

A low-angle photograph looking up into the canopy of a large, leafless tree. The branches are dark and silhouetted against a pale blue sky. Numerous cup-shaped bird nests are visible, attached to the branches. Several birds are captured in flight, scattered throughout the scene. The overall composition is dense and intricate, focusing on the natural habitat of the birds.

Corvids of Poole Harbour

Corvids of Poole Harbour

Rook *Corvus frugilegus*
Jackdaw *Corvus monedula*
Carrion Crow *Corvus corone*
Magpie *Pica pica*
Raven *Corvus corax*

September 2008 - March 2009 (Magpie update 2015)

Nick Hopper

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Summary

In 2007, after many years of interest in the crows of Poole Harbour, Mark Constantine commissioned a survey of all the regular crow species* occurring in Poole Harbour.

The survey was conducted from September 2007 to March 2008 over which time numbers, distribution, important feeding areas, roost sites and habits of Rook, Jackdaw, Carrion Crow were investigated. Magpie and Raven were also investigated but survey effort was limited due to time constraints. In the winter 2014/15, a dedicated Magpie survey was conducted and the findings are included in this report.

Each species receives its own species account, except for Rook and Jackdaw whose lives were so inextricably linked that they are treated together

Rook and Jackdaw

Both Rook and Jackdaw were found to be widely distributed throughout the Poole Harbour recording area. Rooks were slightly more restricted in terms of habitat, being largely absent from the more built up areas, whereas Jackdaws could pop up almost anywhere. Where ever Rook were encountered there would invariably be Jackdaws. This close relationship was maintained throughout the day and night with birds feeding and roosting together, with Jackdaws even accompanying Rooks on visits to their rookeries.

The most important feeding habitat for both was livestock pasture and arable fields.

The most important feeding areas for Rook in terms of highest counts were Ballard fields, Ridge fields, Lytchett Bay, Frome Valley floodplain, New Mills Heath and Bushey fields with all recording over 100 birds at some point during the survey.

Feeding numbers were highest in September, when an estimated 900 birds were thought to be using the harbour area. Numbers, however, were not maintained throughout the period dropping by some 40% in November and December and 50% in January. From February to March, numbers increased again, back to around 900 birds.

The highest Rook count achieved was 410 birds at Ballard fields on 13th September. Ridge fields was the only area to maintain a consistent population throughout the survey with around 100-130 birds.

Feeding Jackdaw numbers however were very consistent with a population estimated at around 500 birds. A spike in the feeding numbers did however occur in November during the migration period, when estimated feeding numbers rose to 850 birds. With numbers back to the usual c500 birds for the rest of the survey it was assumed that all migrants eventually moved through.

In terms of regular feeding numbers, Frome Valley fields was the most important area for Jackdaw with counts consistently around 100 birds until December, with numbers not quite as high in January and February. Lytchett fields also regularly held over 100 birds from December onwards.

Four communal roosts were located; Upton Heath, Keyworth, Arne and Goathorn, all containing both Rook and Jackdaw. A further two roosts were located outside the recording area that were used by birds feeding within the recording area.

The largest roost was Goathorn which at mid-winter peaked at 1200 birds, consisting of roughly 70% Jackdaw and 30% Rook. Upton Heath was the next largest roost peaking at 1055 birds in February but fluctuating significantly in numbers throughout the survey period. Highest numbers at Keyworth were 780 at the end of November. Arne was the only roost to have consistent numbers throughout, at around 300 birds.

Total roosting numbers for Rook broadly followed the pattern of feeding numbers, with the highest estimate also being in September with just over 1000 birds dropping to around 55% - 65% of this number from November to January.

In contrast, Jackdaw roosting numbers were significantly higher than their feeding numbers implying that many were leaving the recording area to feed.

The highest estimated total was 1415 birds in December, with counts ranging between 1201 and 1390 in the other months, overall some 60-65% higher than the daytime feeding numbers. Interestingly, roosting numbers remained consistent during the influx period of November.

In March, breeding numbers of Rook were estimated. A total of 474 occupied and presumed occupied nests were counted at 13 Rookeries. The largest rookery was at Ridge with 142 nests, the second largest was Studland Village with 81 nests.

Carrion Crow

There is an old saying, *When tha's a rook, tha's a crow; and when tha's crows tha's rooks.*

This apparently old East Anglian adage doesn't however hold true in Poole Harbour, where particularly during the winter, large flocks of immature and non-territory holding Carrion Crows can gather.

Carrion Crows, as expected, were found to be widely distributed throughout Poole Harbour. The population is more or less divided into year round territory holding pairs and flocks of immature and non-territory holding birds, although some mixing of the two did occur.

Corfe Mullen Tip was by far the most important feeding site. Numbers here increased as the winter progressed eventually producing the two highest daytime feeding counts of the survey of 301 in February and 280 in March.

The next most important feeding site in terms of average and highest numbers was the north end and, in particular, the north west sector of Holes Bay. The highest single count here was 167 birds in December. The only other site to reach a single count over 100 birds was Baiter with 115 in January.

11 main regular feeding sites were located, 6 of which incorporated inter-tidal areas.

Three large communal roosts were located. The largest at Upton Heath was estimated to contain at least 160 birds at its peak but was in competition with the nearby extralimital roost at Stony Down plantation site, which attracted around half of the 330+ strong pre-roosting birds at Corfe Mullen tip

The Luscombe Valley roost was estimated to contain at least 130 birds and Goathorn probably around 70-80 birds.

Away from these sites there were many other places where Crows were heard calling pre-dawn. Some may have involved small groups of immature birds but many, undoubtedly, involved territory holding pairs.

Estimated population numbers of the communally roosting and feeding birds was attempted. The results appear to show a genuine increase in numbers as the winter progressed, with the highest numbers found in February with a tentative figure of around 650 birds estimated. The overall population however, to include territory holding pairs could not be ascertained however as it was not known to what extent these birds were using the communal roosts or feeding amongst the non-breeding flocks.

There has been a suggestion that some of the UK resident Carrion Crows do move south in winter, a theory that is not contradicted by the findings in Poole Harbour.

Magpie

Magpies were also widely distributed throughout the whole harbour area including the suburban and urban areas.

Magpies do not habitually flock to feed, but if a particularly good source of food became available numbers of birds could be seen feeding together.

Highest regular counts were in the muddy cattle field at Knoll Farm on Soldiers Road, with up to 15 birds and up to 10 birds around the muddy cattle fields of Upton Country Park.

Adult pair birds were also regularly encountered feeding together within their territories.

Magpies do however habitually flock to roost. Nine communal roosts containing 10 or more birds were found, along with one 'loose' roost site. Three small roosts containing 3-6 birds were also located, along with many pair bird roosts.

Most roost sites were in low trees overhanging or very close to water. Failing that, they were surrounded by waterlogged ground. All roosts found contained conspecifics only. During both surveys the largest roost by far was at Hatch Pond, with numbers in 2008/09 reaching an impressive 193 birds on 1st December. Highest count in 2014/15 was 144.

* Jay was also attempted but observations in the limited time available proved inadequate to provide representative findings.

1. Introduction

Corvids are an intelligent, highly social and rather fascinating family of birds.

Having a long association with man, they have often been the subject of much folklore, being considered mystical or mysterious, of a sinister nature and even the forbearers of doom.

Feelings are still often ambivalent toward the crows and some of their bad press has continued to the present day. They can still be persecuted by farmers for their feeding habits, being both carnivores and prolific seed eaters. No doubt some of our earliest sowers of seeds were troubled by Rook flocks. Today the Magpie is probably enemy number one in many people's eyes, who accuse them of adversely affecting song bird populations.

Corvids are largely resident in southern Britain. During the autumn, a few Rook and in particular Jackdaw pass through, temporarily increasing numbers. Carrion Crow numbers can increase in southern Britain in winter with some birds moving south from more northerly areas.

2. Objectives and timing

To assess distribution, important feeding areas and roost sites of Rook, Jackdaw, Carrion Crow, Magpie and Raven within the Poole Harbour recording area and where possible to gain insights into habits and behaviour.

3. Methods

3.1 Locating feeding flocks and roost sites

Initially, vantage point watches were undertaken to locate feeding flocks of Rook and Jackdaw. Places with the highest elevations were chosen, and often a telescope was employed to cover the largest possible areas most efficiently. All feeding parties were plotted. Any remaining areas were, where possible, covered by driving transects.

Most watches were undertaken during the afternoon so that commuting flightlines could also be recorded to help locate roost sites.

Carrion Crows, Magpies and Ravens were also observed during the vantage point watches, along with any late afternoon flightlines. Further dedicated observations were also necessary for these species, in particular Magpie. Many Carrion Crows and Magpies were observed in pairs but it was deemed not practical to try and plot every such encounter and only flocks were recorded.

3.2 Timing

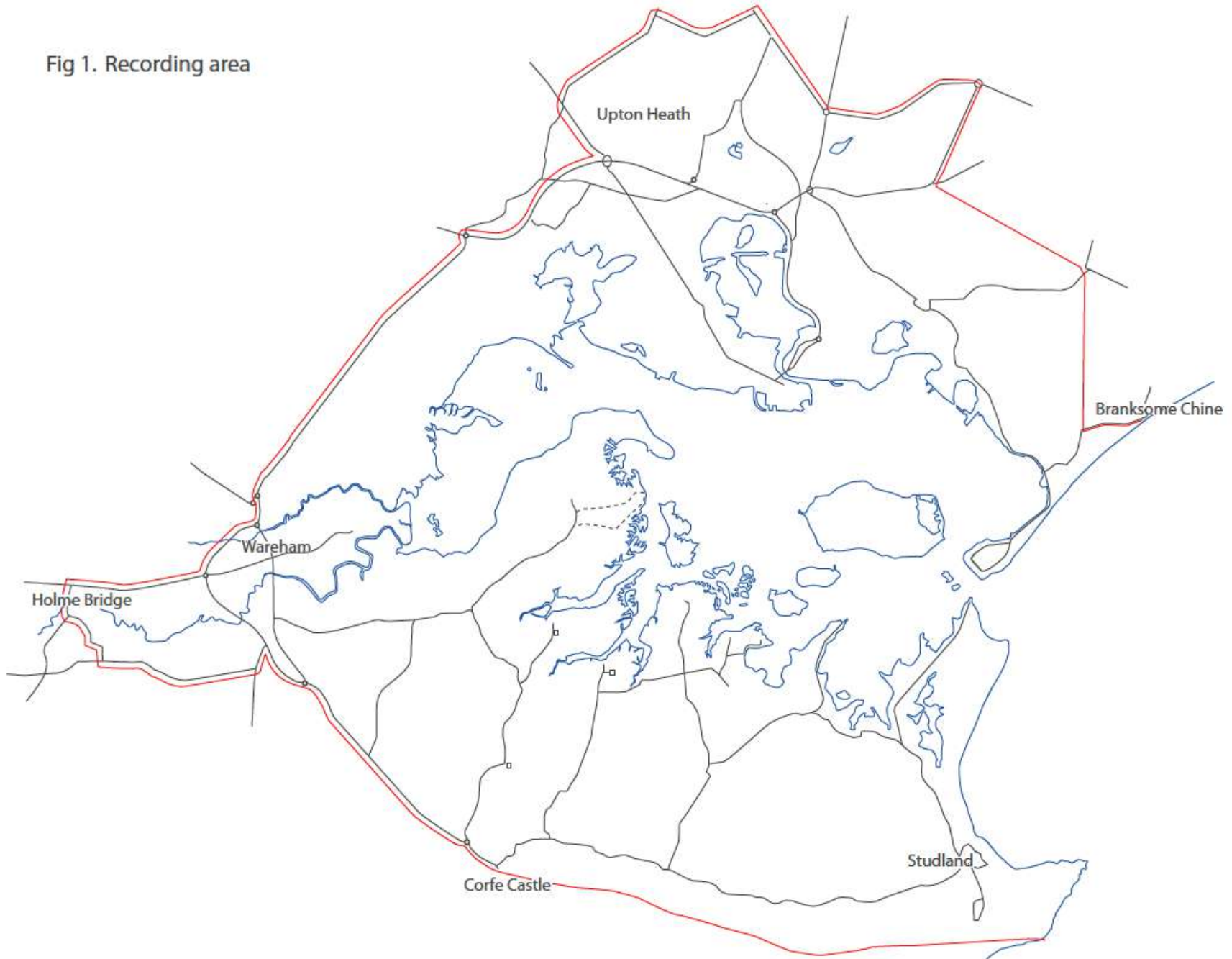
The 2007/08 survey was conducted from 15th September to 15th March, allowing observations within the migration period and an estimation of nesting Rook numbers.

3.3 Survey recording area

See map below

Some species regularly commuted in and out of the recording area so it was also necessary to visit some extralimital areas.

Fig 1. Recording area



4. Species accounts

4.1 Rook and Jackdaw

4.1.1 Introduction

It was found during the survey that Rooks were unfailingly accompanied by Jackdaws and so they are treated here together.

Their conspicuous and noisy gregarious activities make them familiar farmland birds throughout the year. Both prefer to feed on pasture in the winter, being commonly seen in large mixed flocks. The union works well as, by and large, they do not compete for the same prey items. Rooks like to probe deep for earthworms or leatherjackets as the Jackdaws flick over the surface taking small insects and other invertebrates. Arable fields are also very popular where both species feed on grain either from the plant in autumn, stubble fields in winter or sown seed in early spring. Root crops are also an important food source.

Both species also roost together, particularly in winter when large roosts can be formed.

As expected, both Rook and Jackdaw were found to be widely distributed throughout the Poole Harbour recording area. Rooks were slightly more restricted in terms of habitat, being largely absent from the more built up areas, whereas Jackdaws could pop up almost anywhere.

Although there was wandering, it seemed that for each region specific flocks of birds would use specific feeding areas centred around a specific rookery.

In turn, roost sites were also used by birds from specific rookeries, the catchment area for these being known as a Parish.

4.1.2 Feeding areas

Ballard fields and downs

The arable fields and downs at Ballard were the most important feeding area for Rook in terms of numbers, particularly during the autumn. The highest single feeding flock of 410 birds was counted here on 13th September. The average feeding flock counts remained high at around 310 until mid-October.

October until late November, in contrast, produced very low counts of between 0 and 40 birds. Between 24th November and 19th December, just over 200 birds were again using the area. Numbers dropped again in January with an average count of around 42 birds. During February, 187 birds were seen feeding here, however from then until mid-March the average was back to 40 birds. During this time, there was no upturn in numbers at surrounding sites within the recording area so it was assumed they were feeding outside of the recording area somewhere south of the Purbeck Ridge.

Between 73 and 125 Jackdaw used the fields from September to mid-December, with the highest count of 125 birds in early September. From mid-October to mid-November, numbers dropped considerably but from mid-December to early March rose slightly to around 20-40 birds.

Most feeding for both species was concentrated in the arable fields. The surrounding grassland areas were only used occasionally, although they were particularly popular after the grass had been cut in the early autumn which may have partly accounted for the higher numbers during that time.

Jackdaws were also seen feeding on the backs of sheep here, where they were assumed to be taking ticks.

Lytchett Bay

Most birds concentrated in one large cattle field to the south of Slough Lane, which was often particularly muddy with plenty of straw feed lying about. The far fields were largely ignored.

As with Ballard, Lytchett fields had their highest Rook counts in the autumn with a peak count of 122 on 29th September. The overall pattern was very similar to Ballard fields, with numbers dropping in October to around 50 birds and dropping again in November to zero-to-7 birds. From late November until the end of January the average count was 31 birds. By February numbers were back up to a peak of 123.

Lytchett was also popular with Jackdaw. September October and November only produced counts of between 15 and 18 birds, but numbers rose considerably in December to 65-100 birds. These numbers rose again in February to a high count of 160 on 6th February. It seems that it was a bit of a hit and miss affair here regarding connecting with feeding birds, with often reports of “hundreds of birds at the baya the other daya man, where were you?” The reason seemed to be in the timings of the visits, with most birds seemingly arriving here just after dawn to feed for perhaps only an hour or so before then moving on to either a nearby rookery or another feeding area.

The most popular parts of the field were the particularly dungy and straw-laden areas around the cattle feeders.

Ridge fields (including large field north of Knoll Farm)

An area dominated by cattle pasture and wet grassland directly south of the village of Ridge.

A fairly stable population of Rooks throughout the survey period, with around 100-130 birds present from September to February with a one-off high count of 160 birds on 3rd January.

From mid-December onwards, some of these birds were also seen commuting to the cattle field at Knoll Farm barn on Soldiers Road.

Between then and late January, 30-60 birds used this field. In February and March, numbers dropped to around 15-20 birds.

In contrast, only 10-30 Jackdaw were seen using this area throughout the survey. An influx of 65-70 Jackdaws occurred from early to mid-September which roamed the area including visiting Bestwall water meadows.

Frome Valley (from E. Holme bridge to Stoborough)

An area of floodplain fields, cattle pasture and arable fields.

The most important part of this feeding area up until late November were the floodplain fields immediately east of E. Holme bridge. From late August to mid-November, there was a regular feeding flock of between 75 and 165 Rooks.

From December until the end of the survey, this area was largely abandoned apart from a few occasional visits. Some relocated to a large ploughed field about one kilometre east of Holme bridge, however most moved west outside the recording area. A few Rook were also found feeding in fields to the east of E. Holme village.

On 15th December, 102 birds were found in the field just to the south of the lane to E. Holme, with a further 23 birds on floodplain meadow about another kilometre down the valley.

In mid-January, the birds relocated again to a large crop field on the southern border of Wareham Common just outside the recording area, with birds also further north of here on the grassy floodplains of the Piddle Valley.

From January onwards the fields south of Holme Priory rookery also became more popular with an ever increasing amount of birds using these fields. By 21st January, 60 birds were feeding here.

Jackdaws were also constant companions in this area with number fluctuations and feeding patterns almost identical.

The area of floodplain to the east of Holme Bridge was the most popular during the autumn with three counts of over 100 birds.

On 15th December, 95 birds were feeding with 90 Rooks in the field south of the lane to E. Holme village. This later became a dung-filled cattle field and remained popular until the end of the survey.

Up to 45 birds also visited the large crop field on the southern border of Wareham Common.

Middlebere fields

The most popular area was the large cattle field directly south of the Middlebere barns. From mid-September to October there were up to 26 Rook, with numbers increasing in November to a maximum of 57. Lower numbers again in December and January with no more than 20 birds, then an increase again in February and March to an average of 47 birds.

It was notable at this site that numbers were higher towards the end of the day, suggesting a small pre-roost gathering. From here it was a relatively short flight to the Arne roost.

The highest count for this area was 73 during a late afternoon visit on 10th February.

The fields directly backing onto Middlebere creek were only recorded being used once, with 54 birds here on 21st November. These birds were also seen using fields to south and east of Maranoa Slepe Farm on a couple of occasions, coinciding with periods when straw and cows were present.

For the Jackdaw, the cow fields next to the barns were also the most popular. On the occasions of the Rooks feeding in the fields south of Middlebere Lake and Maranoa Farm, the Jackdaw were also in attendance.

Around 20-30 birds used this area regularly with occasionally more. On 23rd October, 40 birds were present with the maximum of 50 birds occurring on 21st November.

Numbers here are very low first thing in the morning and pick up throughout the morning as birds rather casually make their way here from the Arne roost, commonly arriving in pairs.

New Mills Heath

An area of fields with rough pasture, south of Hartland Moor. The fields to the west generally contained grazing cattle but the fields at the eastern end were preferred. Highest numbers here in October and particularly November when an average of 125 Rook were recorded. The maximum count of 134 being on 25th November. Not so popular in December, January and February with a maximum of only 31 birds seen during these months.

These birds were also seen to fly south to the Corfe Castle area and fields just south of Norden Farm just outside the recording area. Some birds also seen to go up and over the ridge. Jackdaw hardly used this area at all, with only 1 or 2 birds generally being seen. During November however, counts of 49-51 birds were recorded which presumably involved migrants. Also 24 birds present early March.

Bushey fields

Pasture with sheep and cattle.

During the autumn, the sheep fields to the south of Brenscombe Heath were by far the most popular and to a lesser extent the field to the north, with birds making occasional trips south over Challow Hill to the fields beyond.

The average Rook count for September was around 100 birds with a maximum count for the survey of 120 on 26th. From November, these areas were abandoned in favour of the grassy fields surrounding the rookery to the south of Lower Bushey Farm.

Only 9 Jackdaw were present in the Bushey area up until early November, when 54 were counted in fields between Higher and Lower Bushey Farm. Counts then continued to be consistently around 40-60 birds. On 16th January, some Jackdaw were noted feeding amongst the very large free range chicken enclosure just to the east of the area.

In early March, the average count for the whole area had returned to only 9 birds.

Norden / Corfe area

Not a regularly visited area by Rooks and Jackdaws but occasional quite large flocks were encountered.

The initial survey visit in mid-September produced 138 Rook and 80 Jackdaw feeding in the field immediately east of Corfe village, but none were seen there on any subsequent visits.

On 29th September, around 120 Rook Jackdaw and Carrion Crow were getting very excited in a field full of failed crops adjacent to the Norden roundabout. Closer investigation revealed the items to be Corn on the Cob.

A few local Jackdaw could be seen regularly hanging around the Castle ruins, with up to 10 birds present.

A flock of 260 Jackdaw feeding in a stubble field just north of Challow Hill on 4th November was particularly noteworthy and was assumed to involve migrants.

A popular feeding area at the recording area boundary was livestock fields around Norden Farm, with up to 200 mixed corvids feeding here.

Kingswood Farm

An area of muddy, straw-laden sheep fields used from December to March. The main interest was the immediate area around the feeding troughs in the field south of the main road. From December to March, 75-95 Jackdaw were regularly in attendance. The biggest count of 128 came on 2nd March. On this occasion, Jackdaw shared the area with Carrion Crows rather than the usual Rooks. There were only two records of Rook, 1 seen on 16th January and 21 on 2nd March.

Rooks also occasionally used the horse paddocks north of the road, with a maximum of 19 on 12th September. Puddles formed here in deep rutted tracks which were occasionally used by Rooks to bathe in.

Corfe Mullen tip

Mainly used as a pre-roost gathering site but both species could be seen here feeding throughout the day. The highest daytime Rook count was 41 birds on 15th February dropping to only 6 birds at the beginning of March.

Jackdaw numbers were higher with up to 62 seen feeding in February dropping to around 30 early March.

Keysworth

It was not possible to access Keysworth Estate. However, it was possible to view some of the area from outside the boundaries. On 7th September, 4 or 5 Jackdaw feeding at Keysworth sewage works feeding in between the moving arms, jumping over them as they came round.

In November around 100 Jackdaw were seen hanging around the sewage works area but it wasn't exactly clear where they were feeding. Apart from 20 birds on 3rd February, this was the only decent count which would suggest that the November birds may well have involved some migrants.

Arne fields

A count of 41 Rook feeding in fields here on 18th September was the only record. Jackdaw were, however, seen here quite regularly feeding amongst the cattle to the east of the farm. Numbers were rather variable with the maximum count being 67 birds on 2nd January. Jackdaw were also occasionally seen feeding on the backs of the Sika Deer here.

Upton Country Park fields

Jackdaws were regularly encountered here but Rooks were not, being replaced by Carrion Crows. The most popular feeding area was fields on the western side of the country park, with a handful of birds loyal to fields on the northern perimeter. December produced the highest counts with 40-53 birds recorded throughout the month.

There was an unusually high count on 6th March of 99 birds, 59 being in the western fields and 32 in the northern fields.

Wareham town bridge area

A regular early morning stop-off for the Rook and Jackdaw roosting at Keyworth. At this time of the morning, the birds had the place to themselves and were able to wander about from bin to bin or just randomly pick up scraps on the roads and pavements.

A few minutes after leaving the Keyworth roost they would arrive and initially assemble on the turrets of the Trinity Church, then the rooftops of the surrounding buildings. After some 10-15 minutes, the Rook would begin to drop to the ground to scavenge. This was a daily event. Up to 55 Rook were counted and up to 120 Jackdaw also visited but many of these didn't actually come down, preferring to hang around the roof tops and chimney pots. Some visited the town's back gardens in the side streets, looking for food that had been put out for the smaller birds.

The line of poplars on the southern side of the river was also a very popular post-roost gathering place and from here birds would move on to other areas mostly to the south.

A particular garden in Stoborough village was also popular for a few Rook and Jackdaw, just opposite the junction with West Lane. Birds could regularly be seen hanging around on the nearby telegraph pole and wires before dropping into the garden to feed on whatever was being put out. Some of the Rooks also seemed quite happy just to sit here preening.

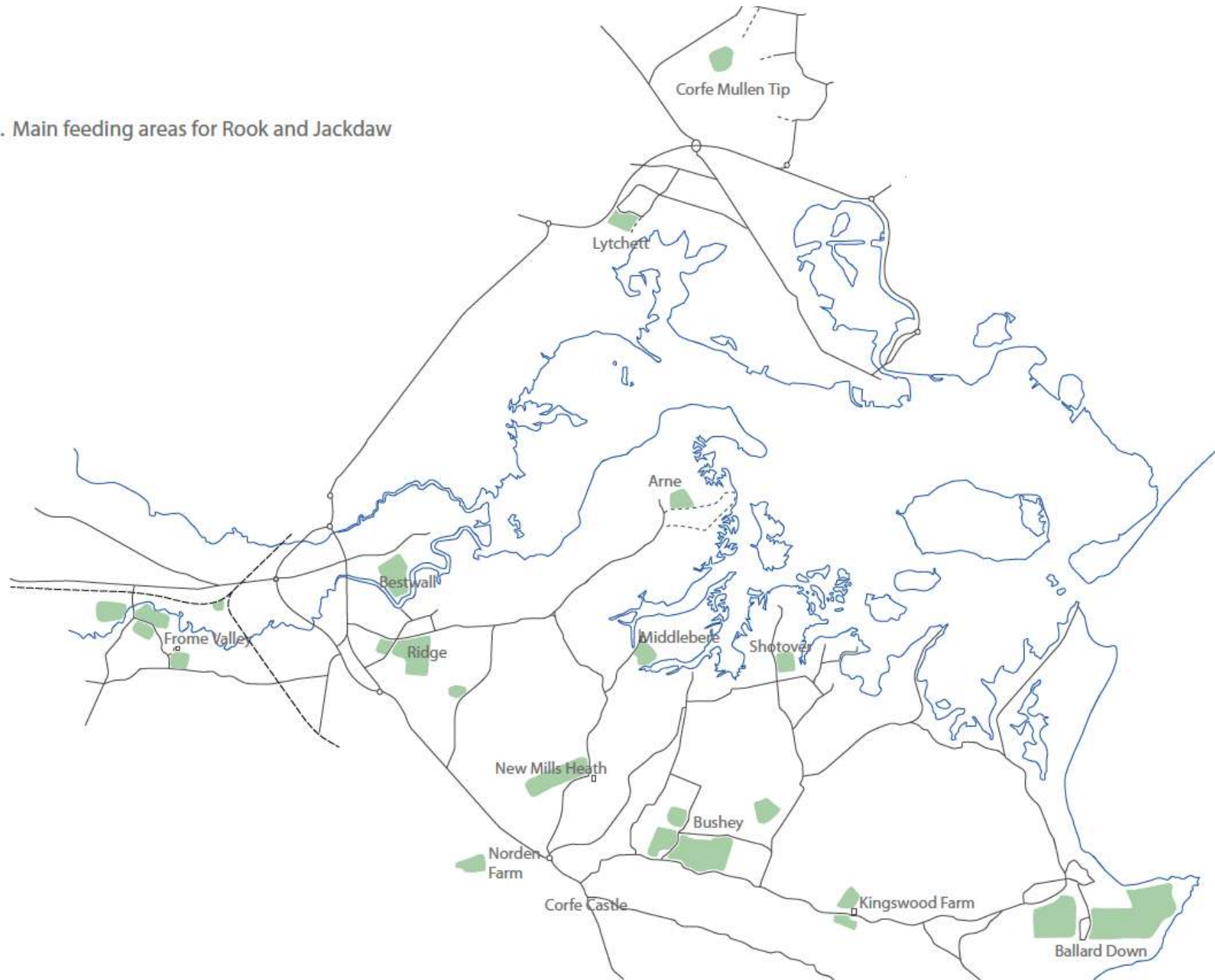
Feeding area	Sept	Nov	Dec	Jan	Feb
Lytchett	130	31	30	34	123
Corfe Tip (day)	20	10	20	30	41
Ridge / Bestwall	138	113	85	160	135
Frome Valley	75	110	102	123	117
Middlebere / Arne	52	57	32	19	73
New Mills Heath	20	134	31	0	10
Bushey / Corfe / Norden	150	126	104	65	126
Shotover	20	35	31	0	18
Ballard	315	21	211	43	187

Table 1. Average feeding numbers of Rook by area and month

Feeding area	Sept	Nov	Dec	Jan	Feb
Lytchett Field	25	65	101	37	160
Corfe Tip (day)	30	40	40	42	60
Ridge / Bestwall	70	19	11	34	5
Frome Valley	101	132	95	48	74
Middlebere	0	40	40	24	6
Arne	13	0	0	67	20
New Mills Heath	0	51	0	0	2
Bushey / Corfe	85	294	8	50	38
Ballard	100	19	75	33	48
Ower	25	20	15	15	12
Keyworth sewage wks	20	105	40	20	20
Upton Country Park	20	40	53	42	14
Kingswood Farm	22	20	10	74	86

Table 2. Average feeding numbers of Jackdaw by area and month

Fig 2. Main feeding areas for Rook and Jackdaw



4.1.3 Roosts

Four roosts were located at Goathorn, Upton Heath, Keyworth and Arne.

Goathorn

Situated on the south west part of Goathorn plantation, this was the largest roost site containing at its peak over 1200 birds during mid-winter. The species mix was consistently around 70% Jackdaw and 30% Rook.

It seemed to be split into two parts, with small numbers using the western side around the Game Copse area, the majority using trees just to the east.

From the end of November the average numbers were 800-1000 birds, rising to 1200 in December (c840 Jackdaw and c360 Rook)

Towards the end of January, numbers fell to around 900 birds comprising c610 Jackdaw and c290 Rook. By mid/late February this number had fallen further to 380 birds in total.

Upton Heath

The only roost site shared with Carrion Crow.

From mid-September to mid-October, 375-450 birds used the roost with a mix of 70% Jackdaw and 30% Rook/Carrion Crow. At the end of October, numbers dropped to 175 birds although the percentages of each remained consistent. November, however, saw a more significant drop in numbers to just 20-40 birds.

In early December numbers increased again to 160 birds (72% Jackdaw and 28% Rook/Carrion Crow), continuing to rise in January to reach 535 birds (55% Jackdaw and 45% Rook/Carrion Crow).

February saw a more dramatic rise in numbers to 1055 birds by the middle of the month. This increase was in the most part due to an increase in Jackdaw numbers to 900 birds, representing 85% of the total.

It was not at all clear why the numbers fluctuated, however there is the possibility that there was some inter-change between here and the roost at Stony Down Plantation.

Keyworth roost

Situated in trees at the southern edge of the Keyworth estate near to the waterworks, this was the only roost which held more birds during the autumn. From September through until at least 18th November, numbers were around 700-780 birds, with a 60/40 split of Jackdaw to Rook. Some time between 18th November and 2nd December, around 350 birds left this roost to join another, with numbers then remaining

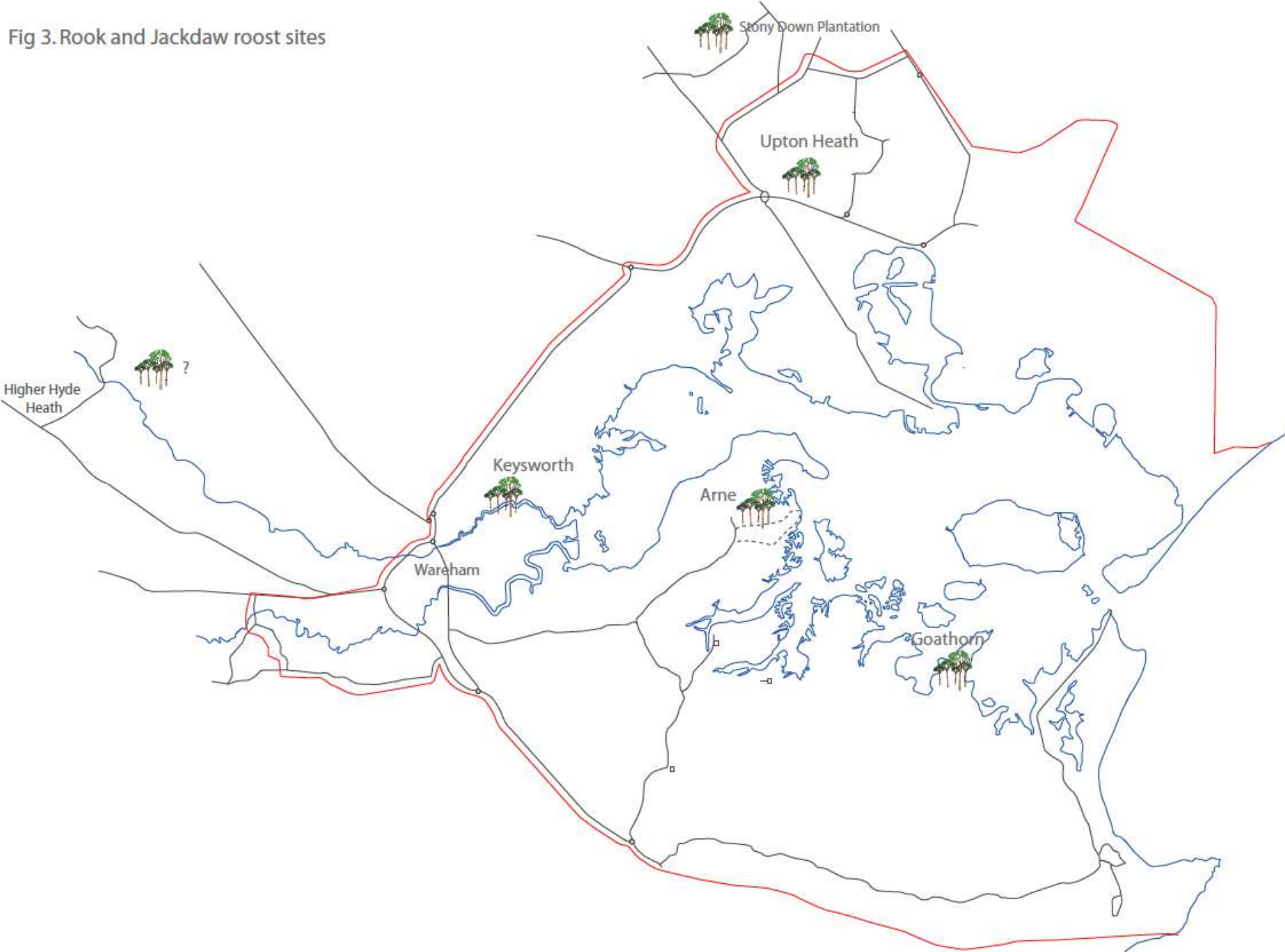
steady again until the end of December. By early January, more birds departed leaving numbers around 145-175 birds through until February. The mix of birds, rather remarkably, seems to remain roughly 60% Jackdaw and 40% Rook throughout.

Arne Big Wood

The smallest roost. In contrast with the other roost sites, Arne Big Wood had very consistent counts of around 300 birds throughout the entire survey period. The species mix was 65-70% Jackdaw and 30-35% Rook.

A further two roosts were also located outside the recording area that were used by birds feeding within the recording area. Their exact locations were not pinpointed but limited observations were able to place one in the area of Stony Down Plantation just north of Corfe Mullen tip, and the other somewhere a few miles up the Piddle Valley.

Fig 3. Rook and Jackdaw roost sites



4.1.4. Parishes

Each roost had its own catchment area or Parish.

Goathorn Parish

Goathorn parish encompassed much of the southern half of the Poole Harbour recording area and beyond. To the west, birds were seen coming from as far as Middlebere, New Mills Heath and Norden and to the south beyond the recording area.

The routine here for Rooks usually went as follows: By mid afternoon, birds gradually began to converge into larger feeding flocks until most of the birds were together, usually in the fields near to the Glebelands Estate. Feeding continued here until some got restless and began to move towards the rookery at Studland village. Some flying straight there, others flying half distance to gather on telegraph wires etc before moving later to the rookery. Eventually, nearly all would then end up at the colony for some socialising.

At a certain point in time, probably triggered by light levels, the birds headed to the roost area. All birds would leave in one or two big flocks then fly straight to the pre-roost site, which for these birds was Greenlands Farm, where they would also be joined by the local Jackdaws. The location was quite specific, being the field bordering the boundary to Godlingston Heath and part of the heath itself. Initially most birds were on the ground.

This was the most impressive gathering of the harbour where, at its peak, 1200 birds were counted. The time here was spent feeding and engaging in short swirling flights. Eventually, the swirling flights became continuous and during mid-winter in particular could go on for quite some time.

When it was nearing dark, the birds would start to alight in the pines on the edge of Newton Heath. This would also involve lots of chattering, interspersed with 'dread' flights out of the plantation and back in again. Eventually in the near darkness, all would go quiet and to all intents and purposes one would be forgiven for assuming they had finally settled down to roost. However after a very brief period of silence, there would be a sudden cacophony of noise and all birds sped off fast toward the Goathorn roost.

Once arrived, there was more chatter and jostling for position for quite some time before they all finally settled down for the night.

Throughout the survey period, this was the basic routine. The only variation was the decision whether or not to visit the rookery which was seasonal. The amount of time spent at Greenlands Farm pre-roost also gradually reduced in time as the start of the breeding season approached.

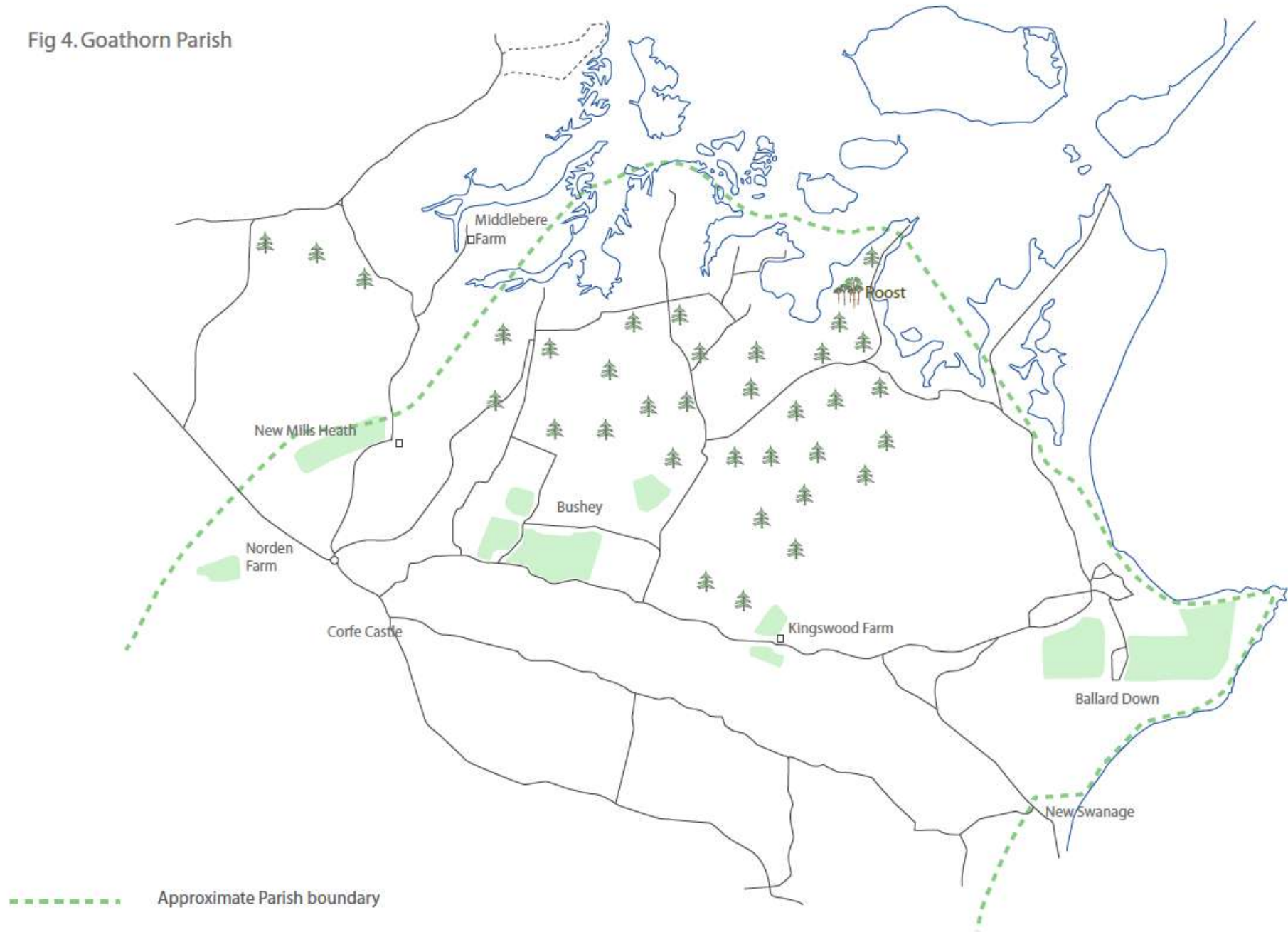
Birds feeding in the Kingswood Farm area, which consisted mainly of Jackdaws, also used this roost. For them there was a pre pre-roost gathering in a couple of big Oak trees near to the feeding area. When the time came, most would leave together for Greenlands Farm pre-roost, and then later onto the roost with the Rooks.

Pre-roost gathering for birds coming from Bushey was centred around the southern most rookery at Lower Bushey Farm and the adjacent grass fields, with birds beginning to congregate by mid-afternoon. Some birds also arrived from outlying areas south of the Purbeck Ridge and Corfe Castle area to join the gathering.

At a time similar to the Ballard birds, the decision would be taken to head off toward Greenlands Farm. Up to 315 birds came from this direction, taking a route over Brenscombe Heath.

Completing the parish were the birds to the north. Here, things were a little more hazy but some Rooks and Jackdaws that assembled near the Ower Cottage rookery certainly roosted at Goathorn. Birds from this area would end up over-flying the roost site to get to the pre-roost site at Greenlands before heading back north to the roost site.

Fig 4. Goathorn Parish



Upton Heath Parish

Upton Heath Parish encompassed all of the northern part of the Poole Harbour recording area and beyond toward the north and west. The southern boundary was slightly hazy but it was thought that birds using the Upton Heath roost probably ventured as far south as Wareham. To the south west, the parish boundary was even hazier as it was impossible follow birds that headed that way. The boundary here has been conservatively estimated north of the Piddle but birds may well have ventured further south.

During the morning exodus, although there was variation throughout the period of the survey, the majority of birds tended to leave the roost on headings within the south west quadrant of the compass. Most were on a south west or west south west heading, with a handful of Jackdaw occasionally flying directly south.

For birds heading south west, Lytchett Bay was one of the first destinations. Birds on the slightly more westerly heading flew to Farmer Palmers at Organford. Both of these sites were usually a temporary stop off before birds dispersed further afield. From Farmer Palmers some birds were seen to carry on some way west most probably at least to fields at Sherford Bridge on the edge of Morden Bog. Some Jackdaw from Lytchett headed on to Sandford where many would stop off to visit their nesting sites on the chimney stacks of the houses.

Rooks heading for Lytchett Bay also visited their rookeries either before or after visiting the bay, depending on the time of year. The rookeries visited were Randalls Farm, Policemans Lane, Lytchett Minster Road and Lytchett Minster School.

A small proportion of Jackdaw and occasionally a few Rooks also flew directly south from the roost. The Rooks' destination was Turlin Moor playing fields. The destinations of the Jackdaws were many, but also included Turlin.

A south east route was also taken, but only by Jackdaw. The main destination was Upton Country Park and surrounding fields. On occasion, some birds, usually in pairs were seen venturing further south east either going over Pergins Island or further to the south over Cobbs Quay Marina in the direction of the town centre. The Pergins Island birds were usually going to Kerry Foods where they could later be seen foraging on the roof, although what they were actually feeding on was a bit of a mystery. On one occasion, some time before dawn, a pair of birds was seen to head out across the water in the direction of Brownsea Island. They were perhaps heading for the cafe where they could often be encountered feeding on the tables.

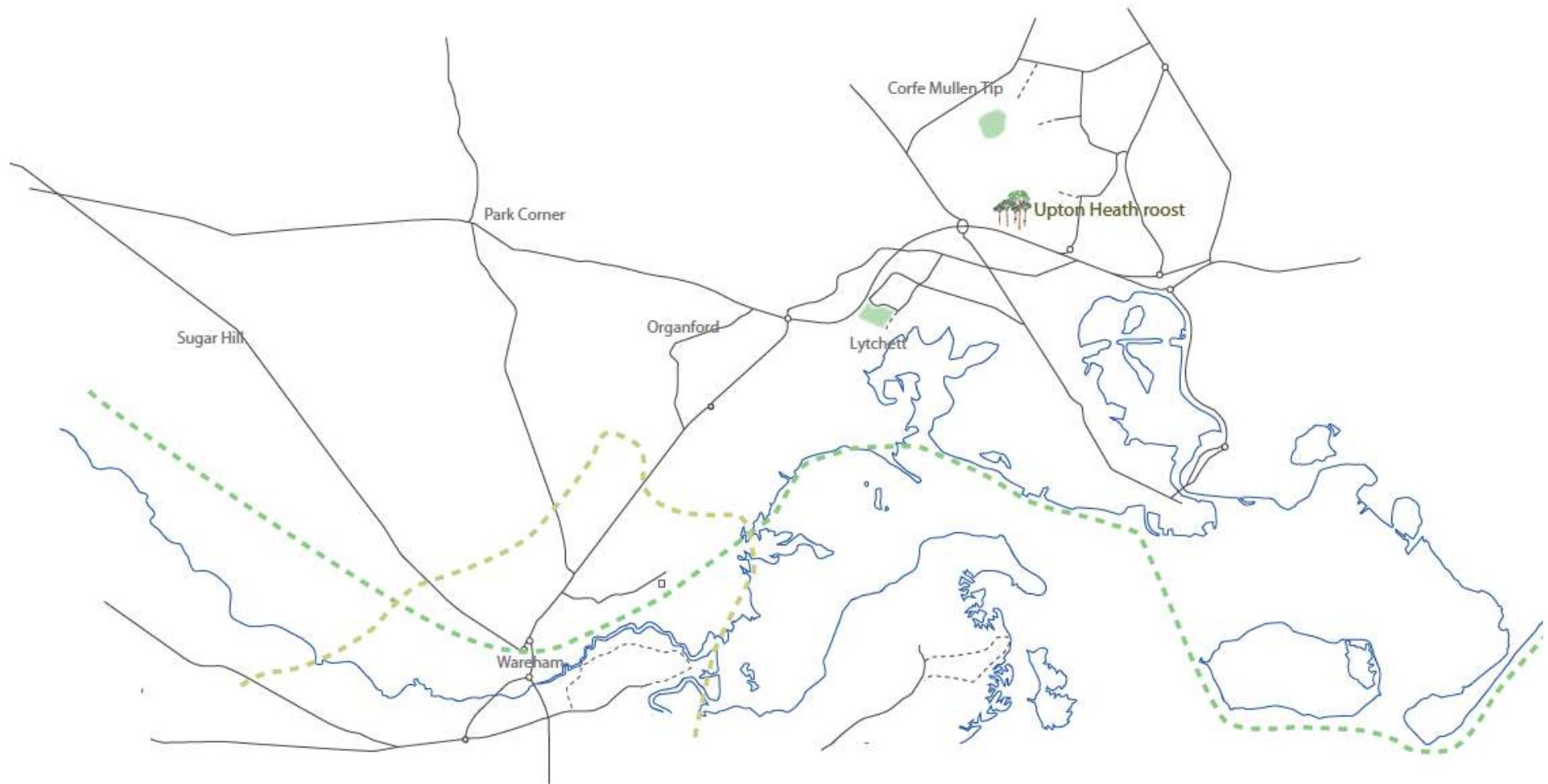
The only other observed route out was north west. Some of these birds were later feeding at Corfe Mullen tip and no doubt some birds carried on further north.

The main pre-roost site for Upton Heath roost was Corfe Mullen tip. Things here seemed far less organised than the Greenlands pre-roost with lots of coming and going during the run-up to roosting time. Some birds wouldn't visit the pre-roost at all, preferring to fly directly to the roost area making use of the pylons and other trees before actually heading into the roost trees. At times this would be several hundred birds. Birds were occasionally also seen to go to from the pylons to join the birds at the tip.

The pre-roost leaving times were also not as coordinated as at Greenlands with many different sized flocks deciding to leave at various times. On some occasions, birds would fly from Corfe Mullen tip up to 30 minutes after sunset to land near the roost trees and even then some minutes later fly back to the tip again.

The situation was further confused as Corfe Mullen tip was also the pre-roost site for birds that roosted at Stony Down Plantation to the north. These birds also had a staggered leaving time, departing in numerous small flocks. The main exodus generally involved the last birds to leave with all doing so together, involving at least a couple of hundred birds.

Fig 5. Upton Heath Parish Boundary



- ■ ■ ■ ■ Parish Boundary
- ■ ■ ■ ■ Keyworth Parish Boundary

Keysworth Parish

Keysworth parish was rather smaller than Goathorn and Upton Heath. The main catchment area being the Frome Valley to the west and Bestwall and Ridge to the south and slightly overlapping with the Upton Heath parish to the north.

Most birds left the Keysworth roost to the south east over the woods towards the south end of Wareham. From here, birds would either carry on or stop in Wareham, initially congregating on the turrets of the Trinity Church and surrounding buildings. After a bit of scavenging, most of the birds generally headed south or south east towards Ridge, with a few drifting off north west towards the Worgret feeding area. The exact extent of their flights south were not known due to the confusion with birds also arriving there from the Arne roost but some certainly visited as far south as Knoll Farm fields.

From September until mid-November only, some birds were also noted to fly off north west. Later investigations revealed Rooks hanging around a conifer belt near Sandford House and Jackdaws scattered around bungalow chimneys at Sandford which would have also included some birds from the Upton Heath roost.

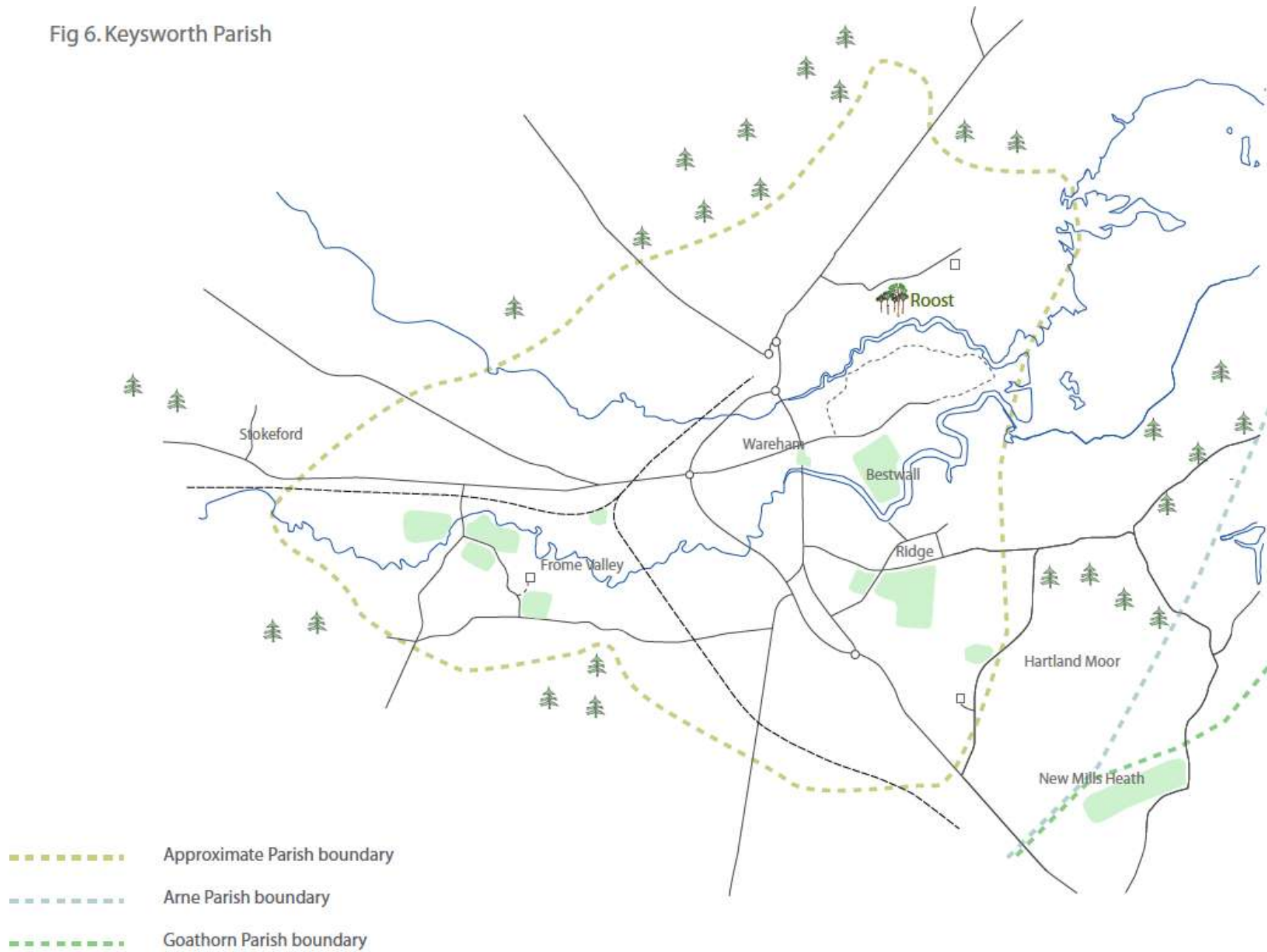
A very small number also flew west south/west from the roost where they would meet up from birds at the Piddle Valley roost at Worgret.

The roost trees here were also the rookery trees and so at certain times whilst other birds were visiting their rookeries up to 170 or so birds remained in the area before eventually moving off to feed.

During December, all birds immediately leaving the roost area headed south west towards Wareham with no birds seen leaving in any other directions.

By the end of January numbers were down to c200 birds. Some observations suggested that some of the birds lost were now using the Piddle Valley roost.

Fig 6. Keyworth Parish



Arne Parish

A small parish centred around the Arne wood roost with much overlap with the Goathorn parish.

All birds left the roost on a southerly heading, with most initially directly south. Jackdaws headed for the nearby line of oaks where most alighted, to then move on later, whereas the Rooks would carry on their flight south.

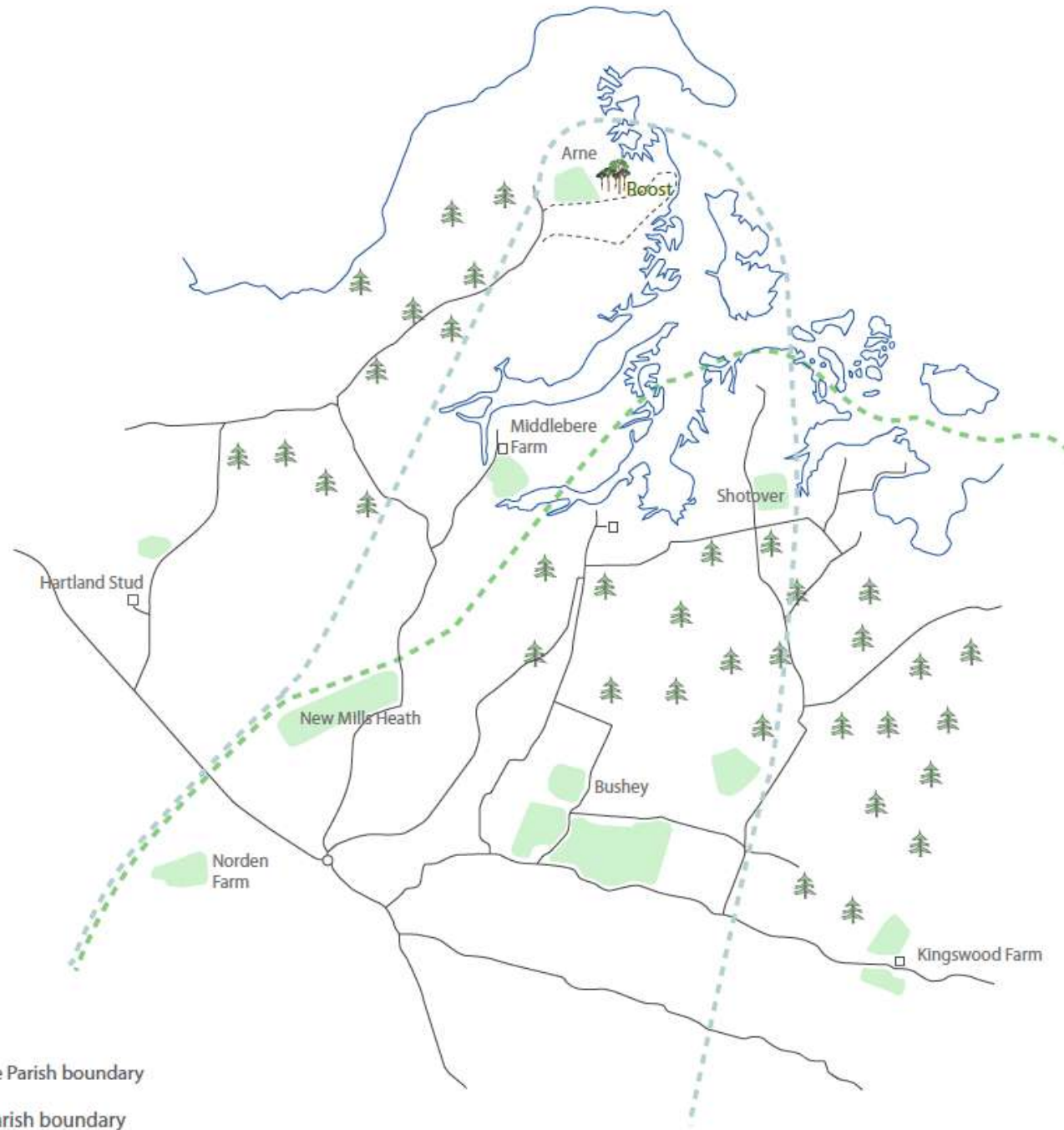
A handful of Jackdaw headed out on a south south-easterly heading toward Fitzworth.

Observations further south revealed that many of the Rook were flying all the way to the Corfe Castle area; a timed flight using an estimated flight speed confirmed the distance flown to somewhere in this area. A few also flew towards the Wytch and Fitzworth rookeries.

The Jackdaws meanwhile didn't stay long in the oaks, moving off in small groups over a period of around ten minutes. The majority flew west along the treeline often regularly stopping on the way. Others also flew directly south toward Middlebere on the same heading as the Rooks and a small amount headed south east toward the Fitzworth rookeries.

The Jackdaws that headed west would eventually end up at one of two feeding areas. Some would just return and fly to the Arne cattle fields, with the others eventually heading south to Middlebere to join earlier arrived birds and some of the Rooks that had also stopped off there.

Fig 7. Arne Parish





4.1.5 Leaving the roost

It quickly became apparent during this survey that Rooks and Jackdaws are creatures of habit. Timings of certain activities seemed to follow distinct patterns, so it was decided to further investigate roost leaving times.

The first calling and chattering would begin in the dark. At the first sign of any light, there would be a dramatic increase in the volume, then both Rook and Jackdaw would erupt out of the roost together as one flock and begin to swirl around the roost tree tops. After a variable amount of time, they would split into two or three groups, with each group heading off on its chosen route. If the roost site was also a rookery, some birds intending to stay continued to fly around until eventually returning to the roost trees or, at least, very near them. Each group could be mixed Rook and Jackdaw or just one species. Mixed leaving groups, however, soon formed single species flocks as the flight speeds of the Jackdaws were considerably faster than the Rook's more leisurely pace.

'Eruption' times were pretty consistent, seemingly triggered by light levels with birds leaving later on mornings with more cloud cover. The table below clearly shows a strong correlation between sunrise and leaving times during mornings with full cloud cover.

Date	Roost Site	Sunrise	Leaving time	Mins before sunrise
18 Nov	Keysworth	06.29	07.02	33
19 Nov	Arne	07.36	07.04	32
26 Nov	Arne	07.48	07.17	31
27 Nov	Keysworth	07.49	07.15	c33.5
2 Dec	Keysworth	07.57	07.24	33
2 Jan	Arne	08.20	07.41	39
5 Jan	Keysworth	08.19	07.40	39
23 Jan	Goathorn	08.05	07.25	40
25 Jan	Goathorn	08.02	07.23	39
13 Feb	Upton Heath	07.31	06.56	35
7 Mar	Upton	06.44	06.07	37

Table 3. Roost leaving times with full cloud cover

From the limited observations, it can also be seen that leaving times from mid-November to the end of January also appear to be getting slightly earlier in relation to sunrise indicating a further influence. Perhaps, with the reduction in daylight hours, there is slightly more urgency to get out and feed. This theory would also explain the return to later leaving times relative to sunrise in February and March.

4.1.6. Migrants

Rooks and Jackdaws in southern Britain are considered sedentary; more northerly and easterly populations are partially or wholly migratory.

Continental Rooks from central and eastern Europe regularly move west and south west in autumn. Many remain on the continent but some carry on west to winter in south east Britain. There are no ringing recoveries from continental birds in Dorset, however every autumn small numbers of birds are seen moving south west or west at migration watch points here.

Observations for this survey were undertaken from early October through to early November, but only a handful of presumed migrant birds were detected. With a healthy population of local Rooks roaming about the area and such small numbers of birds moving it was sometimes difficult to be certain of a bird's provenance.

It can be assumed that at least some were undoubtedly migrants by referring to other Dorset coastal sites which do not have many or any resident birds.

Christchurch Harbour, for example, experienced small numbers of Rooks moving through in October with a peak of 19 birds on 22nd. Durlston noted more birds, with 50+ on 27th and 40+ birds on 28th October. No birds were noted moving at any sites in November.

Jackdaw are also largely sedentary within the UK, but migratory in much of their continental range. As with Rooks, movement is west and south-west, but the extent of their occurrence as far west as Britain is unknown. (Migration Atlas) although many Jackdaws are known to move west to the milder weather and abundant pastures of Ireland (Winter Atlas).

It is also clear from previous observations that good numbers of Jackdaw can pass through Poole Harbour.

Observations of definite moving birds were limited to the coastal sites where resident numbers were low. The first Jackdaws were seen moving through the Harbour in early October with the main movement occurring between 18th October and 7th November. The highest number, which could probably have been improved upon, was over 100 south west on 25th October. These birds were heading across Poole Bay, over Old Harry and onward over the ridge towards Swanage. On the same day, Christchurch Harbour had around 270 birds which were

mainly heading in a westerly direction so would have presumably passed through the north of Poole Harbour.

In fact, it would seem that many of the migrant Jackdaw do pass through the northern part of the recording area as moving flocks seen at Christchurch are heading strictly west up to 1km inland. This is backed up by observations over the years from Constitution Hill where very large flocks of Jackdaw numbering many hundreds have been witnessed heading west.

During and just after the peak period of movement, there was certainly a short-lived increase in Jackdaws at a few sites around the Harbour. In fact, the top three Jackdaw counts all came in November with the most notable being fields just north of Challow Hill where, on 4th November, no less than 240 Jackdaw were feeding in a field just south of the hill, where before and after this period numbers were very much lower.

Also 100 Jackdaw turned up at Keysworth sewage works in early November where numbers at all other times barely reached 20 birds. New Mills Heath had 51 birds on 4th and 49 on 25th November, with virtually no birds at any other time throughout the survey. There were, however, 24 birds present early March and it is tempting to postulate that these could have been returning birds.

Spring passage for some reason is hardly ever recorded at any of the main migration watch points. However, in March a few Rook were seen in odd places in the survey area. First was a couple of birds flying north over Sandbanks Bay on 2nd March, the same day Scillies recorded a few birds and a day after Portland had its first record of the year. Also, a Rook flew north over Creekmoor on the same day.

4.1.7. Non-breeding population

Although a series of ambitious co-ordinated population counts of Rook and Jackdaw was not possible, there was a good case for making an attempt at population numbers based on the large amounts of data collected.

As already alluded to, many birds had very regular routines. Each 'local group' had their favoured feeding sites and, where birds were known to commute between sites, these were all counted within the same period. In addition, as many other sites as possible were also counted in the same period, limiting double counting of birds.

The table below are feeding figures repeated from Table 1. showing average feeding numbers of Rook by area from September to February together with approximate feeding totals for the recording area.

Feeding area	Sept	Nov	Dec	Jan	Feb
Lytchett	130	31	30	34	123
Corfe Tip (day)	20	10	20	30	41
Ridge / Bestwall	138	113	85	160	135
Frome Valley	75	110	102	123	117
Middlebere / Arne	52	57	32	19	73
New Mills Heath	20	134	31	0	10
Bushey / Corfe / Norden	150	126	104	65	126
Shotover	20	35	31	0	18
Ballard	315	21	211	43	187
Approximate totals	920	637	646	474	830

Table 4. Approximate totals of feeding Rook by month

September had the largest feeding numbers with approximately 920 birds. There was then a significant drop in numbers into November which were maintained into December until a further drop is experienced in January to numbers around half that of September. Numbers then significantly increase in February near to September levels. Not enough data was able to be collected in March but plotting the numbers on a graph would produce a curve which when extrapolated would suggest that March numbers would be past 900, very close to September.

It does therefore seem that many of these feeding areas were not quite so desirable in mid-winter. Observations suggest however that birds were not completely moving out of the area, rather expanding their feeding range to just beyond the recording area. Many of the birds in the southern half of the Harbour, for example, were seen regularly flying south over the Purbeck Ridge to feed in fields just beyond.

Roosting population estimates can also be attempted. Rooks and Jackdaws are much less inclined to move between roost sites in the short term and therefore figures are likely to be representative.

The roosting population would be expected to be slightly different from the feeding population as not all roosting birds fed in the recording area.

Roost	Sept	Nov	Dec	Jan	Feb
Upton Heath	50	20	45	145	107
Keysworth	285	265	170	58	70
Arne Big Wood	95	95	95	91	105
Goathorn	580	180	360	290	180
Total population	1010	560	670	584	462
Approx feeding totals from Table 4.	920	637	646	474	

Table 5. Roosting populations of Rooks in Poole Harbour

As with estimated feeding totals, numbers were highest in September with just over 1000 birds. Again following the pattern of feeding numbers there is then quite a sharp drop in November.

Jackdaw population numbers can also be estimated using the same methods.

Feeding area	Sept	Nov	Dec	Jan	Feb
Lytchett Field	25	65	101	37	160
Corfe Mullen Tip	30	40	40	42	60
Ridge / Bestwall	70	19	11	34	5
Frome Valley	101	132	95	48	74
Middlebere	0	40	40	24	6
Arne	13	0	0	67	20
New Mills Heath	0	51	0	0	2
Bushey / Corfe	85	294	8	50	38
Ballard	100	19	75	33	48
Ower	25	20	15	15	12
Keysworth sewage wks	20	105	40	20	20
Upton Country Park	20	40	53	42	14
Kingswood Farm	22	20	10	74	86
Approximate totals	511	855	490	486	491

Table 6. Feeding populations of Jackdaw in Poole Harbour

As can be seen, estimated feeding numbers are a lot more consistent throughout the period than Rook, hovering around the 500 mark. There is a large spike in November which coincided with observed peak migration, then numbers return to pre-migration levels, suggesting that all the migrants moved through.

Roosting numbers were very much higher than feeding numbers, as can be seen from the table below, which suggests that many roosting Jackdaw are travelling outside of the recording area to feed.

Roost site	Sept	Nov	Dec	Jan	Feb
Upton Heath	290	20	115	295	900
Keyworth	495	435	255	87	105
Arne	205	205	205	209	195
Goathorn	c400*	600	840	610	175
Total	1390	1260	1415	1201	1375

Table 7. Jackdaw roosting numbers in Poole Harbour

As with feeding numbers, roosting numbers are also fairly consistent throughout the period, compared with Rook numbers, suggesting a higher degree of loyalty to their chosen roost. The consistent numbers, which only varied throughout the whole survey by 13%, are even more surprising when one considers the influx of feeding birds experienced in November. One must assume that the migrant birds either used temporary roost sites or moved through the area before nightfall.

Comparing the two sets of population estimates reveals that feeding numbers were consistently around 60-65% of roosting numbers in any given month apart from November during the temporary influx of birds.

4.1.8 Breeding Rook population

Being such early nesters, the opportunity was taken at the end of the survey period to try and assess breeding numbers.

Although Rooks will regularly visit their rookeries throughout the winter, interest begins to increase as early as January. Visits are increased as is their duration, until the urge gets too strong to leave and winter roosts are finally abandoned in favour of the rookery trees.

A total of 474 occupied and presumed occupied nests were recorded at 13 rookeries

The largest rookery was at Ridge with 142 nests, the second largest was Studland Village with 81 nests.

Site	A O Nests	No of Trees	Tree type
Ridge plantation	142	35	Scots Pine
Studland village	81	11	Oak, Sycamore and Scots Pine
Lower Bushey south	43	5	Oak
Keysworth	e35		Oak and Scots Pine
Lower Bushey west	31	6	Oak
East Holme Priory	c30		
Policemans Lane, Lytchett	29	5	Oak
Ower	23	8	Oak
Wytch Farm	22	5	Oak
Gallows Hill	15	4	Scots Pine
Vitower Lane south	12	3	Oak
Vitower Lane north	6	5	Oak
Studland Vicarage	5	2	Oak
Total	474		

Table 8. Rookery sites with nest numbers and tree type.

A further 5 rookeries used by birds feeding within the recording area were found just outside the recording area, containing a total of 150 nests.

Corfe Castle village: 54+ nests in 5 trees

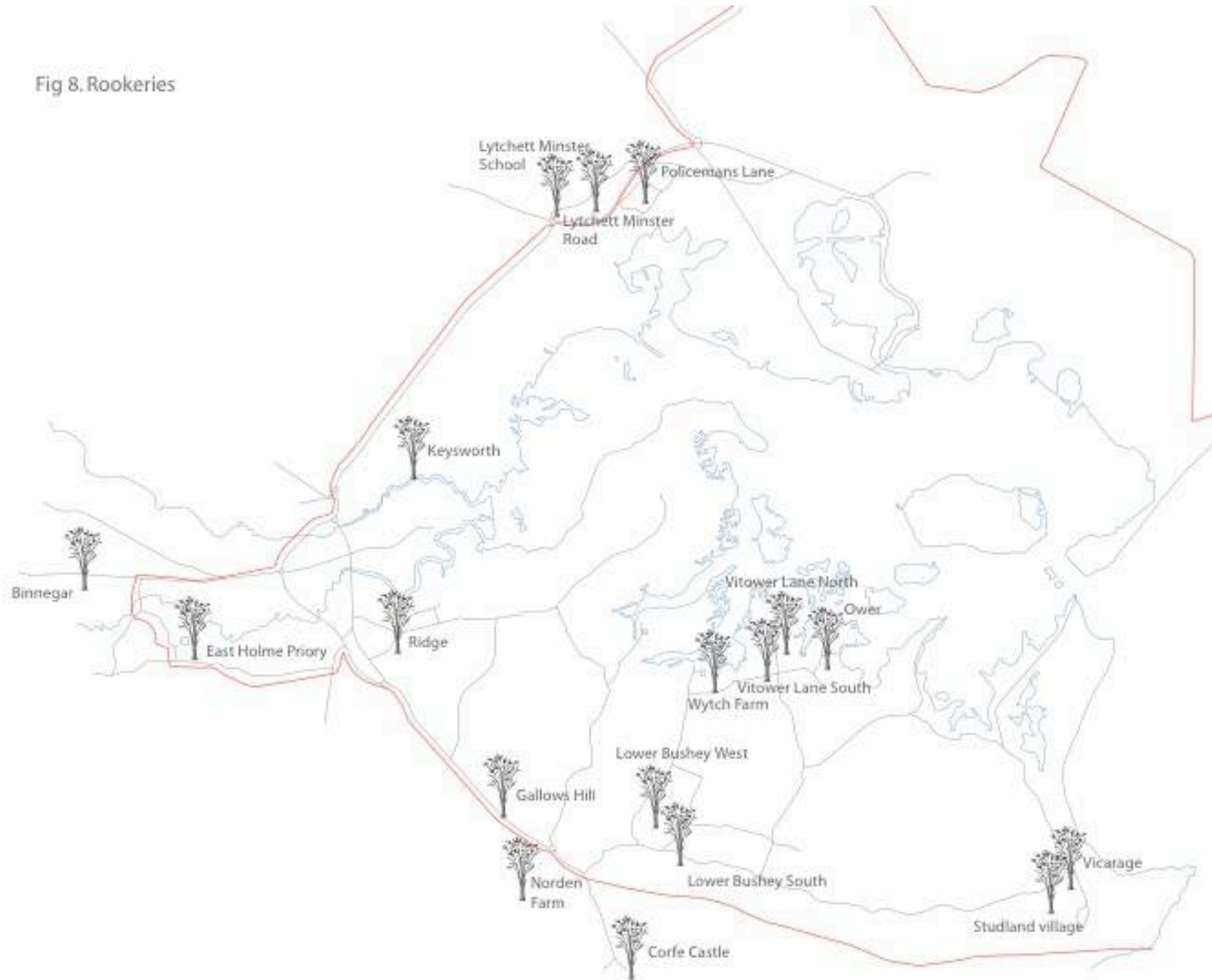
Binnegar: 44+ nests in 4 trees with 35+ nests in one particularly big Scots Pine

Lytchett Minster road: 18 nests in 3 trees

Lytchett Minster School: similar number to Lytchett Minster road (not accessed)

Norden Farm: 8 nests including 2 in a Eucalyptus tree and 2 in an Ash tree.

Fig 8. Rookeries



4.2 Carrion Crow

4.2.1 Introduction

There is an old saying, *When tha's a rook, tha's a crow; and when tha's crows tha's rooks.*

This apparently old East Anglian adage doesn't hold true in Poole Harbour, where particularly during the winter, large flocks of immature and non-territory holding Carrion Crows can gather.

Carrion Crows are widely distributed throughout Poole Harbour. The population is more or less divided into year round territory holding pairs and flocks of immature and non-territory holding birds. Many of the flocks located themselves around the inter-tidal areas of the shorelines, but were also regularly found further inland at particularly good feeding areas.

No attempt was made to count numbers of territory holding pairs, but territory holding pairs were widespread throughout the recording area.

4.2.2 Feeding areas of immature and non-territory holding birds

Corfe Mullen Tip was by far the most important feeding site with all monthly counts reaching at least 130 birds.

The two highest counts of the survey were achieved here with 301 in February and 280 in March.

The next most important feeding site in terms of average and highest counts was Holes Bay. The highest single count here was 167 birds in December. The only other site to record over 100 birds was Baiter with 115 in January.

11 main regular feeding sites were located, 6 of which incorporated inter-tidal areas.

	Oct	Nov	Dec	Jan	Feb	Mar	Count ave.
Arne Saltmarsh	13	14	10	2	4	3	8
Baiter	60	83	84	93	79	70	78
Ballard	50	34	32	39	70	62	48
Corfe Tip (day)	130	143	150	157	301	280	194
Frome Valley	10	12	37	67	39	42	35
Holes Bay	141	95	146	143	18	34	96
Kingswood Farm	4	4	15	21	37	24	18
Knoll Farm	10	10	15	15	38	35	21
Lytchett Bay	27	15	17	28	31	29	25
Shore Road	18	26	23	33	33	36	28
Shell Bay	5	4	3	8	4	3	5
Other sites	30	22	23	27	22	20	

Table 9. Carrion Crow average counts by site by month

Corfe Mullen Tip

From October to early January, numbers were consistently around 130-150 feeding birds. Late January saw an increase in numbers with a more significant increase in February to 300 birds. During this time, numbers of birds regularly feeding at Upton Country Park fell considerably, suggesting the birds were mainly from here.

Corfe Mullen Tip was also an important pre-roost gathering site where already large numbers increased further as birds arrived from other feeding areas during the afternoon. All daytime feeding counts were undertaken before the arrival of pre-roosting birds. During an evening pre-roost count in February, the highest single count of the whole survey counted 323 birds here.

Recently, bird-scaring techniques mainly involving gunshots and large hawks have been employed here to discourage the gulls. These have largely paid off with no gulls now visiting during the day. It hasn't worked with the Carrion Crows, however, who just take temporary cover in the conifers to the west of the tip, returning not long after the apparent danger has passed.

Holes Bay

Holes Bay had the second highest daytime feeding count with 167 birds on 23rd December. Around 95% of all Carrion Crows using Holes Bay were in the northern two sectors. Of these, the north-western sector at Upton Country Park was by far the most frequently used, with saltmarsh here and the stubble field directly to the north being the most popular areas. When the tide was out, the algal covered rocky areas exposed at low tide were frequented but no birds were ever seen feeding directly on the exposed mud.

The large flock also occasionally visited the central saltmarsh just south of the railway line. Away from these areas, small flocks were occasionally seen in fields to the west of Upton Country Park, with occasional birds, usually 2-5 in the southern areas of Holes Bay.

From mid-October numbers were around 140 birds, remaining steady at around 145 birds in November. Numbers peaked in December with 167 birds on 23rd. January's high count was slightly down at 143, however the real drop came in mid-February and by the beginning of March only around 35 birds were using the area. This corresponded with a sharp increase in numbers feeding at Corfe Mullen tip.

Baiter

In terms of numbers, the third most important feeding site in the harbour and the only other site to record over 100 birds. Its popularity was probably again due to a combination of inter-tidal and grass areas, with the additional bonus of tit bits left by visitors.

Numbers were only around 30 at the beginning of September, rising to around 80 in mid-November. December's highest count was 94 birds with numbers finally peaking at 115 birds on 8th January. From late January, there was a gradual downturn in numbers to eventually about 70 birds by early March.

Although numbers here were slightly higher during periods of low water, many of the birds were happy to continue feeding on the grass during low tide.

Disturbance was a factor with birds often moving between foreshore and grass depending on where the loose dogs were. They were however very tolerant of dogs on leads, allowing close approach, suggesting an understanding of the concept of dog leads.

A well-documented feeding activity here is the dropping of shells onto the tarmac to smash them and expose the occupants. As a consequence, the whole area was littered with broken shells.

Occasionally birds could be seen together in small groups on rooftops of the adjacent housing estate, particularly on sunny days where they would stand just below the level of the rooftop out of the prevailing wind and loaf.

Occasionally, very tight flocks of birds would form in the middle of the lawn, which mainly involved just standing around. Who knows what was going on there.



Ballard

Another important feeding area mostly centred around a cattle field to the east of Warren Wood. This field was particularly muddy, dungy and straw laden, a combination irresistible to Crows, Rooks and Jackdaws alike.

30-50 birds were regularly counted until the end of January. This figure rose to 60-70 in February and March. Birds were occasionally encountered at Ballard down, particularly at the eastern end.

Frome Valley

The most popular part of the valley was again a particularly muddy and dungy straw laden cattle field just south of where the Higher Hyde road meets the A352. The highest count of 67 birds was recorded on 21st January.

Other areas used were grass fields just to the east of East Holme bridge with regularly 10-15 birds in the field immediately south of the lane to East Holme and 7-9 birds on floodplain fields immediately north.

Up to 35 birds also used the floodplain fields when they were particularly waterlogged after heavy rain.

Birds feeding here seemed to be largely based outside the area with visits here rather intermittent. These areas included Worgret where a large stubble field was popular. Also the waterlogged floodplain at Wareham Common was a regular haunt.

Shore Road

The inter-tidal area here was regularly used throughout the survey period. In mid-September around 10 birds were regularly using the area. Numbers gradually increased to around 25 birds in November. From early January, numbers had risen again with counts consistently between 33-36 birds, with a peak count of 39 on 25th January.

Lytchett Bay

A combination of a large muddy dung filled cattle field and a neighbouring rocky algal-covered inter-tidal area proved quite popular. Numbers would have undoubtedly been higher were it not for the rather close proximity of the very popular Corfe Mullen tip and Holes Bay feeding areas. Up to 27 birds visited in October, then 15-17 in November and December rising to 28-31 regular birds from January to March.

Knoll Farm, Soldiers Road.

This was basically one large muddy field, where 10-15 birds regularly visited from October to January. Numbers increased in February and March to 35-38 birds.

Kingswood Farm

Another particularly muddy dung-filled livestock field, including sheep as well as cattle. A similar pattern to Knoll Farm with 4-15 birds up until the end of December increasing to an average of 21 birds in January and slightly increasing again in February to 24-37 birds with the highest count of 37 birds occurring in mid-February.

Arne Saltmarsh

There was a regular flock of 10-14 birds here from September until December, however all but 2-4 birds had abandoned the area by January and didn't return.

Shell Bay

Only 1-9 birds present, the usual count being 4 or 5 birds. Highest count of 9 was on 24th January.

Other counts

Up to 20 birds were seen on occasion at Keysworth waterworks.

10- 14 birds regularly encountered at low tide feeding in the South Deep area between Green / Furzey Island and Goathorn including Newton Bay.

Up to 12 birds regularly on Bestwall Meadows.

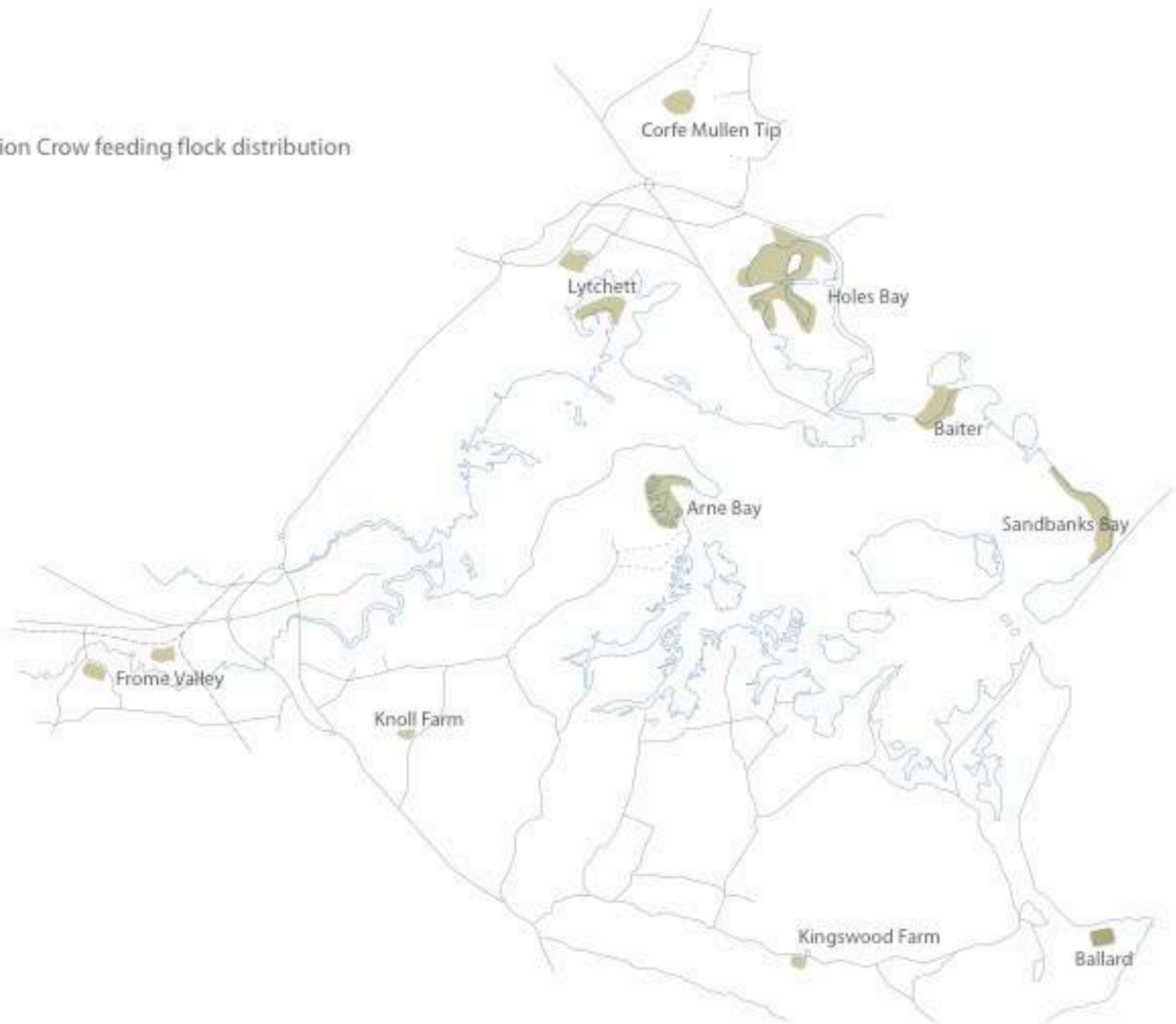
4-8 birds regularly in the Bramble Bush Bay / Stone Island area at low water.

3 -6 birds at Knoll beach were either hanging around the car park for scraps or feeding on the beach, particularly after stormy weather to search the often extensive areas of washed up seaweed.

2-6 birds Brands Bay.

One-off counts included 10 birds in fields north of Norden Farm, 10 birds at Greenlands Farm and 9 birds at New Mills Heath.

Fig 9. Carrion Crow feeding flock distribution



4.2.3 Roosts

Communal roosts are largely made up of immature and other non-territory holding birds, however paired territory holding birds can also join the communal roost in the winter.

Three large communal roosts were located during this survey at Upton Heath, Luscombe Valley and Goathorn. A further roost was located outside the area at Stony Down plantation which was used by some of the birds that fed at Corfe Mullen tip.

Assessing numbers at Upton Heath and Goathorn proved quite awkward with observations often limited to mix flocks in very low light levels, making the separation of Rook and Crow very difficult.

Carrion Crow often went to roost very late, quite regularly in the dark. Some could also leave the roost in the dark the next morning.

Daytime feeding flock numbers, however, were accurate and many birds were able to be observed making their way towards pre-roost areas during the afternoon then onto the roost sites, giving a good indication of numbers potentially using the roost.

Away from these sites there were many other places where Crows were roosting as they were regularly heard calling pre-dawn at many other places. Many undoubtedly involved territory holding pairs, however some may have involved small groups of immature birds.

Upton Heath

This was the largest Carrion Crow roost in the recording area. At the pre-roost gathering site, there seemed to be a lot of to-ing and fro-ing north and south from the tip throughout the afternoon and it was surprisingly difficult to work out exactly what was going on. However, observations at the end of the day seemed to suggest that just over half of the often 300+ strong flock went south to the Upton Heath roost, with the other half heading north to Stony Down plantation roost.

Although the site was shared with Rooks and Jackdaws, the actual roost trees probably were not. During early morning, birds appeared to be coming out of the more southerly part of the roost area with the Rooks and Jackdaws coming out at the northern end.

Luscombe Valley

The only roost site to contain just Carrion Crows. Unfortunately this site was only located at the beginning of February when 131 birds were counted.

Although only limited observations were possible, it would seem that the majority of the numbers were made up of birds from the feeding areas at Baiter and Shore Road.

Goathorn

Again very difficult to assess in terms of accurate numbers. Flightline observations recorded birds flying in from the nearby feeding areas of Ballard which held up to 70 feeding birds at its peak. It was not entirely clear where the birds feeding at Kingswood Farm roosted.

Interestingly, some birds using Baiter during the day were observed leaving the shoreline directly south, up and over Brownsea in the direction of Goathorn. Early morning watches also saw birds heading north to the west of Brownsea, suggesting that indeed their roost site destination was Goathorn.

The only other birds that couldn't really be accounted for within the recording area were the regular Frome Valley birds who were thought to either use the Rook and Jackdaw roost at Binnegar or the roost further up the Piddle Valley.

At shared roosts, Carrion Crows were always the first out in the morning with most leaving singly. As with Rooks and Jackdaws, the timings of at least the first birds out appeared to be influenced by light levels.

The first indication of a bird leaving the roost in the morning was calling. During mornings with 8/8 cloud cover, first calls were heard around 42-44 minutes before sunrise, compared to 50-55 minutes before sunrise when cloud cover was 0-1.

Not all birds left at first light however and the whole leaving process was actually a lot more protracted than the sudden bursts of the Rook and Jackdaw, with single birds continuing to leave the roost trees long after the Rooks and Jackdaws had departed.

4.2.4 Population

Assessing to any degree of accuracy the total numbers of Carrion Crows using the area at any given time was not possible, but many hours of observation during the 6 month survey provided enough data for at least some subjective interpretation.

The first limitation to the estimate, and the real unknown, was the number of paired territory holding birds that were among the feeding flocks and roosting birds. Clearly, many pair birds did not join the feeding flocks and did not roost at communal roosts thus making any population estimate a certain underestimate. It seems likely that territory holding birds formed a very small percentage of the feeding flocks, given the limited areas flock birds could be found and how many territory holding pair birds there are scattered across the Harbour. Any figure based on feeding and roosting numbers therefore are more likely to be a much more accurate estimation of the number of non-breeding and non-territory holding birds in the Harbour.

The second limitation is the degree of movement between sites, potentially leading to a double counting if counted birds later move to an area yet to be counted, but equally undercounting if birds move to an area just counted from an area to be counted.

Having said that, many feeding sites did return consistent numbers, suggesting the same individuals were involved. In other areas, regular movements between sites were also noted and counts of these areas were done withing the same counting period..

Some large fluctuations in numbers were apparent at the Frome Valley site, however later in the survey it was discovered that these birds were commuting to outside of the recording area to Worgret and the Piddle Valley.

The table below shows average feeding figures for sites and combined sites based on assumptions made from observations. The figures are taken for the month of February which had the highest counts.

Baiter / Shore Rd	Ballard / Kingswood	Corfe Tip / Holes	Frome Valley	Knoll Farm	Lytchett Bay	Shell Bay	Other sites combined	Estimated Total
c100	c95	c330	c35	c35	c30	5	20	c650

Table 10. Estimated feeding totals by area of Carrion Crow in February

Increases in feeding numbers as the winter progressed seem to occur at nearly all sites, suggesting birds arriving from outside the area rather than being gained at a neighbouring sites expense.

The only site to experience a drop in numbers was Arne, where numbers were small to begin with.

It was estimated that peak numbers in February were around 25% higher than numbers in September. There has been a suggestion that some of the resident Carrion Crows do move south in winter, a theory that is not contradicted by the findings in Poole Harbour.

4.3 Magpie

4.3.1 Introduction

Magpies are completely sedentary in the UK, occurring in a wide range of habitats but are most abundant on grazed pasture with a few bushes and trees. Their spread into suburban and urban areas reflects their marked population increase over the past 50 years or so.

Adult birds remain in pairs throughout the winter and can roost on territory or at a communal roost. Immatures may roost in small groups within their home range or in winter may join a large communal roost. Numbers are generally highest mid-winter with numbers starting to decline in February when pair birds begin to roost again near their nest site.

The 2008/09 survey mainly concentrated on Rook Jackdaw and Carrion Crow. Some work was done on Magpies but not enough to present complete findings.

In 2014/15 a dedicated survey was conducted.

4.3.2 Distribution and feeding

As would be expected, Magpies were found to be widely distributed throughout the whole area including the suburban and urban areas.

Adult pair birds were regularly encountered feeding together within their territories. If their territories happen to contain a particularly muddy and dung filled field however then more birds would invariably be seen. These birds were generally non-territory holding or young birds whose home range encompassed this particular territory.

Magpies do not habitually flock but if a particularly good source of food became available numbers of birds could be seen feeding together. Highest feeding numbers seen were usually in the muddy cattle field at Knoll Farm on Soldiers Road with up to 15 birds. Up to 10 birds could also be found around the muddy cattle fields of Upton Country Park.

The circular lawn at Poole Park regularly attracted 6 -8 birds. This was also a pre-roost gathering area and during the late afternoon up to 18 birds could occur.

Corfe Mullen tip was also a favourite feeding area with 7 or 8 birds usually feeding on the slope at the perimeter.

Arne cattle fields regularly held up to 6 birds, however not always preferring the muddy areas. Very occasionally, birds were seen feeding on the backs of cows here with the odd appearance on the bird table in the Arne car park.

Mostly pair birds were regularly distributed throughout suburban and urban Poole making use of any small 'green' areas and no doubt benefiting from any refuse left about.

Could also be regularly encountered early morning on roads looking for roadkill.

4.3.3 Roosts

Nine roosts containing 10 or more birds were found, along with one 'loose' roost site. Three small roosts containing 3-6 birds were also located, along with many pair bird roosts.

A few roosts had already been located during the 2007/08 survey. All were still active except for one site which had contained up to 20 birds but was no longer in use. Another site was found to be significantly reduced in numbers.

During both surveys the largest roost by far was at Hatch Pond, with numbers in 2008/09 reaching an impressive 193 birds on 1st December. Highest count in 2014/15 was 144.

Most roost sites were in willow or hawthorn trees overhanging or very close to water. Failing that, they were surrounded by waterlogged ground. All roosts were Magpie only.

Some roost sites were awkward to view in terms of assessing numbers entering the roost. Some sort of pre-roost activity usually occurred with birds congregating often very close to the actual roost site, making this the best time to count. In particularly breezy conditions, however, birds kept quite low and often just slipped into the middle of the roost bush without any fuss. Where possible, counts were done in low winds.

Hatch Pond

This was the largest roost by some margin.

In 2008/09, numbers steadily increased as the winter progressed. November numbers peaked at 144, rising to a survey high of 193 birds on 1st December.

No counts for January but numbers down to 89 birds by 22nd February.

The highest count in 2014/15 was 144 birds in January. Numbers were already over 140 by late October with high counts consistently around this figure into late January. However during this period a number of counts between 75 and 80+ were also recorded.

Viewing here was fairly straightforward in light winds, with birds congregating high up in trees before dropping in. Numbers of observed birds declined in windy conditions, however many of these low counts were in non-windy conditions suggesting a genuine fluctuation in numbers.

A couple of counts in February produced expected lower numbers of 77 and 84.

193 birds coming into roost does suggest a rather large catchment area, however it was not possible to estimate it. Flight observations however did reveal that nearly all birds came in from the south, with only a handful coming in from the north and east. Clearly birds to the north and east were going elsewhere, leaving the main catchment area to the south.

Some birds were seen arriving from the west, as noted by other observations from further west, but it is not known exactly how far west.

Upton Heath

The roost here was in a dense stand of trees at the north west corner of the heath.

With the very large roost at Hatch Pond only a couple of miles away, the discovery of another reasonably large roost at Upton Heath was a bit of a surprise.

In 2007/08, numbers peaked here at 48 birds on 13th January. The next highest count was on 6th December when 43 birds came into roost. However, 5 days earlier on 1st December, when Hatch Pond had its highest count, only 14 birds came in to the roost with many of the others flying off east in the direction of Hatch Pond, suggesting some interchange between these two roost sites.

In 2014/15 numbers were much reduced, with only a maximum of 10 birds recorded on 17th November.

There was also a very small roost at the southern end of Upton Heath, in the vicinity of the main corvid roost, which regularly attracted 4 or 5 birds in 2007/08.

Luscombe Valley

Location Willow/Alder Carr surrounded by waterlogged ground at the southern end of the valley.

Unfortunately, this roost was not located until the end of January. The highest count of 48 birds was achieved on the first visit, after which, as expected, numbers decreased in mid-February to around 35-40 birds.

Woods just south of Norden Farm

Determining the exact position of this roost was not possible, however the area of the wood they seemed to be entering was the boggy Alder Carr located directly south of Norden Farm.

Not located until mid-February, but proved to be quite a sizeable roost with a minimum of 42 birds counted on 25th February. This number may well have been higher in mid-winter.

Electricity generating station, Rigler Road, Poole.

Small mixed wood at far southern end of Holes Bay (west side) adjacent to shoreline and electricity generating station.

A medium-sized roost with up to 25 birds attending in mid-December 2007

Similar numbers in 2014/15, with an estimated 15 birds on 18th December rising to 25 by January, with 22 birds still there on 17th February.

Newton Heath plantation

In 2007/08, up to 20 birds were regularly seen congregating late afternoon in tree tops on the eastern side of the plantation on the western boundary of Greenlands Farm, somewhere in the vicinity of the lake. However the exact location was not determined.

A number of visits were made to this site in 2014/15, but no birds could be found. Since the previous survey, much logging has occurred in this area and one can only speculate as to the reason for the desertion.

Up to 8 birds were however very occasionally seen loosely gathering around the fields at the north end of Greenlands Farm but all eventually left the area in various directions.

Upton Country Park south

Situated in Willows at the back of the large pond at the southern end of UCP, just west of the main track south through the wood.

Up to 26 birds used this roost through the winter. Pre-roost gatherings were in the tall trees at the back, on the old railway embankment. The birds also made use of a very close electricity pylon to gather.

Most birds appeared to come in from the north where many had been feeding earlier in cattle fields at the north end of the country park. No birds seen flying in from the south but with 2 medium roosts to the south, this was not unexpected.

Middlebere

Located in small trees within the reedbed area (Slepe Moor). Around 12-15 birds regularly used this roost site.

Ridge Wharf wood

Small dense stand of trees at Ridge Wharf boatyard, backing onto R. Frome.

A rather serendipitous discovery, rather like the Luscombe Valley roost. This time I was lying in wait for Starlings which had been suspected of roosting in a belt of conifers to the east. At dawn, Magpie calls could be heard coming from the general area of the wood.

Later investigations on 24th January revealed a roost of 14 birds.

Poole Park

Trees between the small lakes by the railway line. Around 16 birds roosted here mid-winter with least 12 birds on 22nd Feb.

Ham Common area

A rather odd situation here with all observations suggestive of a small to medium sized roost in the area.

Towards the end of the afternoon there was plenty of Magpie activity with birds congregating, splitting up, following each other around etc. As dusk fell, things remained disorganised with small groups of birds going in different directions, some seemingly entering likely roost trees with others carrying on. Judging by the calling in the dark later, it was clear that most if not all of the birds were still in the same vicinity but not in the same trees, mostly at the western end of Hamworthy Lake.

It was estimated that 10-12 birds were roosting in this area.

Piddle Valley

Clump of trees near a pond between River Piddle and the east end of Bestwall wood. Around 6-8 birds in January and February.

Fig 10. Magpie roosts



Little Sea

On 24th November, four birds appeared to go to roost in Willow at water's edge on the east side of the main lake

South Haven

3 birds were regularly seen going to roost in a clump of reed edge trees at the south end of the main pond.

4.3.4 Pre-roost activities

Magpies will form pre-roost gatherings in open areas in the vicinity of the roost. This usually just involves birds making their way to the roost area from as early as 3 hours before dark where many will continue to feed.

Later, there is much more activity as birds begin to engage with each other and move to surrounding trees. This usually takes the form of following or chasing each other, either from tree to tree or within a tree, usually accompanied by plenty of vocalisation.

At Hatch Pond there was no adjacent open area, so birds came in later to gather in the high trees near to the roost trees. Activity here was usually pretty muted with not too much more than the odd hopping around of branches interspersed with a few small chases and perhaps the odd flight across the water and back.

At Upton Heath, fields bordered the western part of the heath near to the roost trees, but these areas were not used. Many of the birds appeared to be coming from the east across the heath never reaching the fields.

A regular pattern here would see birds arriving from the east and flying across the heath. Despite the relatively short distance across the heath, most of these flights included a number of stops on the way at variously located trees or bushes, sometimes to join a bird or birds already there. This pattern continued until all birds eventually reached a large clump of trees near the roost site on the western edge of the heath. Here, there would be plenty of vocalisation and chasing.

They would then make their way to the actual roost site trees, where again there was a lot of vocalisation, branch hopping and re-positioning. As it was getting dark, birds would slip into the dark interior of the densest trees.

During this time there was also a small build-up of feeding birds at the rubbish tip and adjacent trees on the southern boundary. Again, there was lots of jostling and chattering with birds making regular sorties between the boundary of the tip and adjacent trees.

On the first visit, it was assumed that this separate group must be using another roost somewhere to the north. However, as it got dark these birds all flew south to join the others in the low trees on the western edge of the heath.

At Upton Country Park, pre-roost gathering was noted in the main field at Upton Park Farm at the northern end. Feeding numbers of birds increasing late afternoon with birds periodically forming quite tight flocks.

At Greenlands Farm in 2007/08, pre-roost gatherings occurred in the fields opposite the roost trees. Initially birds could be quite spread out, with most still foraging. Eventually these birds did co-mingle and interact before flying to the roost trees to interact some more.

At the electricity generating station, Rigler Road, the adjacent playing fields were ignored with birds flying straight to the roost wood or the structures at the generating station.

4.3.5 Discussion

Despite being probably one of the most conspicuous birds in Poole Harbour, some of the roosting sites proved to be very elusive.

Magpies, unlike all the other crows surveyed, were often very difficult to track to their roost sites. The main issue was the difficulty in observing flightlines towards the roost area which, on many occasions, were seemingly non-existent.

Luscombe valley was a case in point. The 2014/15 survey was undertaken in tandem with two other species, Pied Wagtail and Starling and it was Pied Wagtails that were being searched for at the time. Previous observations of commuting Pied Wagtails had led me to Luscombe Valley and it was whilst searching this area I chanced upon a large group of Magpies. The odd thing was that in all the flightline observations I had made to that point, no Magpies were ever seen moving. And yet there they all were! A load of big black and white noisy birds!

Subsequent visits also revealed limited data on flightlines and it seems that they must be making their way to the roost site by garden hopping, never really breaking the skyline properly with any meaningful flight.

A similar situation occurred at the Ridge Wharf roost where fairly extensive observations piecing together Starling and Pied Wagtail flightlines never produced any meaningful Magpie flights to this wood, so it was a complete surprise when a roost of 15 birds were accidentally discovered here.

Although this was all rather worrying, there was a pattern emerging in terms of roost site habitat, with many invariably located in a clump of dense trees near a water body, or at least surrounded by waterlogged ground.

With the strong chance of some roosts being over-looked, a more pro-active method was employed to search for potentially missing roost sites. All ponds and stretches of river were investigated as far as possible, along with many boggy areas although it was not possible to cover all of these.

With most accessible areas covered it seems likely that a very good percentage of the communal roosts were located.

4.4 Raven

Raven is now a regular breeding resident bird in the Poole Harbour recording area. They can pretty much be encountered anywhere in the harbour but most likely to be seen flying somewhere.

Birds were most regularly encountered at Ballard Down or commuting along the Purbeck Ridge.

There were also regular sightings from Cleavel point with birds seen occasionally hanging around Green Island, with 5 birds present here on 24th October. Birds flying from the Newton Heath area north east to Brownsea probably involved the Brownsea nesting birds.

Other regular sightings were in the vicinity of breeding sites such as Corfe Castle, Arne plantation and Upton Heath.

No regular feeding areas were found; nearly every encounter of a feeding bird being at a different site.

Places found included a big dung heap just below Godlingston view point, various dead animals including a sheep on Ballard and another stood on a dead Herring Gull on Brownsea Lagoon.

One bird scavenging at Corfe Mullen tip late February was presumably one of the local breeding birds.

No Ravens were seen to come into any of the main corvid roosts.

On 10th September, 12 Ravens appeared over East Holme Bridge, hung around in the air for a while before most of them moved off in a south east direction. A further 3 birds were seen on 23rd September but after that there were no further sightings.

Ravens are very early breeders and territorial activity was noted right at the start of preliminary work at the beginning of September.

Although dedicated searches were not made for nesting birds, pairs were located nesting or nest-building at Ballard Cliffs, Corfe Castle, Upton Heath, Brownsea and Arne.

There was also always a lot of activity around the South Deep area, particularly Green Island. However no evidence of nest building was seen and could have involved birds from Brownsea.

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