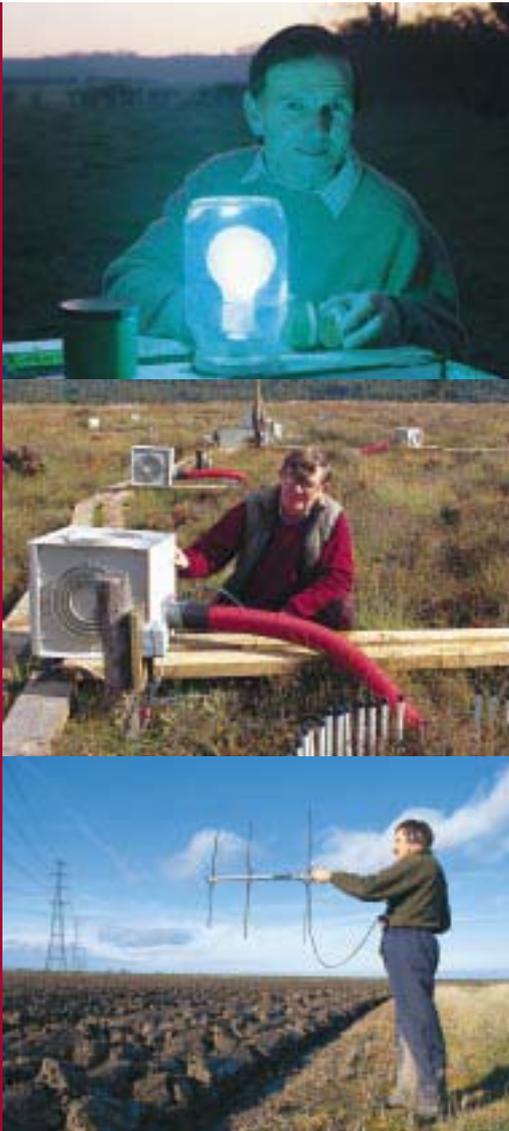


Numbers and distribution of the wintering
golden plover population in and around the
Thanet Coast & Sandwich Bay SPA 2002/2003
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Number 569

**Numbers and distribution of the wintering golden plover population in and around the
Thanet Coast & Sandwich Bay SPA 2002/2003**

Dr Martin Griffiths
Appletree Environmental

for
Kent Team, English Nature

May 2003

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Photo of golden plovers and lapwings on St. Georges fields Sandwich Bay in early January 2003.

photo taken by Mike Waterman archive@geonics for permission to Kent Messenger Group.

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Summary

As part of a review of the SPA citation the numbers and distribution of wintering golden plover *Pluvialis apricaria* were surveyed in and around the Thanet Coast and Sandwich Bay SPA in east Kent throughout the winter 2002/2003.

The survey was undertaken at **high tide** when the golden plover is feeding or roosting inland. Synchronised high-tide counts were achieved through the co-ordination of volunteer observers through the autumn/winter 2002/2003. Numbers of golden plovers at the low-tide roosts were counted separately from the high tide counts. A review of published literature was also undertaken.

The numbers of golden plovers recorded were well in excess of the criteria required to qualify under article 41 of the EU Birds Directive 1979 for SPA inclusion with over 1% of the GB wintering population with the following peak counts:

Count	Survey	EU criteria
2002/2003 survey peak high-tide count for SPA	4962	2500
2002/2003 survey peak low-tide count for SPA	10350	2500
1998/99 to 2002/03 five-year mean peak count SBBOT records	4218	2500
1998/99 to 2002/03 five-year mean peak Pegwell Bay 'roost' count	6332(SPA)	2500

Most (over 80%) of golden plovers at high tide occur in fields in and near the SPA at Sandwich Bay with the balance near the north Kent coast and Pegwell Bay. More occur just outside the SPA than within the SPA at Sandwich Bay. Recommendations are made with respect to the boundaries of the SPA to protect the remaining old pasture in the Sandwich Bay area traditionally used by the golden plover and which may be critical to their feeding during cold weather.

If most of the fields, including arable, between Deal and Pegwell Bay are included within the SPA double the population of the golden plover would be protected through the winter period.

The survey confirms the trend since the mid-1990s to increased use of Pegwell Bay as a major roost site for the golden plover. There is no evidence of significant feeding in Pegwell Bay. There is also confirmation of a trend to increased use of arable fields for feeding and roosting by golden plovers which is probably partly due to the changes in land use and loss of pasture in the area over this period.

Numbers of lapwing *Vanellus vanellus* are also high in the area of the SPA and there is a high bird diversity associated with the traditional feeding areas of pasture where golden plovers are recorded in cold weather.

Contents

Acknowledgements

Summary

1.	Introduction	11
2.	Methods	12
3.	Results	15
	3.1 The high-tide survey	15
	3.2 Literature review	27
4.	Discussion	29
	4.1 The rationale	29
	4.2 The survey	29
	4.3 The population	30
	4.4 The distribution of golden plover in the SPA.....	30
	4.5 Feeding and roosting of golden plover.....	30
	4.6 Recommendations.....	31
	4.7 Disturbance at roost	31
5.	References.....	32
	Appendices	33

1. Introduction

The golden plover *Pluvialis apricaria* winters in east Kent in numbers which represent a significant proportion of the international and national population of this species. Under the criteria for conservation of a species within European Union legislation (article 4.1 of the EU Birds Directive 1979) the golden plover receives protection within the Thanet Coast and Sandwich Bay Special Protection Area (SPA) since 1993 through regularly supporting more than 1% of the GB population.

A total of 1980 golden plover was the average peak count over the five-year period 1985/86 to 1989/90 representing 1% of the GB population for the qualification. This was based on the counts recorded by Sandwich Bay Bird Observatory Trust that are centred in the area of highest concentration of the species in east Kent (Griffiths 1992).

Since 1993 the criteria for the golden plover to qualify within an SPA have changed. As a result of a review of UK SPAs completed in 1991 by the Joint Nature Conservation Committee the golden plover was provisionally removed from the Thanet and Sandwich Bay citation due to the five year mean (based on WeBS data) falling below the new qualifying threshold of 2500. There is conflicting evidence, some anecdotal, that numbers of golden plover are well in excess of this new qualifying threshold.

As required by the Management Scheme for the North East European marine sites a scheduled review of the present numbers and distribution of the golden plover within the SPA was undertaken taking into account any additional evidence.

English Nature's objectives for the study were as follows:

- i. To review currently available information on the extent and distribution of wintering golden plover within and around the Thanet Coast and Sandwich Bay SPA.
- ii. To undertake a comprehensive survey of the wintering golden plover within the SPA to establish the average peak count over a full autumn/winter season (from the beginning of November to the end of March).
- iii. To undertake a survey of adjacent areas outside the SPA over the same timescale to determine whether they support golden plover and, if so, to establish which areas are the most important feeding and roosting grounds.
- iv. To use the above information to produce a comprehensive report and detailed annotated map showing the current number and distribution of golden plover within and around the SPA.
- v. To record lapwings, and other notable species, where possible.

The methods take into account the literature review. The main survey objectives were achieved by a high-tide strategy for field survey recording the occurrence of golden plover away from the low-tide roosts. There were also separate counts for the low-tide roosts and where golden plovers are seen within and outside the survey area. This report details the results of this survey of the present status of this species in the area and takes into account records of golden plover over the previous four winter seasons.

Recommendations are made with regard to the qualification of this species for protection within the SPA at this site taking into account numbers just outside the SPA boundaries.

2. Methods

The survey was based on co-ordinated observations of experienced volunteer observers at high tide at 13 sites around the coast from Swalecliffe to Deal on eleven occasions between 2 November 2002 and 30 March 2003. At high tide any golden plovers that might be on the inter-tidal zone at low tide are forced to seek sites elsewhere allowing for a less labour-intensive survey than surveying all low-tide areas.

The synchronization of counts reduces the risk of double counting of birds.

The locations for survey sites are indicated on figure 1. Parts of the coast are graded for the purposes of the survey: The SPA above high tide (**area 1**), areas adjacent to the SPA (**area 2**) and additional areas further inland from Area 2 if time allowed (**area 3**). These three areas are identified on figures 1 and 2.

Observers were asked by questionnaire (see appendix 1) to record golden plovers in an allotted two-hour time slot when tides are high in all survey sections from Deal round the Thanet coast to Swalecliffe, based on tide tables for Dover.

The questionnaire was designed to guide observers when recording golden plover as well as other procedures such as gaining land ownership permission where appropriate. Health and safety risk assessment and advice were also issued to participants.

Additional information was requested including land use as well as other species present, especially the lapwing, assuming this did not detract from the main objectives of the survey.

Over the same period as the high-tide counts (November-March) there were low tide counts for two sites known to hold golden plovers on the inter-tidal zone: Pegwell Bay near Sandwich Bay and Long Rock, near Swalecliffe. Only occasional golden plovers have been seen at other inter-tidal sites around the Thanet Coast and Sandwich Bay SPA in previous years and this is monitored by WeBS surveys

Supplementary counts were made outside the main survey times in the survey area as well as at outside the main survey area, eg **Ash Fields (16)**, where appropriate.

Figure 1 Thanet Coast and Sandwich Bay SPA Review
Golden Plover high tide survey sites and low tide roosts. Winter 2002/2003

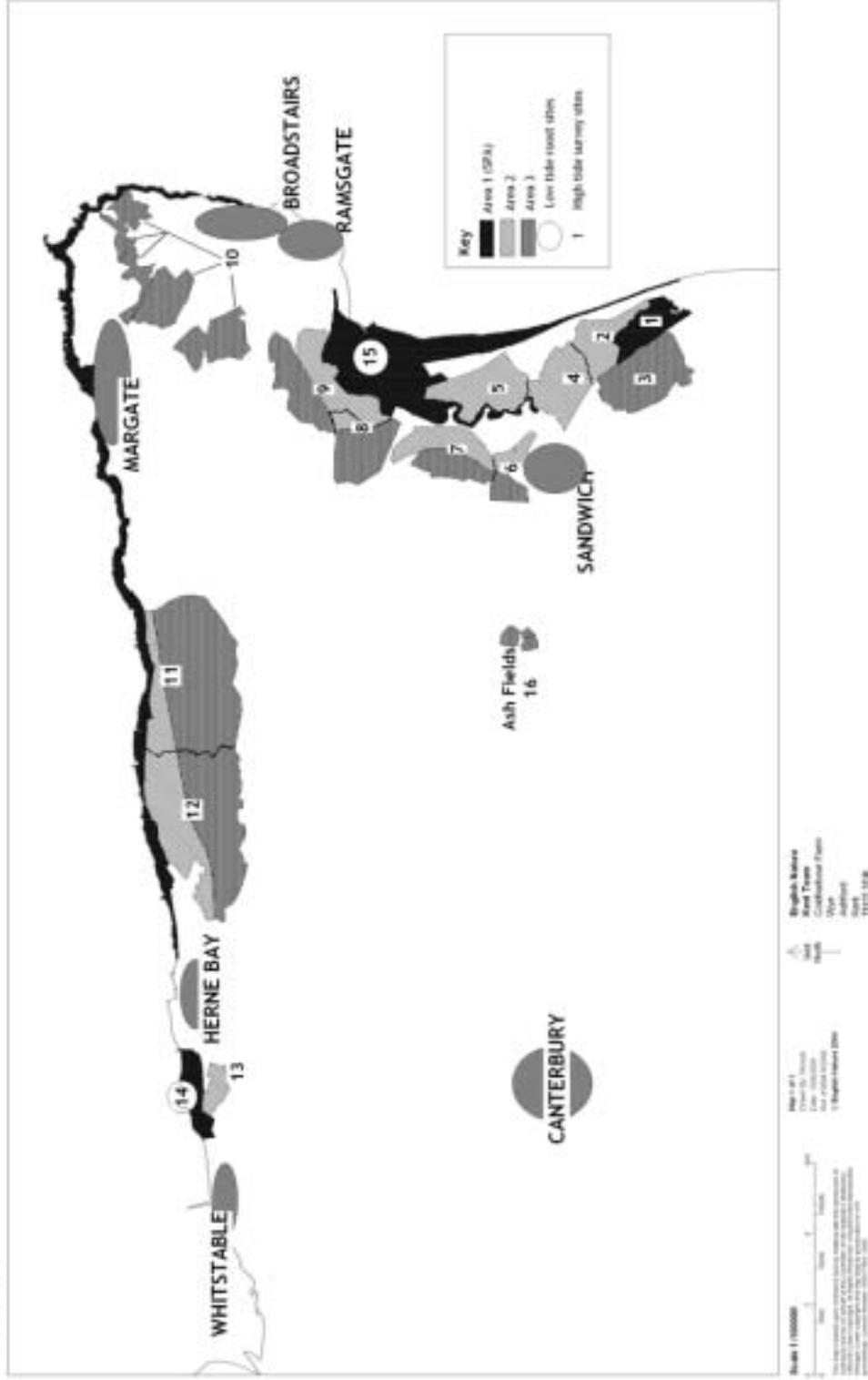
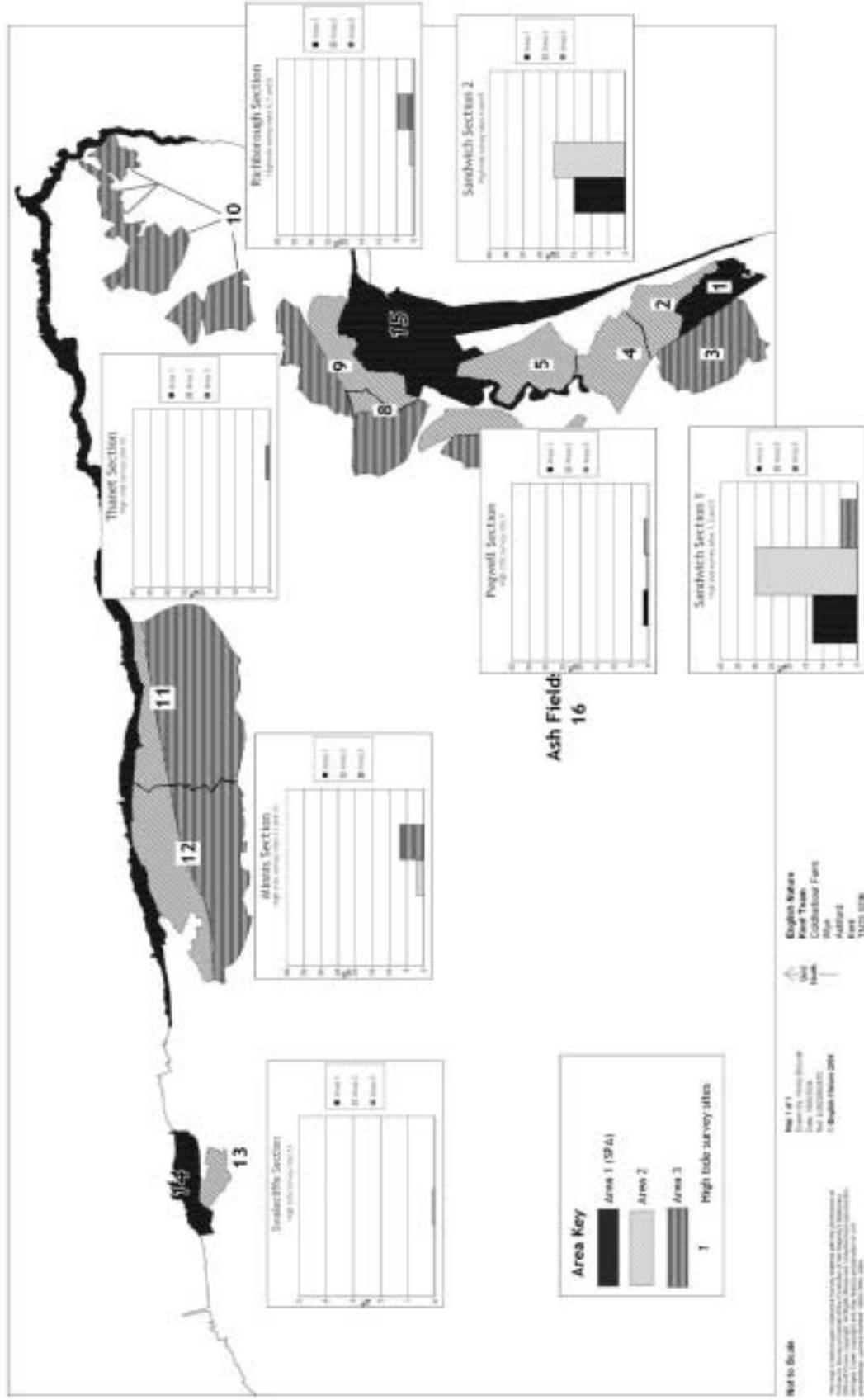


Figure 2 Thanet Coast and Sandwich Bay SPA Review
 Summary of numbers and distribution of golden plovers. Winter 2002/2003



3. Results

3.1 The high-tide survey

The sites surveyed are listed in table 1 and their locations identified in figure 1. The different areas (areas 1, 2 and 3) in each site are indicated in figures 1 and 2 as well as in figures 4 to 6 which also show the boundaries of the survey areas. Some sites include areas of SPA, most have an area 2 and some an area 3. A brief indication of the habitats at each site is included in table 1.

The main feature of these sites is the predominance of farmland with arable in Thanet and along the north Kent coast, with few hedgerows. The stage of the arable crop varies with date of planting and growth as the season progresses with a changing patchwork from stubble to plough, drilled seed, emerging crop and crop over 15cms tall.

The only significant sites with grassland are at Sandwich Bay where it is mainly old unimproved or semi-improved pasture grazed by sheep or cattle. Monks' Wall Nature Reserve (site 6) includes wet grazing land in the winter and sites 5 and 9 include saltmarsh above high-tide level.

The results of the high-tide survey are presented in table 2. The table includes supplementary counts within the Sandwich Bay area. An overall summary of the results in figure 2 emphasises the disparity between the high numbers (over 80%) at the coast at Sandwich Bay compared with small numbers on coastal Pegwell Bay, Thanet, Minnis Bay, Reculver, and Swalecliffe. In the area of Sandwich Bay 31% of these birds occur within the SPA and 53% just outside the SPA.

The peak day high-tide survey count within the SPA was **4962** on 3 January. For nine out of the eleven survey counts the numbers in the adjacent areas to the SPA (area 2) were higher than the counts in the SPA. On all but one occasion, 2 March, the numbers in area 3 were small and considerably lower than the counts in the SPA or area 2.

The numbers recorded are highest at the beginning of January and decline markedly from about the middle of February. Supplementary counts from site 4 show regular high numbers at the permanent pastures of St. George's fields from 1 December to the end of January as well as at site 1, one kilometer further south towards Deal.

Some sites have few or no golden plover. These include site 7 Richborough pastures west of the Sandwich by-pass (recently reclaimed municipal tip) as well as the wetland site 6 Monks' Wall Nature Reserve. The latter site recorded large numbers of golden plover in previous years but none during this survey period. This is probably due to disturbance from development associated with a new road in land adjacent to the reserve (although at the time of writing this report there have been several days with over 100 golden plover at this site in April 2003 - after the road development had ceased!). There were irregular numbers in the fields north of Pegwell Bay at Ebbsfleet (site 8) and small numbers at Dane Valley on Thanet (site 10).

Swalecliffe Area 3 numbers are very low apparently due to use of the field for football on the days of the survey which were usually at weekends.

The locations of peak counts at the individual sites are indicated in figures 4 to 6.

Table 1 Details of sites surveyed in 2002/2003 golden plover survey

Site 1: Sandwich Bay:	Worth Marshes: area 1: SPA old permanent pasture. area 2 adjacent to SPA: permanent pasture.
Site 2: Sandwich Bay:	Worth Marshes: area 1 SPA old permanent pasture to south area 2 Adjacent to SPA variable mixed arable to north.
Site 3: Sandwich Bay:	area 3 Hacklinge Marshes: Some old permanent pasture adjacent to SPA west of railway (Ramsar Site). Elsewhere mixed arable.
Site 4: Sandwich Bay:	St.Georges: area 2: Permanent Pasture (SSSI) adjacent to golf course ; mixed arable elsewhere.
Site 5: New Downs:	area 1: SPA old permanent pasture. Saltmarsh along the River Stour. Area 2 mixed arable with some neglected grassland on old dune ridges.
Site 6: Richborough:	Monks' Wall: area 2: Water meadows nature reserve with brackish saltmarsh alongside the River Stour: area 3: Arable (in stubble) between Sandwich by-pass and the River Stour to the north.
Site 7: Richborough:	area 2: Permanent Pasture. Recent re-claimed tip site to the south and old grazed water meadows to the north.
Site 8:Richborough:	area 2 Golf course alongside the Ramsgate Road and arable immediately to the east of the Ebbsfleet Lane.area 3:Arable to the west of Ebbsfleet Lane.
Site 9: Pegwell:	area 1: SPA saltmarsh exposed at most high tides. Area 2: Arable fields to the north adjacent to the SPA. Area 4 Arable fields further from the SPA.
Site 10: Thanet:	Dane Valley: area 3: Arable fields that have had high concentrations of golden plovers in previous years.
Site 11: Minnis Bay:	area 2: Arable fields adjacent to the SPA between the railway and the north Thanet coast. Area 3: Arable fields further away from the SPA south of the railway.
Site 12. Reculver:	area 2: Arable fields adjacent to the SPA between the railway and the north Thanet coast. Area 3: Arable fields further away from the SPA south of the railway.
Site 13: Swalecliffe:	area 2: A grass field behind a caravan park which was used as a golden plover roost in the past but which is now more disturbed as an occasional use weekend amenity football pitch.
Site 14 Long Rock:	area 1: SPA: Intertidal mud,sand and rocks exposed at low tide.
Site 15: Pegwell Bay:	area 1: SPA: Intertidal mud and sand exposed at low tide.
Site 16: Ash Fields:	Arable fields on brow of hill at the Nash turning from the Ash by-pass. A major golden plover site for some years.

Table 2. Golden plover high-tide survey counts and other counts winter 2002/2003. Thanet Coast and Sandwich Bay SPA. English Nature review

Count = co-ordinated survey dates. Other dates See Table 3 for low tide counts for Long Rocks (14) and Pegwell Bay (15)

Site	2002/03		Nov		Dec		Dec		Dec		Jan		Jan		Jan		Jan		Feb		Feb		Mar		Mar		
	Date	Designator	2nd	17th	1st	8th	13th	14th	15th	20th	3rd	4th	8th	11th	12th	17th	19th	24th	31st	2nd	16th	19th	2nd	16th	30th	16th	30th
1	Area1spa	51p	22p	0	0	145p	n/c	n/c	0	2500p	180p	n/c	650p	n/c	n/c	30p	n/c	n/c	1100p	37p	244p	550p	100p	0	0	0	0
2	Area2	0	0	0	n/c	n/c	n/c	0	n/c	0	n/c	650p	n/c	n/c	n/c	0	n/c	n/c	250p	244p	550p	100p	0	0	0	0	
3	Area1spa	300p	300p	0	n/c	n/c	n/c	0	n/c	4000p	n/c	n/c	n/c	n/c	n/c	300p	n/c	n/c	n/c	0	0	n/c	0	0	0	0	0
4	Area2	20	0	0	0	n/c	n/c	1500	n/c	400	n/c	n/c	n/c	n/c	n/c	3000	n/c	n/c	n/c	4400	103	n/c	22	0	0	0	0
5	Area3	0	75	4	n/c	n/c	n/c	15	n/c	0	n/c	n/c	n/c	n/c	n/c	0	n/c	n/c	n/c	50	n/c	n/c	1420	0	0	0	0
6	Area2	110	1451	500p	3450p	2500p	1700p	800p	3800p	1850p	1000p	1250p	20p	180p	3000p	1	850p	n/c	n/c	16p	223	n/c	0	1	0	0	0
7	Area1spa	624s	22s	750s	n/c	n/c	n/c	1650p	n/c	962p	n/c	n/c	n/c	n/c	n/c	350p	n/c	n/c	n/c	253p	117p	n/c	27p	0	0	0	0
8	Area2	744	164	0	0	n/c	n/c	0	n/c	47	n/c	n/c	n/c	n/c	n/c	0	n/c	n/c	n/c	78	0	n/c	200	389	460	0	0
9	Area3	0	0	0	n/c	n/c	n/c	0	n/c	0	n/c	n/c	n/c	n/c	n/c	0	n/c	n/c	n/c	0	0	n/c	0	0	0	0	0
10	Area2	0	0	0	0	n/c	n/c	0	n/c	0	n/c	n/c	n/c	n/c	n/c	0	n/c	n/c	n/c	0	0	n/c	0	0	0	0	0
11	Area3	0	150	18	n/c	n/c	n/c	30	n/c	0	n/c	n/c	n/c	n/c	n/c	21	n/c	n/c	n/c	0	0	n/c	0	0	0	0	0
12	Area1spa	0	580	21	n/c	n/c	n/c	0	n/c	0	n/c	n/c	n/c	n/c	n/c	0	n/c	n/c	n/c	610	0	n/c	0	0	0	0	0
13	Area2	0	0	0	136s	n/c	n/c	570s	n/c	0	n/c	n/c	n/c	n/c	n/c	0	n/c	n/c	n/c	0	0	n/c	0	0	0	0	0
14	Area3	106	0	0	0	n/c	n/c	0	n/c	0	n/c	n/c	n/c	n/c	n/c	0	n/c	n/c	n/c	48	0	n/c	0	0	0	0	0
15	Area1spa	25	60	40	n/c	n/c	n/c	50	n/c	15	n/c	n/c	n/c	n/c	n/c	220	n/c	n/c	n/c	3	0	n/c	9	0	0	0	0
16	Area2	142	43	0	n/c	n/c	n/c	n/c	n/c	174	n/c	n/c	n/c	n/c	n/c	0	n/c	n/c	n/c	0	0	n/c	30	0	0	0	0
17	Area3	0	0	605	n/c	n/c	n/c	n/c	n/c	0	n/c	n/c	n/c	n/c	n/c	0	n/c	n/c	n/c	6	0	n/c	0	0	0	0	0
18	Area2	40	0	0	n/c	n/c	n/c	n/c	n/c	0	n/c	n/c	n/c	n/c	n/c	66	n/c	n/c	n/c	0	0	n/c	0	0	0	0	0
19	Area3	525	25	46	n/c	n/c	n/c	n/c	n/c	340	n/c	n/c	n/c	n/c	n/c	0	n/c	n/c	n/c	18	36	n/c	0	0	0	0	0
20	Area2	0	0	12	n/c	n/c	n/c	9	n/c	0	n/c	n/c	n/c	n/c	n/c	0	n/c	n/c	n/c	1	0	n/c	0	0	0	0	0
21	Total Area1spa	975	344	886	145	n/c	n/c	2220	n/c	4962	2500	180	650	n/c	680	n/c	n/c	n/c	1100	290	137	124	27	0	0	0	0
22	Area 2	1165	1808	530	3450	2500	1700	2339	3800	2471	1000	1250	670	180	3000	3088	850	250	4787	876	100	252	390	460	0	0	0
23	Area 3	550	740	716	n/c	n/c	n/c	65	n/c	379	n/c	15	n/c	n/c	n/c	810	n/c	n/c	n/c	687	36	n/c	1429	0	0	0	0
24	Total	2685	2892	2132	3595	2500	1700	4624	3800	7812	3500	1445	670	830	3000	4578	860	1350	5764	1049	224	1708	390	460	0	0	0

Count p = pasture. s = saltmarsh. Other counts = arable.

Figure 3 Thanet Coast and Sandwich Bay SPA Review
Golden Plover highest counts, Sites 1, 2 and 3. Winter 2002/2003.

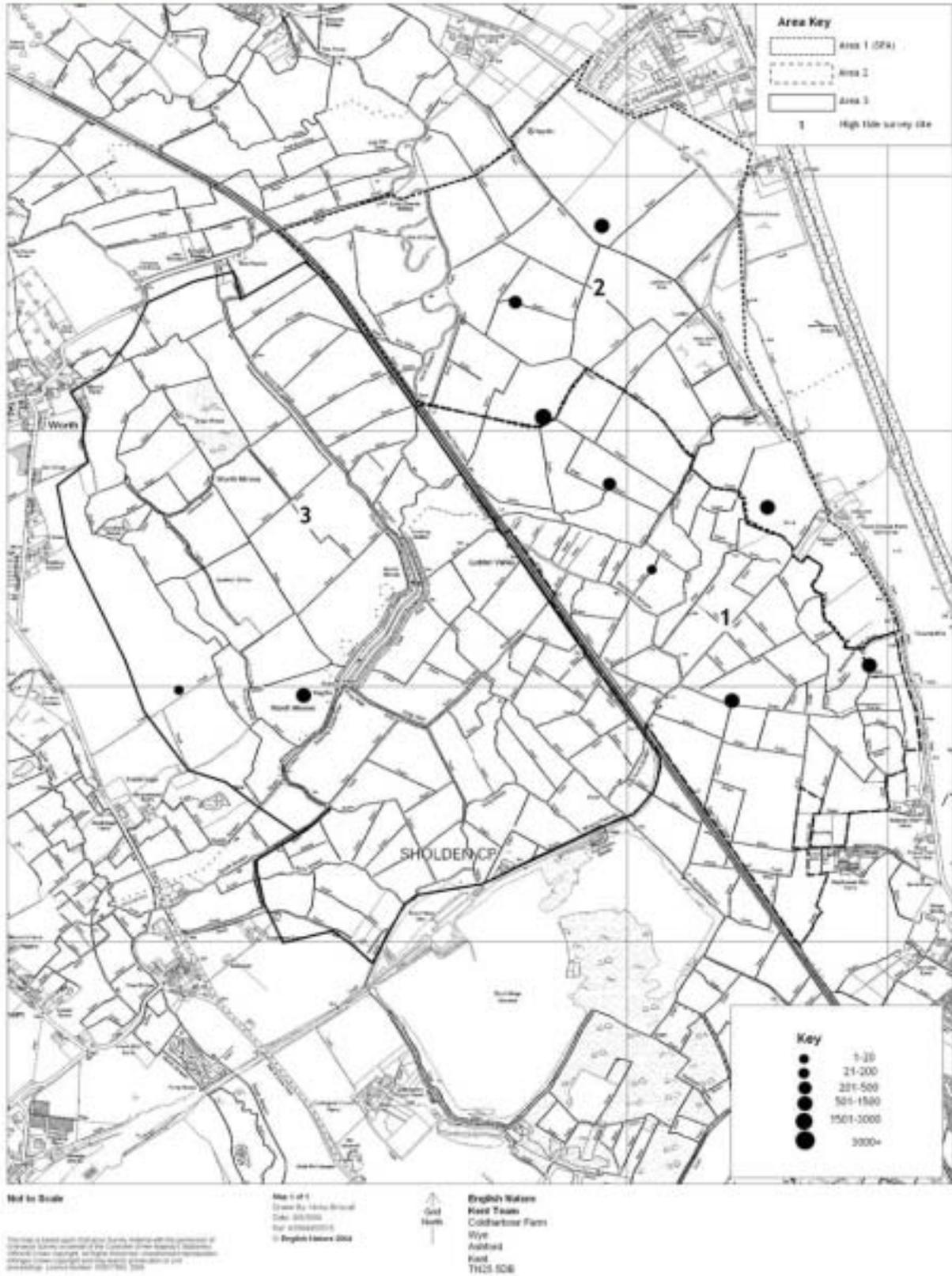
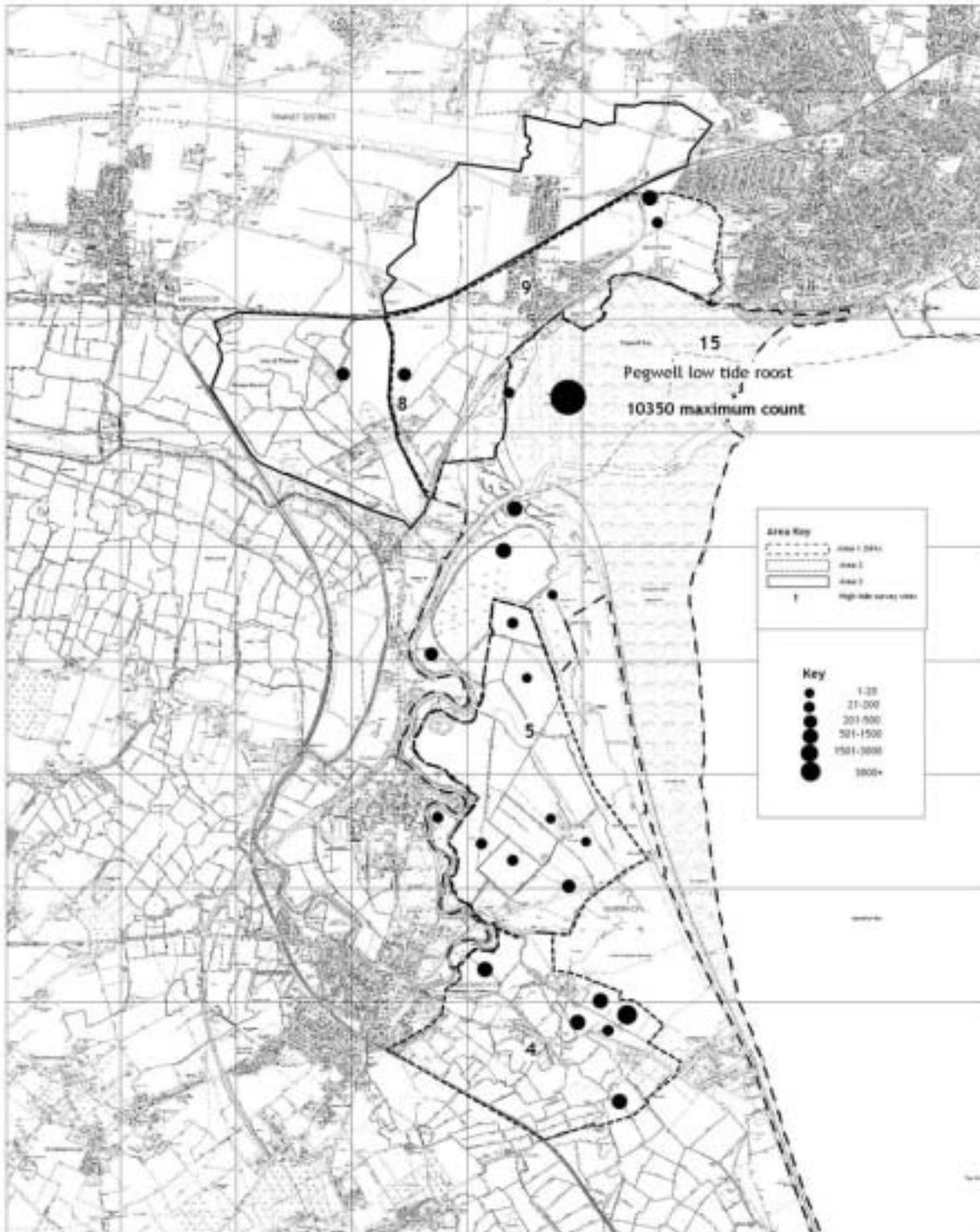


Figure 4 Thanet Coast and Sandwich Bay SPA Review
 Golden Plover highest counts, sites 4, 5, 8, 9 and 15. Winter 2002/2003



Not to scale

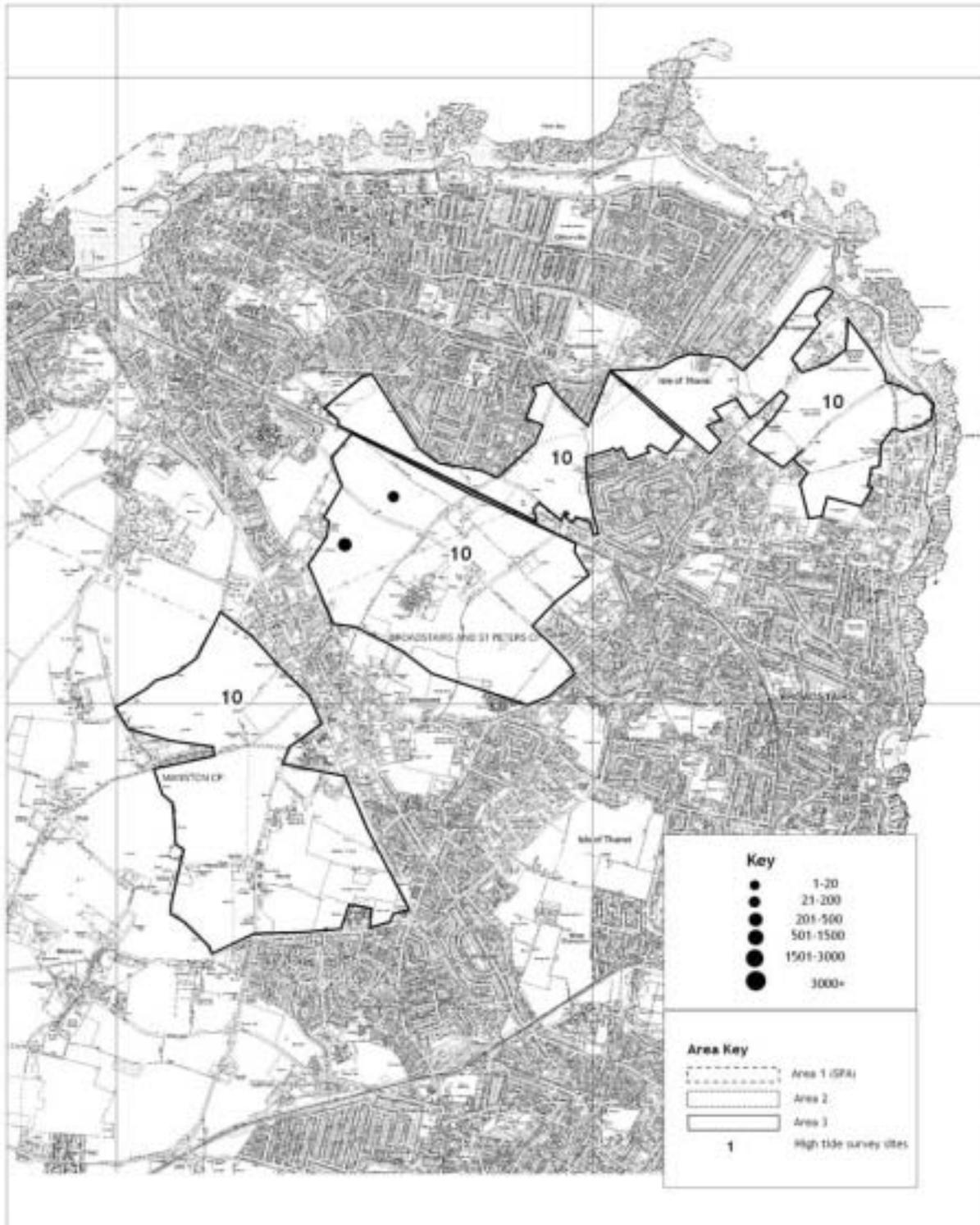
This map is a general guide and should not be used as a substitute for a detailed map. It is intended for general information only and does not constitute a guarantee of accuracy. English Nature is not responsible for any errors or omissions in this map.

Map 1 of 1
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Grid
 North

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 Weir
 Ashford
 Kent
 TN25 5DB

Figure 5 Thanet Coast and Sandwich Bay SPA Review
Golden Plover highest counts, site 10, Winter 2002/2003.



Not to scale

Thanks to the Thanet District Council for the provision of the data for the production of this map. The map is a reproduction of the original map and is not intended to be used as a substitute for the original map. The map is a reproduction of the original map and is not intended to be used as a substitute for the original map.

Map 1 of 1
Scale: 1:10,000
Date: 1/1/2004
By: English Nature



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Kent Team
Colchester Farm
Wye
Aylford
Kent
TN11 5DB

Figure 6 Thanet Coast and Sandwich Bay SPA Review
 Golden Plover highest counts, sites 11, 12, 13 and 14. Winter 2002/2003

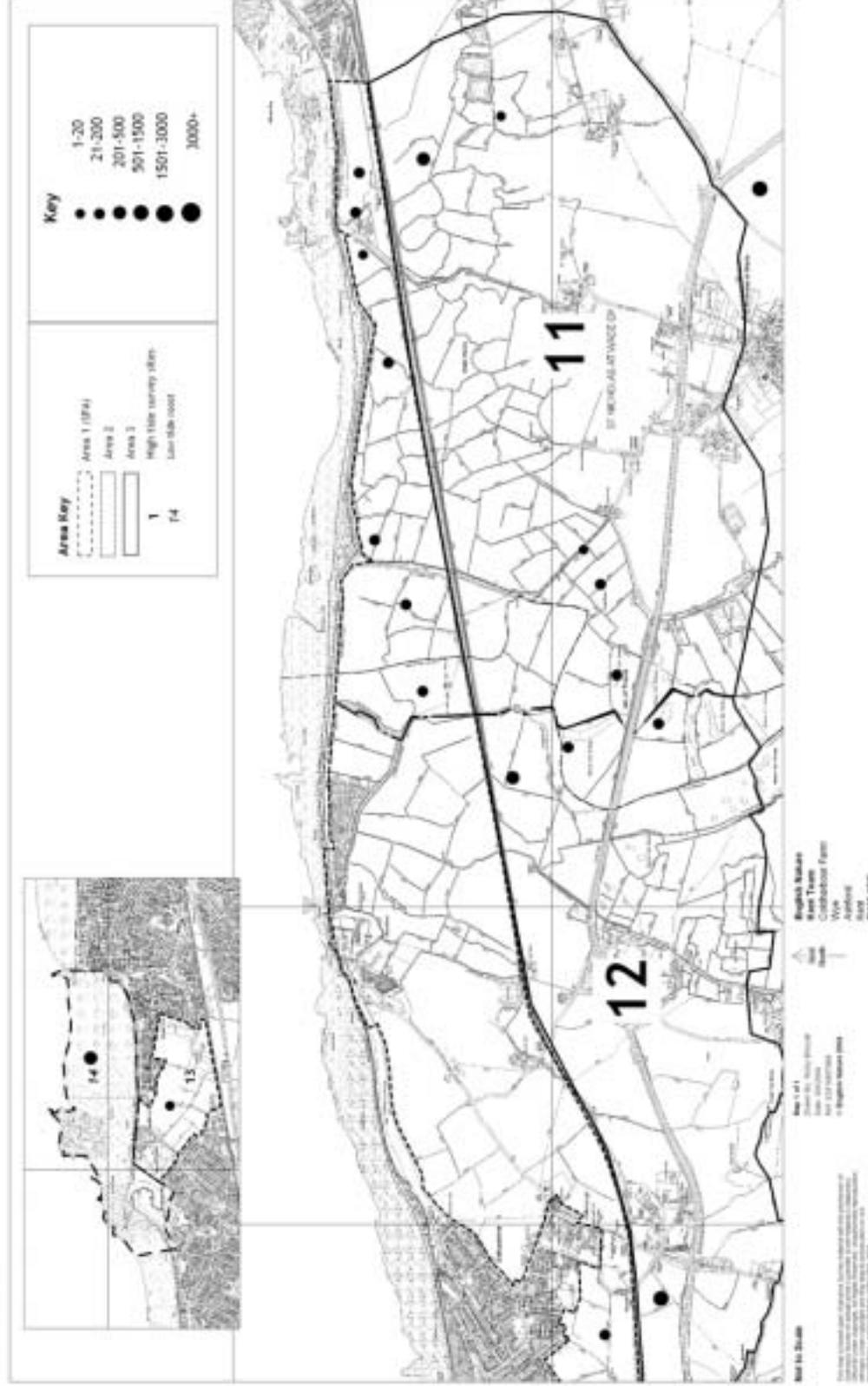
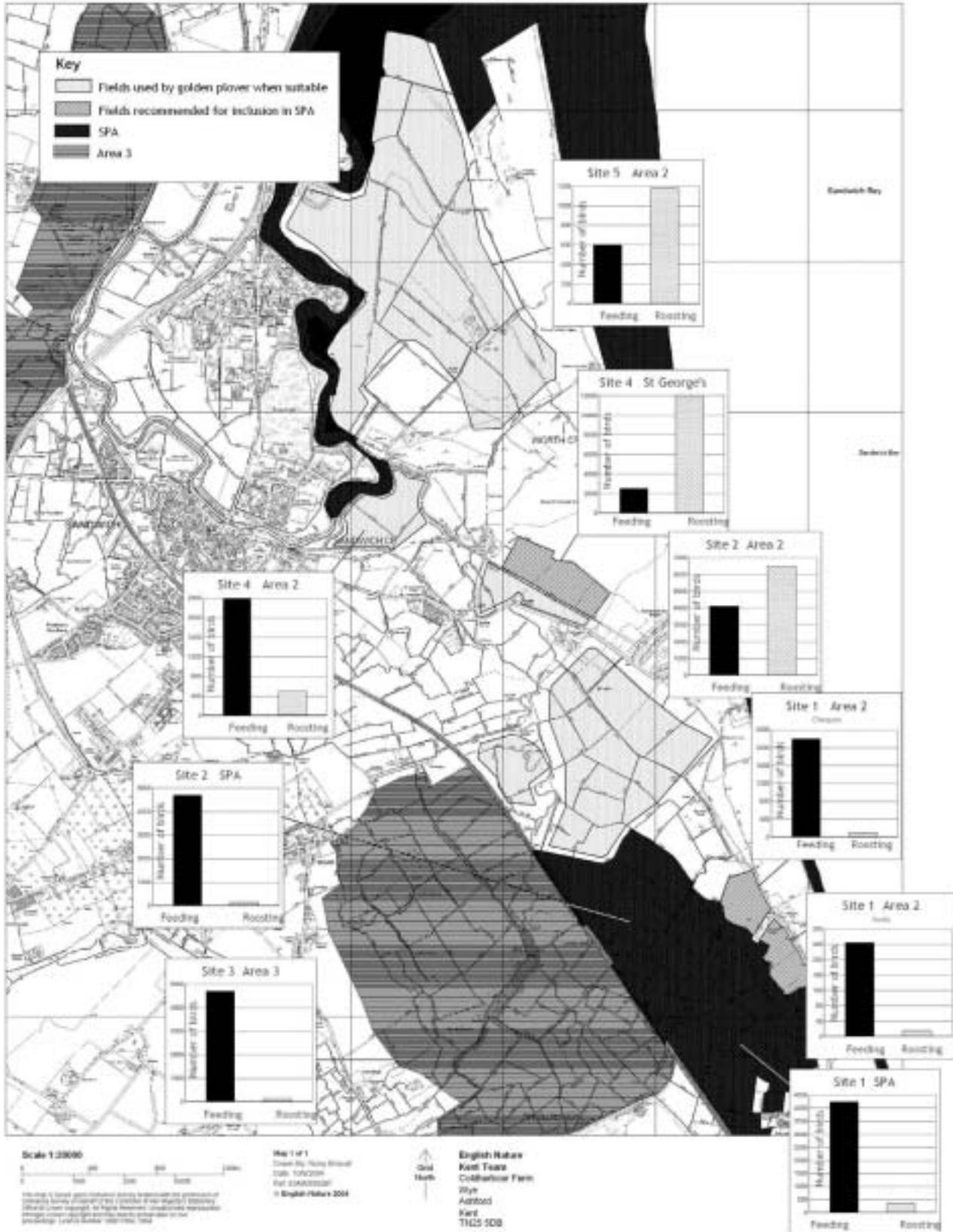


Figure 7 Thanet Coast and Sandwich Bay SPA Review

Numbers and distribution of feeding and 'roosting' golden plovers within and near the SPA at Sandwich Bay



Feeding and roosting golden plover inside and outside the SPA

Most flocks of golden plover have some birds feeding and some roosting at the same time. The main period when they seemed to be all feeding was when the weather was cold with a hard frost inland in early January. This was when large numbers were feeding on the old permanent grass of the SPA at site 1 towards Deal.

Figure 7 illustrates the proportions of golden plovers feeding and roosting in the Sandwich Bay area where the highest concentration of golden plover is at high tide. A large proportion of the Pegwell Bay roosting birds may move to these fields to feed at high tide.

Sandwich Bay is also the area where there is most concern to protect fields of permanent pasture where significant numbers of golden plovers traditionally feed compared with the transient occurrence of arable fields.

Feeding behaviour

The main habitats where golden plovers were recorded each month during the high-tide survey are indicated in table 2 which is summarised below:

Date	Nov	Nov	Nov	Dec	Dec	Dec	Jan	Jan	Jan	Feb	Feb	Feb	Mar	Mar	Mar
Area	spa	2	3	spa	Site 4 area 2 & Site 1 SPA	3	spa	2	3	Spa	2	3	spa	2	3
Pasture	673	0	0	1795	12750	0	10072	8150	0	551	1264	0	27	0	0
Saltmarsh	646	0	0	1456	0	0	112	0	0	0	0	0	0	0	0
Arable	0	2297	1881	0	1609	777	0	3708	1189	0	4872	723	0	1101	1429
Total	1319	2297	1881	3251	14359	777	10184	11858	1189	551	6136	723	27	1101	1429

This table illustrates some important points:

1. There is an increased use of old pasture for feeding in December and January especially at Worth marshes, Deal (sites 1 and 2) when weather is cold.
2. Much of this change to use of pasture includes 'roosting' birds at St.George's fields (site 4 at Sandwich Bay).
3. Arable is a habitat for many birds at all times but less so in late December and early January probably due to the change to pasture feeding.

Overall more golden plover were found to be feeding rather than 'roosting', whatever the habitat, as shown by the percentage of numbers reported feeding each month in the summary table below:

Percentage of golden plovers feeding (rather than roosting) in different habitats each month 2002/2003

	Nov	Dec	Jan	Feb	Mar
pasture	82	77	69	80	n/a
saltmarsh	0	n/a	0	n/a	n/a
arable	66	81	73	85	65

Important fields outside the SPA

An important consideration is whether fields just outside the SPA hold significant populations of golden plovers which would benefit from the protection afforded by inclusion within the SPA.

Three fields with important numbers of birds are just outside the SPA. These are identified in figure 7. St.Georges fields are perhaps the most important for numbers of ‘roosting’ golden plover but also for large numbers of lapwing (see photograph at front of report). Although the field is an SSSI it is a kilometre from other fields in the SPA.

The other two fields are just adjacent to the SPA at site 1. They are part of the complex of old fields of permanent pasture that are not only good for feeding golden plover when the weather is cold but also have a high variety of other species reported by the recorder for this site:-

2 November	17 November	2 December	16 February	2 March
curlew 9	curlew 13	curlew 17	curlew 41	curlew 31
peregrine falcon	grey partridge 15	ruff 2 lapwing 230	dunlin 7 lapwing 325	turnstone 5
mallard	lapwing 2000	dunlin 5	snipe 24	seal 62
Teal		snipe 6	turnstone 6	snipe 3
wigeon	30 March linnet 1	mallard 4	meadow pipit 18	meadow pipit 16
lapwing 525	lapwing 10	teal 26	fieldfare 30	skylark 14
	meadow pipit 17	skylark 14	stonechat 2	fieldfare 34
16 March	skylark 16	hen harrier 1	teal 62	grey partridge 2
lapwing 24	teal 6	sparrowhawk 1		
white wagtail 1	curlew 2	meadow pipit 16		
skylark 7	stock dove 4			
curlew 10	grey partridge 4	fieldfare 55		
grey heron 7	reed bunting 2	starling 250		
turnstone 3		stonechat 1		

Counts of golden plovers at Ash fields (Site 16)

Ash fields are an inland site three miles from the coast where large numbers of golden plover are recorded ‘roosting’ and feeding in November and December 2002 as in at least two previous years. Apart from lapwing, ruffs *Philomachus pugnax* were frequently present. The location of the site is marked on figure 1 as site 16. The fields, mainly one, were in winter wheat and the following counts are supplementary to the high-tide survey counts:

Counts of golden plover and other birds at Ash fields 2002

	29/10	04/11	17/11	28/11	03/12	05/12	08/12	09/12	20/12
golden plover	625	450	2050	998	4300	2350	450	140	3800
(feeding)	250	405	1750	760	50	350			
(roosting)	375	45	300	2380	4250	2000		140	3800
lapwing	990		490	2250	5005	300	850		3000
ruff	10		2		11	4			

Ash fields golden plovers remained on that site at low tide when golden plovers were roosting at Pegwell Bay on the three occasions (29/10; 04/11; 03/12) when it could be checked, suggesting they were not always part of the same flock as the ones at Pegwell Bay. On one high-tide survey day (17/11) they were present during the time of the survey suggesting they were not always part of the same flock as those present at Sandwich Bay. The site at Ash fields is relatively high and open suggesting part of the reason for the attraction of the site may be the visibility for detection flying predators. Merlin *Falco columbarius* were seen on two occasions.

Lapwings recorded during the high-tide golden plover survey

		Date										
		Nov	Nov	Dec	Dec	Jan	Jan	Feb	Feb	Mar	Mar	Mar
		2	17	1	15	3	19	2	16	2	16	30
site	area											
1	spa	525	0	n/c	n/c	81	320	230	n/c	n/c	24	10
	2	p	0	n/c	n/c	n/c	n/c	n/c	n/c	n/c	n/c	n/c
2	spa	p		n/c	n/c	n/c	150	n/c	n/c	n/c	n/c	n/c
	2	p	2000	n/c	n/c	n/c	800	74	n/c	100	n/c	n/c
3	3	0	150	n/c	360	n/c	130	1100	n/c	450	75	n/c
4	2	595	1000	n/c	70	n/c	124	897	128	n/c	n/c	n/c
5	spa	p	p	2500	800	650	1000	210	n/c	27	n/c	9prs
	2	p	p	n/c	n/c	n/c	n/c	120	n/c	200	32	n/c
6	2	0	0	n/c	n/c	n/c	n/c	2500	n/c	40	4	n/c
7	2	0	0	n/c	n/c	n/c	130	n/c	n/c	n/c	n/c	n/c
8	2	0	590	2	270	n/c	21	n/c	n/c	n/c	n/c	n/c
	3	0	1250	n/c	n/c	n/c	590	n/c	n/c	n/c	n/c	n/c
9	1	50	75		n/c	n/c	n/c	n/c	130	n/c	n/c	n/c
	2	0	0	n/c	n/c	n/c	n/c	n/c	n/c	n/c	n/c	n/c
	3	370	0	250	n/c	n/c	1110	n/c	n/c	1	n/c	n/c
10	3	150	100	120	n/c	280	450	350	370	300	n/c	n/c
11	2&3	454	n/c	n/c	n/c	1180	660	n/c	n/c	n/c	n/c	n/c
12	2&3	360	n/c	n/c	n/c	354	n/c	220	82	n/c	n/c	n/c
12	2		n/c	n/c	n/c	3512	550	48	201	n/c	n/c	n/c
	3		n/c	n/c	n/c	3005	n/c	444	483	n/c	n/c	n/c
13	1	0	37	n/c	81	66	n/c	n/c	n/c	n/c	n/c	n/c
	2	n/c	n/c	n/c	n/c	n/c	n/c	n/c	n/c	n/c	n/c	n/c

Low-tide results

Most of these counts are by courtesy of Mr Phil Milton who took part in the 2002/2003 survey and who records, on a regular basis, the birds of Pegwell Bay which is within the Thanet and Sandwich Bay SPA. His records in appendix table 1 are from the start of his recording at the site in 1998 to 2003.

These Pegwell Bay counts are low tide counts of golden plover ‘roosting’ on the intertidal mud. The location is identified in figures 1, 2 and 4. Only rarely are golden plover seen feeding while at the Pegwell ‘roost’. From table 3 it is clear that numbers of golden plovers have been increasing over the period of Mr Milton’s records at this site since the mid-1990s. The maximum count at Pegwell Bay roost during the 2002/03 survey was **10,350** golden plover.

Peak monthly counts of golden plover at Pegwell Bay

	Nov	Dec	Jan	Feb	Mar	Peak
1998/99	nil	2309	2500	1952	20	2309
1999/00	5000	1556	3178	3760	825	5000
2000/2001	3178	3766	3250	8000	1800	8000
2001/2002	5000	6000	5000	3658	572	6000
2002/2003	4960	10350	5810	7100	1170	10350

From the above monthly peak counts **the five year peak mean is 6332** birds which is about **2.6% of the British wintering population!** This would allow the species to qualify within the existing SPA boundary under stage 1.1 of the SPA selection guidelines (JNCC,1999) and article 4.1 of the EU Birds Directive 1979.

Disturbance to golden plover at Pegwell Bay

There is some concern that bait diggers are disturbing the golden plover roosting at Pegwell Bay. Phil Milton reports that some bait diggers have been coming so close to the roosting area that the golden plover have left the site. It is hoped that a voluntary code of conduct for bait diggers already initiated by English Nature and Thanet District Council will benefit the golden plover at Pegwell Bay Also as there are other potential sources of disturbance such as dog walkers and kite surfers a questionnaire has been distributed to establish the significance of all types of disturbance to the SPA birds.

Low-tide counts: Long Rock, Swalecliffe

Geoff Burton recorded golden plovers at low-tide on only one occasion (17 November) during the survey when he counted 68 birds at Long Rock. However he sent the following records for other dates over the period November to March 2002/2003..

Numbers of golden plovers at Long Rock intertidal zone winter 2002/2003

	November						December				January			Feb	March	
Date	8	19	22	25	26	30 th	9	10	11	13	7	11	21	8	15	20
No.	120	54	5	464	535	2	40	500	75	8	7	33	145	105	15	56

Lapwings recorded at low-tide roost

Appendix Table 2 presents the numbers of lapwing recorded by Phil Milton during the low-tide ‘roost’ counts in Pegwell Bay from 2002 to 2003. The maximum recorded is 11,980 on 25 December 2002.

3.2 Literature review

GRIFFITHS, M.E. 1992. *Thanet Coast Wintering Wader Survey 1991/92*. Sandwich Bay Bird Observatory Trust for English Nature

This English Nature report on a survey of the wintering waders along the coast from Swalecliffe to Deal was part of local conservation strategy and to provide information for the proposed candidate SPA. Included was a survey of the golden plover numbers and distribution in the Sandwich Bay area from five co-ordinated counts from November to March. Overall numbers built up from around 500 in March to about 2000 from early December until the end of February when numbers declined sharply.

The field distribution of birds is similar to the 2002/2003 survey with pasture fields preferred later in the winter for feeding.

Of particular interest are the flocks of up to 104 golden plover recorded 'roosting' on the shore at Long Rock Swalecliffe in the 1991/92 wader survey although none were recorded at Pegwell Bay. These would come later.

Sandwich Bay Bird Observatory Trust records

Sandwich Bay Bird Observatory Trust recording area includes the section of coast extending from Ramsgate Harbour to about a mile north of Deal. Inland the recording area extends to the railway to the south and to the River Stour to the east. This recording area includes the entire SPA south of Thanet but is just short of the site 1 SPA referred to in this report. This means that golden plover records in the past ten years have not included Site 1.

Despite not including site 1 in the records the five year peak counts in the table below give the **5-year peak mean of 4218 up to 2002/2003. This is well in excess of 2500 required to qualify for SPA status.** These counts are equivalent to high-tide counts because they do not include Pegwell Bay low-tide counts.

Golden Plover : Sandwich Bay Monthly Peak Counts (Courtesy Sandwich Bay Bird Observatory Trust Records)

Month	November	December	January	February	March	peak count	5yr running mean
1991/92	770	1800	1650	1265	117	1800	
1992/93	1200	800	500	2600	2021	2600	
1993/94	1200	1900	1500	500	1000	1900	
1994/95	600	1000	2400	2000	3536	3536	
1995/96	1430	2500	2400	1412	843	2500	
1996/97	1126	1570	285	485	73	1570	
1997/98	1594	3000	1200	3000	2	3000	2501
1998/99	1125	1960	860	2120	20	2120	2545
1999/2000	950	3120	2140	393	278	3120	2462
2000/01	2344	2740	3700	3700	1000	3700	2702
2001/02	4889	1314	2447	1240	286	4889	3366
2002/03*	2034	3965	7259	5078	1669	7259	4218

* = present survey

The above counts do not include Pegwell Bay counts at low tide.

Kent Ornithological Society Records

Data provided by Tim Hodge of the KOS on computerized data sheets for Kent for 1990 to 2002 did not add significantly to the survey beyond Hodge's own paper (Hodge 1997) below.

The results of the January 1996 KOS Golden Plover survey (Hodge 1997) show a drop to 16,390 golden plover - 84% of the numbers recorded in the previous county survey in 1977/78 (19,580) although a major flock usually counted at Sandwich Bay was not recorded at that weekend. One major conclusion is the change in distribution of golden plover within the county from lowland pasture (most lost in the last 20 years due to arable conversion) to ploughed fields. In 1996 the highest count in Kent was 3500 on ploughed fields at Dane Valley on Thanet where there were no more than 220 in the 2002/2003 survey. It is interesting to note that despite the drop in permanent grassland it is still recorded as the main habitat with 44.03% of golden plover records although mainly outside the area of the 2002/3 survey.

Lloyd Bore Landscape Architects report, June 2000

This report is the result of an Environmental Assessment for the impact of the proposed widening of the A256 Sandwich to Lord of the Manor road on sites of wildlife interest. During the survey, which covers the period 1998 to 1999, some general observations were made of numbers of golden plovers. These observations are consistent with the data analysis of this report that golden plovers may occur in fields north of Pegwell Bay.

The Wildfowl and Wetlands Trust has supplied Wetland Bird Survey (**WeBS**) data on the waders recorded in the Thanet Coast and Sandwich Bay SPA, from winters 1995 to 1999. The records of golden plovers occur from 1996 are presumed to be for Swalecliffe and Pegwell Bay but the data are not specific and the counts do not exceed those we already have for Pegwell Bay from 1999 recorded by Phil Milton which are far higher. Also WeBS counts are for wetlands (mainly intertidal) and do not include counts on farmland inland from the coast such as in the 2002/2003 survey.

BTO golden plover and farmland survey. Winter flocks of golden plovers that occur on Thanet farmland are counted for the British Trust for Ornithology by Ken Lodge and Dave Sutton including winter 2001/2002 as part of an on-going study. The data were provided for this survey courtesy of Simon Gillings of the BTO. Part of the survey area overlaps with about half the Minnis section of the 2002/2003 survey of this report. The results support the results of the present survey in demonstrating that the occurrence of golden plover responds on a daily or weekly basis to changes in the availability of food in different fields as they become ploughed or planted. Generally the flock size recorded was similar to those in the 2002/03 survey.

A picture is emerging of a considerable amount of change taking place in the distribution of this species over the years largely reflecting changes in agricultural practices and the flexibility of the golden plover in exploiting these changes.

4. Discussion

4.1 The rationale

Thanet Coast and Sandwich Bay SPA qualifies as an SPA under article 4.1 of the EU Birds Directive (1979) by regularly supporting 'Greater than 1% of the GB wintering population of golden plover *Pluvialis apricaria*' as well as Turnstones *Arenaria interpres* and breeding Little Tern *Sterna albifrons*. During the five year period 1985/86-1989/90, an average peak count of 1980 golden plover was recorded, representing 1% of the GB wintering population. Part of the basis for the qualification within the SPA for the 1994 designation was the 1991/92 Thanet Coast Wintering Wader Survey (Griffiths 1992) and counts of golden plover recorded over the five year period by Sandwich Bay Bird Observatory Trust which achieved the required mean peak count of 1980 golden plovers for the Sandwich Bay area including birds from Minnis Bay area and Swalecliffe.

Since 1993 the criteria for the golden plover qualifying under an SPA have changed. As a result of a review of UK SPAs completed in 1991 of the Joint Nature Conservation Committee the golden plover was provisionally removed from the Thanet and Sandwich Bay citation due the 5 year mean (based on WeBS data) falling below the new qualifying threshold of 2500. There is, however, additional evidence, some anecdotal, that numbers of golden plover are well in excess of this new qualifying threshold.

Part of the evidence for the above JNCC decision was based on WeBS data which does not take into account numbers on farmland away from the intertidal area. This additional evidence that numbers were higher supported the decision to commission this scheduled survey as a requirement of the Management Scheme for the North East Kent European marine sites.

4.2 The survey

During the 1991/92 Thanet Coast Wintering Wader Survey survey up to 104 golden plovers were counted on the mud at low tide on three dates at Long Rock near Swalecliffe but none were recorded in Pegwell Bay. Since then increasing numbers of golden plovers have been recorded roosting on mud in Pegwell Bay at low tide. This increased population is likely to make a big impact on the number of birds in the SPA and consequently the likelihood that the qualifying number could be achieved.

In the present 2002/2003 survey there are two sources of data that are able to be used to provide a count of the population of golden plover for the SPA review.:

1. The field survey produces a population count for the SPA separate from the roosting population in Pegwell Bay which can be used in conjunction with records from Sandwich Bay Bird Observatory Trust to provide a five year peak mean for the SPA.
2. Counts of the roosting population at low tide in Pegwell Bay produces a population which can be used in conjunction with records of this population over the previous four years to provide a five year peak mean for the SPA.

The population in and around the SPA are counted by a co-ordinated synchronised survey at **high tide** at 13 sites around the coast using experienced volunteer observers on eleven

occasions through the autumn /winter period 2002/2003. These counts are collated and analysed as indicated above. There are also regular counts of the numbers of golden plover 'roosting' in Pegwell Bay at **low tide** throughout this period which are collated and analysed in conjunction with records for the previous four years.

4.3 The population

There is clear evidence that numbers of **golden plovers are well above the new criteria**. The results of the co-ordinated survey provides a peak high-tide count for the SPA in winter 2002/2003 of **4962** golden plover. This count provides a five year peak mean using the SBBOT records of **4218** golden plover for the Sandwich Bay area which is **well in excess of the 2500 required**.

The results for the low-tide count from Pegwell Bay provides a peak count of **10,350** golden plover for the SPA which when used in conjunction with previous years provides a five year peak mean of **6332 - well over double the 2500 required to meet the criteria for SPA qualification**.

4.4 The distribution of golden plover in the SPA

There is a marked concentration of golden plovers (over 80%) in the area of Sandwich Bay. 31% of these birds occur within the SPA and 53% just outside the SPA. The SPA birds are associated with the amount of traditional golden plover habitat of permanent pasture in that area which may provide a greater likelihood of frost-free conditions for feeding in cold weather- partly the coastal influence and possibly partly the thick turf protecting a rich invertebrate fauns. There are also the two major populations nearby: the Pegwell Bay population and the Ash field population three miles inland both of which may mix with the Sandwich Bay population to a greater or lesser degree. It may be surmised that these populations are near Sandwich Bay because of the reduced risk of being caught out in severe weather.

4.5 Feeding and roosting of golden plover

Overall there is no apparent difference between the proportion of birds feeding rather than roosting in pasture than there is in arable fields. However there is clearly much more feeding than roosting in the old pastures at Sandwich Bay. This paradox is due to the Sandwich Bay fields are mainly used by golden plover in late December and early January when weather is usually colder. Arable fields are preferred at other times.

The population of the golden plover in Pegwell Bay clearly does not feed very much in the intertidal zone - if at all - only roosting or resting. There may be an anti-predator function with a wide open area providing good visibility as well as safety in numbers including the other bird species present. There are regular peregrine falcons in the area which must pose a significant threat. This may also be the reason why the Ash population is situated on a high plateau with good visibility and here Merlin have been seen.

There is the possibility that golden plovers feed regularly at night. I have disturbed golden plover in the headlights of a land rover at night thinly distributed in grass fields as if feeding. One local farmer says he only sees golden plover at dusk at his pastures.

4.6 Recommendations

Old pasture fields in the area of Sandwich Bay should be protected for the golden plover as a matter of priority. They are used especially in cold weather which may be a critical time for the survival of the population. They also hold a rich variety of wetland species as detailed in this report. They are traditionally used for feeding by golden plover. All the main grass fields where golden plovers are recorded in this survey were also used by golden plovers during the 1991/92 survey (Griffiths 1992) and are in the SPA except for the fields recommended for inclusion in this report. Inclusion of these fields within the SPA would increase the percentage of the Sandwich Bay golden plovers in the SPA from 31% to 43% over the period of the 2002/2003 survey.

Most other fields - mainly arable - are also used regularly by a major proportion of golden plover population in the Sandwich Bay area but on a more transient basis depending on the land use. Some of these fields were in pasture in 1991 but are now arable. I would recommend that all the fields between Deal and Pegwell Bay north of the railway and east of the River Stour should be included in the SPA. This would **protect more than double the population** at present protected. It would connect all the pastures in this area within the SPA and the farmers/landowners (four) would probably be encouraged to return many of their fields to pasture.

4.7 Disturbance at roost

Pegwell Bay has many potential sources of disturbance from dogs to kite boarders but bait diggers seem to be the main concern recently. According to Phil Milton, the main observer counting birds in Pegwell Bay, the bait diggers are frequently stopping the golden plover from landing because they are too close to their roost site. This has been affecting the numbers of birds roosting in March 2003. This needs to be controlled because choice of roosting site may be critical to survival and whether a site is suitable as an SPA takes into account potential disturbance to the birds. A 'code of conduct' for users of Pegwell Bay, including bait-diggers, has been prepared. A questionnaire has also been distributed to gain evidence for disturbance.

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Appendices

- Appendix Figure 1:** Questionnaire sample
Front of sample questionnaire
Reverse of sample questionnaire
- Appendix Table 1:** Pegwell Bay counts of golden plover at low tide 1998/2003.
- Appendix Table 2:** Pegwell Bay counts of lapwing at low tide 1998/2003.

MH?

Martin

EAST KENT GOLDEN PLOVER SURVEY 2002/2003: RECORD SHEET.

The survey is organised on behalf of English Nature to establish the number and distribution of the Golden Plover population within and nearby the existing Thanet Coast and Sandwich Bay SPA as part of a review of the SPA.

The Survey is a **high-tide count** to cover known roosting and feeding areas from Swalecliffe round to Deal but also covers suitable additional areas of farmland, especially those bordering the SPA. There will also be parallel counts at the two known major intertidal roosting sites at low tide.

Instructions:

Volunteers helping with the survey are asked to keep to the times and locations allotted for the survey to enable synchronization to avoid double counting. **Please persevere with the counts whatever the weather.** Counts take place approximately fortnightly, depending on the tides and time of day, between the 1st November 2002 and the end of March 2003.

Each observer has a record sheet for **each survey date** with their area marked on the map on the reverse by a solid red line. If the area cannot be surveyed from public footpath or road please gain permission from the landowner beforehand (if a problem arises please let me know). Observations from additional areas nearby, indicated by a dotted red line, would be welcome if time allows.

Identify the location of the counts within the allotted area by marking the map clearly with pencil.

Please record this valuable additional data if possible:

Record the land use where the Golden Plovers are seen (e.g. plough, tilled land, crop type, stubble, grazed grass etc.). Date and time are already added to the sheets for counts but record numbers in flight and direction of flight on the map.

Record the activity of the birds- whether feeding or roosting - and if you have time record other species in the same field (e.g. Lapwings, Starlings, larks and gulls) and their activity.

Please let me know in good time if you can't manage a survey date so that someone can fill in.

Location	Date	Time	Number Feeding	Number Roosting	Land use	Other Species	Other Comments
	16/02/03	10:29 to 12:29	(1) 550		Plough	*	
			(2) 20		"		

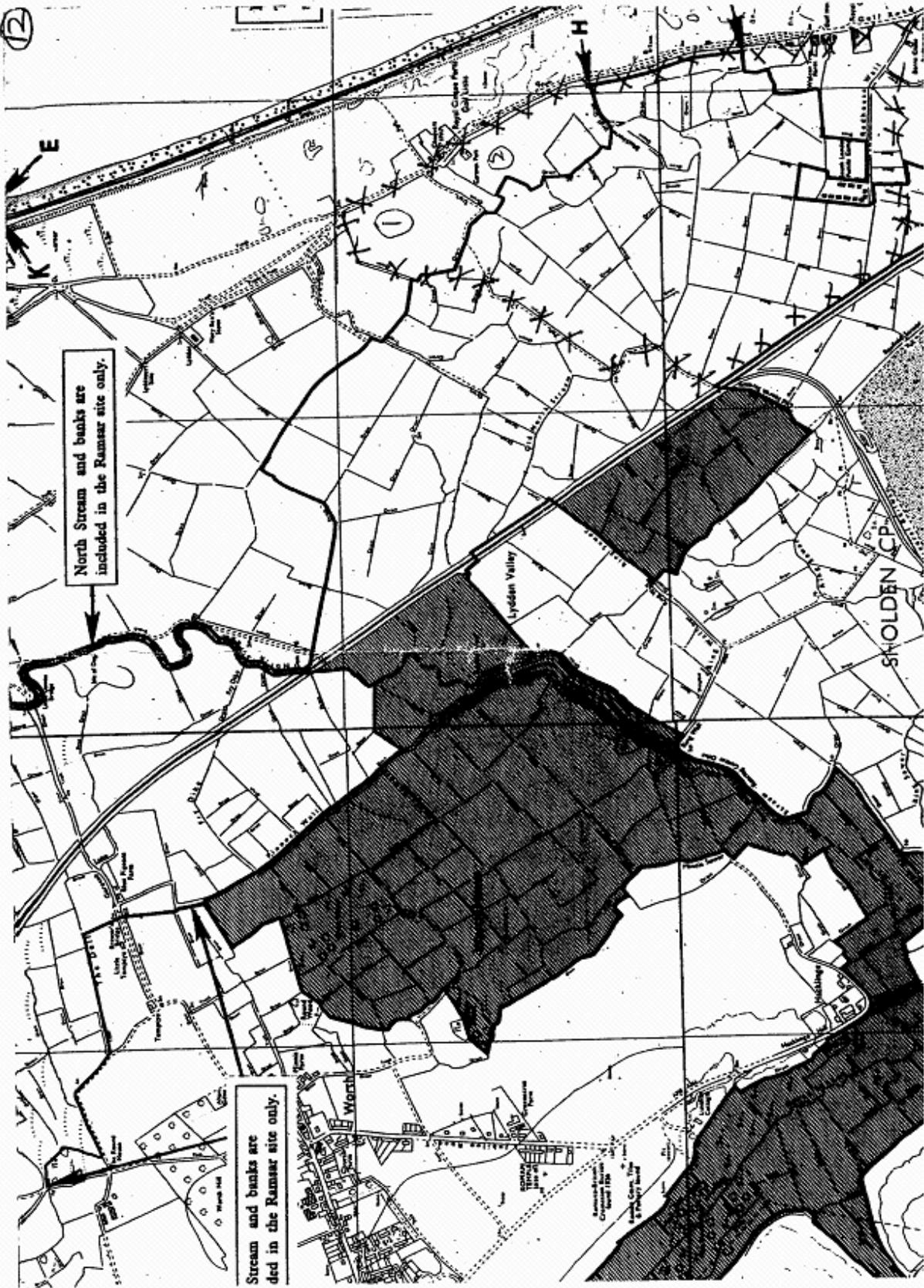
Please return each sheet soon after recording day to Martin Griffiths, Malthouse, 38 Moat Sole, SANDWICH. CT13 9AU.

* Turnstone 6. Lapwing 325. Curlew 41. Snipe 24 Teal 62
 Dunlin 7. Murre 18. Shorechat 20. Fieldfare 30.

12

North Stream and banks are included in the Ramsar site only.

Stream and banks are included in the Ramsar site only.



Appendix Table 1. golden plover roost counts at Pegwell Bay low tide 1998 to 2003. Courtesy Phil Milton

DATE	1998			1999			2000			2001			2002			2003		
	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
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31																		

(Observer -PM- comments that his observations were two to four times a week 1998/99 and that golden plovers were probably not regular until 2000).

Dates with '0' entered are dates with no golden plover present.



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Top left: Using a home-made moth trap.

Peter Wakely/English Nature 17,396

Middle left: Co₂ experiment at Roudsea Wood and Mosses NNR, Lancashire.

Peter Wakely/English Nature 21,792

Bottom left: Radio tracking a hare on Pawlett Hams, Somerset.

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Main: Identifying moths caught in a moth trap at Ham Wall NNR, Somerset.

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