park	56	55	-	-	-	-	-	128	110	97	-
Wych Lake	13	4	10	119	0	0	0	0	0	0	0
Frome Valley	6	17	-	-	-	-	-	50	0	157	0
Little Sea	0	4	11	11	-	0	2	0	0	6	0
Wareham Meadows	0	8	-	-	-	-	69	110	0	0	0
Arne Bay	0	5	40	31	0	0	0	0	132	0	0
Brownsea Lagoon	0	17	58	20	0	3	0	0	3	0	7
Brand's Bay	0	3	71	65	46	0	0	0	1	0	0
Ower Bay	0	2	13	0	0	0	59	0	0	0	2
Furzey Island	0	1	27	20	0	0	0	0	0	6	0
Swineham	0	0	2	0	0	0	0	228	0	0	0

Table 50. Site maxima (survey maximum in red)

The largest single count was 260 birds at Upton Country Park fields in January 08, a place where they had not been noted on previous and subsequent visits. The next highest count was also out of the blue, with 228 birds at Swineham in November. The only other count from there being 2 birds in May.

Most important winter sites are Swineham Gravel Pits and for the first winter period only, Middlebere. Poole Park regularly held over 100 birds in the second winter period and Holes Bay had maximums of 73 birds in Jan 07 and Jan 08.

Distribution shifted with the onset of the breeding season with Brand's Bay, Brownsea and Arne Bay, which held no birds in January and February, becoming the most popular sites. Little Sea numbers also crept up with the arrival of breeding birds. One bird was present at Fitzworth East from February to June being joined by another just for April.

Canadas in the harbour do move around. The flock at the gravel pits had a farmyard goose for a travelling companion which was seen at Upton Country Park and Arne Bay twice in June and twice in July.

Birds regularly use Ballard Down to feed. Regularly seen flying to and from direction of the harbour mouth.

Also regularly commute between Wareham Moors and Swineham GPs and between Frome Valley and Swineham GPs.

## Barnacle Goose

One was present with 3 hybrid birds (thought to be Lesser White-fronted Goose) from January until at least 24<sup>th</sup> March at Swineham Gravel Pits. Returned in November without the hybrids.

## Red-breasted Goose

Adult from the start of the year with Brent Geese at Middlebere, also seen at Baiter on 25<sup>th</sup> Jan

## Bar-headed Goose

An adult was present in Jan and Feb associating with the Canada Geese at Middlebere.

## Egyptian Goose

A single bird spent the summer in the harbour. Initially seen at Swineham gravel pits on 22<sup>nd</sup> May, also visited Wareham Moors. Seen again on 13<sup>th</sup> Oct at Swineham gravel pits and 5<sup>th</sup> Jan 08 at the Lower Frome Valley.

## Mandarin

Rather bizarrely, a drake was seen at Holton Heath in the company of a couple of Mallard on 26<sup>th</sup> November.

## Mallard

Main winter sites Poole Park, Lower Frome Valley and Swineham GPs.

Highest count 254 at Poole Park in November. Next highest count away from this site was 236 at Swineham GPs which was rather unusual and thought to be displaced birds that were being shot at in the Frome Valley.

Next highest count 156 in the Lower Frome Valley also in November.

Holton Heath appears to be a post breeding moulting ground. On 29<sup>th</sup> June, 14 birds had arrived, rising to 28 birds by 13<sup>th</sup> July (in heavy moult), then 60 on 1<sup>st</sup> Aug, peaking at 117 birds on 31<sup>st</sup> Aug. The highest count here between Jan and end of May was 5 birds.

South Lake inter-tidal area is also some sort of post-breeding gathering area. Birds here are also all but absent in the winter months. Interestingly, here though is that numbers begin to build by the beginning of April, with 50 birds present on 22<sup>nd</sup>. It was thought that these involved some non-breeding birds that had moved out of the main wintering area of Lower Frome Valley. By 15<sup>th</sup> June, numbers had risen to 117, remaining steady until 15<sup>th</sup> July at 119 birds and rising to a max of 140 birds by 13<sup>th</sup> Sept.

Similar situation at Brand's Bay, but with lower numbers. No birds from Jan until end of March, a few in the summer, 15 by 12<sup>th</sup> June, 24 by 3<sup>rd</sup> Aug peaking at the same time as Holton with 38 birds on 3<sup>rd</sup> Sept.

Holes Bay peaked at the end of August with 117.

## Garganey

Recorded at three sites beginning with 2 drakes on 16<sup>th</sup> March at Wareham Meadows, 2 at Swineham gravel pits on 4<sup>th</sup> April and a maximum of 2 birds at Wareham Moors from 22<sup>nd</sup> April until 2<sup>nd</sup> May.

Return passage one bird Swineham gravel pits on 29<sup>th</sup> August.



## Tufted Duck

Three main areas, Little Sea (max count 54), Poole Park (max count 33), and Swineham Gravel Pits (max count 19), oddities were a female at Holes Bay on 9<sup>th</sup> Jan and a female at Middlebere on 19<sup>th</sup> Feb.

During the summer, up to 11 birds at Swineham GPs and 9 birds at Little Sea.

An increase in numbers in the second winter period.

## Eider

Three female type birds seen in Dec at Studland Bay. 3 birds spent January 08 at Stone Island Lake with 2 staying into February.

## Common Scoter

Recorded in four of the open water areas within the harbour and Studland Bay, where there was a maximum of 14 birds in December.

Recorded at Stone Island Lake on eight occasions, with a maximum of 8 in Nov with the same birds also being seen in Brownsea South twice in Nov.

Recorded at Lower Wych twice with up to 3 birds.

The only other record was a bird in South Deep on 15<sup>th</sup> July.

In 1984 / 85, the maximum count was 31 in Studland Bay, which was well down on a 1983 count of 105.

## Velvet Scoter

No birds first winter period. Second winter period, 3 birds on 5<sup>th</sup> November at Studland Bay. Two seen in Brand's Bay and on 17<sup>th</sup> could have been the same birds but 2 seen at Lower Wych on 22<sup>nd</sup> may well have been different birds. Three birds remained at Studland Bay until 12<sup>th</sup> December, with one remaining until the 16<sup>th</sup> January.

## Surf Scoter

Two Juvs at Studland Bay on 30<sup>th</sup> October.

## Long-tailed Duck

Two birds wintered in the Upper Wych and Lower Wych areas in the first winter period, last recorded 21<sup>st</sup> March. In the second winter period, 3 birds were seen on 22<sup>nd</sup> Nov at Lower Wych, rising to 5 on 22<sup>nd</sup> December. Some birds on occasion straying into South Deep, Wych Lake, Brownsea South and Round Island OW.

## Ruddy Duck

A pair at Swineham GPS on 14<sup>th</sup> February 07 and a singleton also at the gravel pits on 29<sup>th</sup> August.

## Goosander

A drake at Little Sea on 15<sup>th</sup> November.

## Black-throated Diver

Single birds at Lower Wych OW, Shell Bay, Studland Bay and Sandbanks Bay.

## Little Grebe

During winter, most important site is Holes Bay. In particular the area just north and south of the railway line on the western side with up to 27 birds recorded here.

First winter period Holes Bay highest count was 18 in February, the next highest count away from this area was 3 Little Sea and 2 at Wych Lake. One bird was regularly seen in the Furzey Island / Green Island area with the odd singles at Parkstone Bay, Swineham GPs and Lytchett Bay.

Distribution changed in March with no birds recorded at Holes Bay and an increase in numbers at Swineham GPs, Little Sea and Lytchett Bay.

In April and May, 8 birds counted at Little Sea, presumably breeders.

30<sup>th</sup> August the first bird had returned to Holes Bay, by early November the number was up to 25.

Second winter period highest counts again Holes Bay with up to 27 birds.

The next highest count away from Holes Bay was 8 at South Lake, with 4 at the mouth of the Piddle and the other 4 at the mouth of the Frome. Not straying any further out into the body of water.

On 25<sup>th</sup> Feb 08, 7 birds had already returned to Little Sea for the summer This roughly coincided with 2 birds arriving at Swineham Gravel pits, with these 2 birds already beginning to show some assemblance of summer plumage.

## Red-necked Grebe

No birds first winter period, two birds together at Studland Bay on 12<sup>th</sup> December and a singleton in Brand's Bay on 20<sup>th</sup> January 08.

## Balearic Shearwater

One flew south at Studland Bay on 24<sup>th</sup> Jan 08.

## Grey Heron

Most regularly encountered in good numbers Brownsea and Holes Bay.

Largest single count 16 birds at Brownsea in Sept and Dec, also 16 at Holes Bay on 31<sup>st</sup> July. Next highest count 12 birds at South Lake on 30<sup>th</sup> June.

Use the southern end of Studland Bay to feed in the dark, with up to 5 birds here on 7<sup>th</sup> February 08, all birds seem to fly in from the north.

Can also be heard in the dark at the harbour mouth, so perhaps feeding here also or just making their way to southern end of Studland Bay.

## Cattle Egret

Three birds flew over Swineham Point on 10<sup>th</sup> Nov.

## Moorhen

Due to its skulking nature, a very difficult bird to count unless a qualitative survey is undertaken. Highest count was 25 at Poole Park. Next highest, 21 at Brownsea Lagoon.

## Coot

Recorded at four localities within Poole Harbour.

Highest numbers first winter period were at Little Sea with 55 birds. Maximum count at Swineham gravel pits 21. One count at Wareham Meadows, involving 16 birds on 16<sup>th</sup> March were thought to be displaced birds from Swineham gravel pits.

1-3 birds Poole Park.

Also recorded in the Frome Valley with 1-2 birds and a maximum of 9 on 23<sup>rd</sup> March.

Three fold increase in second winter period at Little Sea with a maximum of 149 on 31<sup>st</sup> Dec. Numbers remained constant at Swineham gravel pits with a maximum count of 19.

## Little Ringed Plover

One on 29<sup>th</sup> March at Wareham Moors, 3 birds (2 ads and a juv) also there on 12<sup>th</sup> July and another juv on 27<sup>th</sup> August.

## Sanderling

Almost identical habits to Ringed Plover although even more site faithful. Studland West is the only low tide feeding area used in the harbour, at high tide birds will then move to Shell Bay / Pilots Point to roost or feed on the beach. If flushed from there they will use the groynes at North Haven or occasionally fly inside the harbour and alight on the *spartina* Islands at Brand's Bay but will not tend to stay for long.

First winter period a maximum of 22 birds.

During passage a few birds were seen at Brownsea Lagoon and Brand's Bay tagging on to the Dunlin. Two spring records for Brand's Bay with a max of 4 birds on 11<sup>th</sup> May and 1-3 birds seen on several occasions at Brownsea in the autumn. Second winter period highest count was 21 only 1 short of the first winter period maximum.

In 1984/5 Collins only recorded a maximum of 10 birds which were also at Studland West.

## Purple Sandpiper

Only regularly recorded at the southern end of the Sandbanks peninsula. In the first winter period only 2 birds wintered. In the second winter period up to 7 birds had arrived by December rising to 11 by the middle of February. Some of these birds were occasionally seen at Pilots Point in association with other waders at high tide but most of their time was spent on the groynes.

On 12<sup>th</sup> Feb 8 birds were seen feeding on the southern slipway oblivious to the comings and goings of the noisy ferry etc which couldn't have been more than a few feet away.

Collins had a max of 7 birds in 1984/85.

## Turnstone

Most popular area was centred around Baiter with up to 37 birds, most feeding on the beach and roosting on the pontoons or Breakwater.

Blue Lagoon had a maximum count of 35 birds and Hamworthy Beach had up to 23 birds. Again birds fed on the beaches and roosted on the jetties and pontoons.

Birds in Parkstone Bay occasionally roosted on abandoned boats.

Next highest count was Brand's Bay with 17, Parkstone Bay with 16 and Sandbanks Bay with up to 12. Studland West was also popular, with up to 9 birds and, rather surprisingly, Fitzworth East with up to 9 birds. Max of 7 birds at Brownsea Lagoon.

During passage, encountered again in ones and twos at Brownsea Lagoon, also at Shell Bay, Pilots Point and Wych Lake (single birds). On 29<sup>th</sup> August, 2 birds were seen to fly quite high west over Swineham Point.

## Curlew Sandpiper

Three spring passage records, all in May, with a single bird at Brand's Bay on 24<sup>th</sup> and up to 3 birds at Brownsea Lagoon on 18<sup>th</sup>. First Autumn passage bird on 30<sup>th</sup> August at Brownsea Lagoon, rising to a max of 8 birds there on 9<sup>th</sup> Sept. Six birds at Middlebere on 11<sup>th</sup> September, also 2 at Wych Lake on 29<sup>th</sup> September. Last birds 2 at Brownsea Lagoon on 12<sup>th</sup> October.

## Little Stint

A bird spent the first winter period in the harbour being mainly seen at Fitzworth East. Also seen at Brownsea Lagoon and Baiter.

The next record was a juv on Brownsea Lagoon on 30<sup>th</sup> August. Numbers increased until a peak of 10 birds on 11<sup>th</sup> October.

## Green Sandpiper

First winter up to 3 birds Lower Frome Valley and singles at Lytchett Bay.

An early returning bird on 22nd June at Wareham Moors.

Up to 4 birds in August at Middlebere, with 3 at Holes Bay on 30th September.

All second winter period records again at Lower Frome Valley (up to 2 birds) and Lytchett Bay (up to 3 birds).

## Common Sandpiper

In the first winter period, one was present in Holes Bay from January until 15<sup>th</sup> March at least. Spring passage was represented by singles in April at Lytchett Bay, Swineham and Swineham GPs.

Autumn passage started on June 29<sup>th</sup>, with two birds at Brownsea Lagoon, rising to 4 on 5<sup>th</sup> July, however a more remarkable series of records occurred at Goathorn. On 12<sup>th</sup> July 6 birds were seen, rising to maximum of 14 birds on 3<sup>rd</sup> August. They seemed to like to feed at the top of the beach, poking around the pebbles and litter in a similar way to Turnstone. This is probably one of the least disturbed beaches of the harbour which may contribute to its popularity although not a lot else is seen here.

Other autumn passage records included 5 at Holton Heath, 3 at Swineham with the odd bird at Green Island, Lytchett Bay, Middlebere and South Lake.

In the second winter period, 2 birds spent the winter at Holes Bay.

Curiously, it appears that Common Sandpiper was not recorded at all by Collins in his 19 month survey unless it was accidentally left out of the report.

## Spotted Redshank

First winter period up to 7 birds wintering at Holes Bay.

On 12<sup>th</sup> March, 7 at Lytchett Bay corresponded with a drop in numbers at Holes Bay.

16<sup>th</sup> April, 5 birds Brownsea Lagoon, 23<sup>rd</sup> April 5 at Wych Lake. Last bird seen on 9<sup>th</sup> May at Lytchett Bay.

First returning bird on 29<sup>th</sup> June at Brownsea Lagoon rising to a maximum of 5 there on 23<sup>rd</sup> September. Eight birds back at Holes Bay by 30<sup>th</sup> September.

Maximum count of survey was 9 birds at Lytchett Pools on 28<sup>th</sup> October. 6+ birds wintered at Holes Bay, second winter period also 2 at Lytchett Bay and 1-2 at Brownsea Lagoon.

## Greenshank

First winter period up to 8 birds using Brownsea Lagoon, seen at both low and high tides suggesting they don't venture too much further. Only inter-tidal areas to record birds in January and February, each with single birds were Lytchett Bay and Holes Bay.

Two birds at Lytchett Bay in March and a single at Ower Bay. Increase to 3 birds at Lytchett Bay in April with 2 at Wych Lake and 1 Wareham Moors.

Return passage from 30<sup>th</sup> June with a singleton at Wareham Moors. A big increase in numbers in July with up to 11 at Brownsea Lagoon and Lytchett Bay and 15 at Wych Lake, in August up to 23 at Brownsea Lagoon and 15 at Middlebere. Numbers peaked in September with 30 birds at Brownsea Lagoon with birds being recorded at no less than 14 sites.

Notable counts were 13 at Newton Bay and 11 at Wych Lake and Lytchett Pools, more unusual records included birds at Furzey, Goathorn West and Fitzworth North/Round Island

Still 28 birds at Brownsea in Oct and up to 16 at Newton Bay. Highest count in November 4 at Newton Bay.

During the second winter period, back to around 7 birds using Brownsea Lagoon. However, were noted at a few more inter-tidal sites with 4 at Lytchett Bay and Lytchett Shore, 2 Holes Bay and singletons at Wych Lake, Ower Bay Brand's Bay and Studland West.

Only occasionally seen roosting away from Brownsea Lagoon with *spartina* areas being the most popular with one or two birds seen at Brand's Bay HT42, Newton Bay HT38 and Shotover Creek HT.

Greenshank were one of the earliest birds to arrive at inter-tidal areas, sometimes long before any mud had been exposed. At many places they would walk up and down the beach foreshore foraging or else loaf in *spartina*.



At Newton Bay birds would also join noisy and impatient Redshanks at Cleavel Spit waiting for the tide to drop. Once mud was available they seemed to prefer the eastern shoreline especially north eastern. As the tide gets lower they gravitate north to Goathorn West.

## Whimbrel

Two birds spent the first winter period in the area centred around Green Island, feeding in the Green and Furzey Island areas and roosting at Furzey beach and Ower *spartina*.

Passage first noted on 16<sup>th</sup> March when 12 birds were seen at Ower Bay. High spring passage counts were 13 on 24<sup>th</sup> April at Brand's Bay, 18 on 27<sup>th</sup> at Lytchett far fields and 17 on 30<sup>th</sup> at Holton Heath.

Another small peak occurred in the middle of May with 12 at Brand's Bay and 5 at Green Island.

Difficult to say exactly when the autumn passage began due to the odd summer sightings but the next significant count was 8 birds on 21<sup>st</sup> July at Brand's Bay. Numbers peaked on 1<sup>st</sup> August with the two highest counts of the survey namely 24 birds at Holton Heath and 18 at Holes Bay.

In the second winter period one bird was seen in the Ower Bay / Fitzworth East area.

## Snipe

Almost impossible to count without flushing, but 15 were observed sitting out a particularly high tide at Upton Country Park *spartina* on 21<sup>st</sup> January 07.

Another count of 15 was achieved whilst watching another surveyor walk through Wareham Meadows on 8<sup>th</sup> February 08. Maximum of 9 at Swineham saltmarsh and 7 at Lytchett far fields.

During passage, 5 birds flew high over Middlebere on 11<sup>th</sup> September.

## Ruff

Only 2 records with 2 birds at Lytchett Bay on 30<sup>th</sup> September and a singleton at Swineham on 1<sup>st</sup> Oct. No birds seen in core winter months.

In 1984/85 up to 16 birds wintered at Wareham Meadows, with 11 in the Lower Frome Valley and 8 Lower Piddle Valley.

## Little Auk

Three records with singles at Poole Bay, Studland Bay and Hamworthy mid November.

## Guillemot

1 bird seen at Brownsea North in first winter period and a single bird in Studland Bay. A partially oiled bird was seen at Jerrys Point in February and later at Redend Point, Studland.

## Razorbill

Odd birds seen around the harbour mouth area during the winter. Up to 3 birds Studland and Poole Bay, 2 birds in Brand's Bay on 8<sup>th</sup> Jan 08 and 1 at Lower Wych on 8<sup>th</sup> October was unusual.