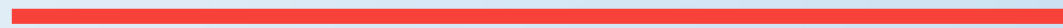


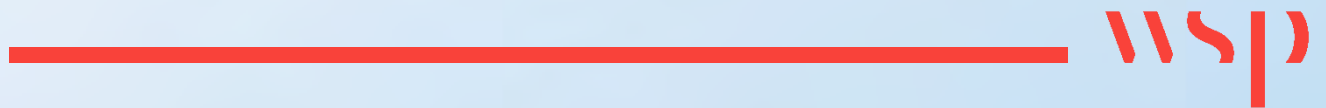
Appendix 5.6

Winter Birds (Part 2 of 3)



Appendix D

ORIGINAL APPLICATION BIRD
SURVEY DATA





The Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 Regulation 5(2)(a)

The Proposed North Killingholme (Generating Station) Order

North Killingholme Power Project

**Environmental Statement
Appendix 7.8**

22 March 2013

Document Reference: 6.2

Author: Parsons Brinckerhoff

C.GEN Killingholme Limited

C.GEN

1 INTRODUCTION

1.1 Overview

1.1.1 Parsons Brinckerhoff (PB) has been commissioned by C.Gen to undertake an Environmental Impact Assessment (EIA) for the proposed combined Cycle Gas Turbine (CCGT) Power Plant at North Killingholme, North Lincolnshire.

1.1.2 As part of the EIA, PB undertook a desk based study to obtain any previous records of protected and notable bird species within the vicinity of the application site. The purpose of the desk based study was to provide an ecological baseline which would inform whether further mitigation and or survey effort would be recommended and to inform the subsequent Ecological Impact Assessment.

1.1.3 The desk based study identified that sufficient wintering bird survey effort had not been completed within the footprint of the Operations Area; the proposed construction site. A wintering bird survey for this site was subsequently completed. Surveys within the rest of the Application Site were not considered necessary given the existing high levels of disturbance throughout the Humber Sea Terminal and the hard standing currently used as car storage.

1.1.4 This overview report presents the data of this dedicated wintering bird survey as well as the other relevant data collected and used to inform the ecological assessment of the Environmental Statement.

1.2 Methodology

1.2.1 Parsons Brinckerhoff obtained detailed and up to date bird data for the Application Site and a surrounding 2 km buffer. The mainland surveys have been undertaken by Mr Graham Catley and the foreshore surveys by the Centre for Marine and Coastal Studies (CMACS) with a single visit each week throughout the various survey periods. Just Ecology also undertook a Winter Farmland Bird Survey on behalf of Able UK Ltd in 2007. The time and day of each survey varied depending on the high and low tides. All surveys followed Natural England guidance¹ and standard British Trust for Ornithology Common Bird Census guidelines.² Specific details of each survey can however, be found in the relevant survey report; see appendices.

Wintering Bird Surveys within the Operations Area

1.2.2 It was identified that the desk study data did not provide sufficient information for the proposed Operations Area itself. PB therefore undertook a wintering bird survey of the Operations Area on the 14th December 2010, 13th January and 17th February 2011. It was not possible to undertake surveys in October, November 2010 or March 2011. It was not considered necessary to undertake two surveys per month as the habitat contained within site 1b, the proposed Operations Area was considered to be sub-optimal for wintering birds, largely comprising of hard standing, large concrete walls and concrete buildings and scattered scrub.

1.2.3 A pre-defined transect was walked around the entire site which took advantage of the existing natural and man-made infrastructure which helped hide the surveyor and

1 Natural England's Bird Survey Methodology Guidance for birds of the Humber Estuary designated sites in North East Lincolnshire.

2 Marchant, J (1983). BTO Common Bird Census Instructions, BTO, Theford.

minimise disturbances. Each compartment of the Operations Area was scanned initially from the hidden vantage point to obtain an accurate assessment of bird numbers. Following this each area was walked methodically to locate any birds not visible from the initial vantage points or to assess areas invisible from the initial vantage point. All species and their behaviours were mapped using standard (BTO) two letter species codes.

1.2.4 The December and February surveys were timed to coincide with high tides; in order to locate all inland waterfowl or waders roosting or feeding on site. The surveys were timed so the high tide occurred in the middle of the survey. The January survey was undertaken to coincide with a low tide as a comparison. All surveys were undertaken during suitable weather conditions.

1.3 Results

1.3.1 The results of the wintering bird survey within the Operations Area is summarised in Table 1 below with the geographical plans presented in Appendix A.

Table 1: Summary Table for the 2010/11 Wintering Bird Survey within the Operations Area

Species recorded	Latin name	Survey 14.12.2012	Survey 13.01.2011	Survey 17.02.2011	Peak Count	Conservation status
Blackbird	<i>Turdus merula</i>	14	4	5	14	N/A
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	NA	4	NA	4	Amber
Blue Tit	<i>Cyanistes caeruleus</i>	1	2	2	2	N/A
Bullfinch	<i>Pyrrhula pyrrhula</i>	NA	NA	1	1	Amber, UK BAP
Carrion Crow	<i>Corvus corone</i>	7	5	7	7	N/A
Common Gull	<i>Larus canus</i>	3	NA	14	14	Amber
Coot	<i>Fulica atra</i>	NA	NA	1	1	N/A
Fieldfare	<i>Turdus pilaris</i>	6	6	NA	6	Red
Goldfinch	<i>Carduelis carduelis</i>	2	3	8	8	N/A
Great Tit	<i>Parus major</i>	NA	1	NA	1	N/A
Herring Gull	<i>Larus argentatus</i>	3	3	5	5	Red, SPI, UK BAP
Jack Snipe	<i>Lymnocyptes minimus</i>	4	3	NA	4	Amber
Lapwing	<i>Vanellus vanellus</i>	1	NA	NA	1	Red, UK BAP, LBAP, SPI
Linnet	<i>Carduelis cannabina</i>	NA	5	2	5	Red, UK BAP, LBAP, SPI
Magpie	<i>Pica pica</i>	3	NA	4	4	N/A
Mallard	<i>Anas platyrhynchos</i>	3	NA	2	3	Amber
Pheasant	<i>Phasianus colchicus</i>	8	3	4	8	N/A

Species recorded	Latin name	Survey 14.12.2012	Survey 13.01.2011	Survey 17.02.2011	Peak Count	Conservation status
Red-Legged Partridge	<i>Alectoris rufa</i>	3	4	1	4	N/A
Redwing	<i>Turdus ilacus</i>	1	NA	NA	1	Red
Skylark	<i>Alauda arvensis</i>	1	NA	1	1	Red, UK BAP, LBAP, SPI
Snipe	<i>Gallinago gallinago</i>	3	3	3	3	Amber
Woodpigeon	<i>Columba palumbus</i>	37	23	17	37	N/A
Wren	<i>Troglodytes troglodytes</i>	2	3	3	3	N/A
Yellowhammer	<i>Emberiza citrinella</i>	NA	1	NA	1	Red, UK BAP, LBAP

SPI = Listed on NERC Act Section 41 Species Priority Importance;
UKBAP = UK Biodiversity Action Plan Priority Species;
LBAP = Local Biodiversity Action Plan Species;
Red = Included in Birds of Conservation Concern (BoCC) Red List;
Amber = Included in Birds of Conservation Concern (BoCC) Amber List.

1.3.2 The other surveys results can be found in the relevant appendix as described below;

Appendix B

Wintering Bird Survey of East Halton and Killingholme Marshes and inland fields encompassed by North Lincolnshire Council Boundary. January – May 2007. G.P. Catley. Nyctea Ltd.

Appendix C

Spring wader counts in East Halton – Killingholme Marshes April 2007 – March 2007. G.P. Catley. Nyctea Ltd.

Appendix D

East Halton – Killingholme Winter Birds Survey 2007/2008. G.P. Catley. Nyctea Ltd.

Appendix E

North Lincolnshire Winter Survey January – March 2009. G.P. Catley. Nyctea Ltd.

Appendix F

Weekly Survey Reports August 2009 – March 2010. G.P. Catley. Nyctea Ltd.

Appendix G

Humber INCA North and North-east Lincolnshire autumn and winter bird surveys September 2010 – April 2011. G.P. Catley. Nyctea Ltd.

Appendix H

Wintering Bird Data along the foreshore. 2009 – 2010. Centre for Marianne and Coastal Studies (CMACS)

Appendix I

Wintering Bird Data along the foreshore. 2010 – 2011. Centre for Marianne and Coastal Studies (CMACS)

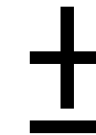
APPENDIX J

Able Humber Ports Facility, Killingholme. Winter Farmland Bird Survey 2007. Just Ecology.

APPENDIX A

GEOGRAPHICAL PLANS SHOWING THE WINTERING BIRDS SPECIES AND THEIR LOCATIONS DURING EACH OF THE THREE SURVEYS WITHIN THE OPERATIONS AREA DECEMBER 2010 – FEBRUARY 2011. PB

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Survey Area

- x Visual
 - ⊗ Singing
 - x Calling
 - x Alarm Call
 - x Flying
 - x From Ground to Flying
 - x From Flying to Ground
 - x Juv Juvenile
 - x + Food Carrying food
 - Confirmed as Separate Individuals
 - Confirmed as Same Individual
- 0 20 40 60 80 100
Metres

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0100031673 2012

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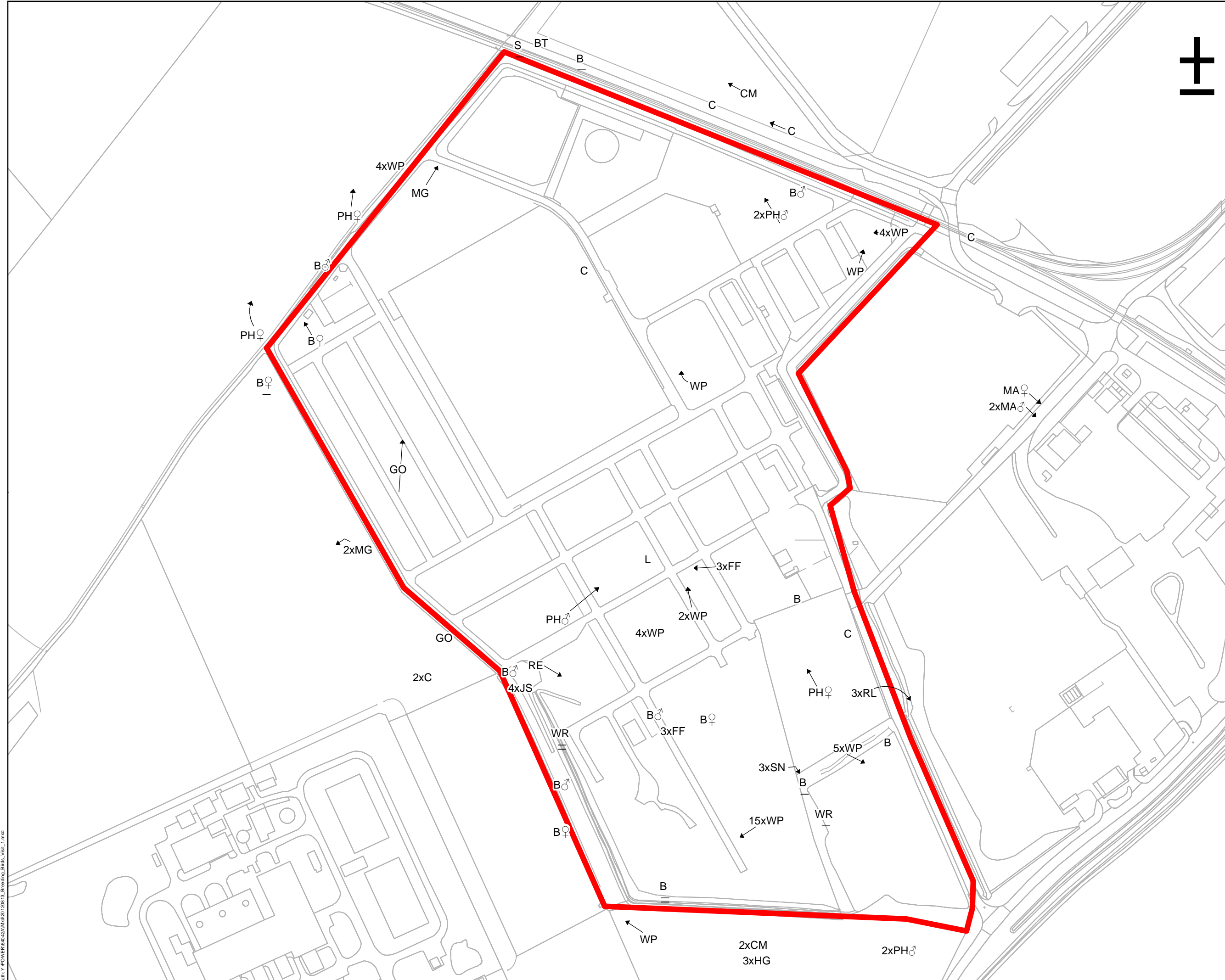
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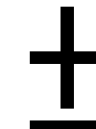


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Survey Area

x Visual

(x) Singing

x Calling

x Alarm Call

x Flying

x From Ground to Flying

x From Flying to Ground

x Juv Juvenile

x + Food Carrying food

--- Confirmed as Separate Individuals

— Confirmed as Same Individual

0 20 40 60 80 100

Metres

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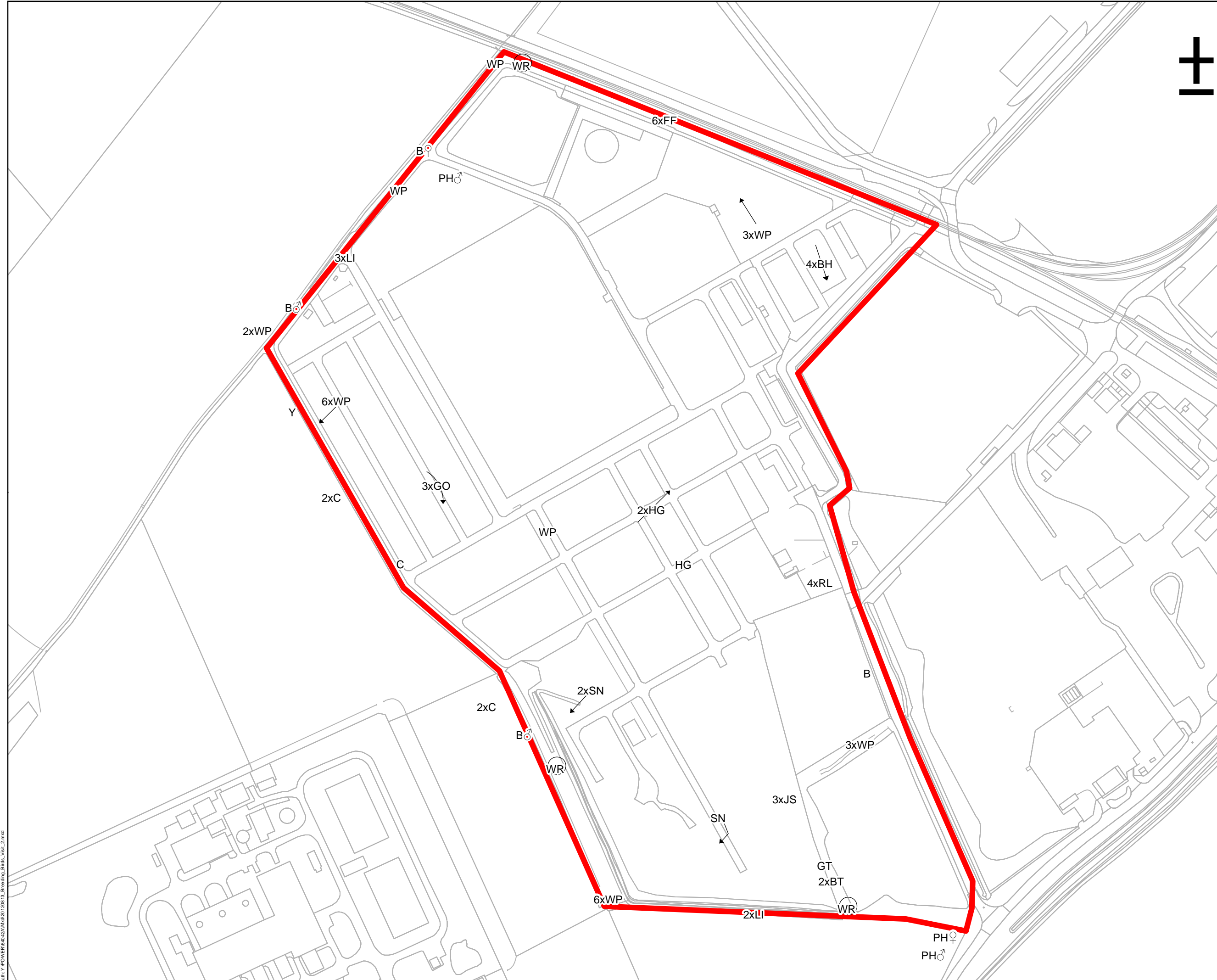
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13th January 2011**

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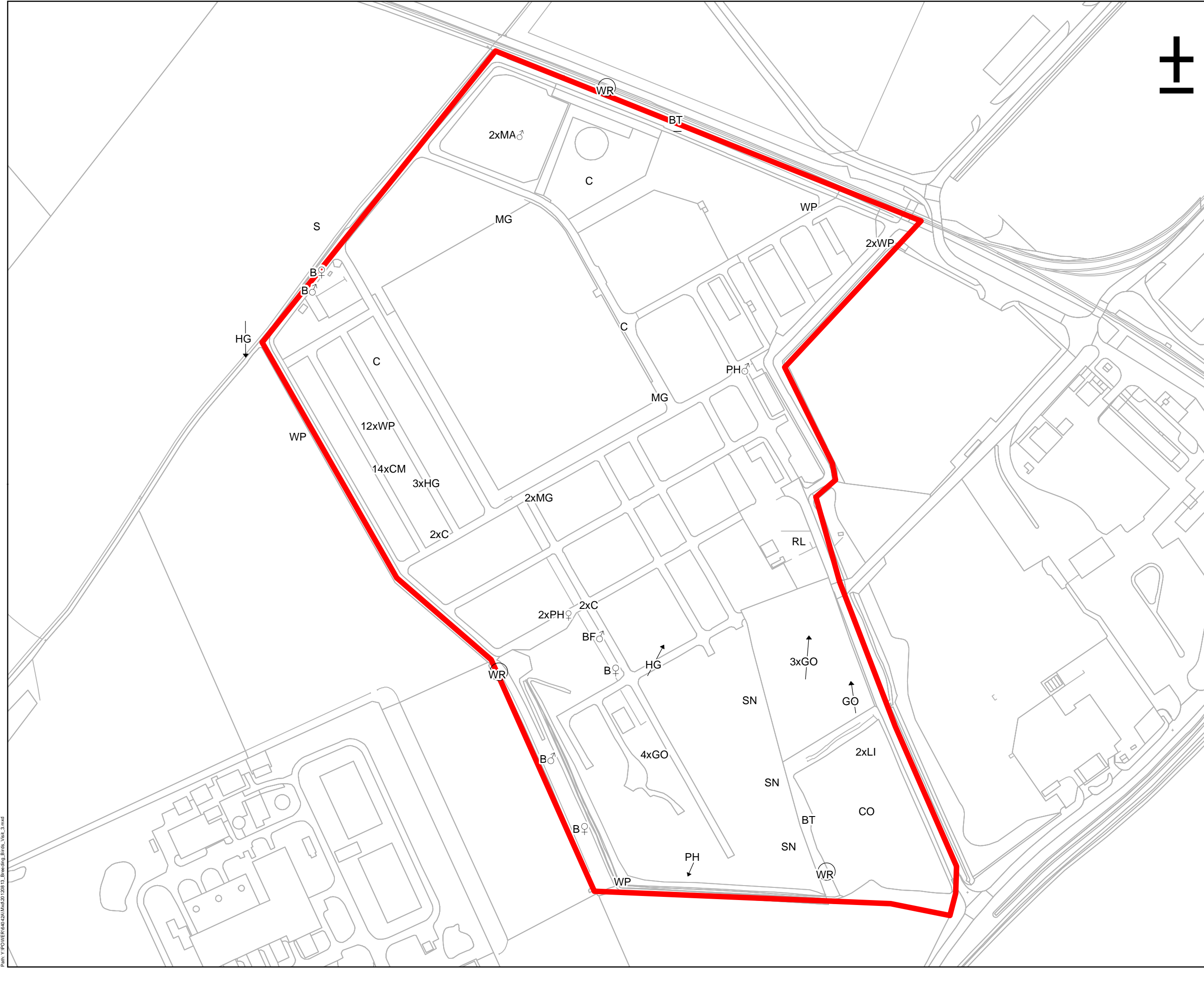
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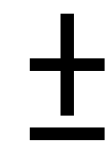
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Survey Area

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- (x) Singing
- x Calling
- x Alarm Call
- x Flying
- x From Ground to Flying
- x From Flying to Ground
- x Juv Juvenile
- x + Food Carrying food
- Confirmed as Separate Individuals
- Confirmed as Same Individual

0 20 40 60 80 100
Metres

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17th February 2011**

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APPENDIX B

**WINTERING BIRD SURVEY OF EAST HALTON AND KILLINGHOLME MARSHES
AND INLAND FIELDS ENCOMPASSED BY NORTH LINCOLNSHIRE COUNCIL
BOUNDARY. JANUARY – MARCH 2007. G.P. CATLEY. NYCTEA LTD.**

Winter bird survey of East Halton and Killingholme Marshes and inland
fields encompassed by North Lincolnshire Council boundary;
January to March 2007

G P Catley BSc Env. Nyctea Ltd

Introduction:

Nyctea Ltd were contracted, by INCA, to undertake a wintering bird survey covering the area shown on the attached plan, stretching in the north from East Halton Skitter to the northern edge of Immingham Docks, and inland to East Halton and South Killingholme villages, during the period January to March 2007 inclusive.

The survey was designed to investigate the abundance and distribution of any of the qualifying bird species noted in the Humber Flats and Marshes SPA criteria. Parts of the area which had already been developed for industrial use were not included within the survey unless observations suggested that any of the qualifying species were using the sites. Similarly mature woodlands were excluded as the qualifying species are all waterfowl, waders and raptors of open countryside, Marsh and Hen Harrier, none of which are associated with woodland.

Description of the survey area:

The entire area was walked during the week prior to the commencement of the surveys and all of the fields were mapped and assigned to a habitat type. Within the surveyed area there were a limited number of different habitat types as the majority of the fields are under either pasture or arable cultivation. The distribution of fields and habitat types is shown on the attached map number one. In order to easily identify individual fields they were identified by a number from one to one hundred and nine and these are shown on map number two. It is considered that the description of habitat types is self-explanatory but further notes are presented below with regard to specific fields, where these are considered to have been of relevance to the survey findings.

Notes on crops within fields:

In general autumn and winter sown cereal fields had a crop which was <10cm high at the start of the survey. Fields of oilseed rape varied in the height and density of the crop but in general it was <15cm in height with the crop being open enough to allow waders to roost and feed. All of these crops were considered to be suitable for even the short legged waders such as Golden Plover and Lapwing (exceptions are noted below). By the close of the survey in March growth of crops had effectively made autumn sown cereal fields unsuitable for feeding and roosting waders while some of the fields of oilseed rape had similarly become unsuitable to an increased density and height of the crop. Permanent pastures were considered to be in a similar condition at the end of the survey to the start with only insignificant growth of the grass sward during the early spring period.

Notes on specific fields within the survey area:

Field number 1

This extensive field immediately adjacent to the estuary was under autumn cereals which had grown to a height in excess of 15cm by January. The crop was dense and appeared to be quite unsuitable for roosting and feeding waders. *see period 3.

Past studies have shown this field to be of particular importance for roosting Lapwing and Golden Plovers with up to 10,000 Golden Plovers and 5000 Lapwing having been counted. The roost of these species usually peaks in November – December but has typically been at its height when the field was either ploughed or had short cereals. Extensive under draining in the past two years may also have affected the surface moisture content of the field and affected its attraction to feeding waders. At times when the field has had standing surface water a wider range of species including Dunlin, Ruff, Redshank, Curlew and Ringed Plover have been found roosting and feeding there.

Field numbers 4 and 15

Canon type bird scaring devices were positioned in both of these fields of oilseed rape at GR's TA144215 (4) and TA143209 (15) respectively.

Field numbers 9, 10, 11, 12, 17 and 25

These fields of oilseed rape all had areas of standing water in the form of pools up to 20m² in extent. The crop was relatively thinly spread at the start of the survey period with bare soil being evident over an estimated 20% - 35% of the field area in addition to flood water pools.

Between weeks 10 and 11 a period of drying winds and extensive sunny spells reduced the areas of flood water in these fields considerably. In addition the oilseed rape in field 25 increased markedly in height to 70cm and in-filled much of the open ground within the field in the same period. The crop in the other fields remained fairly sparse and relatively short, <70cm high, during the same period.

Field numbers 35, 39, 40, 48 and 49 plus fields west of field number 45.

All of these fields were permanent pasture or rough grassland but all were small with surrounding mainly thorn hedgerows and standard trees, typically ash, amongst habitations. Most of the fields were either being grazed by horses or were parts of small holdings mainly given over to small scale grazing. Due to the enclosed nature of the fields, their individual small size and their location amongst houses and buildings none of the fields were suitable for use by waders or wildfowl.

Field number 42

This permanent pasture field had an extensive area of flood water at the eastern end of the grassland where the ditch, between fields 42 and 43, had overflowed into the field. According to local sources this was a recent feature and the pasture had not been flooded during early December 2006. This flood water pool attracted waders which came to the site to bathe and also held variable numbers of waterfowl.

Between the completion of the survey in week 6, February 5th – 11th and the survey in week 7, February 12th – 18th, the blocked ditch between fields 42 and 43 was cleared and the majority of the flood water in field 42 drained away along with the deep water between the two fields.

Field number 64

Two permanent ponds within this pasture varied in extent with rainfall amounts. The ponds are relatively small with a broken fringe of rush but proved attractive to an unexpectedly wide range of waterfowl.

Field number 85

This large area had been planted with small trees as part of a woodland establishment scheme. It appeared to be particularly unsuitable for waders but in fact a fairly narrow strip of land in the middle of the field had been left un-planted and this area of short grass and bare earth attracted a small number of Curlew during the early part of the survey.

Field numbers 88 and 89

These two permanent pasture fields although classified as the same habitat type were quite different in character at the start of the survey. In recent years field 89 has been used for hay production with little or no summer grazing and thus the sward is of medium length with some rougher grass intruding. Conversely field 88 was being grazed by up to 12 ponies during January and the sward was thus very short throughout with areas of standing flood water in the form of small pools and puddles.

Permanent wetlands:

Three major permanent wetland sites were identified and these are also marked on the two maps 1 & 2 noted above. Only these three areas consistently held any significant numbers of waterfowl. *see field 64 above.

East Halton Pits:

This area of flooded clay pits comprises a deep water pit, the largest water area, central GR TA15420 21190, which has a narrow reed fringe on the south-eastern edge and small areas of reed within the pit and in the south-western corner. An open water pond within a permanent pasture field, number 29, which has a small reedbed in the north-east corner and a fringe of *juncus* and rush and an enclosed water area which is mostly reed with some small pools of open water, central GR TA15560 21110. To the east of the largest pits a mixed plantation borders the pond area. A narrow strip of permanent pasture at the western end of the largest pit was very boggy and wet throughout most of the survey. This small area of pasture held a grazing flock of Coot and Moorhen and frequently attracted a large number of Curlew and more surprisingly a few Black-tailed Godwit.

The pits appeared to be relatively undisturbed in January but there was evidence of intensive shooting on the pond in the pasture field, where shooting butts had been constructed; the wildfowl on this pond, including the Coot, were particularly flighty moving off, or in the case of the Coot, flying onto the larger water body at the first sight of a human being.

North Killingholme Haven Pits SSSI:

Four water bodies make up the collection of disused clay extraction pits at North Killingholme Haven. The small western most pit, central GR TA15890 19560, is a deep water pit with a reedbed at the northern end and a narrow reed fringe along the western side. It lies alongside the access road to industrial compounds and is fairly heavily disturbed.

The SSSI consists of three pits. The pit which lies to the west of the railway track is quite shallow and in recent years it has been invaded by *scirpus* and phragmites to the extent that it is now principally a large reedbed with some enclosed areas of open water. A series of small islands within the pit have been surrounded by phragmites. Thorn scrub has also grown high along the northern and eastern edges of the pit. The pit was formerly important for roosting waders but the

spread of *scirpus* and phragmites and the development of scrub around the water areas have all but removed this facet of the pit's importance.

It is now particularly difficult to view this pit due to lack of suitable access.

The large pit to the east of the railway track is now the major site for roosting waders and waterfowl within the pits complex. Water levels within the pit can be adjusted via a sluice system which controls the connection with the adjacent Humber estuary. Typically water levels are maintained at a level which provides a variable expanse of open mud within the pit to attract roosting and feeding waders. This shallow water and mud area lies along the northern end of the pit; the remainder of the pit has deeper water and is more attractive to waterfowl.

The smallest of the three pits comprises two areas of open water with a variable reed fringe adjacent to a thicket of thorn, on the south-eastern side, and is now bounded by the ABLE car parking area to the south and west. The water is deep and attracts small numbers of diving duck and has occasionally produced records of wintering Bittern. Water Rails are frequent. Long-eared Owls formerly bred in the scrub and roosted there during the winter but there have been no records of this species since the development of the ABLE site.

Rosper Road Reservoir:

This flood water catchment site can vary in water depth as a clew door into the adjacent drainage ditch can be operated to lower the levels below that of the weir on the north side of the reservoir. During the present survey water levels were high being about 15cm below the maximum height on the weir. The pond is relatively shallow and has been colonised by a mix of *scirpus*, rush, sedges and phragmites apart from eastern end where open water over grass is still present. During the early part of the survey the area of *scirpus* and sedge was quite open due to winter die off of these plants with waterfowl feeding within the vegetated area. This area proved to be particularly important for waterfowl (see table).

Note that the birds recorded for the East Halton pits wetland site included those waterfowl and waders which were located on the adjacent permanent pasture. This area of pasture was identified as field number 29 and as such the waders recorded on this part of the study site have been recorded twice but this has been discussed in the individual species texts. In the case of North Killingholme Haven pits and the Rosper Road site any waders recorded were found within the boundaries of the wetlands and not on adjacent grassland.

Adjacent inter-tidal areas:

The survey area lies adjacent to two WeBS (Wetland Bird Survey) count sectors, Humber Inner South I and Inner South J. North Killingholme Haven pits are classified as a WeBS sub-sector Inner South JJ and are counted separately to the adjacent inter-tidal.

Inner South I ISI East Halton Skitter to North Killingholme Haven TA 147 230 to 167 203

At peak low water the inter-tidal mudflats cover approximately 36.86ha between the mean high water and low water marks. The mudflats are not uniform in width with the greatest extent being at the southern end between the old seaplane jetty at TA161208 and the new jetty by North Killingholme Haven TA167203. Much of the central section, adjacent to East Halton pits, is rather stony and less suitable for waders. Although there may be a thin spread of Redshank and Dunlin along the sector the areas most favoured by waders are the extreme northern and southern ends. The 500m south from East Halton Skitter and the 700m stretch between the old seaplane jetty and the new North Killingholme Haven jetty. The latter sector, approximately 10.7ha in

extent, typically holds the bulk of the Lapwing which occur on this WeBS sector at low water. The middle and northern end of the sector are frequently subjected to disturbance from sea anglers during the winter months as there is open vehicular access to the concrete embankment.

Inner South **J** ISJ North Killingholme Haven to (South Killingholme Haven) now the second LPG jetty due to mudflat reclamation works. TA 167 203 to 185 179

This larger area of inter-tidal mudflats encompasses 52ha between the concrete sea wall and the low water mark. The mudflats are at their widest between the South Killingholme Lights and the second LPG jetty and narrow off to the north. Waders feed along the whole of the sector at certain times of the tide and in certain weather conditions but the southern part of the sector is most heavily frequented under most conditions and particularly during neap tides. On most tides the upper section of the mudflats between the two LPG jetties TA181181 and 184178 remains uncovered and it is used as a high tide roost by a variety of waders. On higher tides a section of the stony base of the embankment at TA179182, adjacent to the Texaco compound, is used as a high tide roost by Curlew, Dunlin, Redshank, Lapwing, Turnstone and occasionally other waders.

Inner South **JJ** ISJJ North Killingholme Haven pits centre TA 166 198
See wetland sites for a description of this area.

The WeBS sector to the north of the study area Inner South **H**, Goxhill Haven to East Halton Skitter, is referred to occasionally in the text as movements of waders between that sector and the study area were observed during the course of the surveys and anecdotal and casual observations of wader numbers in that sector were considered relevant to the present study.

Weather conditions:

It is generally accepted that different weather conditions affect the behaviour as well as the abundance of waterfowl and waders with changes in weather conditions sometimes having a marked effect over a short timescale. Local flooding may also affect the spatial distribution of species within habitats. Details of the prevailing weather conditions throughout the survey period, along with a brief summary of the weather prior to the survey, are thus presented and any obvious effects upon bird distribution and abundance related to these conditions have been recorded.

Weather conditions late autumn 2006.

The autumn of 2006 proved to be particularly mild with no frosts being recorded in the local area until mid December. Daytime temperatures were frequently as high as 10C and peaked at 14C in November. Following a rather dry early autumn a series of fast moving depressions brought a considerable amount of rainfall to the area during late November and December. In the ten days prior to the start of the present study further heavy rain accompanied a period of strong west and south-west winds and led to localised flooding of susceptible areas. Of particular significance was the increase in standing water in many of the surveyed fields. The amount of flooding varied by field but often produced shallow water to a depth of 3-5cm standing in hollows in many of the arable fields and those with permanent pasture all of which appeared sodden and damp underfoot. The heavy rain had also raised the water levels in the pits at North Killingholme Haven which in turn affected their use by roosting waders during the first week.

Survey period one; January 1st to 7th 2007.

The New Year began bright and breezy with an increasing west-north-westerly wind after some overnight rain. It continued to be fairly mild but temperatures fell towards evening as the wind swung more to the north-west and cloud increased presaging the arrival of another Atlantic depression. The week continued along similar themes with temperatures very high for early January, up to 13C, winds from the west or south-west, up to force six on the 4th and with small amounts of rainfall most of which fell at night.

Survey period two; January 8th to 14th 2007

A more benign start to the survey period with clear skies following overnight rain on the 8th and lighter winds still from the south-south-west. The week was again mild but with some very strong winds, from the west and south-west, and more periods of heavy rain which added to surface water abundance in many of the surveyed fields. The end of the period experienced light winds and some sunshine.

Survey period three: January 15th to 21st 2007

Winds remained in the westerly quarter but were generally quite light at the start of the period intensifying through the week, with a severe gale on the 18th, as another series of frontal troughs passed over the British Isles bringing yet more rain. Temperatures remained high for January with daytime means of 7C-10C and no overnight frosts. The week ended with more heavy rain on the night of the 21st. The cumulative effect of the week's rainfall produced even more surface flooding of some of the arable fields particularly the oilseed rape fields in East Halton Marshes.

Survey period four: January 22nd to 28th 2007

The first taste of winter arrived with a strong, cold, north-easterly wind and showers on the 22nd. Light snow flurries overnight produced a thin covering by the morning of the 22nd which also heralded the first hard frost of the winter. Over ensuing days night frosts and occasional snow showers were accompanied by long spells of sunshine which quickly melted the snow and broke

up the early morning frosts. Large water bodies were never frozen over and even the surface layers of soil were seldom impenetrable for long into the daylight hours. By the end of the period warmer weather had returned with a fresh to strong north-westerly wind on the 28th.

Survey period five: January 29th to February 4th 2007

The week commenced with very mild weather as a large high pressure system over Western Britain dominated the local conditions. Temperatures were exceptional for late January particularly during broken periods of sunshine which permeated the start of the week. Winds were light and the lack of precipitation was in marked contrast to the first four weeks of the survey. The dominant anti-cyclone persisted to the end of the week producing bright and sunny days with light north-westerly breezes but nights turned cooler by the end of the period with a frost overnight 3rd to the 4th.

Survey period six: February 5th to February 11th 2007

Cooler weather set in at the start of the period with some severe overnight frosts, down to -5C, and a mixture of cloud and sunny spells during the early part of the week. An approaching front from the south-west turned the winds into the east by the 7th with some light snow fall on the 8th. The frosts at the start of the week froze some of the water bodies in the survey area in addition to the surface layers of the soil in some of the fields. Another hard frost during 8th – 9th was quickly followed by a period of heavy rain which developed during the afternoon of the 9th and intensified overnight producing local flooding. A further period of persistent rain then developed overnight from 9th to 10th and continued for almost 24 hours bringing further localised flooding. Winds remained initially in the eastern vector being generally cold but without any frosts after which temperatures rose quickly at the weekend to an above average 9C at the end of the period.

During the mid-week survey the following relevant environmental conditions were recorded:

East Halton pits: some ice was present around the edges of both of the pits but the majority of the open water was ice free.

North Killingholme Haven pits: the larger two pits were completely iced over with open water remaining in the two smaller pits.

Rosper Road reservoir: although there was ice around the edges of the open water area and amongst the vegetation there was still a considerable amount of open water available to waterfowl, considered to be 60% of the total area.

Field 42: the flood water area within this pasture was completely frozen over.

Field 64: the two permanent ponds in this pasture field were both locked in ice.

Survey period 7 February 12th to February 18th 2007

The mild weather continued into the start of the week with Monday being mainly bright and dry before heavy showers developed in the afternoon. Temperatures remained above average for the remainder of the week with a frost on the night of the 13th. Considerable amounts of rainfall again fell towards the end of the week but winds were generally light and from the westerly quarter and the last two days of the period were dry, cloudy but mild and sunny and warm respectively.

Survey period 8 February 19th to February 25th 2007

A cooler southerly wind with overcast conditions but near normal temperatures arrived at the start of period eight. Rain fell overnight during 19th – 20th with dull and overcast conditions on the

morning of the 20th slowly brightening by afternoon; this pattern being repeated on the following day. The remainder of the week was mild with long dry periods but also some heavy rain often falling overnight, and light west to north-west winds.

Survey period 9 February 26th to March 4th 2007

Mild weather continued through the first part of the week with light winds and extensive spells of sunshine on the 26th but increasing wind and cloud from the south by early on 27th heralded the arrival of a deep frontal system bringing heavy rain to the region. The rain cleared by evening with Wednesday starting bright and dry but cloud increased again by early afternoon. Three days of mixed sun and showers were then followed by a very wet and windy end to the period as a particularly vigorous frontal system tracked north-east across the UK on the 4th.

Survey period 10 March 5th to March 11th 2007

Temperatures remained above the season average throughout the week with particularly warm spells from 7th – 9th as longer daylight hours and extensive spells of sunshine brought out the first butterflies of the year. Some overnight rain fell in the early part of the week and water levels in general remained high even in arable fields where flood water pools were still extensive. Winds were mainly light during the early part of the week increasing towards the weekend and from the west or north-west quadrants.

Survey period 11 March 12th to March 18th 2007

Spring like weather dominated the first four days of the week with extensive periods of sunshine and midday temperatures reaching 13C; nights were cooler under clear skies with a slight frost in the early mornings of the 13th and 14th. Winds remained light and from the west or north-west. The effect of extensive sunshine and drying winds was particularly obvious in some of the fields where surface water mounts decreased markedly during the period. By the 17th signs of a change in the weather were apparent with an increase in the strength of the north-westerly wind and a flurry of showers of hail. The wind strengthened to force 6 on the 18th accompanied by a series of wintry showers of hail, sleet and snow.

Survey period 12 March 19th to March 25th 2007

The cold wintry weather which ended the previous period continued through the 19th with further showers of sleet and snow pushed down on a fresh north-westerly wind. The wind swung into the north over the ensuing two days with frequent showers of hail, sleet and snow but there was only a brief accumulation on the ground through the night of the 20th – 21st. A substantial amount of rainfall occurred overnight between the 19th and 20th. The remainder of the period was cool with winds from the north and east accompanied by occasional showers.

Survey period 13 March 26th to March 31st 2007

Although the cool easterly airflow continued through the first days of the week winds were light and with long sunny periods during the major part of the day it felt much warmer than in the previous week with temperatures reaching 13C on the 27th. Early morning fog and mist occurred overnight. By Thursday the wind turned into the north and then north-east but remained light although temperatures dropped from the highs of the early week and it was generally dull with some very light rain.

Results:

Distribution and abundance of SPA species:

All of the area covered by the study was surveyed on a single date during each of the thirteen weeks spanning the period January 1st to March 31st 2007. Surveys covered each seven day period starting with January 1st to the 7th and continuing to the last, March 26th to 31st, which was the only six day period.

Surveys were mainly carried out around the high tide period in order to locate all of the inland roosting and feeding areas of waterfowl and waders which had moved to such sites from the inter-tidal mudflats of the Humber estuary. During the mid-winter phase there are seven day periods when all of the high tides fall within the hours of darkness and thus surveys were typically concentrated at first light closest to the high tide time as waders will remain in their roosts until dawn during such periods under most conditions.

All of the survey area was covered with fields being scanned, where possible, from a vehicle in order to obtain an accurate assessment of bird numbers without causing initial disturbance to the birds, following which fields were walked where necessary to locate any birds not visible from vantage points or to cover areas invisible from a vehicle. All qualifying SPA species present were identified and the number of birds counted and recorded to a specific field number. Any movements of birds between different fields were recorded. Longer movements between fields and the inter-tidal areas of the estuary were also recorded and mapped. An initial attempt was always made to ascertain the total number of birds of each species in a series of fields between which there were frequent movements. Where a series of fields were used by the same individual flock of birds on a set survey date then details are discussed in the species texts. The use of different feeding and roosting areas by the same flock of birds on any specified survey date is clearly of significance. The inter-tidal areas adjacent to the study area were also observed to ascertain which species were present and to gauge an estimate of the numbers of relevant species which may have been moving between the estuarine area and the adjacent or more distant fields. Details of bird movements are shown in the attached series of maps relating to the survey periods and specific species.

Surveys in the early morning and late evening were also considered to be beneficial in identifying the movements of some species between roosting and feeding areas which typically included inter-tidal and inland fields; Lapwing, Golden Plover and Curlew were the principal species identified in the study area which undertake such movements. In order to understand the movements of waders involved in this study a brief summary of the winter ecology of the main species is presented below.

Any non qualifying species which were present in significant numbers or of which the distribution or abundance were considered to be of interest were also recorded and details are given in the species texts.

Winter ecology of the principal wader species recorded during the course of the study:

When attempting to interpret survey results relating to wader abundance and distribution it is important to understand the behaviour of different species in relation to roosting, feeding and movements between sites used for night and day roosts and for feeding. Below is a brief synopsis of the key features which have been noted in relation to in depth studies of wintering populations of the most abundant wader species occurring in the survey area. Most of the information is taken from a summary of behaviour in the species texts in BWP, The Handbook of the Birds of the Western Palearctic. Observations of species behaviour within the present study area compared to the known behaviour patterns outlined below, where appropriate.

Golden Plover

On the Humber estuary extensive observation of flocks of Golden Plovers reveals that they exhibit a mix of strategies which are affected by time of year, weather conditions and disturbance levels. Golden Plover flocks are typically present on the estuary between mid to late June and February with most of the wintering birds having departed by the end of the latter month in mild winters. Smaller numbers in April and May are more usually spring passage flocks of the northern form *altifrons*. During June – August Golden Plover are frequently noted feeding as well as loafing and roosting on the estuarine flats. A change in behaviour usually occurs with ploughing and cultivation of inland fields from mid August. Golden Plover flocks then move inland to feed and return to the estuary to loaf and roost at low tide. Generally winter flocks on the inter-tidal areas are seldom seen feeding but use the area for roosting with both day and night roosts being in evidence. This evidence is supported by finding from wider areas of Britain and Europe as noted in BWP see below;

“Readily forms flocks for roosting or loafing throughout the year, especially outside breeding season; some birds feed at night (R Parr)”.

“In winter, Britain, roost-sites often traditional within flock range, sometimes distant from feeding-grounds; ploughed land and low growing crops preferred (Fuller and Youngman 1979, D Nethersole-Thompson); on coast, mudflats and saltmarsh (Weatherhead and Weatherhead 1979, R J Fuller and R E Youngman)”.

“In winter, **roosting movements mostly at dusk and soon after dawn**; birds sometimes leave apparent roost-site soon after dark, suggesting some early roosts are pre-roost gatherings; birds may loaf at any time of day outside breeding season (R J Fuller and R E Youngman). Passage migrants and breeding birds regularly loaf 11.00 -14.00 hrs (Glutz et al. 1975)”.

“On migration and in winter, attracted to mown grass or close-grazed pastures, and to stubbles, fallows, harvest-fields, and other farmlands of open character, including floodlands (see, e.g., Fuller and Youngman 1979). **On coast, tends to neglect tidal flats of mud or sand and to prefer open ground above the foreshore, thus sharing more commonly with Lapwings *V. vanellus* than with other waders**”.

Observation of winter flocks on areas of the estuary close to the study site, Immingham Dock to Pywipe, showed that day roosts were occupied on the mudflats at low water with flocks of birds departing inland in tight flocks usually 50mins to 90 minutes after sunset again supporting the details presented above.

Lapwing

Winter flocks of Lapwing on the Humber estuary are usually to be found roosting or loafing on the inter-tidal mudflats with feeding being rare and clearly a secondary feature of their behaviour in this habitat. Feeding occurs on fields inland from the estuary with flocks of birds often departing from the day roosts, on the inter-tidal, after sunset. Fields used for feeding can be considerable distances inland but may also be close to the estuary. Clearly some fields are traditional and seem to hold feeding birds whatever the cropping regime, unless the crop is too tall, but other fields may be exploited when feeding conditions are advantageous, if the field is being worked or there is recent flooding etc;.

Further details on the winter ecology of Lapwings is presented in BWP;

“Behaviour radically affected by lunar cycle (Klomp 1946; Spencer 1953a; Klomp and van den Starre 1956). **Communal nocturnal roosts** begin to form early to late May (start of moult), principally July (when young enter flocks) to **January**”.

“At dusk, birds move to traditional roost site; 1 or more staging-posts may be used for intensive feeding for c. half an hour en route to roost. In July, birds feed mostly at dawn and in late evening. **However, 2–3 nights before and after full moon, remain feeding at staging-post all night, even if cloudy, resting by day.** Night-feeding flock may split into several day-time flocks. Up to 15,000 recorded, Cheshire, on day after full moon. Even at half moon, may start feeding up to c. 1 hr before sunrise (Spencer 1953a). At loafing site, early May to June, flock size increased from 11.00 hrs to 15.00–17.00 hrs, then gradually declined, apparently dispersing at night to feed (Symonds 1980). Night-roost site typically on open ground. **By day loaf elsewhere**, e.g. lake edge, **sand-bank, river flats** (Spencer 1953a; Stakhovski 1954; Symonds 1980). Resting birds usually stand; very rarely alight in water”.

“Autumn flocks often partly disperse during day, but may assemble to preen, bathe, drink, and rest (Stakhovski 1954; Lind 1957). **Birds may commute between resting and bathing sites**”.

“Capability for nocturnal feeding, especially at full moon, and restless aerial reconnaissance of alternative foraging grounds to which instant switches can be made, reinforce efficiency in habitat exploitation”.

“In flight, lower airspace usually preferred except on movements, when altitudes of 250–400 m are common and up to 2000 m or more recorded (Meinertzhagen 1920)”.

Within the present study area most of the above strategies seem to have been observed; for details see the relevant species text:

Curlew

Winter Curlew flocks on the Humber can be seen feeding on the lower and upper reaches of the inter-tidal mudflats, roosting there during the day or at night and commuting to inland feeding sites which can be up to 15km away from the night time roosts. The species is therefore the most complex of the commonly occurring waders in its use of the present study area. Night roosting flocks usually arrive at estuarine roosts between sunset and an hour after sunset with small flocks aggregating into larger groups for the later stages of the move to the roost site. In the morning birds leave the roost sites soon after first light, in mid winter when daylight hours are short, with birds lingering longer in the roost on milder days in the spring and autumn when the potential for extended periods of feeding is present. Particularly on spring tides Curlew flocks which have been feeding inland will return to the estuary at low water to feed in the lower reaches of the inter-tidal which are usually not uncovered on neap and mid tides. This presumably increases the rate of prey harvesting and is an adaptation to short term abundance.

Data from BWP are in general agreement with the ecology of the species found on the Humber;

“Outside breeding season, roosting communal both at **high tide and at night, generally at traditional sites often reached by habitual flight-paths** (Sluiters 1941; Hibbert-Ware and Ruttledge 1944); however, pattern variable with season, locality, latitude, lunar cycle, weather, disturbance, etc., and may involve formation of various sub-roosts before and after main roosting period (B J Ens; see also Elphick 1979; Hale 1980; Köck 1980). Roosting flocks often do not associate with other *Charadrii*, or at least remain discrete within mixed roosts; sometimes habitually share roosts with Bar-tailed Godwit *Limosa lapponica* (B J Ens)”.

Roosts “**Sites usually on or near shores of sea or lake (e.g. rocks, dunes, salt-marsh, fields, sand-bars, etc.), even if day-time feeding areas are well inland.** On mudflats, where possible birds use depressions in which to sit or stand (B J Ens, A S Holmes)”.

“**Roost-site fidelity outside breeding season strong** (Ens and Zwarts 1980a). As tide starts to flow, many birds give roosting calls, which possibly stimulate flocking on roosting flight, thereby reducing energetic costs of flight; birds usually fly in groups of c. 2–20, sometimes singly (B J Ens). **May travel over 20 km to roost**, Scotland (A S Holmes). Most time at roost spent sleeping and preening. When stormy weather keeps feeding grounds covered, **high-tide period may be spent foraging in fields**; throughout autumn and winter, many (known to feed on mudflats) do not roost at high tide but continue feeding in fields, sometimes remaining there throughout tidal cycle (Ens and Zwarts 1980a); inland feeding at high water also reported by Bainbridge and Minton (Bainbridge and Minton 1978). In Netherlands, birds habitually fly out to form post-roosting groups at water's edge before continuing to disperse (B J Ens). Throughout foraging period, individuals regularly but briefly (c. 15 min) interrupt bouts of feeding to preen and rest, sometimes to sleep (B J Ens). **Extent of nocturnal activity unclear; numbers feeding at night often substantial, though always less than by day.** Bubbling-calls commonly heard at night from mudflats, suggesting possible continuation of day-time feeding territories (B J Ens; see also Knight 1979 and part 2); **evidence that birds also feed at night in fields** (A S Holmes). At full moon, attendance at one inland night roost dropped, with some evidence that birds flew to coasts to feed (Hale 1980)”.

The following reported findings from an in depth study in the Netherlands is of particular importance when considering the feeding areas used by wintering flocks or even sub-groups from a larger flock.

Some behaviour ---“Poorly known for so familiar a bird, but major study, Netherlands, of birds outside breeding season in progress (L Zwarts and co-workers). **Individually colour-marked birds are found to return year after year to same spots on tidal flats and to same roosts; this occurs in non-territorial as well as territorial birds** (Ens and Zwarts 1980a; see also Bainbridge and Minton 1978; Elphick 1979)”.
“**Despite probably quite large winter home-range, individual bird used particular set of small feeding areas (sometimes only a few ha), determined by its particular diet and feeding techniques, and by tradition** (Ens and Zwarts 1980a)”.

The latter paragraph has particular importance with regard to the survival strategies of individuals when part of the habitat used by a flock is destroyed.

Species recorded during winter bird survey January – March 2007 with status

Species	BTO code	Schedule 1	BAP	Red List 2002-2007	Amber Listed 2002-2007	GB qualifying WeBS	International qualifying WeBS	Humber 00-01	Humber 5yr 96-97 to 01-02	Humber status National- International
Little Grebe <i>Tachybaptus ruficollis</i>	LG					30				
Great Crested Grebe <i>Podiceps cristatus</i>	GC									
Cormorant <i>Phalacrocorax carbo</i>	CA					130	1200	185	143	N
Little Egret <i>Egretta garzetta</i>	ET	S1								
Grey Heron <i>Ardea cinerea</i>	H									
Mute Swan <i>Cygnus olor</i>	MS					260	2400	303	275	N
Greylag Goose <i>Anser anser</i>	GJ									
Canada Goose <i>Branta canadensis</i>	CG									
Shelduck <i>Tadorna tadoma</i>	SU					750	3000	6918	5400	I
Wigeon <i>Anas penelope</i>	WN					2800	12500	3969	5039	N
Gadwall <i>Anas strepera</i>	GA					80	300			
Teal <i>Anas crecca</i>	T					1400	4000	3370	2275	N
Mallard <i>Anas platyrhynchos</i>	MA					5000	20000			
Shoveler <i>Anas clypeata</i>	SV					100	400			
Pochard <i>Aythya ferina</i>	PO					440	3500	216	713	N
Tufted Duck <i>Aythya fuligula</i>	TU					600	10000			
Goldeneye <i>Bucephala clangula</i>	GN	S1				170	3000	498	467	N
Smew <i>Mergellus albellus</i>	SY									
Ruddy Duck <i>Oxyura jamaicensis</i>	RY									
Marsh Harrier <i>Circus aeruginosus</i>	MR	S1								
Sparrowhawk <i>Accipiter nisus</i>	SH									
Kestrel <i>Falco tinnunculus</i>	K									
Merlin <i>Falco columbarius</i>	ML	S1								
Red-legged Partridge <i>Alectoris rufa</i>	RL									
Grey Partridge <i>Perdix perdix</i>	P		B							
Pheasant <i>Phasianus colchicus</i>	PH									
Water Rail <i>Rallus aquaticus</i>	WA									
Moorhen <i>Gallinula chloropus</i>	MH									
Coot <i>Fulica atra</i>	CO					1100	15000			
Oystercatcher <i>Haematopus ostralegus</i>	OC					3600	9000			
Avocet <i>Recurvirostra avosetta</i>	AV	S1				10	700	126	59	N
Ringed Plover <i>Charadrius hiaticula</i>	RP					290	500	409	403	N
Golden Plover <i>Pluvialis apricaria</i>	GP					2500	18000	25133	30709	I
Lapwing <i>Vanellus vanellus</i>	L					20000	20000	16870	22765	I
Knot <i>Calidris canutus</i>	KN					2900	3500	34888	28165	I
Dunlin <i>Calidris alpina</i>	DN					5300	14000	18502	22222	I
Ruff <i>Philomachus pugnax</i>	RU	S1				7	10000	4	14	N
Snipe <i>Gallinago gallinago</i>	SN						10000			

Woodcock <i>Scolopax rusticola</i>	WK								
Black-tailed Godwit <i>Limosa limosa</i>	BW	S1	70	700	545	1064	I		
Curlew <i>Numenius arquata</i>	CU		1200	3500	4044	3253	N		
Redshank <i>Tringa totanus</i>	RK		1100	1500	4990	4632	I		
Turnstone <i>Arenaria interpres</i>	TT		640	700					
Black-headed Gull <i>Larus ridibundus</i>	BH								
Common Gull <i>Larus canus</i>	CM								
Herring Gull <i>Larus argentatus</i>	HG								
Great Black-backed Gull <i>Larus marinus</i>	GB								
Stock Dove <i>Columba oenas</i>	SD								
Woodpigeon <i>Columba palumbus</i>	WP								
Collared Dove <i>Streptopelia decaocto</i>	CD								
Barn Owl <i>Tyto alba</i>	BO	S1							
Short-eared Owl <i>Asio flammeus</i>	SE								
Kingfisher <i>Alcedo atthis</i>	KF	S1							
Great Spotted Woodpecker <i>Dendrocopos major</i>	GS								
Skylark <i>Alauda arvensis</i>	S	B							
Meadow Pipit <i>Anthus pratensis</i>	MP								
Rock Pipit <i>Anthus petrosus</i>	RC								
Water Pipit <i>Anthus spinoletta</i>	WI								
Pied Wagtail <i>Montacilla alba</i>	PW								
Wren <i>Troglodytes troglodytes</i>	WR								
Dunnock <i>Prunella modularis</i>	D								
Robin <i>Erithacus rubecula</i>	R								
Stonechat <i>Saxicola torquatus</i>	SC								
Blackbird <i>Turdus merula</i>	B								
Fieldfare <i>Turdus pilaris</i>	FF	S1							
Song Thrush <i>Turdus philomelos</i>	ST	B							
Redwing <i>Turdus iliacus</i>	RE	S1							
Mistle Thrush <i>Turdus viscivorus</i>	M								
Chiffchaff <i>Phylloscopus collybita</i>	CC								
Goldcrest <i>Regulus regulus</i>	GC								
Long-tailed Tit <i>Aegithalos caudatus</i>	LT								
Willow Tit <i>Parus montanus</i>	WT								
Blue Tit <i>Parus caeruleus</i>	BT								
Great Tit <i>Parus major</i>	GT								
Magpie <i>Pica pica</i>	MG								
Jackdaw <i>Corvus monedula</i>	JD								
Rook <i>Corvus frugilegus</i>	RO								
Carrion Crow <i>Corvus corone</i>	C								
Starling <i>Sturnus vulgaris</i>	SG								
House Sparrow <i>Passer domesticus</i>	HS								
Tree Sparrow <i>Passer montanus</i>	TS	B							
Chaffinch <i>Fringilla coelebs</i>	CH								
Greenfinch <i>Carduelis chloris</i>	GR								
Goldfinch <i>Carduelis carduelis</i>	GO								
Linnet <i>Carduelis cannabina</i>	LI	B							
Bullfinch <i>Pyrrhula pyrrhula</i>	BF	B							
Yellowhammer <i>Emberiza citrinella</i>	Y								
Reed Bunting <i>Emberiza schoeniclus</i>	RB	B							

Species texts:

Little Grebe *Tachybaptus ruficollis*

Status: Green Listed

Single birds were seen at East Halton pits and North Killingholme Haven pits in early to mid January following which there was an obvious increase in the number of birds in the last week of January and early February as pre-breeding birds returned to their territories. Four were present on East Halton pits and the first bird was found at Rosper Road.

In late February and March up to five birds were recorded from east Halton pits, equating to three breeding pairs, a single pair was present at Rosper Road and two pairs on the inland pit and smaller eastern pit at North Killingholme Haven. The latter site typically also holds breeding pairs on the pit west of the railway tracks but these birds had not returned by the middle of week 13.

Great Crested Grebe *Podiceps cristatus*

Status: Green Listed

Single birds were present on East Halton pits from January 8th with two different individuals being recognizable in the first two periods. By period five two birds, both in breeding plumage were on the larger of the ponds at East Halton pits. With some local water bodies frozen over during period six there were three breeding plumaged adult Great Crested Grebes on East Halton pits during that mid-week survey. The established pair were noted in courtship displays in weeks seven and eight with two pairs on the same body of water in week nine increasing to a somewhat over-crowded three pairs in weeks ten to twelve. No birds were recorded from any of the other wetlands.

East Halton pits has typically supported a single breeding pair of Great Crested Grebes in recent years and they have been the earliest nesting pair in the Humber clay pits producing young before the end of March have then subsequently gone on to rear two broods in some years. The apparent increase to three pairs in 2007 is possibly a response to increasing numbers of birds surviving in the very mild winters which have become the norm in the last 12 years.

Cormorant *Phalacrocorax carbo*

Status: Amber Listed

Humber status **National Importance**

5 year mean to 2003 / 2004 ---

A regular daytime roost of two to eight birds was located on the old seaplane jetty to the north of North Killingholme Haven. From there birds moved onto North Killingholme Haven and East Halton pits to fish in addition to using the Humber and other inland water bodies beyond the boundaries of the present survey area. Up to three birds were recorded from East Halton pits on single surveys with 1-2 less frequently recorded from North Killingholme Haven pits.

Little Egret *Egretta garzetta*

Status: Amber Listed

Schedule 1

A single bird feeding on Rosper Road ponds on January 26th was the first bird of this species to be recorded in the locality for over four years. In spite of the rapidly expanding population on the

outer Humber estuary, where there are up to 30 birds at most times of year and a breeding population has become established, the species has remained scarce on the inner estuary probably due to the lack of any extensive areas of saltmarsh.

Grey Heron *Ardea cinerea*

Status: Green Listed

A single bird was found feeding in the flooded ditch between fields 42 and 43 on every visit in periods 1 to 3 inclusive and again in period five. What may have been the same bird was sunning itself along the base of the northern hedge in field 42 during period nine even when the bulk of the flood water in the field had been drained. One or two birds were also recorded from the ponds in field 64 from mid February onwards presumably taking amphibians from these shallow waters. Amphibians are a favoured prey of adult Grey Heron during the breeding season and are frequently fed to youngsters in the nest.

The nearest heronry is only 4-6kms inland from the wetland sites at Abbey Wood, Thornton Abbey and adult birds from this site are known to feed regularly at all of the wetland sites within the survey area. Pairs were already established in the heronry by the end of February.

On the wetland sites there were two to five birds on every survey at Rosper Road up to the end of February with one or two during March while one or two birds were also frequent at East Halton pits and up to three were present at North Killingholme Haven pits with a strange absence from the latter site during most of February but a reappearance during late March.

Mute Swan *Cygnus olor*

Status: Amber Listed

A family party, from the 2006 season, two adults and five cygnets was present at East Halton pits throughout January and February before the cygnets were expelled by the breeding pair in mid March. An additional six and two birds, respectively, were recorded from the same site in weeks three and four. One to three birds were recorded from Rosper Road between January and March 11th and two were at North Killingholme Haven Pits from week seven to the end of the period with a second pair on the smallest inland pit from mid March. This appears to equate to two breeding pairs at North Killingholme Haven pits and one at East Halton pits. A pair have bred in recent years at Rosper Road but there was a gap in observations on the Rosper Road site in mid to late March but a pair of Mute Swans were frequently observed on the other side of the road on a small reservoir during the same period.

Greylag Goose *Anser anser*

Status: Introduced Population Green Listed

A flock of 9 birds on the inter-tidal adjacent to East Halton pits during period one flew off north-west. Three birds had returned to East Halton pits, a likely breeding locality, by the start of period four but no others were recorded there until two pairs took up territories in period eight. By week ten there were three pairs at East Halton pits, increasing to 11 birds by week 12. A single pair was at North Killingholme Haven pits in week 9 and a pair was recorded from Rosper Road in week nine being seen there again in week 12.

This is a rapidly increasing species around the Humber estuary where the population has grown from <10 pairs in the 1970's to a winter peak in excess of 1500 birds in the last two years.

Greater Canada Goose *Branta canadensis*

Status: Green Listed

The only record was of three birds at East Halton pits during survey period 12 with a pair at the same locality in week 13; this species formerly bred at North Killingholme Haven pits and has also been noted as breeding at East Halton pits.

Shelduck *Tadorna tadorna*

Status: Amber Listed

Humber status **International Importance** 5 year mean to 2003 / 2004 ---5255

Up to 63 birds fed on the inter-tidal at the southern end of ISJ during January declining to 33 in February with this level of abundance being maintained through to late March when 32 birds were counted.

Between 1 and 3 birds were typically noted on the inter-tidal immediately north of North Killingholme Haven during January with nine birds in the same area in February. During period nine the number of birds north of the Haven increased to ten and they commuted between the inter-tidal mudflats and East Halton pits where they often loafed on the grassland around the edges of the largest pit. The flock, located at East Halton pits, increased markedly to 19 birds in survey period 11 but fell back to ten again in week 12 and just five in the final survey period.

A single bird was present on field number 17 with large numbers of waders in period two. During period seven a single bird was found with other wildfowl in field number 64; it was seen to fly off following disturbance by a Grey Heron and was later located at North Killingholme Haven pits. Two birds were on the same small pond with other waterfowl in weeks nine, ten and 13.

Wigeon *Anas penelope*

Status: Amber Listed

On January 15th (period 3) a flock of 110 birds was feeding on the flooded pasture in field number 42 along with a large flock of Teal and Mallard. Due to the enclosing hawthorn hedgerows viewing the field was only possible from the gate in the south-east corner meaning that it was impossible to observe the birds without flushing them; unfortunately on being disturbed the birds left the site and did not return during the observation period. They appeared to leave high to the south but no Wigeon were located on any of the permanent wetland sites during the same day so it was not possible to ascertain their origin.

In period 4 a total of 92 Wigeon were grazing the pasture around the edge of the same flood water pool in field number 42. Unfortunately they were flushed by a dog walker but their departure allowed an accurate assessment of the direction in which they departed. Their heading to the ENE would have taken the flock out over the estuary. No Wigeon were observed on any of the other wetlands in the survey area during the same survey date and it is assumed that they moved either to the north bank or headed out to the estuary and then turned north to a favoured loafing area at Goxhill Skitter Ness. On this same survey date a pair of Wigeon was surprisingly found on the small permanent pond in field 64.

In survey period five there were no wildfowl on the flooded area in field number 42 when it was surveyed in the late afternoon. Observations in the early mornings on previous surveys had revealed that the wildfowl feeding in this area would leave the site completely if they were flushed and it seems likely that such an event had already occurred during the earlier part of the

survey date in week five. A pair of Wigeon was again found on the small permanent pond in field number 64 on this survey.

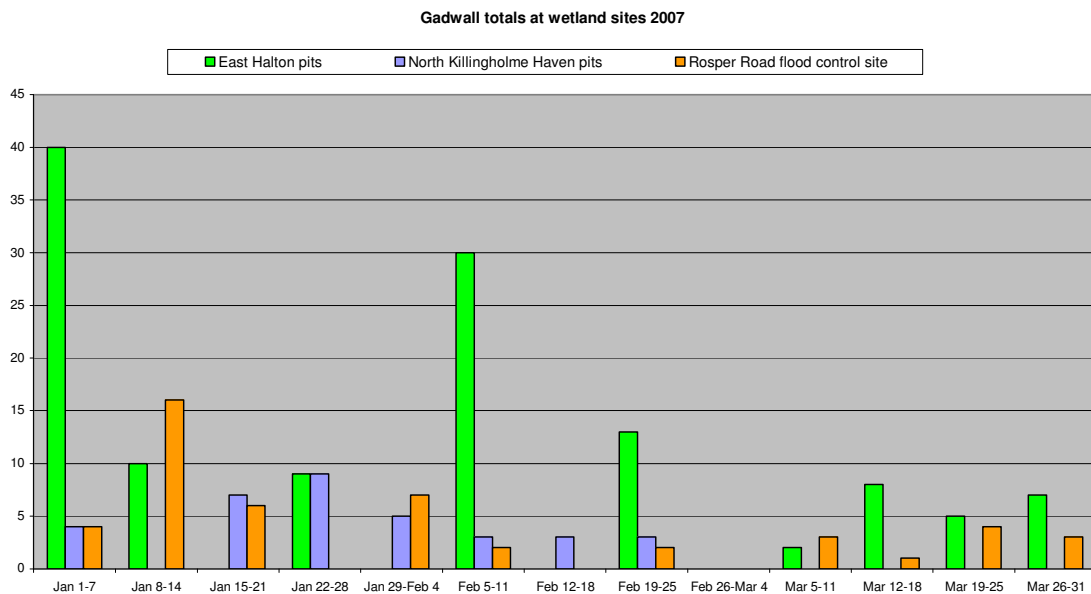
The draining of the flood water area in field 42 between survey periods six and seven removed a valuable feeding site for this species. During period 7 a total of 32 Wigeon was present on the small permanent pond in field 64 and this number increased to 38 in period eight with 32 present again in period nine declining to 14 in period 10 with 17 again counted in week 11; these are surprisingly high counts for such a restricted area of habitat so close to human habitations.

Gadwall *Anas strepera*

Status: Amber Listed

Excluding the permanent large wetland sites the first occurrence of Gadwall during the survey series was during period five, January 29th to February 4th, when two pairs were found on the pond in field number 64 with a collection of other waterfowl. This pond was frozen over in period six but a pair of Gadwall was again present in the same area during period seven and again in periods eleven and twelve.

On the permanent wetlands the smaller southern pit at East Halton pits held a total of 40 birds in period one and 30 in period six with 13 in period eight and up to eight birds on most of the other surveys. These birds tended to flush easily, possibly as a consequence of winter shooting, and moved off in the northerly or north-easterly direction up the estuary. North Killingholme Haven pits typically held up to nine birds between January and late February but none were recorded in March while the peak at Rosper Road was 16 in period two with a less consistent presence of two to seven birds there through the survey period.



Teal *Anas crecca*

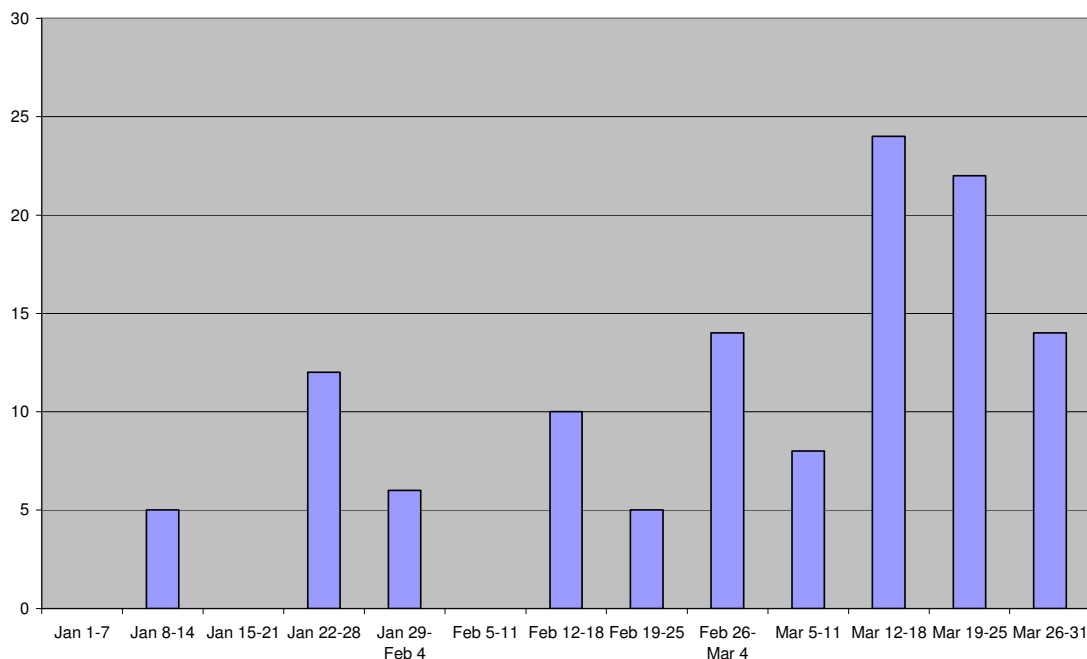
Status: Amber Listed

Humber status **National Importance**

5 year mean to 2003 / 2004 ---**3045**

On the inland fields a party of five Teal was feeding on the permanent pond in field number 64 in period 2 and this increased to 12 in period four peaking with 24 birds on the ponds in period 11 March 12th – 18th with 22 still present in the following week and 14 birds in week 13. The attraction to wildfowl of the small ponds in this area of permanent pasture was particularly surprising and an unexpected finding of the surveys.

Teal field 64 January-March 2007

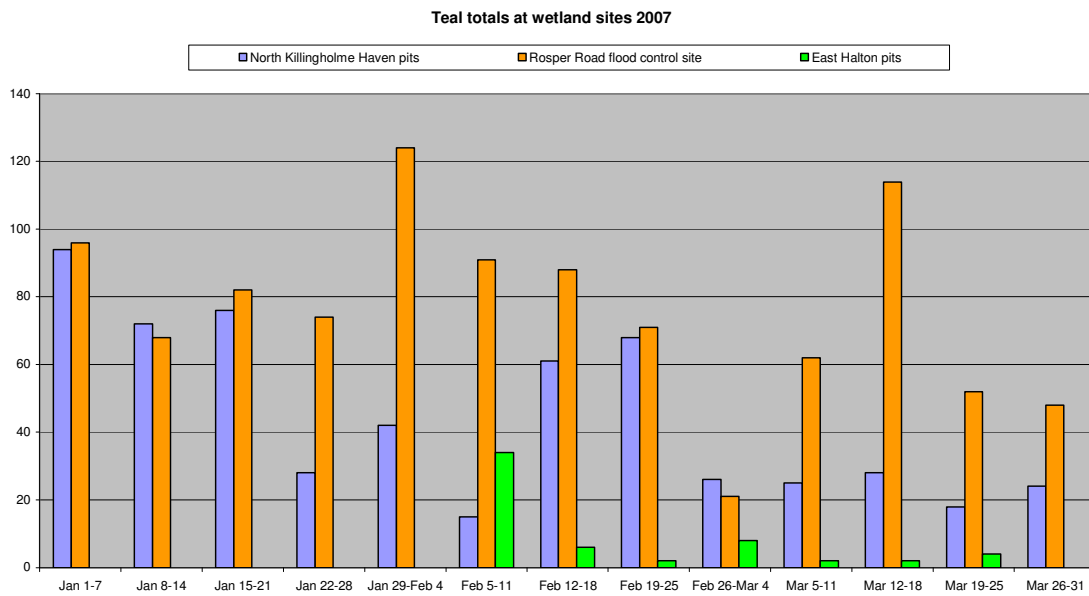


During period 3 a flock of 82 Teal was found on a large area of flood water in the permanent pasture in field number 42. During this same survey period a link was found between birds feeding in field number 42 and those roosting at North Killingholme Haven pits. A count at the latter site in the morning revealed low numbers of Teal with just 12 birds present. Subsequently a flock of 82 birds was located on the flooded area in field number 42 later the same day. These birds flushed during the observation period and most of the flock was seen to fly in the direction of North Killingholme Haven pits. That site was checked again following this observation and a total of at least 76 Teal was found to be present confirming the link between these two feeding and roosting areas. A reduced number of 21 Teal were found on field number 42 in survey period 4 when they left the site with the Wigeon flock and headed off ENE towards the Humber estuary.

No Teal were present in field number 42 in survey period five, January 29th to February 4th, in spite of the flood water having increased the size of the pool within the pasture during the intervening week. Disturbance of the feeding birds earlier in the day seems the most viable explanation for the absence of the birds in this late afternoon survey. The flooded area in field 42

was frozen over in period six with no wildfowl present and the area was subsequently drained between period six and seven and no wildfowl were recorded from that area subsequently.

The three major wetland sites all held Teal during the period and the species was also recorded from the inter-tidal area around East Halton Skitter. The distribution of Teal between the three permanent wetlands is shown in the chart below.



As shown in the chart both North Killingholme Haven pits and Rosper Road held important numbers of Teal with the former site holding more birds in the early part of the survey and a more consistent presence throughout, being maintained at Rosper Road. The number of birds recorded from East Halton pits was highest in period six, 34 birds, when the whole of North Killingholme Haven pits were frozen solid. During this same period Teal were first found on the inter-tidal at East Halton Skitter where there were 24 birds.

Although a similar number of Teal were found at the two major localities in weeks one to three it was established that the two flocks were different. During period 2 the Teal flock at Rosper Road seemed to be reluctant to leave the site and unlike the Mallard below they remained within the confines of the wetland, even following disturbance, with only six birds moving off with the Mallard flock towards North Killingholme Haven pits. This confirmed the split between the two flocks at Rosper Road and North Killingholme Haven pits. This was confirmed in many of the later surveys when the Teal flock at Rosper Road remained on site following disturbance in spite of many of the other wildfowl leaving the area. A connection between the birds found at East Halton pits and North Killingholme Haven pits was not established through direct observations but the lack of birds at the latter site in week six and the consequent increase at East Halton in this period points to these being the same birds. A connection was established between the flock found feeding on field 64 in weeks three and four and North Killingholme Haven pits and this suggests that birds which are usually found of the permanent wetlands may well move inland to exploit any suitable feeding conditions which are presented in fields within the study area.

During survey period 11, March 12th to 18th, there was a very obvious increase in Teal abundance at Rosper Road where there were 114 birds, the highest count of the winter for this locality. This

sudden increase appeared to be connected with a slight drop in water levels on the wetland which may have produced improved feeding conditions for this species.

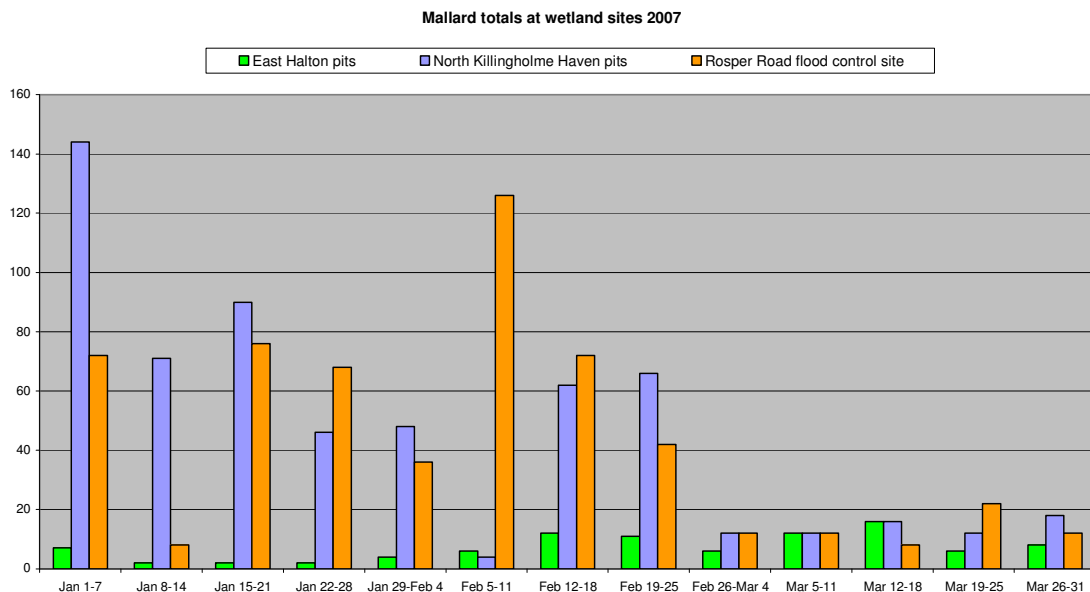
The combined peak counts from Rosper Road and North Killingholme Haven pits, maximum 166 birds in period five, is equivalent to approximately 5% of the Humber mean winter population as recorded by WeBS.

Mallard *Anas platyrhynchos*

Status: Green Listed

On inland fields apart from the odd record a pair of Mallard feeding on flood water pools there was a small concentration of birds in the flooded permanent pasture in field number 42 in weeks one, three and four peaking with a count of 32 in period three. A link was established between birds feeding in field number 42 and North Killingholme Haven pits in periods three and four. Birds flushed from the pasture field flew off ESE towards the pits where later counts found an increased number of birds to be present in comparison to the previous early morning count. No birds were found subsequently on this flooded field which was drained between weeks six and seven. Up to 16 birds were also found on the permanent pools in field number 64 from survey period four onwards.

Mallard were most numerous at both North Killingholme Haven pits and Rosper Road up to period eight, February 19th – 25th following which there appeared to be a departure of winter visitors with a remnant breeding population remaining throughout March.



A direct connection was established between the two major Killingholme wetlands, North Killingholme Haven pits and Rosper Road during the first three survey periods and subsequently throughout the survey series. During period 1 a count of the birds at Rosper Road inadvertently flushed a proportion of the waterfowl present. Of these about 50 Mallard flew north in the direction of North Killingholme Haven pits and they had not returned by the completion of the survey. A later count at North Killingholme Haven pits revealed the largest Mallard total of the winter, indeed of the recent five winters with 144 birds present. This count was in the region of

50 birds higher than the recent average number of Mallard at the site and confirms the movement of birds from Rosper Road. Similar events were witnessed in periods 2, 3 and 4 with 46 – 62 birds moving between the two wetlands. The exceptional count at Rosper Road in period six was during a week when many of the other water bodies in the area and surrounding areas were iced over and Rosper Road remained mainly ice free.

Shoveler *Anas clypeata*

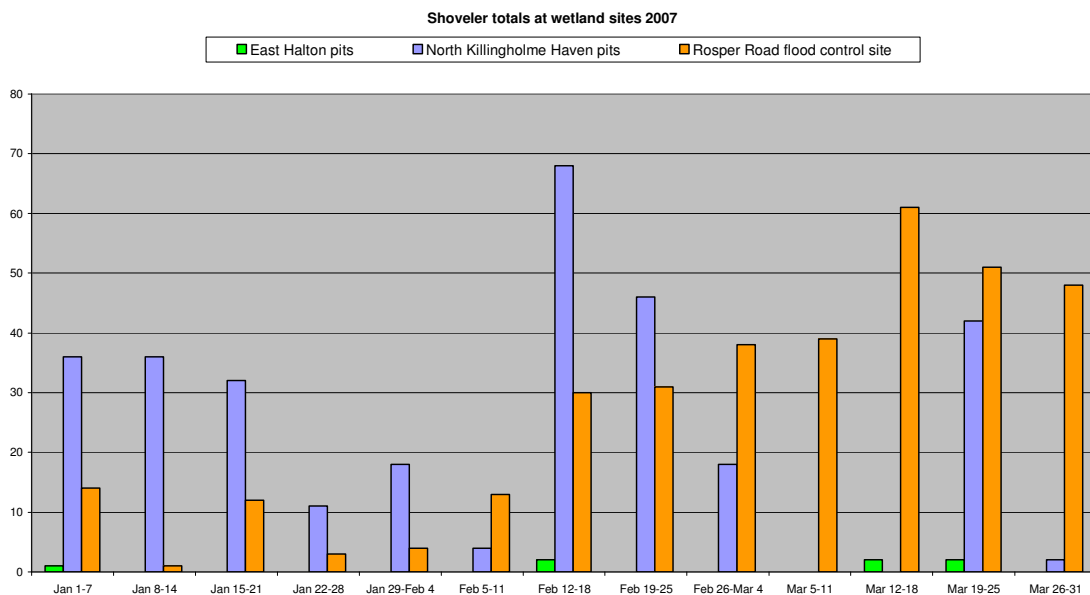
Status: Amber Listed

Humber status **National Importance**

5 year mean to 2003 / 2004 --- **150**

A pair of Shoveler were found on the permanent pond in field number 64 in survey period four along with Teal, Mallard and a pair of Wigeon. A pair of Shoveler was present again in period five with three birds being located there in period seven and four, two pairs, in period eight then a single pair in the next two consecutive survey periods with four birds, three drakes and a duck being recorded in period 12 and finally two pairs in period 13. These were the only Shoveler records away from the main wetland sites.

The vast majority of the Shoveler recorded from the survey area were confined to the wetland sites of North Killingholme Haven pits and Rosper Road; a single bird was at East Halton pits in period one and pairs were present there in periods 7, 11 and 12.



As shown in the chart above the majority of the Shoveler found on the survey area were concentrated at North Killingholme Haven pits between January and February 25th following which there was an obvious exodus from this site and a consequent increase in numbers at Rosper Road. The overall population peaked at 100 birds in period 7. The Humber estuary is classified as Nationally Important for Shoveler with a five year mean of 150 birds recorded by WeBS to 2003-2004 so the total of 100 birds would have formed 66% of this total demonstrating the significance of this concentration of Shoveler in the surveyed area.

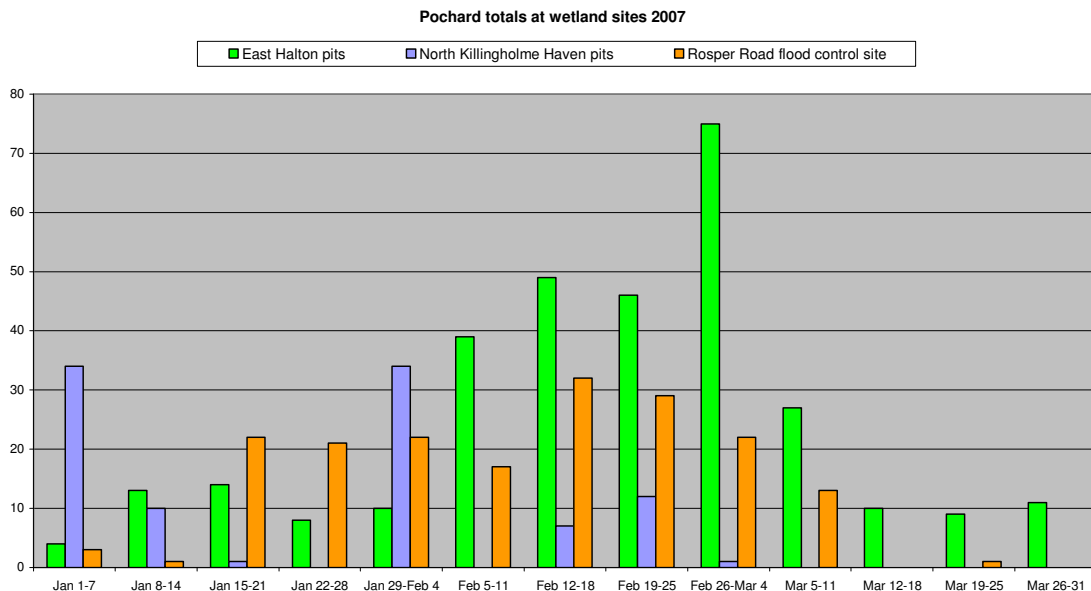
During periods seven and eight a clear connection was established between Rosper Road and North Killingholme Haven pits with birds from the former site leaving the area in a northerly

direction and then being re-located at the latter site. This connection had already been established for Mallard, Teal and Gadwall. During survey period 11 all but four of the 65 Shoveler were found on Rosper Road with none on North Killingholme Haven pits. This concentration of Shoveler and Teal suggested that feeding conditions on the site for dabbling duck had improved through a drop in water levels between periods ten and eleven.

Pochard *Aythya ferina*

Status: Amber Listed

All of the Pochard records during the survey came from the three large wetland sites. The number of birds peaked between late January and early March, see chart below, with 99 birds being present during period nine February 26th to March 4th. Movements were detected between Rosper Road and North Killingholme Haven pits but not between East Halton pits and any of the other sites.



Tufted Duck *Aythya fuligula*

Status: Green Listed

At North Killingholme Haven pits two Tufted Ducks frequented the small pit on the approach to the first terminal at TA 158195 throughout the survey. The only other birds seen on this body of water were two Coot and 2 Moorhen. Small numbers of Tufted Duck were recorded from all of the three permanent wetland sites during the survey but the peak count of 36 birds was not even of local significance.

Goldeneye *Bucephala clangula*

Status: Amber Listed Schedule 1

Humber status **National Importance**

5 year mean to 2003 / 2004 ---**406**

A single drake was on East Halton pits in survey periods three and four.

Smew *Mergellus albellus*

Status: Green Listed

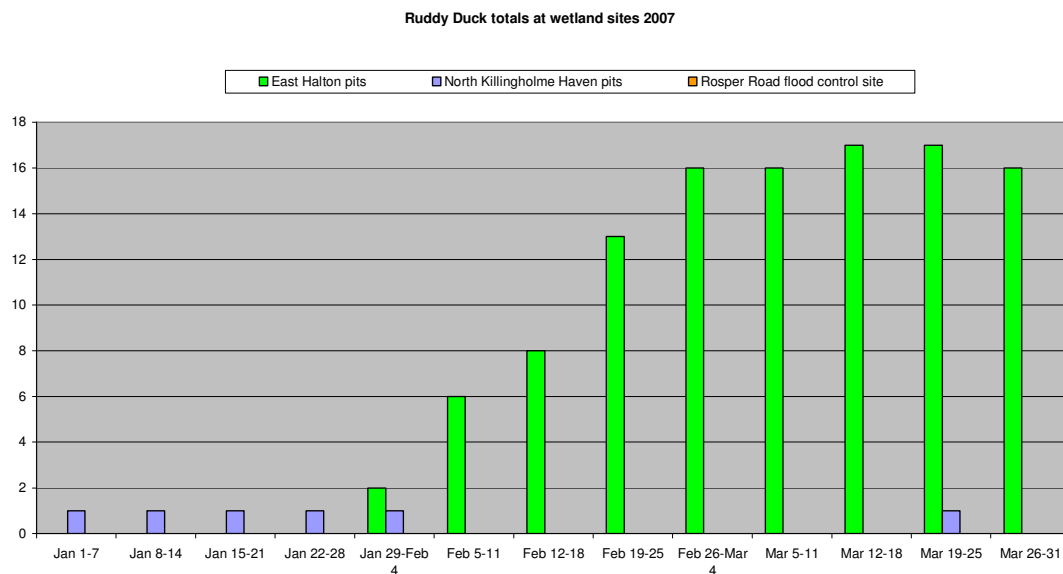
The regular wintering female returned to North Killingholme Haven pits in period four and was still present in period seven, disappeared in period eight but was again recorded in period nine. This female is assumed to be the same birds has been recorded at this locality in every winter since January 1998; its arrival dates are always in January or February with departure typically in March.

Ruddy Duck *Oxyura jamaicensis*

Status: Green Listed

A single female was present on the smallest of the three pits at North Killingholme Haven TA168196 in periods 1 to 5. This species has bred annually at this site for at least five years with a maximum of two broods having been recorded.

A pair had returned to East Halton pits, a former breeding locality, by the start of survey period five, January 29th to February 4th and this party increased to six individuals by the middle of survey period six, February 5th to February 11th 2007 and to eight, five drakes and three ducks, during period seven. Further small rises saw the population peak at 16 individuals, eight drakes and eight ducks in weeks nine, ten and 13 with 17 present in weeks eleven and twelve.



Water Rail *Rallus aquaticus*

Status: Amber Listed

Water Rail is a particularly difficult species to census as they remain hidden in dense aquatic vegetation and typically only reveal their presence when calling. They are most audible during periods of frost and cold weather on calm evenings. Recent winters have thus not proven to be beneficial for recording this species as temperatures have been typically high and evenings have often been windy. Up to ten birds have been seen / heard at North Killingholme Haven pits during

the winter period but this is probably an under-estimate of the total population. Two breeding territories were identified at this site in 2003 and 2004.

At East Halton pits Water Rails occur in winter but no estimate of the population has been attempted. A single breeding territory was located in 2004 and it is likely that the species breeds there every year.

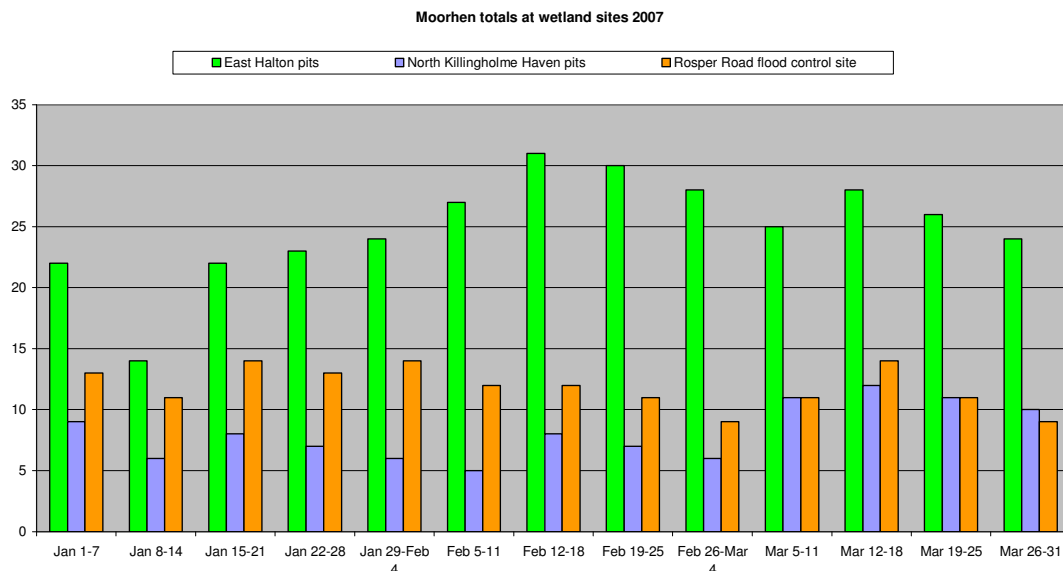
This species has bred at Rosper Road and birds have been found there in winter but there has never been a proper winter census of the site.

During the present survey series Water Rails were heard at East Halton pit in periods one, five eight, nine and ten and at North Killingholme Haven pits in periods 2, 3 and 5 with one to three birds being recorded from both sites. Calling became more frequent at North Killingholme Haven pits in periods nine to twelve with four birds being noted a probable response to the approaching breeding season. The number of birds recorded throughout is considered to have been an under-estimate of the number of birds at both localities. At Rosper Road with the water area partly frozen during period six, two individuals were found feeding in the ditch along the north side of the reservoir and along the northern edge of the open water by the weir. Subsequently one or two birds were noted in the main water area through to late March.

Moorhen *Gallinula chloropus*

Status: Green Listed

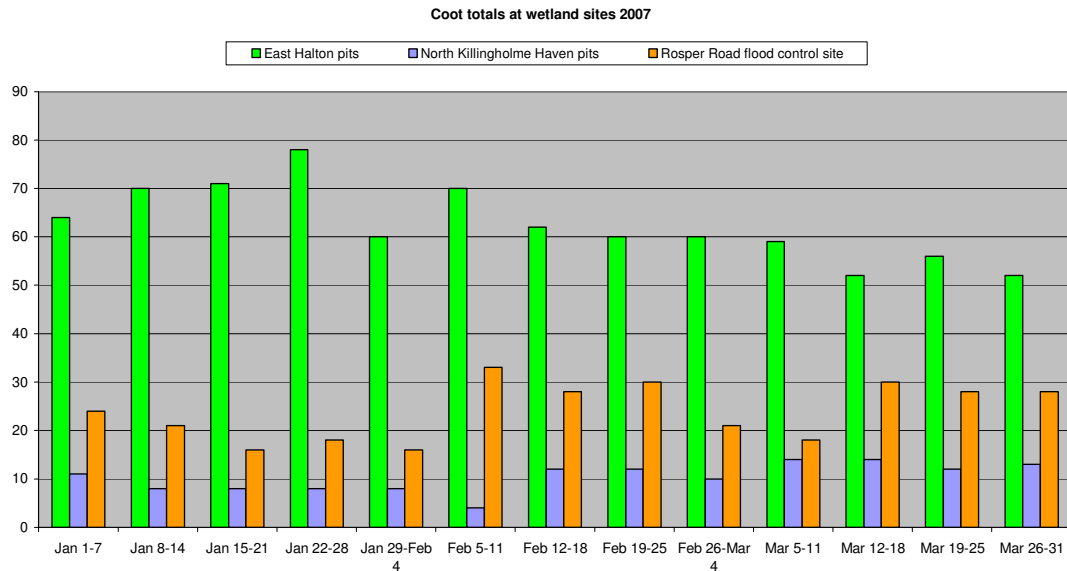
A concentration of birds at East Halton pits, between 14 and 31 individuals, frequently fed on the edge of the oilseed rape in field number 25 adjacent to the pits. This was the site with the most Moorhen of the three wetland areas but fairly consistent numbers were recorded from all areas throughout indicative of a localised population.



Coot *Fulica atra*

Status: Green Listed

The number of Coot recorded from the three principal wetland sites are shown below:



Oystercatcher *Haematopus ostralegus*

Status: Amber Listed

Humber status **National Importance**

5 year mean to 2003 / 2004 ---**3849**

A single bird was usually present along the inter-tidal sector ISJ during January. By late February two birds were located along the ISJ inter-tidal and a different pair was found frequenting the grassland around East Halton pits. Further arrivals saw pairs at East Halton Skitter and East Halton pits with two pairs along the ISJ inter-tidal by survey period ten, March 5th to 12th. None were recorded in North Killingholme Haven pits until survey period 12 when a single bird was present with a pair being recorded in week 13.

Avocet *Recurvirostra avosetta*

Status: Amber Listed Schedule 1

Humber status **National Importance**

5 year mean to 2003 / 2004 ---**189**

Survey period ten produced the first occurrences of this species in the area with a flock of 26 birds moving north-west up the estuary off East Halton Skitter and a pair feeding on the inter-tidal in ISJ, south of the Killingholme lighthouses on the same day. Although there were no records in period 11 by survey period 12 there were 55 birds in North Killingholme Haven pits at high tide; this is probably a record count for this locality. Strangely there were only two pairs at the patter locality in week 13 both of which were mating and showing signs of breeding behaviour.

This species bred successfully at North Killingholme Haven pits in 2005 and attempted to do so in 2004 and 2006.

Ringed Plover *Charadrius hiaticula*

Status: Amber Listed

Humber status **National Importance**

5 year mean to 2003 / 2004 ---**374**

In survey period 12 a party of eight Ringed Plovers was seen in flight over the water off the ABLE UK site south of North Killingholme Haven pits at high water. The flock moved inland over the site but it could not be ascertained whether they continued inland or roosted somewhere on the site at high water.

On the adjacent inter-tidal no birds were recorded in January with the first individuals being located in February. A maximum of three birds occurred on ISI during February when a peak count of 12 birds occurred on ISJ. This species is typically most numerous on the inter-tidal areas during peak passage periods which for this species on the Humber occur in May and July-August and occasionally September and October.

Golden Plover *Pluvialis apricaria*

Status: Amber Listed

Humber status **International Importance**

5 year mean to 2003 / 2004 ---**37,674**

Golden Plover were only encountered on three of the survey periods during the winter all prior to February 12th. This species is typically recorded in peak numbers on the Humber during July – January with the early departure of wintering birds being a feature of mild winters. In the 2006-2007 winter there also appeared to be unusual concentrations of Golden Plovers in some highly favoured but limited areas of the estuary with very large flocks at the head of the estuary around Alkborough and on the north bank around Cherry Cobb and Paul. In the survey area all of the Golden Plover records came from the area of fields to the north of the old Immingham – Goxhill railway line around East Halton pits. A maximum of just 617 birds was found in period five, January 29th to February 4th. The birds were mixed in with feeding Lapwings and occurred on fields of oilseed rape. In previous winters some large flocks of Golden Plover have occurred in the area between East Halton Skitter and the old railway with peaks in excess of 12,000 birds. The early part of 2007 could therefore have been exceptional for the lack of this species in the surveyed area.

Details:

A flock of 60-65 birds flew from the west over the survey area crossing fields just north of East Halton pits and carried on across the estuary during the survey in period one (see map GP wk 1).

During a force 6 to 7 gale in period 2 a flock of 270 birds was roosting in the long cereal crop in field number one, with Lapwings. The crop appeared to be offering some shelter from the wind which was particularly gusty at the time.

Some huge flocks of Golden Plover were visible over the north side of the estuary around Saltend and Paul during the first three periods of the survey with estimates of 15-20,000 birds being made. During the late afternoon of the period 3 survey a total of 8500 Golden Plovers moved from the north bank of the estuary to the south bank moving inland over the fields between Goxhill and East Halton Skitters.

Golden Plover are known to move inland to feed after sunset during the winter months but many of the movements are difficult to detect as they occur in low light and even during darkness. On the period three survey date noted above, a flock of 110 Golden Plovers moved south-east along

the estuary at a height of approximately 30m between East Halton Skitter and North Killingholme Haven where they were lost to view.

Period five January 29th to February 4th 2007

During these falling late morning neap tides a total of 617 Golden Plover were found feeding with Lapwing on oilseed rape field numbers, 4, 17 and 29 in East Halton Marshes. The split between fields is shown in the table. Upon being flushed, by what was probably an unseen raptor, during the observation period, the Golden Plover and Lapwing rapidly split into single species flocks with the Golden Plover moving off to the north-west and being lost to view in the direction of East Halton Skitter (see map).

Survey period six February 5th to February 11th 2007

A total of 20 Golden Plovers was found mixed in with Lapwing flocks on permanent pastures and oilseed rape in fields 14, 29, 30 and 42. Incidental observations, outside the survey area, but considered to involve birds which frequent the fields within the surveyed area showed that the majority of the Golden Plover flock had moved further inland to feed on pastures and open arable fields around Thornton Abbey. In particular a flock of 650+ birds was present in a field GR TA124193 with other birds amongst Lapwing flocks on fields to the west of the Abbey centred on GR TA112189.

Survey period 7 February 12th to February 18th 2007

In direct contrast to the situation in the previous period no Golden Plovers were recorded at all amongst the Lapwing flocks in period seven.

Lapwing *Vanellus vanellus*

Status: Amber Listed

Humber status **International Importance** 5 year mean to 2003 / 2004 ---**27,297**

Lapwing was the most numerous SPA species located on both the inter-tidal and the inland fields during the present survey. Typically numbers were highest during the first seven weeks of the survey following which the departure of wintering birds left just a vestigial population of Lapwing in the area. The vast majority of the records of Lapwing feeding in fields came from the area north of the old railway tracks centred on fields west of East Halton pits. The major loafing area for the flock was located on the inter-tidal immediately north of North Killingholme Haven as far north as the old seaplane jetty (see maps). There were movements of birds between these two areas and field 42 during the period when it was badly flooded in the first five weeks of the survey and also between the loafing area on the inter-tidal and North Killingholme Haven pits where part of the flock roosted on some of the higher spring tides. Records from the southern part of the surveyed area were particularly limited with an almost total lack of birds on the southern inter-tidal ISJ, maximum 122 in January, where in the two previous winters there had been peak counts of 860 and 710 birds respectively in 2004 – 2005 and 2005 – 2006. The southern pasture fields along Rosper Road have also previously held good numbers of feeding Lapwing but 31 birds in period 6 and two in period 10 were the only instances noted in this survey.

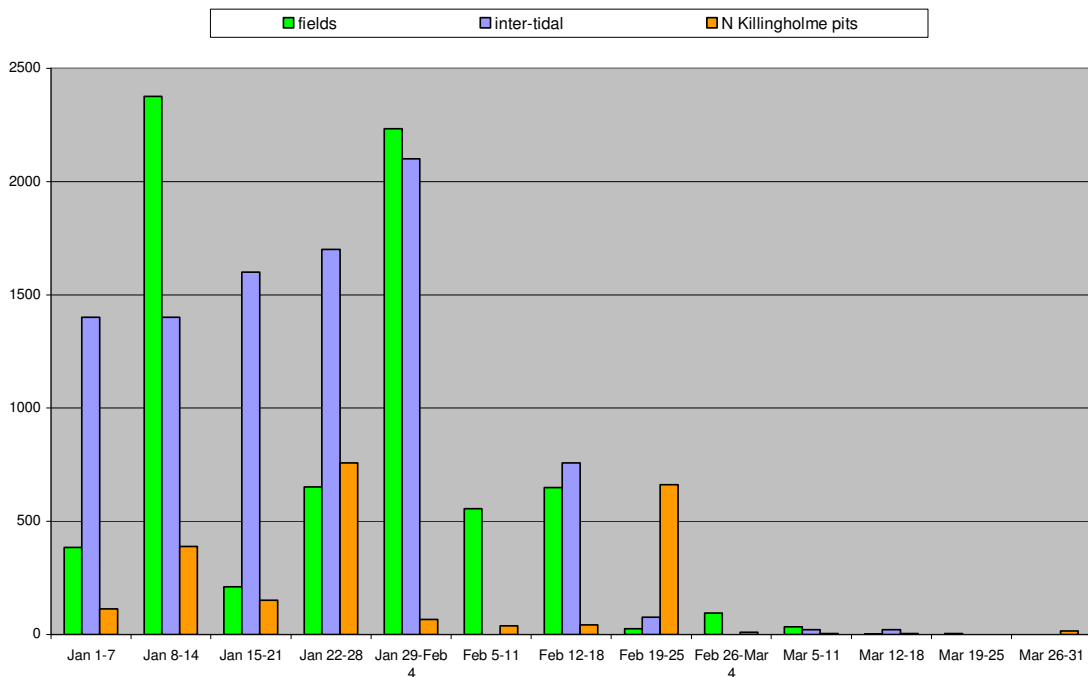
Lapwing flocks fed mainly on fields of oilseed rape where the crop was thin and open as well as short, <30cm in height, and usually with shallow areas of flood water interspersed across the field. Feeding in fields was more frequent during the mid part of the survey when birds may have been putting on weight in preparation for migration. During January it seemed that nocturnal feeding was taking place as birds remained on the inter-tidal loafing area throughout the day during some of the surveys. There was a very strong attachment to the favoured loafing and resting area on the inter-tidal with birds only moving off this site when spring tides left no mud

uncovered and even during such periods some of the flock tended to roost on the remnants of the seaplane jetty which were above the high water mark.

Connections were established between the Killingholme population and flocks from the north bank of the estuary with cross estuarine movements being noted in the early part of the survey (see below).

Period 6 February 5th – 11th, produced the only short spell of hard winter weather with severe frosts producing a change in environmental conditions which affected feeding waders. During this survey period Lapwings concentrated in permanent pastures, sometimes in fields which had not been used previously during the winter, and also moved up to 5km inland to feed on traditional fields around Thornton Abbey.

Lapwing totals January - March 2007



Lapwing		Jan 1-7	Jan 8-14	Jan 15-21	Jan 22-28	Jan 29-Feb 4	Feb 5-11	Feb 12-18	Feb 19-25	Feb 26-Mar 4	Mar 5-11	Mar 12-18	Mar 19-25	Mar 26-31
Totals	fields	384	2376	209	652	2234	556	648	24	95	34	3	5	0
	inter-tidal	1400	1400	1600	1700	2100	0	757	75	0	21	21	0	0
	N Killingholme pits	112	388	151	758	65	38	42	662	8	5	5	0	15

Details:

Period 1 January 1st – 7th

During the early part of the survey a flock of approximately 1400 Lapwing was seen over the inter-tidal immediately north of North Killingholme Haven. Two hours prior to high tide there were 600 Lapwing in the same area central GR TA 164204 (see map for extent of roost / loafing site). Observations revealed that small flocks of birds were arriving to join the roosting birds from across the estuary from the direction of Paul Holme Strays. It was calculated that 120 birds arrived from this direction during a 15 minute period.

A flock of 64 birds was found on field 11 but they were flushed and flew north eventually landing in field number 7 another oilseed rape field. Over the high tide period a flock of 320 birds was found roosting on field 11. Most of the 450 birds which had remained on the inter-tidal by North Killingholme Haven moved off south-west but due to high water levels in the North Killingholme Haven pits they failed to roost there.

Incidental observation from the adjacent WeBS sector to the north of the survey area during the same period revealed the presence of a flock of 1600-1900 Lapwings on the Goxhill Skitter Ness inter-tidal area at low water. This flock was separate from the flock found on the inter-tidal at North Killingholme Haven.

Period 2 January 8th – 14th

At first light 400 Lapwing were roosting in North Killingholme Haven pits but most of the flock departed when a raptor disturbed the roosting waders. A large flock of 1400 Lapwing was then observed in the air, over the estuary, between the North Killingholme Haven jetty TA 166203 and the old seaplane jetty at TA161208 during the entire high tide period of an hour. Although some of the flock settled on the remnants of seaplane jetty, the remainder of the birds wheeled around in the air for this extended period, until the upper reaches of the inter-tidal between these two localities allowed the birds to land there. Some of the flock, up to 500 birds, occasionally moved north-west along the edge of the estuary and even over the fields nearest to the sea embankment, as far as field number 9 but only six birds actually landed on a field, number 25 during this period. This behaviour appears to be particularly strange as it involved the expenditure of a considerable amount of energy over a period when the birds could have rested on fields within a short flight of where they were observed. As the weather conditions had been so warm and partial flooding of fields had presumably produced an abundance of worms it could be that the birds are well fed, in good condition and were able to sustain such a loss of energy without detriment to their survival. Later in the same day the wind increased to force 6 gusting 7. During this spell of poor weather the entire Lapwing flock moved off the inter-tidal onto field number 17, west of East Halton pit, where they roosted with some birds feeding intermittently throughout the afternoon. Heavy rain had left flood water pools on this field and in addition to the flock of 2100 Lapwing there were 14 Ruff, 102 Curlew, 1 Redshank, 2 Black-tailed Godwits and 11 Dunlin on the same field during this period. During the same survey in addition to the birds in field number 17 a flock of 270 birds was roosting in field number 1, with Golden Plovers. During this period there were thus a minimum of **2370** Lapwing on the surveyed fields in East Halton Marshes.

Period 3 January 15th – 21st

The majority of the Lapwing observed during the day were loafing and roosting on the inter-tidal mudflats between North Killingholme Haven and the old sea plane jetty. Variable numbers moved into North Killingholme Haven pits during the day with a peak count of 151 birds being recorded. From there a few small flocks then moved down the estuary to roost on the mudflats between the two southern Killingholme jetties. From the main loafing area, on the inter-tidal north of North Killingholme Haven, a total of 209 birds moved to field 42 where they bathed. Flocks on being disturbed from this field either flew back to the estuary or moved off westwards inland. This field appears to be used as a bathing site rather than a feeding area by Lapwing.

Period 4 January 22nd – 28th

At high tide the Lapwing flock was split between the favoured inter-tidal loafing area immediately north of the North Killingholme Haven jetty (see maps) and North Killingholme Haven pits. About 90 minutes after sunrise birds from both localities moved to a feeding site in field number 25 where a peak count of 540 birds was obtained. A flock of 110 birds also moved inland to field number 42 which appears to be used as a bathing area. Frequent movements

between field number 25 and the inter-tidal loafing area meant that a high proportion of the entire flock of 1700 birds probably fed on this field during the day as the birds commuted between the two sites throughout the survey period.

Period 5 January 29th to February 4th 2007

The start of this period coincided with a series of neap midday tides. Lapwing flocks were found feeding in the mid afternoon period when there was extensive areas of inter-tidal mudflats available in the area where the flock typically roosts and loafs north of North Killingholme Haven. A total of 2234 Lapwing was counted in oilseed rape field numbers 4, 17 and 29 with the bulk of these 1680 in field number four. Surprisingly this suitable looking field had not been frequented by any feeding waders up until this survey period. During the observation period all of the waders were flushed by what was probably an unseen raptor. The Lapwing flock split with 450 birds moving to the adjacent inter-tidal and the bulk of the remainder moving back to the favoured area by North Killingholme Haven. A small flock of 56 birds remained on field number four. During the same period a party of 65 birds was present on North Killingholme Haven pits. As the bulk of the flock settled on the inter-tidal mudflats by North Killingholme Haven further flocks of birds arrived from the estuary to the north swelling the total number of birds on the inter-tidal to 2500.

Survey period six February 5th to February 11th 2007

A marked change in environmental conditions during the period with hard overnight frosts produced a change in behaviour amongst the wintering Lapwing flock. The loafing site on the inter-tidal mudflats north of North Killingholme Haven was abandoned with birds moving to frost free feeding sites and concentrations of birds in permanent pasture fields. Observed movements of flocks revealed that part of the local population was moving to fields in the vicinity of Thornton Abbey, 2-3kms west of the edge of the study site. A flock of 180 birds was also found feeding in a permanent pasture field just west of the study area, south-west of East Halton village at TA137193. Fields being used in the vicinity of Thornton Abbey were centred on GR TA124193 with other birds on fields to the west of the Abbey centred on GR TA112189.

Within the study area 556 birds were found in fields 14, 17, 29, 30, 42 and 88. This was the first survey period when Lapwing were found in permanent pasture in field 14 although this field has proved to be consistently good for the species in previous years. Similarly a small group of birds, numbering 31, was found in field 88, a wet permanent pasture field adjacent to Rosper Road where the species has fed extensively in past years. Field number 42* was again favoured in spite of the large flood water pool in the field being frozen solid with Lapwing actively feeding on the pasture. The permanent pasture in field 30 also held feeding Lapwing for the first time although this field is usually a good feeding area for Curlew.

*[This field also held a flock of 56 Redwing and four Song Thrushes which were actively feeding on worms suggesting that this pasture is particularly rich in invertebrates].

Survey period 7 February 12th to February 18th 2007

The flooded area in field 42 had been dramatically reduced in size by drainage by the start of period seven and it also appeared that disturbance may have occurred in the area prior to the start of the surveys in early afternoon. A public footpath runs down the southern side of the field and this seems to be used by a regular movement of dog walkers during the day. Once disturbed from the field waders and wildfowl seem reluctant to return to the site for long periods.

With the exception of a small number of Lapwing which roosted during the day at North Killingholme Haven pits, maximum 42 individuals, all of the recorded birds were found in two areas the favoured loafing site on the inter-tidal north of the North Killingholme Haven jetty and in field number 12, a very wet oilseed rape field adjacent to the estuary north of East Halton pits. The latter field held a total of 648 Lapwing over high tide, and for most of the afternoon, while a

further 757 birds were present on the inter-tidal. Thus a total of 1420 Lapwing (including 15 birds at NKH pits) was present at high tide. This is a reduction on recent counts from the area and possibly reflects the commencement of early spring departures of wintering birds to their pre-breeding feeding area. Small flocks of Lapwing had been noted during the previous six days moving in a westerly direction adjacent to the Humber at Barton.

Survey period 8 February 19th to February 25th 2007

This first half of the week coincided with a series of spring tides, high tide falling between 06:56hrs and 09:31hrs in the morning and 18:56hrs and 21:44hrs in the evenings following which tides fell away rapidly to the weekend. The survey was timed to occur during the spring tide period.

The only Lapwing found on the fields were 24 birds which moved from the inter-tidal loafing area to field 12 and then into field 11 when they were disturbed by walkers on the adjacent embankment. On the inter-tidal only 75 birds were present at low tide and in the two hours up to high water but in the hour prior to high water a total of 662 Lapwing moved into North Killingholme Haven pits to roost. Birds arrived from the east and the south-east some presumably having arrived from the other side of the estuary.

Survey period 9 February 26th to March 4th 2007

The spring exodus of Lapwings had clearly continued through late February with a total of just 95 birds found in this census period. A total of 94 birds were feeding on the flooded areas of the oilseed rape field 25 with a single bird in the adjacent field 17. No birds were seen on the inter-tidal throughout the survey date. Flocks of Lapwing had been observed during the previous week at Barton on Humber moving off high to the East at dusk; such behaviour is typical of the spring return movements of Scandinavian and East European breeding birds in February and March.

Survey period 10 March 5th to March 11th 2007

An overall total of 70 Lapwing was located in all the survey area in this period. Of these 32 were feeding on field 25, 21 on the inter-tidal loafing area north of North Killingholme Haven where they roosted out the high tide on the old seaplane jetty, 15 at North Killingholme Haven pits and two on field 88. The vastly reduced number of birds clearly confirms the departure of the bulk of the wintering population noted in the previous survey period. The two birds on field 88 could have been prospecting for a breeding site but no display was noted. Up to five pairs have bred on the adjacent Rosper Road pools in recent years when water levels have been suitable.

Survey period 11 March 12th to March 18th 2007

Just three Lapwing were present on field 12 at high tide with a further 21 roosting on the old seaplane jetty and five in North Killingholme Haven pits, a combined total of 29 birds the lowest count of the winter.

Just five Lapwing were found in survey period 12, March 19th – 25th, all of which were roosting on field number 17 at high tide. There were no birds at North Killingholme Haven pits and none were seen on the inter-tidal at low water.

The only Lapwing seen on the final survey, period 13, of the winter period were 15 birds which roosted in North Killingholme Haven pits throughout the high tide period.

Knot *Calidris canutus*

Status: Amber Listed

Humber status **International Importance** 5 year mean to 2003 / 2004 ---**36,018**

A single bird was found on the inter-tidal ISJ during period 3 with Redshanks and two roosted in North Killingholme Haven pits in period four. During period seven a flock of 14 birds was feeding on the inter-tidal in WeBS sector Inner South H, just north of East Halton Skitter. In period eight six birds were scattered along the Inner South I sector at low water.

Dunlin *Calidris alpina*

Status: Amber Listed

Humber status **International Importance** 5 year mean to 2003 / 2004 ---**21,588**

High tide roosts of 177 in period 2 and 387 in period 4 at North Killingholme Haven pits occurred on spring tides. These were exceptional counts for the mid-winter roost at this site with the latter count exceeding the number of birds found on the adjacent inter-tidal areas at low water and thus confirming the movement of birds to the roost from feeding areas outside of the adjacent inter-tidal areas. This movement of Dunlin into the survey area was again confirmed in period eight, on a high spring tide, when a total of 346 Dunlin arrived into the roost at North Killingholme Haven pits in the two hours prior to high water. The majority of the birds were seen to arrive from the north-easterly direction but it is not clear whether they had been feeding on the other side of the estuary or on inter-tidal areas on the south bank to the north of the survey area. A roost of 191 birds in period 12 again occurred during spring tides and appeared to indicate that birds arrived from a northerly direction; again only small numbers of birds were noted on the adjacent inter-tidal mudflats at low water proving that these birds moved into the roost site from feeding areas outside of the surveyed area.

On the surveyed fields during period 2 a total of 11 birds were feeding around flood water pools in field number 17 amongst a large mixed flock of waders, mainly Lapwing, during a severe gale and in period five two birds were feeding on the same flood water pools in field number 17 within a large mixed flock of Lapwing and Golden Plover which also included small numbers of Ruff and a single Redshank.

Ruff *Philomachus pugnax*

Status: Amber Listed Schedule 1

Humber status **National Importance** 5 year mean to 2003 / 2004 ---**14**

As noted above the Humber estuary is classified as of National Importance for Ruff during the winter months with a five year mean of only 14 birds being recorded. The Killingholme flock, which peaked at 14 birds and held 11-13 birds throughout the survey, is thus clearly of considerable significance in spite of the small number of birds which are present. Another small flock of Ruff winters between Humberston Fitties and Grainthorpe Haven.

During the survey period the Ruff flock were found either on fields around East Halton pits or at North Killingholme Haven pits with the exception of weeks 3, 4 and 6 when 5, 2 and 2 birds respectively were feeding on the flooded area in field 42. This probably demonstrates the ability of the species to respond to changes in habitat quality and availability of suitable feeding sites within their wintering area. Presumably the birds which were found in field 42 had followed

Lapwings or Curlew to the area as the Ruff were typically found in association with this two species when feeding on fields around East Halton pits.

The Ruff had a versatile feeding strategy using flooded pools and furrows in oilseed rape fields, areas of flooded and damp permanent pasture and also on occasions foraging along the tide edge on the inter-tidal mudflats. The flock or part thereof roosted at North Killingholme Haven pits particularly on spring tides which were when high water coincided with late evening or early morning periods.

Details:

Up to 13 Ruff roosted with Redshank and Lapwing in North Killingholme Haven pits during January. During period 1 they remained in the pits throughout the survey period as strong winds held waders in the relative shelter provided by the surrounding thorn hedgerows.

In period 2 the whole of the Ruff flock, 14 birds, was located feeding on the flooded oilseed rape field number 17 amongst Lapwings.

During period three 7 birds from this flock were on the inter-tidal just south of the Killingholme seaplane jetty again with a large Lapwing flock. On the same date five Ruff were feeding in the flooded pasture field, number 42, with wildfowl and Curlew. Observed movements confirmed that the birds from the same flock were moving between these four areas with the flock fragmenting and joining up during different survey periods.

In period 4 five birds roosted at North Killingholme Haven pits over high tide. Shortly afterwards at least one bird was again in field number 42 but the wader flock was flushed by a dog walker before an accurate count could be made. Later the same morning a total of 10 birds was found feeding in field number 25 with a large flock of Lapwing and Curlew.

In study period five, January 29th to February 4th, five birds were found with Lapwings in field number 17 and a single birds was in the adjacent field number four. Due to the nature of the terrain in field number four it is possible that the remainder of the flock, which is usually composed of 13-14 birds, may have also been present in that field but some may have been out of view during the survey. No Ruff were located elsewhere during this period.

In Survey period six February 5th to February 11th 2007, two Ruff were found in field 30 and two more in field 42 both permanent pasture fields; all of these birds were feeding with Lapwing and Golden Plover.

The total of 12 Ruff found feeding with Lapwings and Curlew on field number 12 in survey period seven represented the bulk of the small local wintering population. The attachment to the flock of Lapwing was confirmed and seems to be relevant to the distribution of feeding birds.

All of the 12 Ruff were noted feeding on the edge of the inter-tidal mudflats between North Killingholme Haven and East Halton pits during the low water period in week eight. Towards high tide all of the birds moved into North Killingholme Haven pits to roost with Lapwing and Redshanks.

During survey period nine, February 26th to March 4th, six Ruff were found feeding on oilseed rape fields at East Halton with four on field 17 and two on the adjacent field 25.

Nine of the Ruff flock were found together in field 25 in survey period ten with the whole flock later moving onto the flooded grassland by East Halton pits where Black-tailed Godwits and

Curlew were also feeding. Towards low water the flock moved on the inter-tidal north of North Killingholme Haven and were joined by another two birds taking the total to 11 individuals.

The flock of nine Ruff were feeding on the oilseed rape field number 11, north of East Halton pits, at high tide but moved into the grassland south of the pits in field number 29 when disturbed by a passing helicopter. The birds were associating with feeding Curlew and Black-tailed Godwits. It was notable that the Ruff flock had remained in the area in spite of the departure of the Lapwings with which they had been associating in previous weeks.

During survey period 12 all of the eleven Ruff were feeding with Curlew in the permanent grass field adjacent to East Halton pits, field number 29, during the afternoon but moved into North Killingholme Haven pits over the high tide period; an unusual move given that their feeding area was not affected by the rising tide and presumably a roosting movement.

In the final survey period of the survey a total of nine Ruff were found on the inter-tidal at the extreme southern end of the survey area at low water while two birds were at North Killingholme Haven pits. A flock of 11 Ruff had been recorded on the fields at East Halton pits and on the adjacent inter-tidal at high water, as it was a neap tide, and it must be assumed that these were the same birds. This was the first occasion that this flock had been recorded to the south of North Killingholme Haven pits.

Snipe *Gallinago gallinago*

Status: Amber Listed

Small numbers of Snipe were typically present at North Killingholme Haven pits but gaining an accurate estimate of numbers was often difficult due to the birds' habit of skulking in dense vegetation around the edges of the islands.

During period two, January 8th – 14th, a flock of eight Snipe was roosting on field number 12 amongst Curlew. With some water bodies frozen over a few more Snipe were encountered in open fields on the survey during period six but the total recorded was considered to be a gross under-estimate of the number of birds present. Without extensive walking of all suitable fields a proper estimate of the Snipe population is not possible.

Woodcock *Scolopax rusticola*

Status: Amber Listed

A single bird was disturbed from the rough grass on the edge of the Rosper Road wetland site during the period five survey. Locating birds of this species, which are typically nocturnal feeders during winter, is restricted to chance encounters during survey walks and it is certain that more birds would be in the surveyed area than those which are recorded.

Black-tailed Godwit *Limosa limosa*

Status: Red Listed Schedule 1

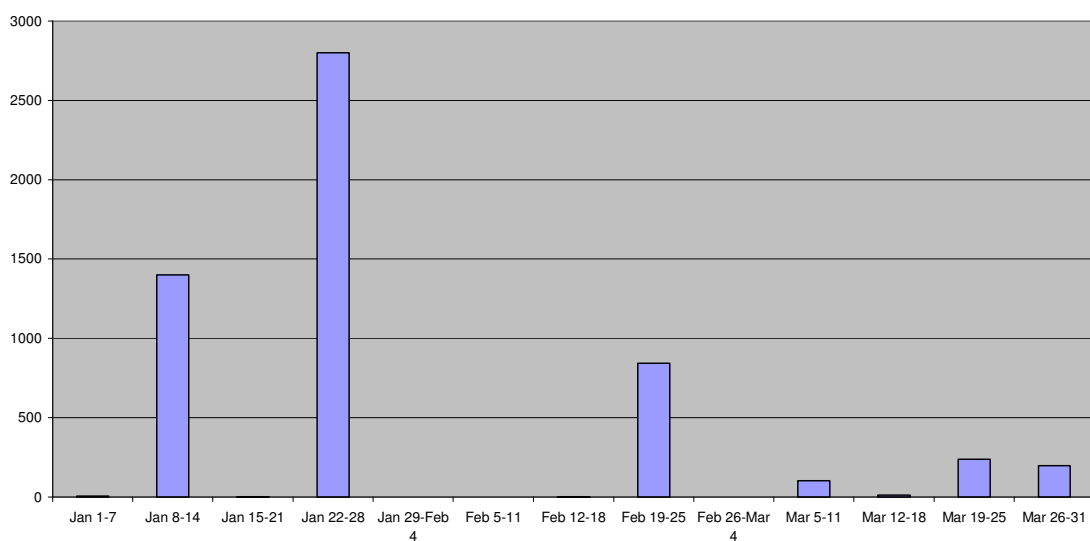
Humber status **International Importance** 5 year mean to 2003 / 2004 ---**1075**

The wintering population of Black-tailed Godwits on the Humber estuary has increased from 31 on the winter of 1989-1990 to 1030 by 1999-2000 and has attained the status of International

Importance with the recent five year mean being 1075 birds. This mean up to the winter of 2003-2004 may well underestimate the actual wintering totals. The counts contributed to the 2003-2004 Low Tide WeBS project were certainly well below the actual number of birds recorded by GPC in casual surveys. Survey work in the area of Pywipe mudflats in winter 2005-2006 revealed the presence of 2380 Black-tailed Godwits in November 2005; this would appear to be the highest winter (November – February) count up to and including that winter WeBS survey period. Presently 95% of the wintering population of Black-tailed Godwit on the Humber roost and feed in the area between North Killingholme Haven and the Pywipe basin on the south bank of the estuary. The autumn and spring flocks are more widespread. Until the winter of 2004-2005 occurrences of Black-tailed Godwits north of Immingham Docks were very rare in the period December – February with the birds remaining in the Pywipe basin at high tide and moving to the inter-tidal between there and Immingham Docks at low water. In November and December 2004 peaks of 2830 and 2900 Black-tailed Godwits roosted at North Killingholme Haven pits on these respective dates but just two and 140 were noted in January and February. In the following winter a one off count of 442 in November was the only winter occurrence in the pits. In the present winter there have been fairly consistent roosts in the pits throughout the winter to date with 3600 in November 2006, 2350 in December and 2800 January 2007 falling to 842 in February and 247 in March. These data show that there is a continuing increase in the wintering population on the estuary, 3600 being a new winter high, and that the winter movements and range are possibly changing as the population size increases. The birds roost at North Killingholme Haven pits on spring tides with the roosting flock typically departing about an hour after high tide when the majority move back to the inter-tidal south of Immingham Docks.

During the present survey series in addition to the roosting flock at North Killingholme Haven pits a small number of birds, peak of 24 in March, occurred on the fields around East Halton pits. In the early part of the survey the godwits fed mainly on flooded areas in fields of oilseed rape with more regular observations on permanent pasture fields later in the survey. This field feeding is a new facet of Black-tailed Godwit winter ecology on the Humber and may be a response to the increasing numbers of wintering birds forcing the less dominant individuals to exploit alternative food resources. Certainly all of the birds recorded from the fields were first-winter, 2cy, individuals.

Black-tailed Godwit North Killingholme pits 2007



Details:

Period 1 January 1st – 7th 2007

A single bird was feeding with Curlew on a partly flooded oilseed rape field (25) and then moved onto field 17 in the first hour after dawn.

Period 2 January 8th – 14th 2007

A flock of six birds joined the Curlew on the permanent pasture on the western edge of East Halton pit and then moved over the hedge into field number 25. During high winds in the afternoon of the survey two birds were feeding with other waders in field number 17.

Period 3 January 15th – 21st 2007

Three birds were again feeding in the pasture adjacent to East Halton pit, field number 29.

Period 4 January 22nd – 28th 2007

Seven birds were feeding with Curlew and Lapwing in field number 25 and on the pasture at the western end of East Halton pits. One of the seven birds was colour ringed Red/Yellow left, White/Lime flag Right. This individual had been ringed as a chick at Langhus, Fljot, Northern Iceland on July 7th 2006. It roosted at Water's Edge, Barton on November 3rd 2006 and was seen at North Killingholme Haven pits on January 15th 2007. This individual is clearly wintering on the Humber estuary but its habit of feeding on an oilseed rape field is apparently unprecedented.

A new colour ringed first-winter was also seen at North Killingholme pits on January 7th; Orange/ Yellow left and White/Lime flag right was ringed as a chick in July 2006 in North Iceland at Gásir, Eyjafjörður.

During survey period five on neap tides there was no high tide roost at North Killingholme Haven pits but five first-winter birds were again feeding on the rich permanent pasture at the western end of East Halton pits.

The colour ringed first-winter bird located at East Halton in field number 25 in survey period four was again present in the same area of the same oilseed rape field along with four other Black-tailed Godwits in week seven. The strong attachment of this individual to this unusual feeding site seems rather bizarre; without colour ringing there would of course be no confirmation that the same bird was feeding in this area on different dates. Just one Black-tailed Godwit was present at North Killingholme Haven pits during the period seven survey.

In period eight the high tide roost at North Killingholme Haven pits held 842 birds including the colour ringed bird noted above. The decline from 2800 birds noted in the roost in period four is typical of the early spring departures from the Humber. In February and March a high proportion of the Humber Black-tailed Godwits move south and south-east to sites in Norfolk and Cambridgeshire such as the Ouse and Nene Washes and Cley Marshes, where they stage prior to starting their northbound spring migration to Iceland.

Neap tides in period nine meant that there was no high tide roost at North Killingholme Haven pits; the only Black-tailed Godwits recorded were three on field 25 and two birds including the colour ringed first-winter, on the grassland by East Halton pits.

Survey period ten produced the highest count of Black-tailed Godwits from the fields and grassland at East Halton pits with 24 birds in the wet pasture by the pits and also in field 29 while five birds, including the colour ringed bird, were also note in field 25 on the same date. All of the

birds seen appeared to be 2cy with no trace of summer plumage. Later in the survey the colour ringed bird, along with two others, was found on the inter-tidal mudflats at East Halton Skitter.

In survey period 11 a total of 11 Black-tailed Godwits were feeding with Curlew and Ruff in field 29 for most of the day while a further 12 birds were roosting in North Killingholme Haven pits at high water. Surprisingly of the latter 12 birds two were colour ringed and neither were birds seen previously during the present surveys. One of these birds proved to have been ringed in the Wash in the previous autumn and the other on the north bank at Cherry Cobb again in the autumn of 2006. By mid February the majority of the wintering Black-tailed Godwits on the Humber have left the estuary following which there may be a passage of Icelandic birds through the area during April.

No birds were recorded from the fields in periods 11 and 12 but 237 roosted at North Killingholme Haven pits in week 12 and 198 in week 13.

Curlew *Numenius arquata*

Status: Amber Listed

Humber status **National Importance**

5 year mean to 2003 / 2004 ---**3865**

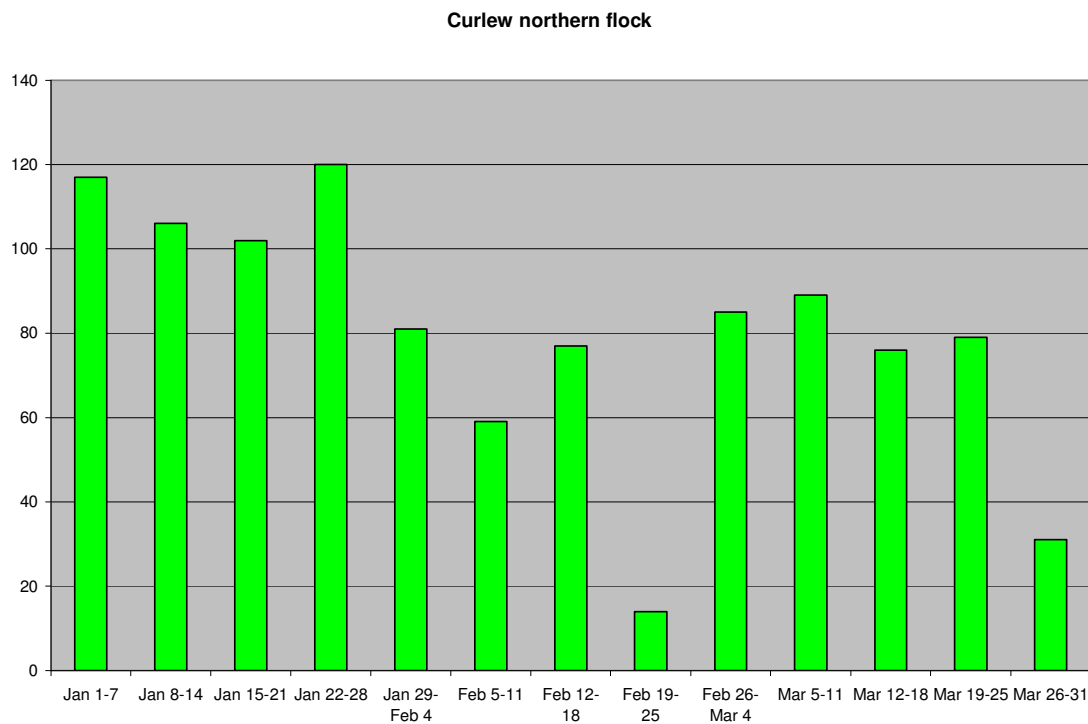
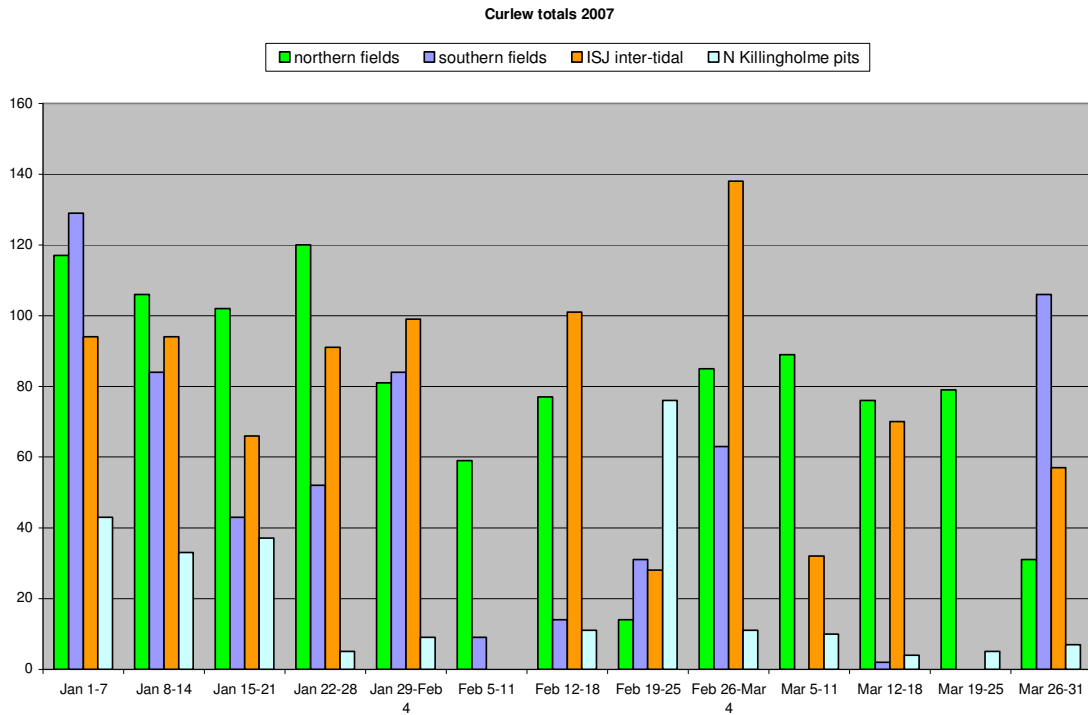
Although there was a limited interchange of birds between the two major Curlew flocks which were located in the study site for the majority of the time the two flocks remained separate.

The northern flock was usually to be found on fields around East Halton pits as well as in the permanent grass fields at the western end of the pits and to the south of the pits. This flock of birds usually numbered around 85 – 100 individuals. Birds from this flock also moved over the old railway tracks to feed in fields to the south centred upon field numbers 33, 37 and 38 but they also used field 42 while it was flooded in January and the permanent pasture in field 30 during the latter part of the survey. A small number of birds moved as far as the permanent pasture in field 64. This flock **did not** make use of the adjacent inter-tidal ISI where the maximum Curlew count was just two birds in January.

The southern flock were usually found on the inter-tidal ISI south of the South Killingholme lighthouses (see map) where they fed and loafed through most of the survey period also making use of the adjacent grass field number 103. Small numbers of birds from this flock were also found feeding on an open area in field 85, the planted woodland; this was presumably a traditional feeding area which was still attracting birds following initial conversion to woodland. Some birds from this flock moved into the pits at North Killingholme Haven at high tide but also overnight where there was a Curlew roost early in the period at least. A small number of birds which had roosted at North Killingholme Haven pits were then followed to field 42 where they joined birds from the northern flock in mid January; this was the only obvious interchange between the two flocks. During the final week of the survey the entire southern flock were feeding on permanent pastures adjacent to Rosper Road wetland, field numbers 88 and 89; this was the first occasion during the survey that substantial numbers of Curlew had been found in this area in contrast to past winters when Curlew have frequently fed on the same fields.

It was notable that during the short period of severe frosts in early February most of the Curlew from both of the flocks disappeared from the survey area. Those which remained were concentrated in small fields of permanent pasture some of which had not been utilised previously in the winter and were not used thereafter.

The table and chart below show the calculated number of Curlew observed in the four principal areas of the study site during the period; note that there was frequent interchange between the birds on the southern inter-tidal, ISJ, and the southern fields.



		Jan 1-7	Jan 8-14	Jan 15-21	Jan 22-28	Jan 29-Feb 4	Feb 5-11	Feb 12-18	Feb 19-25	Feb 26-Mar 4	Mar 5-11	Mar 12-18	Mar 19-25	Mar 26-31
Curlew	northern fields	117	106	102	120	81	59	77	14	85	89	76	79	31
	southern fields	129	84	43	52	84	9	14	31	63	0	2	0	106
	ISJ inter-tidal	94	94	66	91	99	0	101	28	138	32	70	0	57
	N Killingholme pits	43	33	37	5	9	0	11	76	11	10	4	5	7

Details:

Survey period 1 January 1st – 7th

The survey commenced in the area of East Halton pits at dawn. Parties of Curlew arrived from the direction of the inter-tidal but were probably coming from further away than the closest inter-tidal areas. They concentrated on the permanent pasture at the western end of East Halton pit and in the adjacent oilseed rape field number 25. Birds then moved into other adjacent oilseed rape field numbers 17 and 11. Part of this flock then moved off to the south-west and it was presumably these birds which were found to the south of the old railway tracks in field numbers 31 and 33. This latter flock of 41 birds was seen to move back towards the original feeding area when they were flushed by a raptor later in the morning. Observations of a party of 33 birds in field number 42 also appeared to relate to this same flock of birds as these birds also moved off north-east and were observed landing in field 33. Over the high tide period the majority of the flock were again feeding in the oilseed rape fields (numbers 10, 11, 17 and 25), and the permanent pasture adjacent to East Halton pits.

A second flock of Curlew was located at the southern end of the survey area where they day roosted and fed on the inter-tidal mudflats but also moved into Field number 103. This grass ley field has consistently attracted roosting and feeding Curlew over at least the past seven winters in spite of being re-seeded and during period 1 it held up to 79 birds.

Somewhat surprisingly a flock of 35 Curlew was found feeding on an open area in the middle of the planted woodland in field number 85. The strip of bare soil and short grass had been left unplanted as the site of a medieval village? When flushed the birds moved onto pasture fields and winter cereals to the south of field 85 outside of the study site. In the late afternoon the flock left the area and flew off over the oil tanks in a direction which it was estimated would have taken the birds to the known inter-tidal roost site by the South Killingholme Lighthouses (see map).

Observation thus revealed that there were two core flocks of Curlew in the area. The minimum total of Curlew in the northern flock using the fields around East Halton pits and inland to field 42 was calculated to be at least **117** individuals from spot counts on the ground.

The second flock which fed on the inter-tidal and in field 103 held at least 94 birds but if the 35 birds found in field 35 were added then there would have been 129 birds in the latter amalgamated group.

Survey period 2 January 8th – 14th

Behaviour of the northern flock was the same as in period 1 with some of the flock moving as far inland as field number 64. There was constant interchange between field numbers 43, 32, 37, 54 and 25. The total flock size was at least 106 birds which was the count from field number 12 at

first light and over high tide. A small group of nine birds arrived from the inter-tidal to the north of the survey area and roosted on field number one during high winds.

The southern flock again fed mainly on field 103 with visits to the adjacent inter-tidal. A minimum of 78 birds were noted using the field with a higher count of 94 on the inter-tidal. Six birds were feeding on the same part of field number 85; these birds moved onto the pasture field to the south during the observation period. A total of nine birds moved from field 103 to North Killingholme Haven pits during the observation period.

Survey period 3 January 15th – 21st

The northern flock were all feeding in field number 25 and particularly in the small area of pasture at the western end of East Halton pits. A total of 77 birds were found in this locality in addition to which 25 were again in field number 42. It was considered that these two flocks were composed of different birds at the time of the observation but a connection between the two sites was reinforced as the inland flock flew towards East Halton pits and birds were also seen leaving that site on a direct heading for field 42; this link between the two area has been established in previous survey periods.

The southern flock again fed exclusively on the inter-tidal and in field number 103 roosting on the upper reaches of the inter-tidal on a neap tide. No birds were found in field 85.

Survey period 4 January 22nd – 28th

Birds which had roosted at North Killingholme Haven over high tide at dawn were observed to fly off in the direction of field number 42 where 57 birds were counted later in the morning. This same flock of birds were also seen on field number 32 and 37 with some moving between these fields and field number 25. Around East Halton pit a minimum of 120 Curlew, counted in field 12 at high tide, were present all day and fed variously on field numbers 12, 11, 17, 25, 29 and particularly the wet pasture at the western end of East Halton pit where the birds seemed to be particularly successful at extracting worms.

The southern flock again fed on field number 103, 52 birds of the 91 present on there and the adjacent inter-tidal; no birds were found on field 85. Some birds again moved between North Killingholme Haven pits and the southern feeding / roost site.

Survey period 5 January 29th – February 4th

Field number 42 appeared to have been disturbed by the time of the survey but there were still seven Curlew in the field; on leaving the site they moved back towards the vicinity of East Halton pits with only one individual being seen subsequently in field number 37. The single bird which departed from field number 37 flew off in the direction of North Killingholme Haven pits. The bulk of the northern flock, 81 birds, were feeding in field number 29; when flushed during the survey of the wetland the whole flock flew towards the adjacent inter-tidal but the birds were not in that habitat later in the afternoon and it is considered that they continued across the estuary to the north bank. Only nine Curlew roosted at North Killingholme Haven pits where a count was undertaken from late afternoon until an hour after sunset by which time it was virtually dark, excepting the artificial lighting from the adjacent ABLE UK sites.

Five birds were again feeding on field number 85 and a total of 77 were found on the favoured field number 103 with 22 more on the adjacent inter-tidal.

Survey period 6 February 5th to February 11th

The majority of the two Curlew flocks were notable by their absence during this survey period a fact which is assumed to be connected to the harder weather with over-night frosts having frozen some of the water bodies and the upper layers of soil in some of the fields. Curlew were found

only in permanent pasture fields with 39 in field 14, a single bird in field 42, 19 in field 64 and just 9 in 103.

Field 14 had not previously held Curlew during these surveys but has been noted as a regular feeding area particularly in spring, in past years and has also held a notable spring passage flock of Whimbrel in April. The 19 birds in field 64 were well inland and in what appears to be an unusual feeding location for the species as the field is enclosed by hedgerows and is close to a busy road. The number of birds feeding in pastures and further from the estuary may suggest that the remainder of the local flock had moved further inland to feeding areas outside the study site as was observed with Lapwing and Golden Plovers during the same survey period.

Survey period 7 February 12th to February 18th

The number of Curlew found in the northern fields declined to 77 birds in total and most of the southern flock spent the whole of the low tide and high tide period on the inter-tidal roosting site south of the South Killingholme lighthouses with just 14 being noted in field number 103, usually a heavily used feeding area. No birds were found on field 42, where most of the flood water had been drained, and just three birds were on field 37 the only ones south of the old light railway tracks at East Halton. The bulk of the East Halton flock were again on oilseed rape fields, 11, 12, and 25 where birds were actively feeding throughout. The birds found feeding in field 24, over-wintered stubbles, were the first of any species of wader to have been noted in this type of habitat during the survey.

Movements were again noted between the southern loafing site and North Killingholme Haven pits prior to high tide but as it was a mid neap tide most of the Curlew remained on the usual loafing area throughout the high water period as this was not covered by the tide.

Survey period 8 February 19th to February 25th 2007

Only 14 Curlew were present in the East Halton Marshes field numbers 29, 11 and 12 with a single bird in field 64. The sudden decline in the number of birds feeding in this area may be related to the first movements of wintering birds towards their breeding sites or could be part of a pattern of late winter dispersal around the estuary. A total of 31 birds was feeding in field 103 with an additional 28 birds being noted on the adjacent inter-tidal.

At high water on the evening tide Curlew arrived at North Killingholme Haven pits from the south building up to a peak of 76 birds over high tide. This is actually the highest ever count of Curlew from this locality. The birds appeared set to roost overnight.

Survey period 9 February 26th to March 4th 2007

Surprisingly there was a notable resurgence in Curlew numbers during this period following a marked reduction in the previous period. Heavy rain had produced more obvious flooding in several of the fields in East Halton Marshes and this could have been what had attracted the birds to return to this favoured feeding site. A minimum of 85 birds was present in the oilseed rape fields around East Halton pits with considerable movements between the different fields during the survey date. At the southern end of the survey area a record total of 138 Curlew was recorded from the inter-tidal loafing area south of the Killingholme lighthouses. Up to 59 birds from this flock had been feeding on field 103 during the low tide period but all moved to the inter-tidal at high water. Only 11 birds from this population were noted at North Killingholme Haven pits during the mid tide period. Four birds fed on the flooded grass field, number 88, adjacent to Rosper Road pools. No Curlew were again noted from the field north of the old railway tracks at East Halton and the oil refineries around field 37-42 where there were regular records earlier in the survey.

Survey period 10 March 5th to March 12th 2007

The concentration of partly flooded oilseed rape fields around East Halton pits, fields 10, 11, 17, 25 and wet pasture 29, continued to hold a notable flock of Curlew through this period with a minimum of 89 birds being recorded. Up to 18 birds were in the grassland around East Halton pits. There were no observed movements of birds outside of this area and no birds were found in the fields south of the old railway tracks.

The concentration Curlew at the southern end of the survey area was notable reduced during this period with a peak count of only 32 birds from the favoured inter-tidal loafing site. At high tide these birds roosted on the adjacent rocky upper shoreline south of the Killingholme lights. When the flock was disturbed by a passing micro-light 27 of the birds flew north-east across the estuary and were lost to view heading for the north bank. This connection between the north and south bank populations had not previously been confirmed in this survey series.

Survey period 11 March 12th to March 18th 2007

The Curlew flock in the East Halton pits/fields area totalled 76 birds all of which were feeding on the pasture in field 29 at one point during the survey. Disturbance from aircraft flushed the birds with 25 relocating to field 11 and 19 of the flock moving off south-west to field 30, a permanent pasture field to the south of the old railway tracks. The predominant habitat used by this species in recent weeks seems to have been permanent pasture with the oilseed rape fields being used for feeding much less frequently than earlier in the winter. Further inland three birds were feeding in the permanent pasture in field 64 and singles were in fields 85 and 88. The flock at the southern end of the survey area was located on the inter-tidal south of the Killingholme lighthouses with no movements being noted to the adjacent fields. The neap tides meant that the upper inter-tidal was not covered even at high water. A total of 70 birds on the favoured inter-tidal loafing area was a considerable increase on the low numbers present on the spring tides in the previous survey period.

Survey period 12 March 19th to March 25th 2007

Five Curlew were found in field 19 the first occurrence in this field during the survey series. The remainder of the northern flock were split between field 17, 24 birds and field 29, 50 birds making a total of 79 individuals. There was some movement between field 29 and 17 during the observation period but none of the birds moved away from this restricted feeding area. No birds were present at the southern end of the inter-tidal or on the adjacent fields over the spring high tide.

Survey period 13 March 26th to March 31st 2007

The northern Curlew flock had declined to just 31 birds all of which were feeding on permanent pastures adjacent to East Halton pits. From here the bulk of the flock moved inland to feed on field 38 with six birds moving to the permanent pasture in field 30 and another three being located in field 64. The flock of 26 birds located on field 38 moved back to the East Halton pits area where the flock became more fragmented with some birds then feeding on oilseed rape fields. The southern flock of Curlew held 106 birds all of which were found feeding on the permanent pasture fields, numbers 88 and 89, to the north of Rosper Road wetland. These wet pastures have held good numbers of Curlew and Lapwing in previous winters but had not produced any significant records during this study series prior to this week. At low tide 57 birds were found on the usually favoured inter-tidal areas south of the South Killingholme lighthouses. Only seven birds roosted at North Killingholme Haven pits on what was only median neap tide.

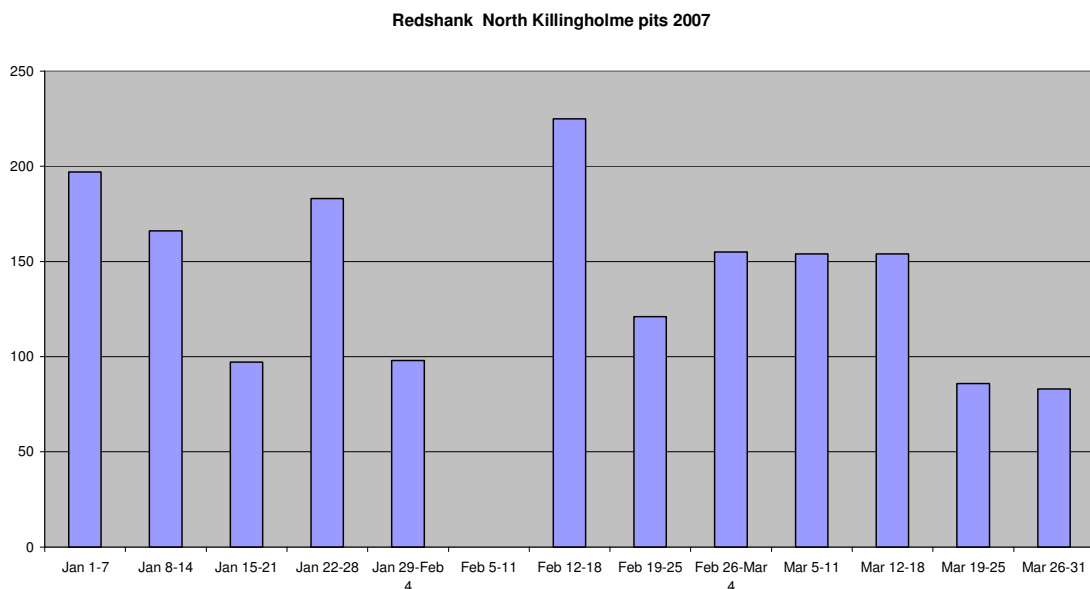
Redshank *Tringa totanus*

Status: Amber Listed

Humber status **International Importance** 5 year mean to 2003 / 2004 ---**5578**

Between 83 and 225 Redshank roosted at high tide in North Killingholme Haven pits during all the survey periods with the exception of February 5th – 11th when the pits were all frozen over. All of these birds appeared to be of local origin feeding on the inter-tidal north and south of the pits at low water and moving into the pits for 3-4 hours over the high tide period. On days with high winds and poor weather such as heavy rain many of the birds remained in the pits throughout the day.

Just one bird was recorded on field number 17 with other waders during a gale in period two. In period five single birds were found in fields 17 and 42.



Turnstone *Arenaria interpres*

Status: Amber Listed

Humber status **National Importance** 5 year mean to 2003 / 2004 ---**639**

No Turnstone were recorded from anything other than the inter-tidal areas where there were February – March peaks of just 5 and 8 birds respectively in ISI and ISJ.

Additional relevant species:

Marsh Harrier *Circus aeruginosus*

Status: Amber Listed Schedule 1

A third calendar year male was seen over fields 14 and 17 during period seven. It appeared to be a known individual which has wintered on the upper Humber roosting on Whitton Sands. An immature probably 2cy or 3cy male was hunting North Killingholme Haven pits before flying east across the estuary on March 27th, period 13.

Merlin *Falco columbarius*

Status: Amber Listed Schedule 1

A female or first-winter was chasing a Skylark which it had flushed from field number 38 during the period 1 survey, January 1st – 7th.

Grey Partridge *Perdix perdix*

Status: Red Listed BAP

A covey of eight birds was noted in field 24 in early January and a pair were in the adjacent field number 25 in survey period eight, February 19th to 25th. What was presumed to be the same pair of Grey Partridge were located in the permanent pasture in field 29 in survey period eleven.

Barn Owl *Tyto alba*

Status: Red Listed Schedule 1

A single bird was recorded flying west in the area of field number 35 in East Halton village soon after first light in week 4. A presumably different individual was hunting field number 23 later in period four. Two birds were at East Halton Skitter in period seven with one hunting the drainage ditch and embankments at the northern end of the survey area.

Short-eared Owl *Asio flammeus*

Status: Amber Listed

Single birds were observed over the saltmarsh at East Halton Skitter in January and a lone individual came in off the Humber and hunted the fields between the ABLE site and the South Killingholme Lighthouses on March 27th, survey period 13.

Skylark *Alauda arvensis*

Status: Red Listed BAP

The only concentrations of birds noted during survey work were in over-wintered stubbles in fields 24 and 38 where there were up to 24 and 28 birds respectively. Up to ten birds were

encountered in other fields more particularly during the latter part of the survey when birds were establishing breeding territories.

Willow Tit *Poecile montanus*

Status: Red Listed

One was located in the thorn hedgerows at East Halton pit in week one and one or two birds were there in week four. An additional bird was in the scrub by field number 64 in week four. At least one bird was present in an old thorn hedge in field number 88 adjacent to Rosper Road wetland on January 26th.

Yellowhammer *Emberiza citrinella*

Status: Red Listed

The only flock of birds recorded was in field number 24, over-wintered stubble where there were consistently 18-24 birds throughout the period. Males were establishing breeding territories by during the latter part of March.

Reed Bunting *Emberiza schoeniclus*

Status: Red Listed BAP

Over-wintered stubbles in fields 24 and 38 produced most of the records of this species with peak counts of 16 in field 24 and 31 in field 38 during the period. Breeding birds were back in the major wetlands by the end of the survey period.

Mammals:

Brown Hare

One was present in field number 43 on the two survey periods 2 & 3 and moved into field 37 when disturbed. Presumably the same individual was found in field number 46 in period eight. A different individual was grazing in field number four in period four.

Roe Deer

Roe were observed in field 85 and adjacent areas of planted woodland where there were numerous tracks throughout the period. Four were in field number 64 in period seven. It seems likely that a substantial population exists in the survey area.

References:

Cramp S et al; The Handbook of the Birds of the Western Palearctic Volume II Hawks to Bustards; Oxford University Press 1980

Graham Catley BSc Env
Nyctea Ltd
April 2007

APPENDIX C

**SPRING WADER COUNTS IN EAST HALTON – KILLINGHOLME MARSHES
APRIL 2007 – MAY 2007. G.P. CATLEY. NYCTEA LTD.**



Spring wader counts in East Halton - Killingholme Marshes April 2007– May 2007

April 2nd – 8th

The two Curlew main flocks were both found feeding avidly on permanent pastures; the northern flock minimum 95 birds concentrated in field number 14 where there were 92 birds with three in field 30 which had been used by more birds earlier in the day. From field 14 some birds moved into fairly dry fields of oilseed rape for periods, possibly to loaf. The southern flock, 91 birds, were again all on field 88 where they were found in week 13 of the winter surveys.

The Ruff flock, nine birds, was on the permanent pastures at East Halton pits with 2 roosting at North Killingholme Haven pits.

BBS walking of field number 24, over-wintered stubbles, revealed the presence of 18 Common Snipe.

A high spring tide count at North Killingholme Haven pits revealed the presence of 282 Icelandic Black-tailed Godwits with 28 Avocets and 64 Redshank as the most numerous species. There were reports of up to 68 Avocets in the pits in the previous week.

April 9th – 15th

Curlew were highly concentrated with the northern flock on permanent pastures south of the East Halton railway tracks in fields 30 and 41; the latter field had not been used during the winter; this same field also held a flock of 10 Ruff presumably the wintering birds. The southern Curlew flock were mainly feeding in permanent pastures in fields 88 and 89 but 32 birds were found in field 98 another field which had not been used during the winter period.

Neap tides at North Killingholme Haven pits produced low counts of most species but 25 Avocets were of note as they showed many signs of attempted nesting.

April 16th – 21st 2007

The majority of the wintering waders appeared to have departed between the end of the previous week and this survey with just 18 Curlew being located in total. Of these three birds were in the permanent pasture in field 30 where display had been evident in the previous week, a single bird was in field 64 (permanent pasture) and 14 birds were commuting between the permanent pasture in field 88 and the shallow eastern end of the Rosper Road wetland site.

A total of six Lapwing on the grassland at East Halton pits appeared to be local breeding or failed breeding birds from adjacent fields.

North Killingholme Haven pits held a good total of waders on the high spring tides with peak counts of 74 Black-tailed Godwits, all Icelandic birds in breeding plumage, 19 Redshank, 10 Lapwing, 17 Avocets and eight Ruff. The Ruff were the birds from the wintering flock which had been noted in the various fields at East Halton as well as on the inter-tidal and at North Killingholme Haven pits. Two of the Avocets appeared to be incubating on an island in the largest of the pits at North Killingholme Haven.

April 23rd – 28th 2007

Specific areas were again targeted but more waders were encountered on breeding bird survey visits and details of these occurrences are also given in the excel sheet.

At least 37 Curlew were located (see sheet) with concentrations of birds in permanent pastures in fields 30 and 64 while five birds were still feeding in field 88 an commuting onto the eastern end of Rosper Road. A party of six Curlew found on field 76 were the first such occurrence during these surveys as was a single bird on field 107; the latter field is set aside with a two wet areas in the middle of the field where the bird was feeding.

The first passage Whimbrel occurred but in permanent pastures where they have not been encountered in the past. The change of frequented areas may well be due to the baking of the soil in many of the other fields in the survey area which has left them rock solid with deep cracks appearing in the clay and clearly not suitable for long billed probing waders. The minimum number of Whimbrel was 16 with the flock of five moving between two fields and the two in fields 40 and 41 being assumed to be part of the flock in field 64.

Lapwing nests were found on spring sown cereals in fields 27, 28 and 100 with two in the latter field. There were also two nests on chalk at the southern end of the East Halton pits pastures, field 29, and one in field 107. A pair were in field 88 and moved between there and Rosper Road.

Four Ruff were feeding on the inter-tidal south of North Killingholme Haven with two different birds in the North Killingholme Haven pits and a single bird was feeding on the permanent pastures at East Halton pits, field 29.

Up to 25 Avocets remained in North Killingholme Haven pits where they were fighting over nest sites. Although there are numerous islands in the pit most are covered in vegetation and are thus unsuitable. The two bare islands held 4 active nests. It would be a rather simple task to produce a large number of nest sites by vegetation removal on some of the larger islands.

A total of 90 Icelandic Black-tailed Godwits roosted at North Killingholme on the spring tides at the start of the week.

April 29th – May 5th 2007

With the continuing drought conditions most of the fields in the area became parched and extremely dry with the clay soils baked hard and cracked making them unsuitable for surface probing waders.

The pairs of Lapwing noted in the previous weeks report remained on the spring cereal fields. At Rosper Road the effects of the continuing lack of rainfall became particularly obvious as levels fell exposing muddy areas at the eastern end of the site where two pairs of Lapwing quickly established territories.

Two Curlew were still using the pasture in field 88 and commuting between there and Rosper Road in addition to which five birds were feeding in field number 30, with two in field 64, again in permanent pasture but in general there was a final departure of wintering birds with a scatter of non-breeders remaining in the area.

Spring tides at North Killingholme Haven pits failed to produce any sign of a high tide roost, this being the first week without a record of Black-tailed Godwit in the area. The breeding Avocets remained with seven active nests being defended against the two resident pairs of Carrion Crows. Four male Ruff remained from the wintering flock, gaining summer plumage, in addition to which single pairs of Oystercatcher, Lapwing and Redshank were also present. Two passage Common Sandpipers were also present on the survey date along with a lingering Snipe.

A single Common Sandpiper was also noted at East Halton pits.

Three Whimbrel were feeding in field 64 with two Curlew.

May 6th – 13th 2007

The small number of waders still present in the survey area appear to be either breeding or non-breeding summering individuals. Most of these birds are now located around the wetland sites with the permanent pasture fields holding only the odd bird. This could be largely due to the extreme desiccation of the fields which has been evident in recent weeks.

During this survey period a single Curlew was found in field 88/ Rosper Road where there were also two Lapwing. Two Lapwing in the pasture adjacent to East Halton pits were also probably local breeding birds.

All of the other waders located were found at North Killingholme Haven pits. The breeding colony of Avocets was decimated by the local Carrion Crows with just three active nests remaining. Also in the pits were single Lapwing, Redshank and a Bar-tailed Godwit which had joined a flock of 36 first-summer Black-tailed Godwits. This flock held the celebrated colour ringed individual which was first seen at Waters' Edge in November 2006 and subsequently wintered in the East Halton Killingholme area during January – April 2007.

Given the very low level of wader presence now apparent in the fields this will be the final spring survey before autumn counts recommence in July 2007. Any significant observations of waders in the intervening period which are recorded during BBS visits will be logged and noted in the BBS report at the end of the summer.

Graham Catley
Nyctea Ltd

APPENDIX D

**EAST HALTON – KILLINGHOLME WINTER BIRDS SURVEY 2007/2008. G.P.
CATLEY. NYCTEA LTD.**

East Halton- Killingsholme Winter Birds Survey 2007/2008

Graham Catley BSc Env
Nyctea Ltd April 2008



Nyctea Ltd.

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Winter bird survey of East Halton and Killingholme Marshes and inland fields encompassed by North Lincolnshire
Council boundary;
July 1st to March 31st 2007 - 2008

G P Catley BSc Env Nyctea Ltd

Introduction:

Nyctea Ltd were contracted, by Humber INCA, to undertake a second wintering bird survey covering the area shown on the attached plan, stretching in the north from East Halton Skitter to the northern edge of Immingham Docks, and inland to East Halton and South Killingholme villages, during the period July 1st to March 31st 2007 – 2008 inclusive.

The survey was designed to investigate the abundance and distribution of any of the qualifying bird species noted in the Humber Flats and Marshes SPA criteria. Parts of the area which had already been developed for industrial use were not included within the survey unless observations suggested that any of the qualifying species were using the sites. Similarly mature woodlands were excluded as the qualifying species are all waterfowl, waders and raptors of open countryside, Marsh and Hen Harrier, none of which are associated with woodland.

Description of the survey area:

The entire area was walked several times in spring 2007 in connection with a full breeding bird survey and also in the week prior to the commencement of the surveys and all of the fields were mapped and assigned to a habitat type. Within the surveyed area there were a limited number of different habitat types as the majority of the fields are under either pasture or arable cultivation. Individual fields were identified by a number from one to one hundred and nine, the same as used in the previous winter survey and the breeding bird survey and these are shown on map. The distribution of fields and habitat types as of July 1st is shown in the table; the table also shows any significant changes in cropping which occurred during the period of the surveys. This was particularly important as fields were harvested through the autumn period changing the availability of feeding and roosting sites for waders and wildfowl on a weekly basis during the peak period of crop harvest and field cultivation. The attached map, A, shows the distribution of cropping within the fields as of December 2007 following all harvesting and autumn cultivations.

During the period of the survey the management of field 65 was of considerable significance. The farmer maintained the half of the field adjacent to the permanent ponds and pasture in field 64 as over-wintered stubbles. Additional food was also put out occasionally for wildfowl and this encouraged large numbers of Mallard and small numbers of other species to remain in this area through the late autumn and mid winter period although Mallard numbers were particularly prone to large weekly fluctuations.

Permanent wetlands:

Three permanent wetland sites were identified and these are also marked on the two maps noted above. Only these three areas and the permanent ponds in field number 64 consistently held any significant numbers of waterfowl.

East Halton Pits:

This area of flooded clay pits comprises a deep water pit, the largest water area, central GR TA15420 21190, which has a narrow reed fringe on the south-eastern edge and small areas of reed within the pit and in the south-western corner. An open water pond within a permanent pasture field, number 29, which has a small reedbed in the north-east corner and a fringe of *juncus* and rush and an enclosed water area which is mostly reed with some small pools of open water, central GR TA15560 21110. To the east of the largest pits a mixed plantation orders the pond area.

During late June 2007 the pit and adjacent ditch overflowed into the grass fields with the permanent pasture at the western end of the main pit being inundated with water to a depth of 25cm. Although the flood water was receding by the end of the first week the field remained partly flooded and the ditch full almost to the top of the bank.

During the course of the wildfowl shooting season from September 1st through to February 1st the smaller of the two pits was almost constantly disturbed by shooting in the early mornings and evenings. This had a marked effect upon the number and variety of waterfowl which used the site during this period. Disturbance was at such a high level that even Coots and Moorhen were particularly skittish and would fly at the first sight of a human being in the adjacent fields. This level of persecution is clearly having a detrimental effect upon what could be a notable wintering wildfowl locality. The almost immediate increase in waterfowl numbers and variety after the close of the season was testament to the level of disturbance which had prevailed.

North Killingholme Haven Pits SSSI:

Four water bodies make up the collection of disused clay extraction pits at North Killingholme Haven. The small western most pit, central GR TA15890 19560, is a deep water pit with a reedbed at the northern end and a narrow reed fringe along the western side. It lies alongside the access road to industrial compounds and is fairly heavily disturbed.

The SSSI consists of three pits. The pit which lies to the west of the railway track is quite shallow and in recent years it has been invaded by *scirpus* and phragmites to the extent that it is now principally a large reedbed with some enclosed areas of open water.

A series of small islands within the pit have been surrounded by phragmites. Thorn scrub has also grown high along the northern and eastern edges of the pit. The pit was formerly important for roosting waders but the spread of *scirpus* and phragmites and the development of scrub around the water areas has all but removed this facet of the pit's importance.

It is now particularly difficult to view this pit due to lack of suitable access.

The large pit to the east of the railway track is now the major site for roosting waders and waterfowl within the pits complex. Water levels within the pit can be altered by a sluice system which controls the connection with the adjacent Humber estuary. Typically water levels are maintained at a level which provides a variable expanse of open mud within the pit to attract roosting and feeding waders. This shallow water and mud area lies along the northern end of the pit; the remainder of the pit has deeper water and is more attractive to waterfowl.

The smallest of the three pits comprises two area of open water with a variable reed fringe adjacent to a thicket of thorn, on the south-eastern side, and now bounded by the ABLE car parking area to the south and west. The water is deep and attracts small numbers of diving duck and has occasionally produced records of wintering Bittern. Water Rails are frequent. Long-eared Owls formerly bred in the scrub and roost there during the winter but there have been no records of this species since the construction of the ABLE site.

During the floods of mid – late June 2007 the larger pits at North Killingholme Haven were inundated by a huge volume of water which raised the level in the larger of the three pits by 1m. This covered most of the islands and obviously removed all available roost sites for waders. Although the water was gradually being drained away during the first survey week there was still no mud available and no waders were noted there during this period.

Rosper Road Reservoir:

This flood water catchment site can vary in water depth as a clew door into the adjacent drainage ditch can be operated to lower the levels below that of the weir on the north side of the reservoir. The pond is typically relatively shallow during the spring and summer and has been colonised by a mix of *scirpus*, rush, sedges and phragmites apart from eastern end where open water over grass is still present.

The series of spells of heavy rain which affected North Lincolnshire during May and June 2007 produced frequent flooding of the Rosper Road site with water pouring into the ponds from the roadside ditches over the weir in the north-west corner of the pond. Water levels had been up to 70cm higher than the norm during mid June but water was still flowing into the site during the time of the first survey when the incoming water depth over the weir was 20cm. The frequent flooding and exceptionally high summer levels had led to an exodus of breeding waterfowl as the water was discoloured, high in silt and suspended materials and there was >1m of water covering the aquatic vegetation in the pond area.

Adjacent inter-tidal areas:

The survey area lies adjacent to two WeBS (Wetland Bird Survey) count sectors, Humber Inner South I and Inner South J. North Killingholme Haven pits are classified as a WeBS sub-sector Inner South JJ and are counted separately to the adjacent inter-tidal.

Inner South I ISI East Halton Skitter to North Killingholme Haven TA 147 230 to 167 203

At peak low water the inter-tidal mudflats cover approximately 36.86ha between the mean high water and low water marks. The mudflats are not uniform in width with the greatest extent being at the southern end between the old seaplane jetty at TA161208 and the new jetty by North Killingholme Haven TA167203. Much of the central section, adjacent to East Halton pits, is rather stony and less suitable for waders. Although there may be a thin spread of Redshank and Dunlin along the sector the areas most favoured by waders are the extreme northern and southern ends. The 500m south from East Halton Skitter and the 700m stretch between the old seaplane jetty and the new North Killingholme Haven jetty. The latter sector, approximately 10.7ha in extent, typically holds the bulk of the Lapwing which frequent this WeBS sector at low water.

Inner South J ISJ North Killingholme Haven to (South Killingholme Haven) now the second LPG jetty due to mudflat reclamation works. TA 167 203 to 185 179

This larger area of inter-tidal mudflats encompasses 52ha between the concrete sea wall and the low water mark. The mudflats are at their widest between the South Killingholme Lights and the second LPG jetty and narrow off to the north. Waders feed along the whole of the sector at certain times of the tide and in certain weather conditions but the southern part of the sector is most heavily frequented under most conditions and particularly during neap tides. On most tides the upper section of the mudflats between the two LPG jetties TA181181 and 184178 remains uncovered and it is used as a high tide roost by a variety of waders. On higher tides a section of the stony base of the embankment at TA179182, adjacent to the Texaco compound, is used as a high tide roost by Curlew, Dunlin, Redshank, Lapwing, Turnstone and occasionally other waders.

Inner South JJ ISJJ North Killingholme Haven pits centre TA 166 198

See wetland sites for a description of this area.

The WeBS sector to the north of the study area Inner South **H**, Goxhill Haven to East Halton Skitter, is referred to occasionally in the text as movements of waders between that sector and the study area were observed during the course of the surveys and anecdotal and casual observations of wader numbers in that sector were considered relevant to the present study.

Weather conditions:

It is generally accepted that different weather conditions affect the behaviour as well as the abundance of waterfowl and waders with changes in weather conditions sometimes having a marked effect over a short timescale. Local flooding may also affect the spatial distribution of species within habitats. Details of the prevailing weather conditions throughout the survey period, along with a brief summary of the weather prior to the survey, are thus presented and any obvious effects upon bird distribution and abundance related to these conditions have been recorded.

Weather conditions late spring 2007

A sudden change of weather was apparent in the first week of May as the high pressure system, which had produced seven weeks of settled and hot weather in the UK, broke down allowing a series of deep Atlantic fronts to cross the British Isles bringing some substantial rainfall and very unsettled conditions. Daytime temperatures fell dramatically from their April levels under cloudy skies with winds which were often from the north-west to north-eastern vectors. A particularly severe frontal system arrived in North Lincolnshire at midday on May 13th with initially light rain which intensified through the afternoon and evening backed by a fresh south-east wind which then moved into the north. The front remained stationary over the district for 24 hours producing exceptional amounts of rainfall. Localised flooding of the baked hard land surface with exceptional run off raised water levels in the main wetlands. The worst affected site was Rosper Road where the adjacent drain backed up and flooded the wetland raising the water level by over 70cm in 12 hours. A respite in the procession of frontal systems from the 15th to the 26th was followed by a second period of flooding as a depression became stationary over Eastern England and the North Sea during the 27th – 29th bringing very similar conditions to the previous system. Heavy rain fell for 24 hours from late morning on the 27th to midday on the 28th with particularly cold north-easterly winds, which occasionally reached force five, dropping day and night temperatures to March levels. Localised flooding was again evident. Early June was generally warm with some extensive periods of sunshine and much higher temperatures but the third period of bad weather hit the area from late on the 13th. As an occluded front tracked into the North Sea thunderstorms and persistent rain arrived in the late afternoon with rain falling continuously for 12 hours. After a few hours respite the front tracked back and lay across central England for the next 36 hours bringing periods of torrential rain backed by a strong and cool north-easterly wind. Water levels in all of the major wetlands rose substantially and produced localised flooding on arable fields. A fourth period of heavy rain hit the local area overnight from June 20th – 21st with a more intense but shorter lived weather system being involved. A thundery low pressure system that moved north up the British Isles, with torrential rain, thunder and lightning, arrived in the area from 22:00hrs on the 20th and produced a period of heavy rain which lasted for five to six hours. The amount of rain which fell during this short period was equivalent to a month's typical summer rainfall and, added to the already high June rainfall amounts, leading to local flooding in several parts of the district. But the worst was yet to come. Rain started to fall during the late afternoon of June 23rd and intensified as a deep low pressure system became stationary over the Humber with a swirl of cloud moving east to west across the Midlands. The rain was often torrential and a record 100mm fell in a 26 hour period around the Humber with no let up until the 25th. With the ground already saturated by the rainfall of previous weeks run off was exceptional and flooding was widespread and disastrous. The East Halton Beck overflowed for the second time in a month and small ditches and dykes were full to overflowing. At North Killingholme Haven pits over 1m of water was added to the pit levels, the highest on record while Rosper Road suffered a similar fate. At East Halton pits the water overflowed into the adjacent grassland, field 29, with Great Crested Grebes observed swimming in what had been cattle pasture. All of the arable fields held large amounts of standing water but much was hidden from view by the standing crops; only in harvested hay fields was the extent of the flooding apparent. After another short respite during the 27th – 28th yet more rain arrived overnight from 28th to 29th aggravating the flooding before a fifth intense weather system tracked north-west across the region on the 30th.

Details of weather conditions during the course of the survey are details in each of the weekly reports at the end of this report.

Disturbance:

Disturbance events which occurred frequently during the survey period were connected mainly with sea angling, wildfowling and dog walking; although often seen as being innocuous the latter source of disturbance looks set to become one of the main factors involved in wader distribution around the survey area given the continuing increase in the number of people and animals involved and also the expansion of the routes used by people conducting this activity.

During the period from November through to mid February sea angling along the Humber embankment between East Halton Skitter and the old seaplane jetty, north of North Killingholme Haven, was a source of frequent disturbance to the adjacent fields and also to the inter-tidal sector ISI. Anglers drive to their chosen locations but then appear on the highly exposed embankment typically wearing high visibility clothing which makes them particularly obvious to roosting waders. The disturbance of the inter-tidal areas also reduces the potential feeding areas for waders which is particularly relevant in the short winter days and probably also restricts the number of waders which would roost on the adjacent fields if they had been feeding on that inter-tidal area at low water.

Details of the disturbance caused by wildfowling are given under the description of East Halton pits below.

Dog walking has also increased dramatically in the East Halton Marshes area and also along the sea embankment at North Killingholme. The majority of walkers follow roads and the sea embankments but their conspicuousness is often enhanced by the wearing of high visibility clothing. Disturbance of waders and wildfowl is usually due to the sight of people rather than direct disturbance from dogs themselves. The presence of people in raised positions, such as on the sea embankment is likely to be seen as a threat to roosting and birds feeding in fields adjacent to the bank which are lower in elevation. Whereas very few walkers or dogs were seen in the East Halton Marshes area in the previous winter the numbers this winter probably average five to ten every hour. A favoured route that has developed follows the minor road to Winter's pits then on the seawall to East Halton Skitter and back along Skitter road. This produces disturbance of many of the key wader roost areas in the marsh. During the survey in week 23 a roosting and feeding flock of Curlew in the vicinity of fields, 4, 6, 10, 17 and 24 were frequently put to flight by dog walkers during the period of the survey in the area (2 hours) with the birds being forced to move between fields. While this disturbance did not result in the birds leaving the area altogether this was perhaps as a result of their desire to feed in the area; had these been roosting waders then the frequent disturbance could have resulted in the movements of birds to a different less suitable roost site.

Distribution and abundance of SPA species:

All of the area covered by the study was surveyed on a single date during each of the 39 weeks spanning the period July 1st 2007 to March 29th 2008. Surveys covered each seven day period starting with July 1st to the 7th and continuing to the last week March 23rd – 29th.

Surveys were mainly carried out around the high tide period in order to locate all of the inland roosting and feeding areas of waterfowl and waders that had moved from the inter-tidal mudflats of the Humber estuary. During the mid-winter phase there are seven day periods when all of the high tides fall within the hours of darkness and thus surveys were typically concentrated in the period immediately following first light, closest to the high tide time, as under most conditions, waders remain in their roosts until after dawn during such tidal conditions.

All of the survey area was covered with fields being scanned, where possible, from a vehicle in order to obtain an accurate assessment of bird numbers without causing initial disturbance to the birds, following which fields were walked where necessary to locate any birds not visible from vantage points or to cover areas invisible from a vehicle. All qualifying SPA species present within the various fields and wetland sites were identified and the number of birds counted and recorded in relation to specific field numbers or wetlands. Any movements of birds between different fields were recorded. Longer movements between fields and the inter-tidal areas of the estuary were also recorded and mapped. An initial attempt was always made to ascertain the total number of birds of each species within a series of fields between which there were frequent movements. Where a series of fields were used by the same individual flock of birds on a set survey date then details are discussed in the weekly report texts. The use of different feeding and roosting areas by the same flock of birds on any specified survey date is clearly of significance. When practicable the inter-tidal areas adjacent to the study area were also observed to ascertain which species were present and to gauge an estimate of the numbers of relevant species which may have been moving between the estuarine area and the adjacent or more distant fields.

Details of bird movements are shown in the attached series of maps relating to the survey periods and specific species.

Surveys in the early morning and late evening were also considered to be beneficial in identifying the movements of some species between roosting and feeding areas which typically included inter-tidal and inland fields; Lapwing, Golden Plover and Curlew were the principal species, which undertake such movements, and were identified in the study area. In order to understand the movements of waders involved in this study a brief summary of the winter ecology of the main species is presented below.

Any non qualifying species which were present in significant numbers or of which the distribution or abundance were considered to be of interest were also recorded and details are given in the species texts.

Winter ecology of the principal wader species recorded during the course of the study:

When attempting to interpret survey results relating to wader abundance and distribution it is important to understand the behaviour of different species in relation to roosting, feeding and their movements between sites used for night and day roosts and for feeding. Below is a brief synopsis of the key features which have been discovered by in depth studies of wintering populations of the most abundant wader species occurring within the survey area. Most of the information is taken from a summary of behaviour in the species texts in Cramp et al, *The Handbook of the Birds of the Western Palearctic*. Observations of species' behaviour within the present study area are compared to the known behaviour patterns outlined below, where appropriate.

Golden Plover *Pluvialis apricaria*

On the Humber estuary extensive observation of flocks of Golden Plovers reveals that they exhibit a mix of strategies which are affected by time of year, weather conditions and disturbance levels. Golden Plover flocks are typically present on the estuary between mid to late June and February with most of the wintering birds having departed by the end of the latter month in mild winters. Smaller numbers in April and May are more usually spring passage flocks composed of birds of the northern form *altifrons*. During June – August Golden Plover are frequently noted feeding as well as loafing and roosting on the estuarine inter-tidal area. A change in behaviour typically occurs with the ploughing and cultivation of inland fields from mid August. Golden Plover flocks then move inland to feed and return to the estuary to loaf and roost at low tide. Generally winter flocks on the inter-tidal areas are seldom seen feeding but use the area for roosting with both day and night roosts being in evidence. These behavioural patterns are supported by findings from wider areas of Britain and Europe as noted in BWP see below;

“Readily forms flocks for roosting or loafing throughout the year, especially outside breeding season; some birds feed at night (R Parr)”.

“In winter, Britain, roost-sites often traditional within flock range, sometimes distant from feeding-grounds; ploughed land and low growing crops preferred (Fuller and Youngman 1979, D Nethersole-Thompson); on coast, mudflats and saltmarsh (Weatherhead and Weatherhead 1979, R J Fuller and R E Youngman)”.

“In winter, **roosting movements mostly at dusk and soon after dawn**; birds sometimes leave apparent roost-site soon after dark, suggesting some early roosts are pre-roost gatherings; birds may loaf at any time of day outside breeding season (R J Fuller and R E Youngman). Passage migrants and breeding birds regularly loaf 11.00 -14.00 hrs (Glutz et al. 1975)”.

“On migration and in winter, attracted to mown grass or close-grazed pastures, and to stubbles, fallows, harvest-fields, and other farmlands of open character, including floodlands (see, e.g., Fuller and Youngman 1979). **On coast, tends to neglect tidal flats of mud or sand and to prefer open ground above the foreshore, thus sharing more commonly with Lapwings *V. vanellus* than with other waders**”.

Observation of winter flocks on areas of the estuary close to the study site, Immingham Dock to Pywipe, showed that day roosts were occupied on the mudflats at low water with flocks of birds departing inland in tight flocks usually 50mins to 90 minutes after sunset again supporting the details presented above.

Lapwing *Vanellus vanellus*

Winter flocks of Lapwing on the Humber estuary are usually to be found roosting or loafing on the inter-tidal mudflats with feeding being rare and clearly a secondary feature of their behaviour in this habitat. Feeding occurs on fields inland from the estuary with flocks of birds often departing from the day roosts, on the inter-tidal, after sunset. Fields used for feeding can be considerable distances inland but may also be close to the estuary. Clearly some fields are traditional and seem to hold feeding birds whatever the cropping regime, unless the crop is too tall, but other fields may be exploited when feeding conditions are advantageous, if the field is being worked or there is recent flooding etc.;

Further details on the winter ecology of Lapwings is presented in BWP;

“Behaviour radically affected by lunar cycle (Klomp 1946; Spencer 1953a; Klomp and van den Starre 1956). **Communal nocturnal roosts** begin to form early to late May (start of moult), principally July (when young enter flocks) to **January**”.

“At dusk, birds move to traditional roost site; 1 or more staging-posts may be used for intensive feeding for c. half an hour en route to roost. In July, birds feed mostly at dawn and in late evening. **However, 2–3 nights before and after full moon, remain feeding at staging-post all night, even if cloudy, resting by day**. Night-feeding flock may split into several day-time flocks. Up to 15,000 recorded, Cheshire, on day after full moon. Even at half moon, may start feeding up to c. 1 hr before sunrise (Spencer 1953a). At loafing site, early May to June, flock size increased from 11.00 hrs to 15.00–17.00 hrs, then gradually declined, apparently dispersing at night to feed (Symonds 1980). Night-roost site typically on open ground. **By day loafs elsewhere**, e.g. lake edge, **sand-bank, river flats** (Spencer 1953a; Stakhovski 1954; Symonds 1980). Resting birds usually stand; very rarely alight in water”.

“Autumn flocks often partly disperse during day, but may assemble to preen, bathe, drink, and rest (Stakhovski 1954; Lind 1957). **Birds may commute between resting and bathing sites**”.

“Capability for nocturnal feeding, especially at full moon, and restless aerial reconnaissance of alternative foraging grounds to

which instant switches can be made, reinforce efficiency in habitat exploitation”.

“In flight, lower airspace usually preferred except on movements, when altitudes of 250–400 m are common and up to 2000 m or more recorded (Meinertzhagen 1920)”.

Within the present study area most of the above strategies seem to have been observed; for details see the relevant species text:

Curlew

Winter flocks of Curlew on the Humber can be seen feeding on the lower and upper reaches of the inter-tidal mudflats, roosting there during the day or at night and commuting to inland feeding sites which can be up to 15km away from the night time roosts. The species therefore employs the most complex strategy of the commonly occurring waders in the study area. Night roosting flocks usually arrive at estuarine roosts between sunset and an hour after sunset with small flocks aggregating into larger groups for the later stages of the move to the roost site. In the morning birds leave the roost sites soon after first light, in mid winter when daylight hours are short, with birds lingering longer in the roost on milder days in the spring and autumn when the potential for extended periods of feeding is present. Particularly on spring tides Curlew flocks which have been feeding inland will return to the estuary at low water to feed in the lower reaches of the inter-tidal which are usually not uncovered on neap and mid tides. This presumably increases the rate of prey harvesting and is an adaptation to short term abundance.

Data from BWP are in general agreement with the ecology of the species found on the Humber;

“Outside breeding season, roosting communal both at **high tide and at night, generally at traditional sites often reached by habitual flight-paths** (Sluiters 1941; Hibbert-Ware and Ruttledge 1944); however, pattern variable with season, locality, latitude, lunar cycle, weather, disturbance, etc., and may involve formation of various sub-roosts before and after main roosting period (B J Ens; see also Elphick 1979; Hale 1980; Köck 1980). Roosting flocks often do not associate with other *Charadrii*, or at least remain discrete within mixed roosts; sometimes habitually share roosts with Bar-tailed Godwit *Limosa lapponica* (B J Ens)”.

Roosts “**Sites usually on or near shores of sea or lake (e.g. rocks, dunes, salt-marsh, fields, sand-bars, etc.), even if day-time feeding areas are well inland.** On mudflats, where possible birds use depressions in which to sit or stand (B J Ens, A S Holmes)”.

“**Roost-site fidelity outside breeding season strong** (Ens and Zwarts 1980a). As tide starts to flow, many birds give ,roosting calls, which possibly stimulate flocking on roosting flight, thereby reducing energetic costs of flight; birds usually fly in groups of c. 2–20, sometimes singly (B J Ens). **May travel over 20 km to roost**, Scotland (A S Holmes). Most time at roost spent sleeping and preening. When stormy weather keeps feeding grounds covered, **high-tide period may be spent foraging in fields**; throughout autumn and winter, many (known to feed on mudflats) do not roost at high tide but continue feeding in fields, sometimes remaining there throughout tidal cycle (Ens and Zwarts 1980a); inland feeding at high water also reported by Bainbridge and Minton (Bainbridge and Minton 1978). In Netherlands, birds habitually fly out to form post-roosting groups at water’s edge before continuing to disperse (B J Ens). Throughout foraging period, individuals regularly but briefly (c. 15 min) interrupt bouts of feeding to preen and rest, sometimes to sleep (B J Ens). **Extent of nocturnal activity unclear; numbers feeding at night often substantial, though always less than by day.** Bubbling-calls commonly heard at night from mudflats, suggesting possible continuation of day-time feeding territories (B J Ens; see also Knight 1979 and part 2); **evidence that birds also feed at night in fields** (A S Holmes). At full moon, attendance at one inland night roost dropped, with some evidence that birds flew to coasts to feed (Hale 1980)”.

The following reported findings from an in depth study in the Netherlands is of particular importance when considering the feeding areas used by wintering flocks or even sub-groups from a larger flock.

Some behaviour ---“Poorly known for so familiar a bird, but major study, Netherlands, of birds outside breeding season in progress (L Zwarts and co-workers). **Individually colour-marked birds are found to return year after year to same spots on tidal flats and to same roosts; this occurs in non-territorial as well as territorial birds** (Ens and Zwarts 1980a; see also Bainbridge and Minton 1978; Elphick 1979)”.

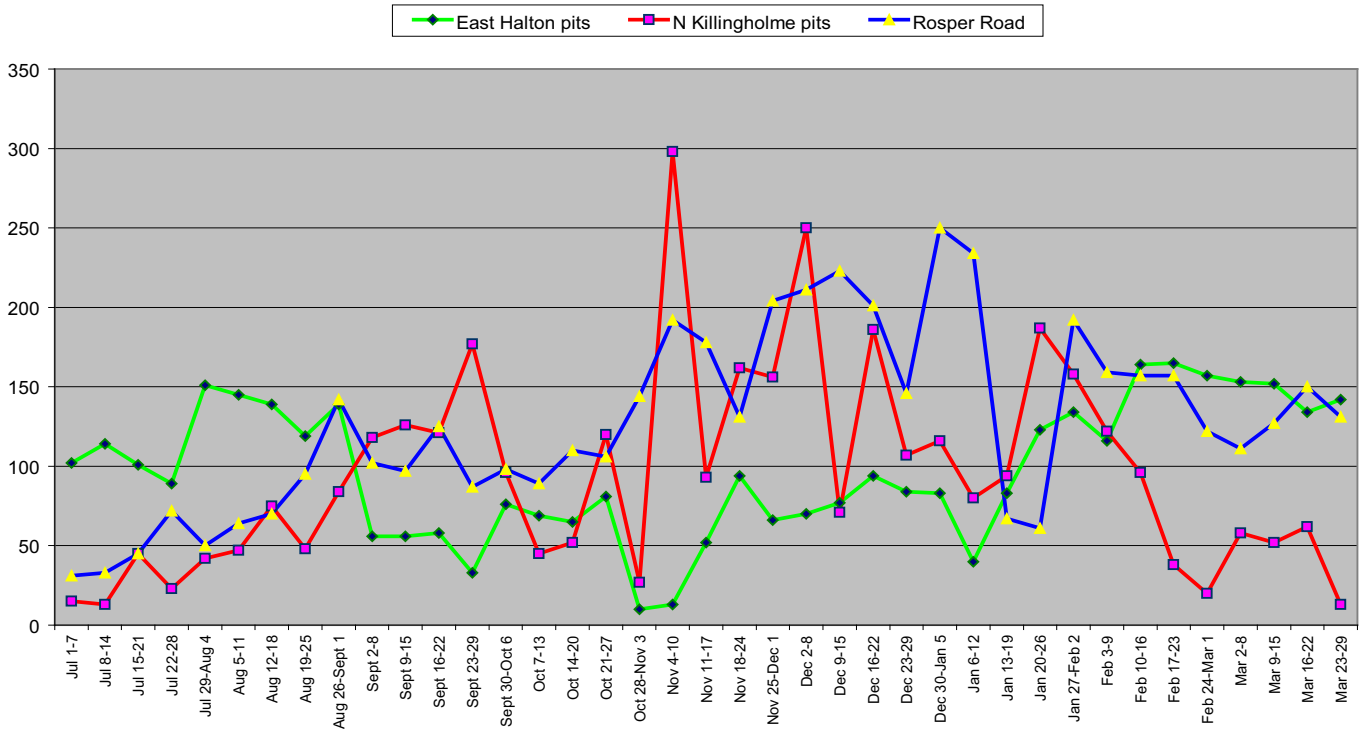
“**Despite probably quite large winter home-range, individual bird used particular set of small feeding areas (sometimes only a few ha), determined by its particular diet and feeding techniques, and by tradition** (Ens and Zwarts 1980a)”.

The latter paragraph has particular importance with regard to the survival strategies of individuals when part of the habitat used by a flock is destroyed.

Wildfowl, raptors and waders recorded during winter bird survey July 2007 – March 2008 with status

Species	BTO code	Schedule 1	Red List	Amber Listed	GB qualifying WeBS	International qualifying	Humber 03-04	Humber 5yr 99/00 – 03/04	Humber status
Little Grebe <i>Tachybaptus ruficollis</i>	LG				78				
Great Crested Grebe <i>Podiceps cristatus</i>	GC				159	4800			
Cormorant <i>Phalacrocorax carbo</i>	CA				230	1200			
Little Egret <i>Egretta garzetta</i>	ET	S1				1300			
Grey Heron <i>Ardea cinerea</i>	H								
Mute Swan <i>Cygnus olor</i>	MS				380				
Greylag Goose <i>Anser anser</i>	GJ								
Pink-footed Goose <i>Anser brachyrhynchus</i>	PG				2400	2400	6562	4473	I
European White-fronted Goose <i>Anser albifrons</i>	WG				58	10000			
Canada Goose <i>Branta canadensis</i>	CG								
Barnacle Goose <i>Branta leucopsis</i>	BY								
Shelduck <i>Tadorna tadorna</i>	SU				782	3000	6426	5255	I
Wigeon <i>Anas penelope</i>	WN				4060	15000			
Gadwall <i>Anas strepera</i>	GA				171	600	104	140	
Teal <i>Anas crecca</i>	T				1920	4000	5111	3045	N
Mallard <i>Anas platyrhynchos</i>	MA				3520	20000	2347	2511	
Shoveler <i>Anas clypeata</i>	SV				148	400	127	150	N
Pochard <i>Aythya ferina</i>	PO				595	3500			
Tufted Duck <i>Aythya fuligula</i>	TU				901	12000			
Goldeneye <i>Bucephala clangula</i>	GN	S1			249	4000	296	406	N
Smew <i>Mergellus albellus</i>	SY								
Goosander <i>Mergus merganser</i>	GD								
Ruddy Duck <i>Oxyura jamaicensis</i>	RY								
Marsh Harrier <i>Circus aeruginosus</i>	MR	S1							
Sparrowhawk <i>Accipiter nisus</i>	SH								
Common Buzzard <i>Buteo buteo</i>	BZ								
Kestrel <i>Falco tinnunculus</i>	K								
Merlin <i>Falco columbarius</i>	ML	S1							
Water Rail <i>Rallus aquaticus</i>	WA								
Moorhen <i>Gallinula chloropus</i>	MH								
Coot <i>Fulica atra</i>	CO				1730	17500			
Oystercatcher <i>Haematopus ostralegus</i>	OC				3200	10200	3305	3849	N
Avocet <i>Recurvirostra avosetta</i>	AV	S1			35	730	271	189	N
Ringed Plover <i>Charadrius hiaticula</i>	RP				330	730	418	374	N
Golden Plover <i>Pluvialis apricaria</i>	GP				2500	9300	50662	37674	I
Grey Plover <i>Pluvialis squatarola</i>	GV				530	2500	2285	1766	N
Lapwing <i>Vanellus vanellus</i>	L				20000	20000	39865	27297	I
Knot <i>Calidris canutus</i>	KN				2800	4500	50557	36018	I
Dunlin <i>Calidris alpina</i>	DN				5600	13300	19182	21588	I
Ruff <i>Philomachus pugnax</i>	RU	S1			7	10000	5	14	N
Snipe <i>Gallinago gallinago</i>	SN					10000			
Woodcock <i>Scolopax rusticola</i>	WK								
Black-tailed Godwit <i>Limosa limosa</i>	BW	S1			150	350	914	1075	I
Bar-tailed Godwit <i>Limosa lapponica</i>	BA				620	1200	4291	3229	I
Curlew <i>Numenius arquata</i>	CU				1500	4200	3530	3865	N
Redshank <i>Tringa totanus</i>	RK				1200	1300	8229	5578	I
Turnstone <i>Arenaria interpres</i>	TT				500	1000	723	639	N

Wildfowl totals 2007-2008



Species accounts:

Little Grebe *Tachybaptus ruficollis*

Status: Green Listed

Birds were recorded from all three of the major wetlands with records at North Killingholme being only sporadic. A frequent presence of post breeding adults and young was noted at Rosper Road and East Halton pits from July through to early October when birds dispersed for the winter and records became more sporadic. Pairs returned to breeding sites at East Halton pits and Rosper Road from late January.

Great Crested Grebe *Podiceps cristatus*

Status: Green Listed

Between one and four birds were recorded at East Halton pits from week one to 16; three pairs bred at the site in 2007 but productivity was generally poor due to summer flooding. One or two birds were then recorded on the majority of surveys throughout the winter period with a two pairs taking up breeding territories from mid February.

Cormorant *Phalacrocorax carbo*

Status: Amber Listed

Humber status **National Importance**

5 year mean to 2003 / 2004 ---

Up to four birds were frequently recorded loafing on the old seaplane jetty at North Killingholme Haven on inter-tidal sector ISI with a peak count of seven birds there in week 22; from this loafing area birds moved onto East Halton pits and North Killingholme Haven pits to feed in addition to using the Humber itself and also flying inland to wetland sites outside the boundary of the survey. A peak of five birds was on East Halton pits in week 20 but otherwise 1-3 individuals formed a more typical showing. During periods of shooting no birds were recorded.

Little Egret *Egretta garzetta*

Status: Amber Listed

Schedule 1

A party of six birds was present in North Killingholme Haven pits on the evening of August 5th, survey week 6, but moved off to the north bank to roost prior to dusk. A single bird was on the inter-tidal sector ISI at East Halton Skitter during the survey in week 33, February 10th-16th.

Grey Heron *Ardea cinerea*

Status: Green Listed

A maximum of six birds was recorded from the inter-tidal sector ISI in survey period 11 but otherwise this sector usually held 1-2 birds during September and October with single birds in odd weeks during the remainder of the survey. In the wetland sites North Killingholme Haven pits consistently held most birds with 2-4 being frequent during the whole survey period and higher counts of five in weeks 3 and 14 with a peak of seven in week 12. Two to three birds were at Rosper Road in August with odd singles occasional through the rest of the winter.

The nearest heronry is only 4-6kms inland from the wetland sites at Abbey Wood, Thornton Abbey and adult birds from this site are known to feed regularly at all of the wetland sites within the survey area. Pairs were already established in the heronry by the start of February.

Mute Swan *Cygnus olor*

Status: Amber Listed

At East Halton pits the family party from summer 2007 remained from July through to week 24, December 9th – 15th; initially there were six cygnets but this number fell to five by mid September, four by mid October and three from mid November. In addition there were occasionally additional immature birds in the pits during the autumn period with wandering immatures and pairs occurring again from late January onwards when they were typically repelled by the resident breeding pair. Up to three birds were on North Killingholme Haven pits from late December to late February. During the autumn 1-2 were on Rosper Road in July – September with 2-3 again in late February and a pair in March.

Pink-footed Goose *Anser brachyrhynchus*

Status: Amber Listed

Humber status **International Importance**

5 year mean to 2003 / 2004 ---4473

The same family party of eight birds was seen in, what were then, autumn stubbles in fields 18 and 44 during the week 15 (October 7th – 13th) surveys.

European White-fronted Goose *Anser albifrons*

Status: Amber Listed

An individual of the European race *A a albifrons* was in the area of East Halton pits and marshes during the week 20 (November 11th – 17th) survey. It was first found in the permanent pasture in field 31 before moving to East Halton pits and then into fields 25 and 29 after which it flew south over the old railway and was not relocated.

Greylag Goose *Anser anser*

Status: Introduced Population Green Listed

Between three and 27 birds were recorded from East Halton pits from early July to the start of the shooting season on September 1st following which there were just three and two birds in the subsequent two weeks and none thereafter until birds returned after the closure of the season in early February. From then on up to eight birds were present at this locality through to the end of the survey.

Greater Canada Goose *Branta canadensis*

Status: Green Listed

Two birds were at North Killingholme pits in week 33 and a pair at East Halton pits from week 37 to the end of the survey.

Shelduck *Tadorna tadorna*

Status: Amber Listed

Humber status **International Importance** 5 year mean to 2003 / 2004 ---5255

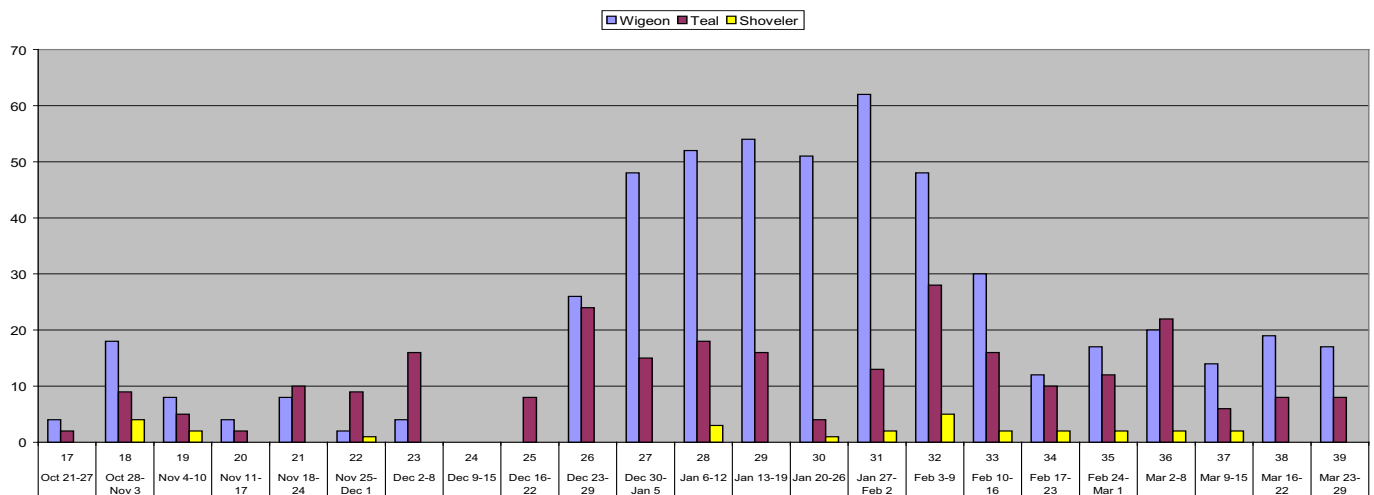
The only records from the fields were of two birds on a flood water pool in field 103 in week one then five in field 8 and two in field 98 during week 29 during a period of extensive flooding of the fields following some torrential rainfall. Between six and ten birds were regular at East Halton pits between weeks one and seven with birds returning to this site after the close of the shooting season in the first week of February, week 31 following which there were up to seven birds there on most surveys to the end of March. Up to seven birds were on North Killingholme pits on several surveys between July 1st and week 12, September 16th – 20th but none thereafter until a single bird was seen in week 28, two in week 33 and two in week 39. Five birds were on Rosper Road in week 33. On the inter-tidal ISI had a maximum of six birds on several visits, mainly at the East Halton Skitter end of the sector with much more variable numbers being present on ISJ where the peak counts of 31 occurred in weeks 19 and 21 with 45 in week 30 and 38 in week 37; most of these birds were feeding at the southern end of the sector between the LPG jetty and the HIT terminal.

Wigeon *Anas penelope*

Status: Amber Listed

Records at North Killingholme pits involved eight in week 19 and four in week 23 while East Halton pits had one in week 15, three in week 17 and 2 in week 31. The most consistent site for this species was the permanent ponds in field 64 where four birds were first noted in week 17 increasing to a peak of 48 – 62 birds between weeks 27 and 32, December 30th – February 9th. Birds flushed from this location were noted flying off to the east-north-east sometimes being observed moving out over the Humber but on one occasion the flock accompanied Mallard to North Killingholme pits where they loafed for several hours before returning to the favoured ponds.

wildfowl field 64 2007-2008

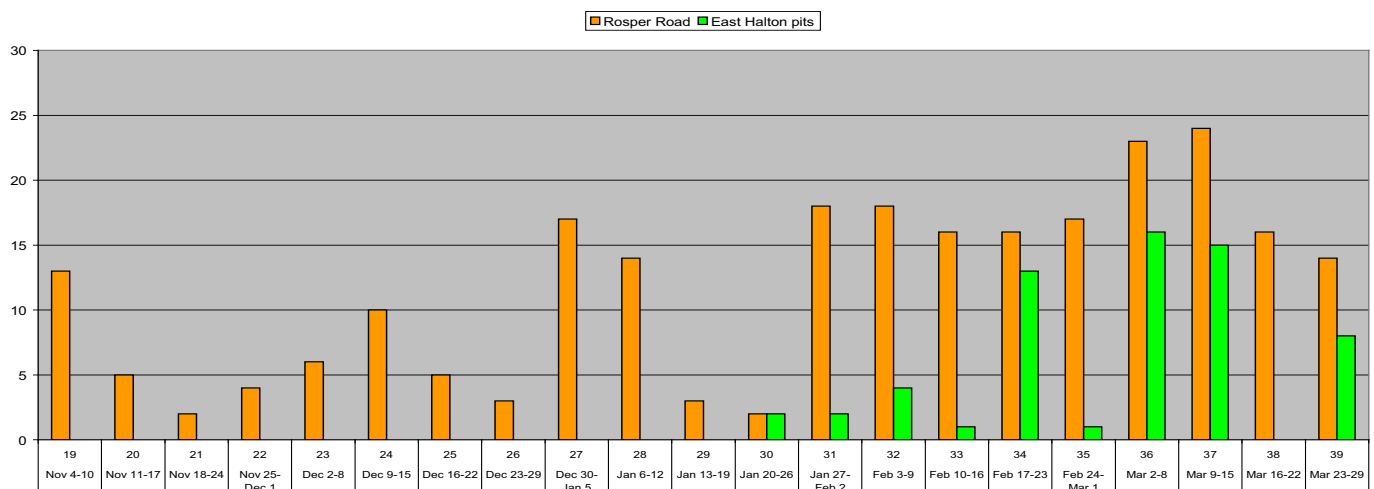


Gadwall *Anas strepera*

Status: Amber Listed

Apart from four birds in week 16 and one in week 17 at East Halton pits this species was only recorded from November onwards. The most consistent site was Rosper Road where the number of birds peaked in the late winter – early spring period; numbers at east Halton pits also increased notably from mid February onwards. Four birds from Rosper Road were feeding on the wet pasture in field 88 in week 39.

Gadwall 2007 - 2008



Teal *Anas crecca*

Status: Amber Listed

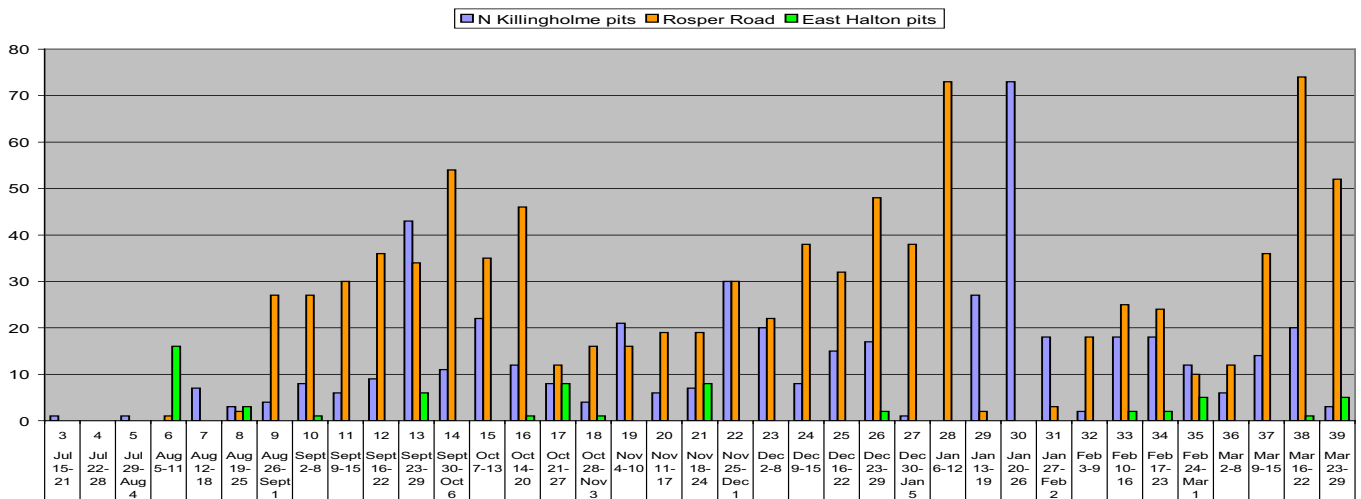
Humber status **National Importance**

5 year mean to 2003 / 2004 ---**3045**

The only Teal found within the surveyed fields were on the permanent ponds in field 64 where the flock increased from nine in October to a peak of 28 in early February.

On the three major wetland sites the number of Teal was well down on the previous winter with peaks of 16 at east Halton pits in week 6, an isolated count of 73 at North Killingholme pits in week 30 otherwise no more than 43 (in week 13) were noted there while at Rosper Road there was an early peak of 54 in week 14 and a late increase to 74 in week 38 probably involving spring passage birds. There was very little interchange between the wetland sites in the study area during the surveys with most birds remaining in their favoured wetland even when numbers of other wildfowl left the sites.

Teal 2007 - 2008



Variable numbers were also recorded from the inter-tidal ISI where birds concentrated at the East Halton Skitter end of the sector. Occurrences were irregular with 24 – 46 birds in October, weeks 15 and 18, but then none until week 25 when six were present. A notable increase occurred from week 33 coinciding with the early spring passage of this species when a winter peak count of 85 birds was noted in week 34 February 17th – 24th.

Mallard *Anas platyrhynchos*

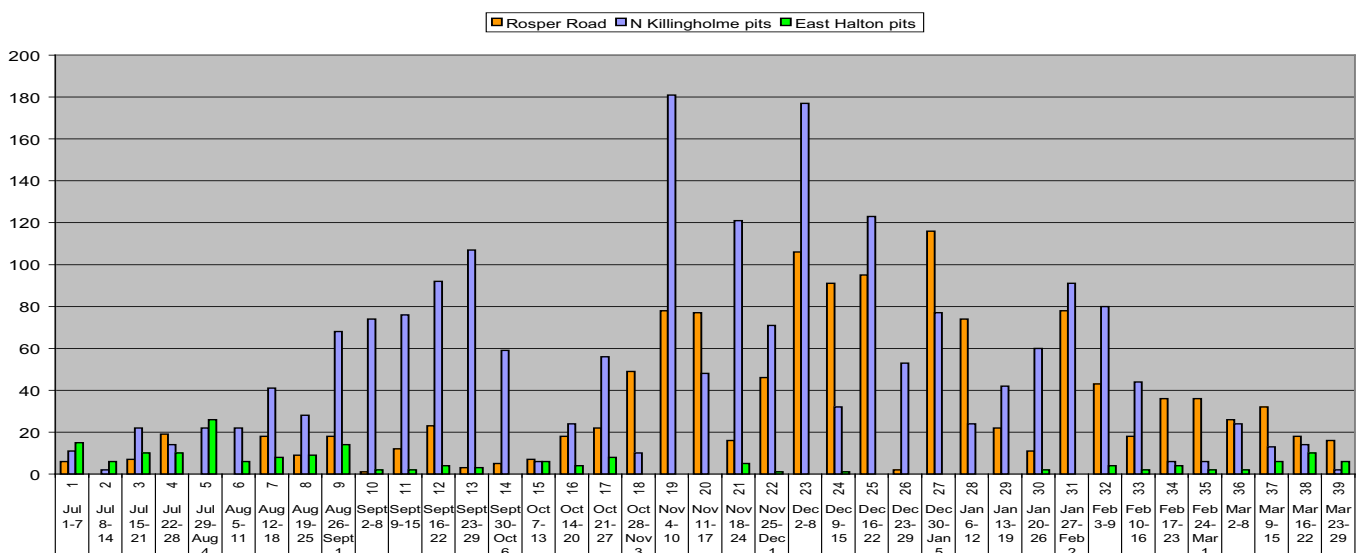
Status: Green Listed

Apart from 14 Mallard found in field 25 during week 29 the only obvious concentration of this species within the fields area were on the permanent pools in field 64 and on the over-wintered stubbles in the adjacent field 65. Mallard were found there from October onwards with a peak count of 212 birds in week 21, November 18th – 24th; numbers remained high but with large weekly variations through to week 26, December 23rd – 29th when 105 birds were counted but following this numbers fell suddenly with the last notable count of 66 in week 32, February 3rd – 9th. The birds from this feeding area were noted moving to North Killingholme Haven pits following disturbance but also flying east-north-east across the adjacent fields on a track which would take them out over the estuary.

Up to 39 birds were noted irregularly on the inter-tidal sector ISI mainly in the area of the old seaplane jetty just north of North Killingholme Haven.

With the exception of 26 in week 5 East Halton pits never held more than 15 Mallard throughout the winter. at North Killingholme pits and Rosper Road there was a steady increase in Mallard abundance from July through to late October with a winter peak during the period November to late December after which numbers falls steadily through to the end of the survey. Within this general pattern there were some large weekly fluctuations with a particularly poor period during October. Birds were noted moving between the two main wetlands, North Killingholme pits and Rosper Road and there were also observed movements of birds to and from the north bank of the estuary into both wetlands.

Mallard 2007 - 2008



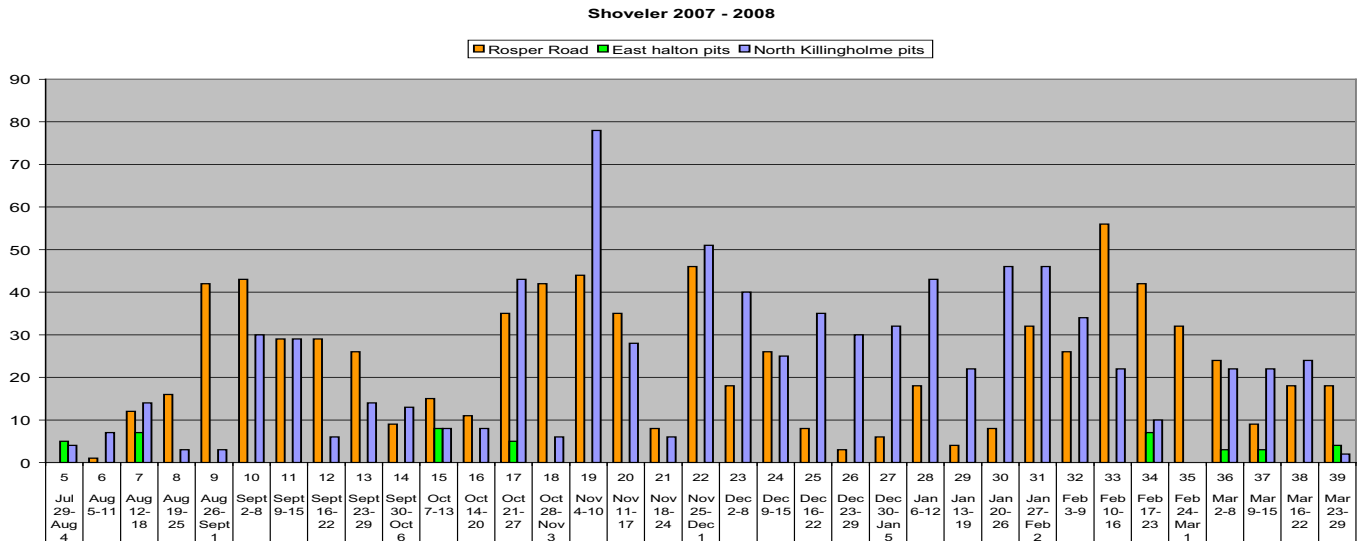
Shoveler *Anas clypeata*

Status: Amber Listed

Humber status **National Importance**

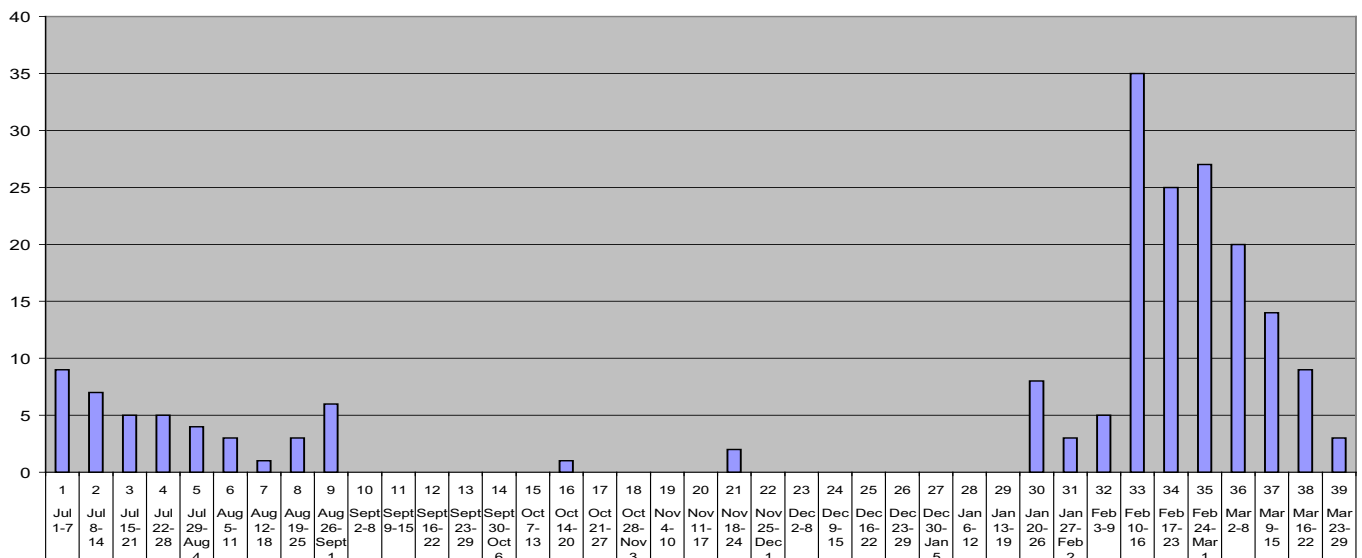
5 year mean to 2003 / 2004 --- 150

Shoveler were only recorded from field 64 where there were occasional records of up to five birds between October 28th and the end of the survey. All three of the major wetlands had records of Shoveler but East Halton pits only held birds on a sporadic basis through the winter due to the heavy shooting pressure and there was no real recovery at this site even following the end of the shooting season. There were considerable weekly variations between the counts at North Killingholme pits and Rosper Road which were difficult to explain. Although there were established connections between the two sites, with birds observed moving between the two localities, the differences in abundance between weeks and changes between sites were not consistent with simple interchange between two localities and it was clear that birds were moving into and out of the surveyed wetlands on a fairly regular basis. The general level of abundance was down on recent winters at both sites with the one off peak of 78 at North Killingholme pits in week 19 not being repeated.

Pochard *Aythya ferina*

Status: Amber Listed

A flock of 11 birds was on North Killingholme pits in week 21, singles were on Rosper Road in weeks 1 and 2 with 6 there in week 30 and 11 in weeks 31 and 32 at a time when the pits were flooded deeper than they had been for several weeks. Other wise the site which held Pochard most frequently was east Halton pits where birds were present from July through to the end of August and the start of the shooting season and again from week 30 to the end of the survey.

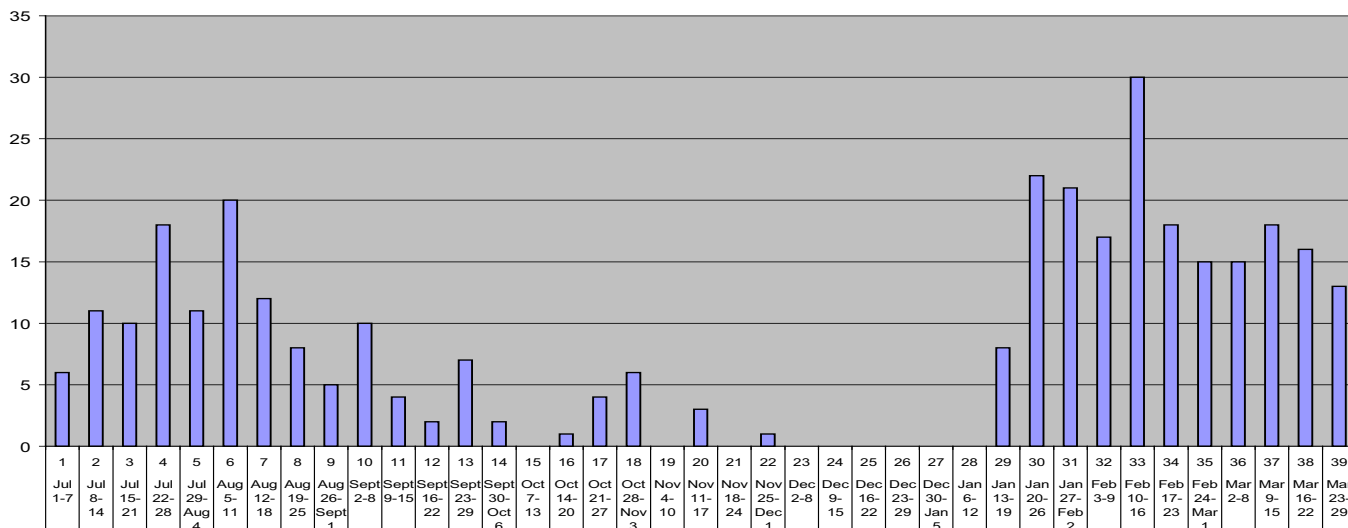
Pochard East halton pits 2007 - 2008

Tufted Duck *Aythya fuligula*

Status: Green Listed

A family group of a duck and six ducklings was seen on Rosper Road in August and there were between one and five birds there between weeks 31 and 33 but the majority of the records came from East Halton pits as shown below. The gap in occurrences during the shooting season and the sudden resurgence from early February are particularly obvious.

Tufted Duck East Halton pits 2007 - 2008

Smew *Mergellus albellus*

Status: Green Listed

What is presumed to be the same returning female Smew was seen at North Killingholme pits in weeks 28 and 30 but not thereafter.

Goosander *Mergus merganser*

Status: Green Listed

A female was on the Humber off east Halton Skitter on the somewhat unusual date of July 31st and one was seen over East Halton pits on March 22nd.

Ruddy Duck *Oxyura jamaicensis*

Status: Green Listed

A brood of three ducklings was present on the smaller of the two main pits at East Halton in August and September with a peak count of seven adults there in week 1. None were recorded from week 17 to week 32 when pre-breeding birds started to return to the site with a peak of ten in week 36. Single birds were at Rosper Road in week 8 and North Killingholme pits in week 21.

Water Rail *Rallus aquaticus*

Status: Amber Listed

Water Rail is a particularly difficult species to census as they remain hidden in dense aquatic vegetation and typically only reveal their presence when calling. They are most audible on calm evenings during periods of frost and cold weather. Recent winters have thus not proven to be beneficial for recording this species as temperatures have been typically high and evenings have often been windy. Up to ten birds have been seen / heard at North Killingholme Haven pits during the winter period but this is probably an under-estimate of the total population. Two breeding territories were identified at this site in 2003 and 2004 and four in 2007.

At East Halton pits Water Rails occur in winter but no estimate of the population has been attempted. A single breeding territory was located in 2004 and it is likely that the species breeds there every year.

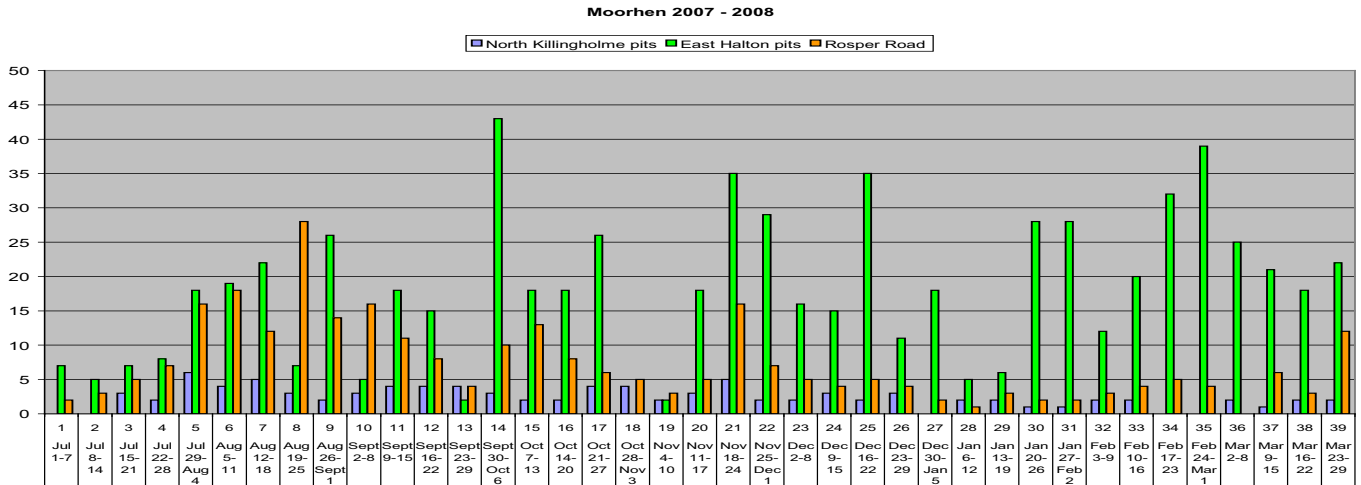
This species has bred at Rosper Road and birds have been found there in winter but there has never been a proper winter census of the site. Large fluctuations in water levels at this locality can be detrimental to the ability of the species' to feed and thus periods of heavy rainfall leading to flooding of the site are likely to cause birds to desert the wetland.

At least two were calling at East Halton pits in week 25, a peak of three was noted at North Killingholme pits in week 20 and three were heard at Rosper Road in week 22 but these are likely to be underestimates of the number of birds present at each locality. A single bird calling at Rosper Road in week 38 may have been on passage but may have been a prospective breeder.

Moorhen *Gallinula chloropus*

Status: Green Listed

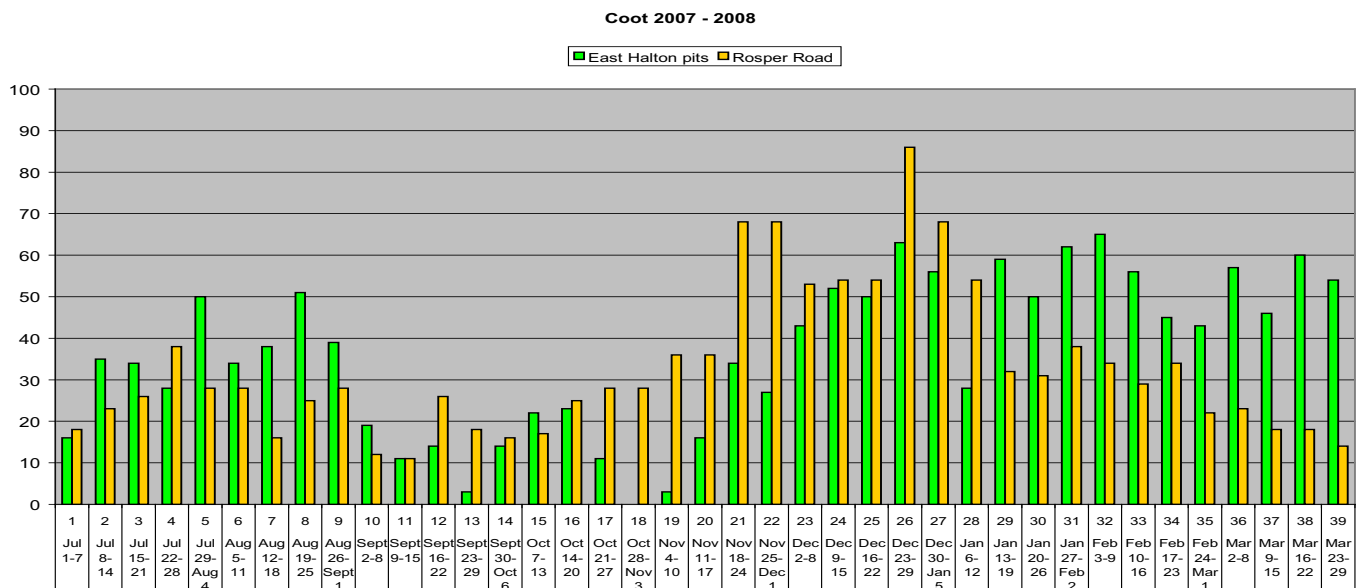
East Halton pits consistently held high numbers of this species but on survey dates which coincided with active shooting birds were invisible within the reedbeds; this population fed on the permanent pasture around the ponds and also in the oilseed rape stubble in the adjacent field 25. The number of birds at Rosper Road peaking in the autumn and fell away thereafter possibly as a result of food resource degradation.



Coot *Fulica atra*

Status: Green Listed

A maximum of five birds was recorded from North Killingholme pits in the early autumn period with one or two there subsequently on odd dates. Both of the other major wetlands showed a similar pattern of occurrence with high early autumn numbers, including fledged juveniles, a mid autumn decline followed by a steady increase to a winter peak in late December. As numbers fell at Rosper Road from early January they were maintained at East Halton pits; the loss of birds from Rosper Road was considered to be due at least in part to a reduction in available food supplies following heavy over-winter exploitation.



Oystercatcher *Haematopus ostralegus*

Status: Amber Listed

Humber status **National Importance**5 year mean to 2003 / 2004 ---**3849**

Up to seven birds were noted on the inter-tidal sector ISJ and 1-2 on ISI between July and mid September with a winter absence being broken by the reappearance of four on ISJ in early March. Two birds were in North Killingholme pits in week 3 and a migratory flock of 19 birds dropped in there at high tide on the survey date in week 5 July 29th – August 4th at the peak time for westerly passage up the Humber. A pair were feeding on the pasture field adjacent to East Halton pits in weeks 38 and 39.

Avocet *Recurvirostra avosetta*

Status: Amber Listed Schedule 1

Humber status **National Importance**5 year mean to 2003 / 2004 ---**189**

Following the disastrous 2007 breeding season on the Humber there were no records in the survey area until a single bird appeared in week 27 at North Killingholme pits where it remained through to week 29. This was a somewhat unusual winter occurrence as the species is usually absent from the Humber between November and February and this may have involved an injured bird. The first spring migrants, six birds, were found on inter-tidal sector ISI in week 34, February 17th – 23rd, with 18 present at North Killingholme pits in week 36; the following week a flock of 33 birds was on the inter-tidal sector ISI and an additional eight birds at North Killingholme pits. By week 38 a total of 33 birds was feeding in North Killingholme pits at high tide and this total increased to 43 by week 39 when several pairs were displaying and mating.

Ringed Plover *Charadrius hiaticula*

Status: Amber Listed

Humber status **National Importance**5 year mean to 2003 / 2004 ---**374**

Autumn occurrences on the inter-tidal sectors were sporadic and typically involved low numbers of birds, <20, with a peak of 27 recorded on ISJ in week 13, September 23rd – 29th. No more than four birds were noted from October to the end of November after which there was a total absence of birds until the first spring migrants appeared in early March. This species was formerly much more numerous on the inter-tidal sectors included in this survey with autumn peaks in excess of 200 birds being regular and peak counts of 350 – 440 birds having been recorded; whether the huge decline is in part due to reclamation schemes in the area or is part of the wider ecological changes being shown by this species is unclear. Single birds were seen in North Killingholme pits in weeks 9 and 13.

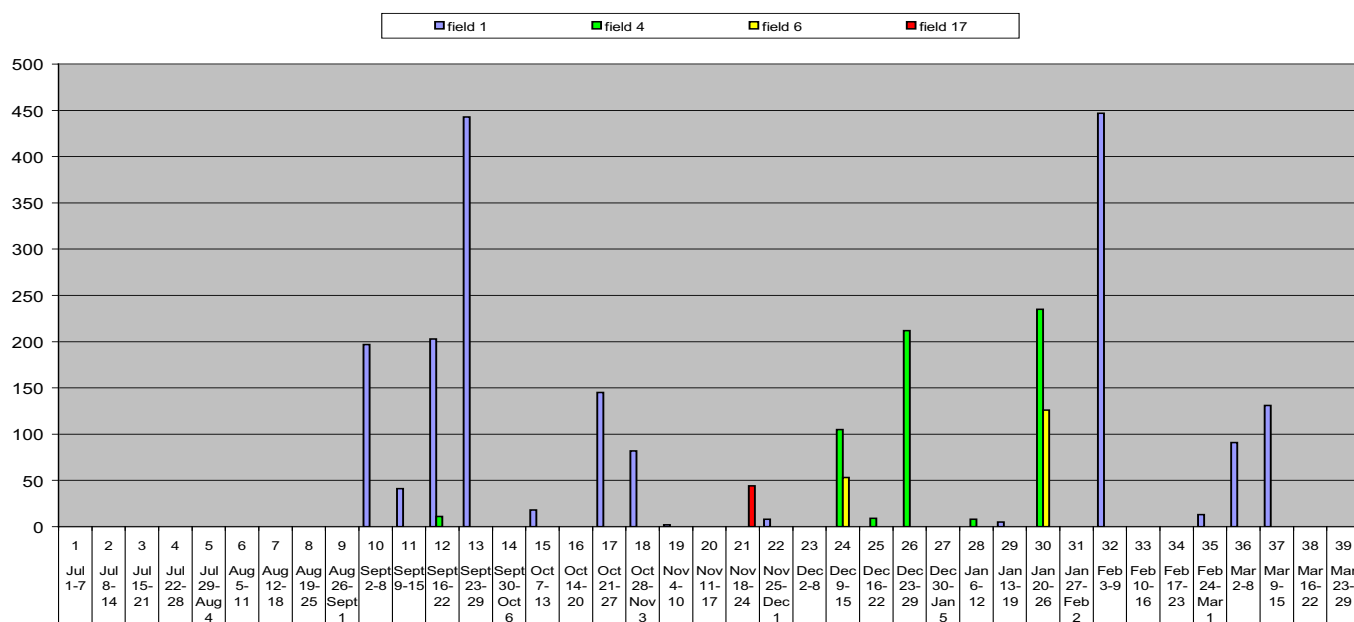
Golden Plover *Pluvialis apricaria*

Status: Amber Listed

Humber status **International Importance**5 year mean to 2003 / 2004 ---**37,674**

All of the records of Golden Plover came from the fields under review with no occurrences being recorded on the inter-tidal sectors which are relatively narrow along ISI and ISJ and are thus not suitable for disturbance free loafing which is the principal use of such sites on the Humber by this species. Within the fields complex all of the occurrences were to the north of the abandoned East Halton – Immingham railway line in East Halton Marshes. Fields 1, 4 and 6 were the only ones to hold any significant numbers of the species and even then occurrences were sporadic with the exception of weeks 10 – 18 which produced a regular roost of Golden Plovers in field number 1. The pattern of distribution is shown in the chart below with the most frequent occurrences in field number 1 being particularly obvious. In addition to those records shown below field 8 held four birds in week 15 and one in week 29, field 24 had 13 birds in week 20 and field 26 had 15 in week 25. Overall numbers of Golden Plover were very low in comparison with recent winters but huge flocks were visible on the north bank of the estuary opposite East Halton – Goxhill Marshes and there were observed movements of flocks from this north bank concentration to the south bank with observations suggesting that flocks continued inland to feeding areas that were identified outside the survey area in fields around Thornton Abbey and between there and South End Goxhill where some large concentrations were located during the survey period.

Golden Plover in fields 2007 - 2008



Grey Plover *Pluvialis squatarola*

Status: Amber Listed

Humber status **International Importance** 5 year mean to 2003 / 2004 ---1704

The inter-tidal sector ISI held four birds in week 17 and singles in weeks 19 and 20 and these were the only records during the survey.

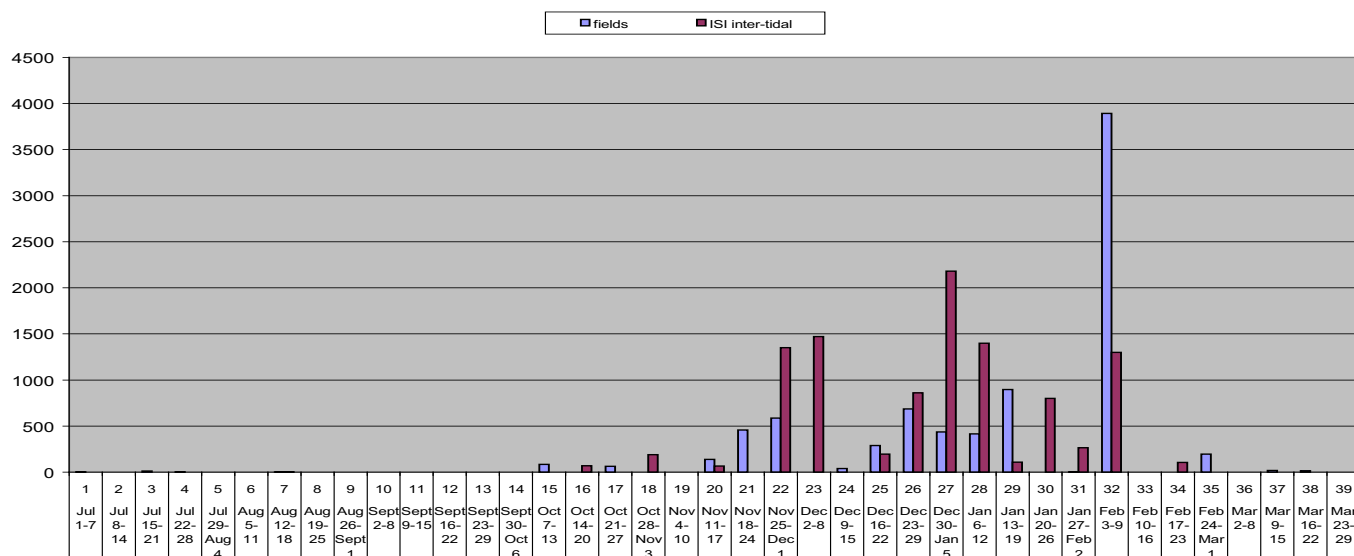
Lapwing *Vanellus vanellus*

Status: Amber Listed

Humber status **International Importance** 5 year mean to 2003 / 2004 ---27,297

No more than 12 Lapwing were observed on the fields until week 15, October 7th – 13th when the first signs of the arrival of wintering birds were evident from a small increase throughout the survey area. Occurrences on the fields under review were very sporadic during the survey period with no set pattern being apparent. Very few birds were seen away from the East Halton Marshes and even there the number of birds using the fields adjacent to the estuary was limited and certainly did not account for the larger flocks which occurred on the adjacent inter-tidal areas.

Lapwing totals on fields 2007 - 2008



Prior to December 23rd the maximum count from the surveyed fields was 586 in week 22, November 25th – December 1st, all of which were in field number 1. In week 26 685 birds were present in three fields 24, 26 and 30 with 419 being found in the following week but in fields 5 and 12. A total of 894 birds roosted in week 29 the majority of which were in field number 1 but the greatest

number of birds occurred in week 32, February 3rd – 9th when a sequential count of fields 1 – 12 produced a total of 3892 Lapwing. This was by far the highest count of this species within the survey area during the present winter survey and in addition to the birds noted on the fields there were 266 Lapwing on the adjacent inter-tidal at the same time making a combined total of 4158 Lapwing. The reason for this huge concentration of birds may have been complex; recent rains had increased the area of standing water in the arable fields and also attracted feeding Dunlin and Redshank but the early February period also sees the start of the first stage of the spring migration of wintering Lapwing flocks with mass departures often occurring in the space of a few days around the Humber. Areas which hold large flocks of Lapwing one week can suddenly be almost lacking in any birds a few days later following such a spring exodus. Strong winds in the days before the week 32 survey along with heavy rain may have concentrated departing flocks of Lapwing on the East coast blocking their onward movements out of the British Isles. The following week no Lapwing were found on the fields but 1300 were on the adjacent inter-tidal; thereafter numbers fell to 321 and then 106 on the inter-tidal areas prior to the last departure of wintering birds. Birds found in March were likely to be prospective breeders or non-breeding immatures; in week 38, 14 birds were in the rape stubble in field 25 and another 10 on the pasture on the edge of East Halton pits with four at North Killingholme Haven pits at the same time. This pattern was repeated in week 39 with 12 birds in field 25 and 8 on the East Halton pits pasture.

Large flocks of Lapwing were frequent on the inter-tidal sector ISI between the old seaplane jetty and North Killingholme Haven but less so on ISJ and the only counts in excess of 200 in the roost at North Killingholme pits were 665 in week 21 and 325 in week 23; these counts are well down on the typical numbers found at North Killingholme pits in winter roosts and no doubt reflect the loss of the large wintering flocks from the fields within the study area.

As with Golden Plover flocks of Lapwing were noted flying inland from the inter-tidal ISI towards Thornton Abbey where large winter flocks were found on fields between there and South End Goxhill.

Knot *Calidris canutus*

Status: Amber Listed

Humber status **International Importance** 5 year mean to 2003 / 2004 ---**36,018**

Knot is typically a scarce species on the inter-tidal sectors involved in the survey in spite of the fact that tens of thousands of birds frequent the estuarine flats just 12km further down the estuary and on the north bank. During the present winter Know numbers were quite high, by comparison with typical years, in the inner estuary.

The first birds recorded from the inter-tidal were in week 8 when three birds were feeding on ISJ. Subsequently up to 40 birds were noted feeding on ISJ through to 19 but there were no further occurrences on that sector. Along ISI a peak of 181 birds was recorded in week 14, September 30th – October 6th, after which there were < 20 apart from 38 in week 21. It was however, notable that larger numbers were feeding further north at the southern end of ISG, Goxhill Skitter – East Halton Skitter, during the late autumn and early winter period. From mid November there were few records and no count in excess of 12 birds. A small autumn roost occurred at North Killingholme pits with birds recorded in each period between weeks 8 and 20 inclusive, August 19th to November 17th; typically there were 20 or less birds but larger counts involved 30 in week 11, 41 in week 12 and 35 in week 16.

Purple Sandpiper *Calidris maritima*

Status: Amber Listed Schedule 1

A single bird was feeding with Dunlin on inter-tidal sector ISI, at the East Halton Skitter end of the sector in week 21, November 18th – 24th at a time when several Purple Sandpipers were arriving on the East coast from Scandinavia.

Dunlin *Calidris alpina*

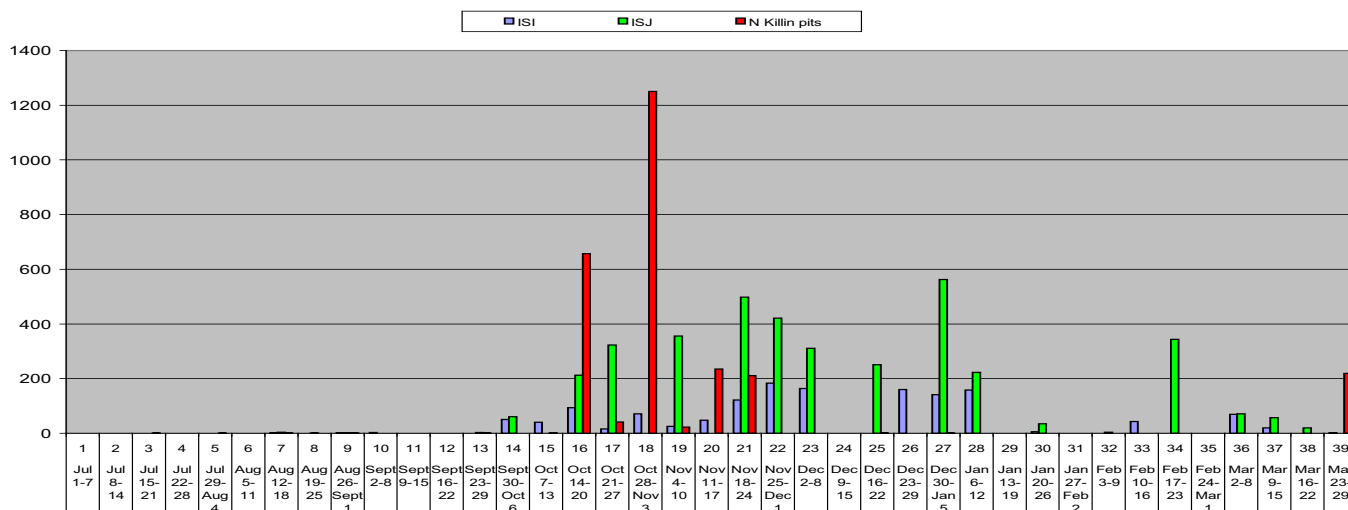
Status: Amber Listed

Humber status **International Importance** 5 year mean to 2003 / 2004 ---**21,588**

The only Dunlin occurrences on the survey fields were a flock of 35 roosting on field 1 in week 29 and two flocks, 53 in field 1 and 18 in field 6 all of which were actively feeding in addition to bathing in the flood water pools within the fields concerned.

Following the peak October passage of Dunlin along the estuary it was a particularly poor winter along the surveyed inter-tidal areas and numbers at North Killingholme pits were the worst for several years with none recorded there after November 17th until a total of 219 roosted over high water on the week 39 survey date. Note that some of the blank mid winter weeks on ISJ were as a result of the lack of counts rather than as a lack of birds (details are shown in the spreadsheet).

Dunlin 2007 - 2008



Ruff *Philomachus pugnax*

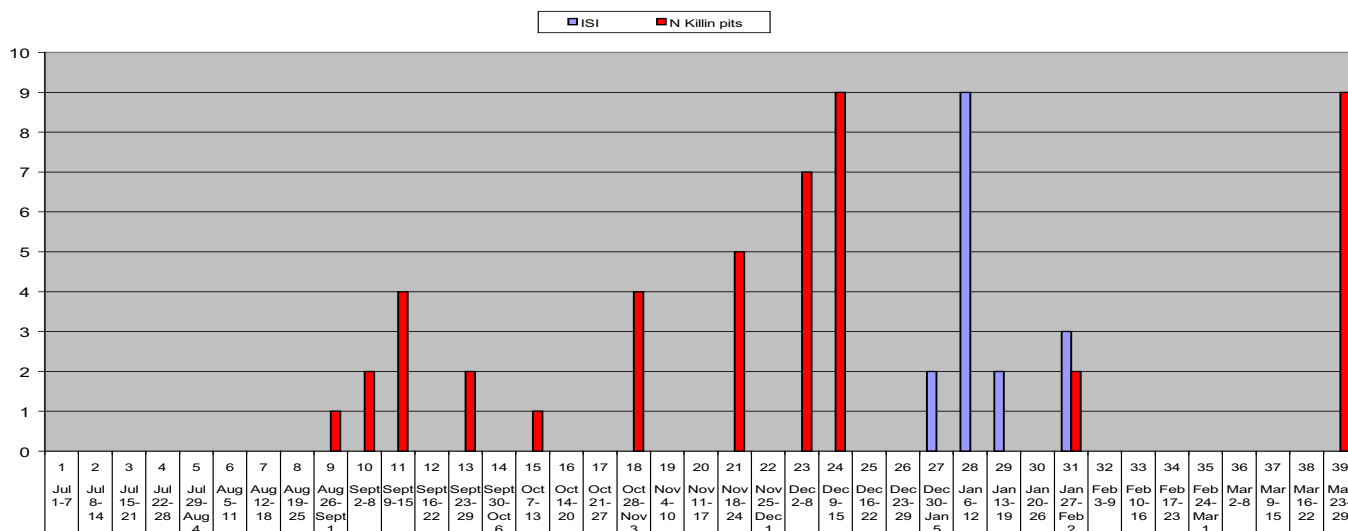
Status: Amber Listed Schedule 1

Humber status **National Importance**

5 year mean to 2003 / 2004 ---14

The small wintering flock of Ruff in the surveyed area never exceeded eleven individuals during the review period. Occurrences were much less frequent than in the previous winter with the only records on the fields being in weeks 29, 32 and 33; fields 1, 6, 11 and 12 holding birds in these three weekly surveys. Up to nine were feeding on ISI in weeks 27 – 31 with the same flock occurring in North Killingholme pits in sporadic weeks between week 9 and week 31. Some of the birds from this flock were seen flying off up the estuary on three occasions and what were presumed to be some of the same individuals were found feeding in permanent pasture fields adjacent to the Humber estuary in Goxhill Marshes during the mid winter period. The maximum winter counts came late, in weeks 38 and 39; in week 38 a total of 11 birds were feeding with Curlew and Redshank in field number 12 at high tide then in week 39 three birds were in field 12 while an additional 10 were feeding in the oilseed rape stubbles in field 25 and nine of these roosted at North Killingholme pits on the late evening high tide.

Ruff 2007 - 2008



Jack Snipe *Lymnocyptes minimus*

Status: Green Listed

A single bird was seen at North Killingholme pits in week 21 but due to the cryptic and skulking nature of the species other birds could have been missed.

Snipe *Gallinago gallinago*

Status: Amber Listed

Small numbers of Snipe were typically present at North Killingholme Haven pits but gaining an accurate estimate of numbers was often difficult due to the birds' habit of skulking in dense vegetation around the edges of the islands. Following the first two birds in week 8 there were between 14 and 38 birds in the pits from September 30th to December 8th after which there were never more than nine birds present. Single birds were noted at East Halton pits in weeks 25 and 29 and there were up to 11 birds at Rosper Road from week 10 onwards; the variation in numbers at the latter site reflected a combination of movements related to varying water levels and also the feeding areas used by the birds which sometimes rendered them more likely to flushing during routine counts than at other times.

On the inter-tidal a small flock of 14 birds was found on ISI during week 16, October 14th – 20th at a time when wintering birds were arriving along the East coast.

Black-tailed Godwit *Limosa limosa*

Status: Red Listed Schedule 1

Humber status **International Importance** 5 year mean to 2003 / 2004 ---**1075**

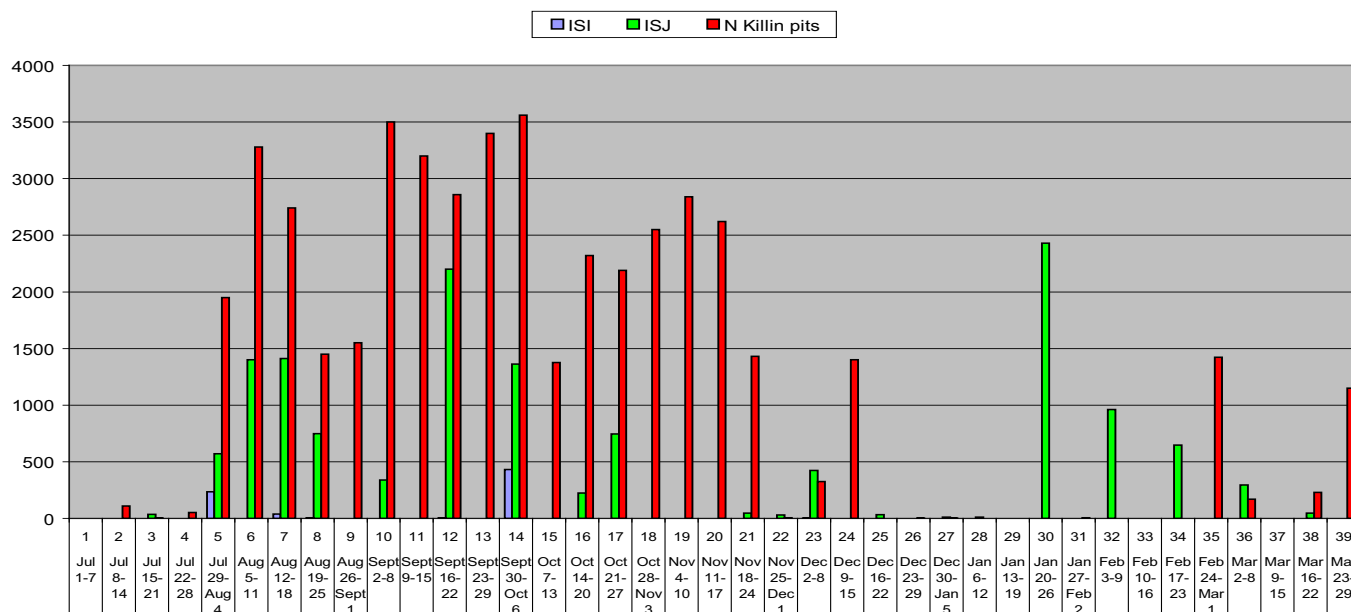
The wintering population of Black-tailed Godwits on the Humber estuary has increased from 31 in the winter of 1989-1990 to 1030 by 1999-2000 and has attained the status of International Importance with the recent five year mean being 1075 birds. This mean up to the winter of 2003-2004 may well underestimate the actual wintering totals. The counts contributed to the 2003-2004 Low Tide WeBS project were certainly well below the actual number of birds recorded by GPC in casual surveys. Survey work in the area of Pywipe mudflats in winter 2005-2006 revealed the presence of 2380 Black-tailed Godwits in November 2005; this would appear to be the highest winter (November – February) count up to and including that winter WeBS survey period. Presently 95% of the wintering population of Black-tailed Godwit on the Humber roost and feed in the area between North Killingholme Haven and the Pywipe basin on the south bank of the estuary. The autumn and spring flocks are more widespread. Until the winter of 2004-2005 occurrences of Black-tailed Godwits north of Immingham Docks were very rare in the period December – February with the birds remaining in the Pywipe basin at high tide and moving to the inter-tidal between there and Immingham Docks at low water. In November and December 2004 peaks of 2830 and 2900 Black-tailed Godwits roosted at North Killingholme Haven pits on these respective dates but just two and 140 were noted in January and February. In the following winter a one off count of 442 in November was the only winter occurrence in the pits.

Birds roosting at North Killingholme Haven pits during September and October only fed on the inter-tidal for short periods, between one hour and two hours, and mainly on the falling tide. On high springs the birds typically moved to the inter-tidal about 2 hours after high water whereas on neaps they appeared to favour the period at high water and immediately after high water as the tide was falling. Rising tides were not favoured during this autumn period with birds returning to the roost site following feeding even before low water.

The high tide roost at North Killingholme pits reached 1950 in week 5 increasing to 3280 in week 6 and remaining high with an autumn peak of 3560 in week 14; numbers then fell below 3000 with 2620 in week 21 before the usual late autumn movement to the Pywipe roost. A one off roost of 1400 in week 24 was the only December count of note but 2430 roosted on ISJ in week 30, January 20th – 26th and subsequently there were 960 along that inter-tidal sector in week 32 and 646 in week 34. A total of 1423 birds roosted at North Killingholme pits in week 35 probably reflecting the start of spring movements with a further high count of 1150 on a spring tide in week 39 including a colour ringed bird seen at Alkborough Flats in late November 2007 and subsequently at North Killingholme in December and January 2007-2008.

The only birds found on the fields surveyed during this winter period were two individuals which were feeding on the small area of pasture at the western end of East Halton pits in week 38.

Black-tailed Godwit 2007 - 2008

Bar-tailed Godwit *Limosa lapponica*

Status: Amber Listed

Humber status **International Importance** 5 year mean to 2003 / 2004 ---3229

In North Killingholme pits it was a particularly poor year for this species with single birds recorded amongst the roosting Black-tailed Godwits in weeks, 10, 11, 16 and 18 only.

Single birds were noted on inter-tidal sector ISJ in weeks 13 and 17.

Whimbrel *Numenius phaeopus*

Status: Amber Listed Schedule 1

A single bird was found at North Killingholme pits in week 5, July 29th – August 4th.

The autumn passage produced a maximum of 10 birds on ISJ in week 8, August 19th – 25th with 1-3 between weeks 3 and 9.

Curlew *Numenius arquata*

Status: Amber Listed

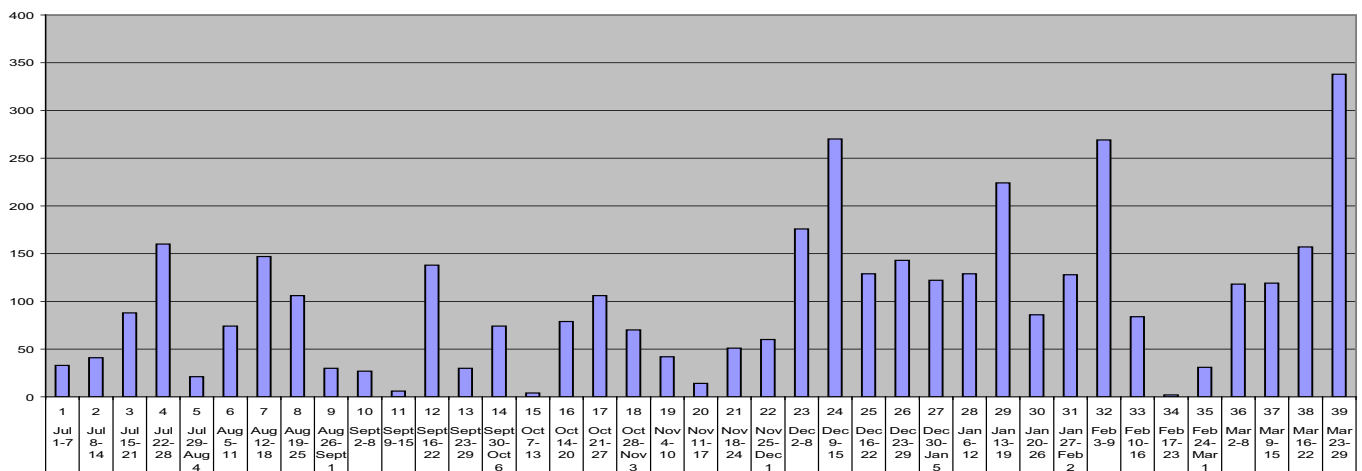
Humber status **National Importance**

5 year mean to 2003 / 2004 ---3865

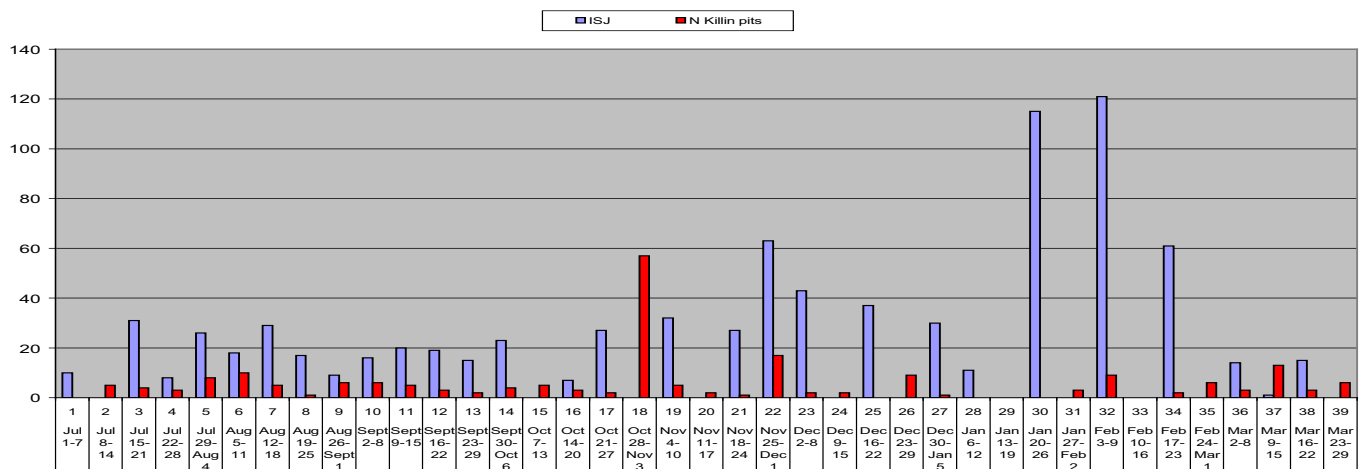
Curlew were found on at least one occasion during the survey period on 48 of the 110* fields within the survey area making Curlew by far the most numerous and widespread of the waders and wildfowl occurring on the arable and pasture fields. (Conocco playing fields were added to the 109 identified fields on the map). Although there were often frequent movements between different fields used for feeding the chart below shows the general pattern of occurrence through the survey period. The high numbers recorded in July and August could have referred to passage birds as there was an obvious decline in numbers through late August and September with the exception of week 12 when 138 birds were noted. The clear winter peak occurred from early December through to early February a relatively restricted period. As in 2007 an early spring peak occurred in the last week of March with a total count 338 birds, by far the highest count of the whole series. This was an accurate accumulated count from all of the surveyed fields with no observed interchange between the different sites. The large increase in abundance was spread between the two major sites, East Halton Marshes and Rosper Road pastures. In the latter site, field 88 held 141 birds, the largest single concentration of this species thus far recorded from the survey area, while a further nine birds were in the adjacent field 89. In East Halton Marshes 170 Curlew were concentrated in winter cereals, oilseed rape and oilseed rape stubbles in fields 1, 6, 8, 12 and 25. It seems likely that the survey area attracts spring passage birds in addition to the wintering flocks which would account for the sudden increase in numbers over a short time span.

On the inter-tidal areas the winter peak on ISJ was later, between late January and February; the number of birds that roosted in North Killingholme pits was typically <20 with a one off count of 57 there in week 18, October 28th to November 3rd.

Curlew on fields 2007 - 2008



Curlew 2007 - 2008



During the course of the surveys the vast majority of observations of this species involved birds that were actively feeding and there was a very obvious preference for feeding in permanent pasture fields and to a lesser extent in grass leys with harvested stubbles, oilseed rape and autumn cereal fields being poorly used. Birds were noted moving between all of the major frequented areas but there was a general split between the flock which fed and roosted on the field along Rosper Road and the southern end of the inter-tidal sector ISJ and the one which used the fields around East Halton village and in east Halton Marshes. Birds from both flocks were noted commuting between sites on the north bank of the estuary and the survey area with the southern flock frequently appearing just after first light from the north bank presumably having roosted there overnight. On odd occasions this flock of birds was found in field 12 at first light and although it seemed an unlikely roost site the birds presence prior to dawn suggested that this field had been used. Small numbers also roosted overnight at North Killingholme pits when conditions were suitable.

A feeding flock located on fields around Thornton Abbey, outside the survey area, during the early winter period probably included birds from the east Halton Marshes flock as birds were observed flying inland from fields in the vicinity of field 30 towards Thornton Abbey.

Spotted Redshank *Tringa erythropus*

Status: Amber Listed

The strange disappearance of this once regular species from the North Killingholme pits area continued apace with just three occurrences of single birds amongst the roosting Redshank in weeks 15, 17 and 19; all probably related to the same first winter individual.

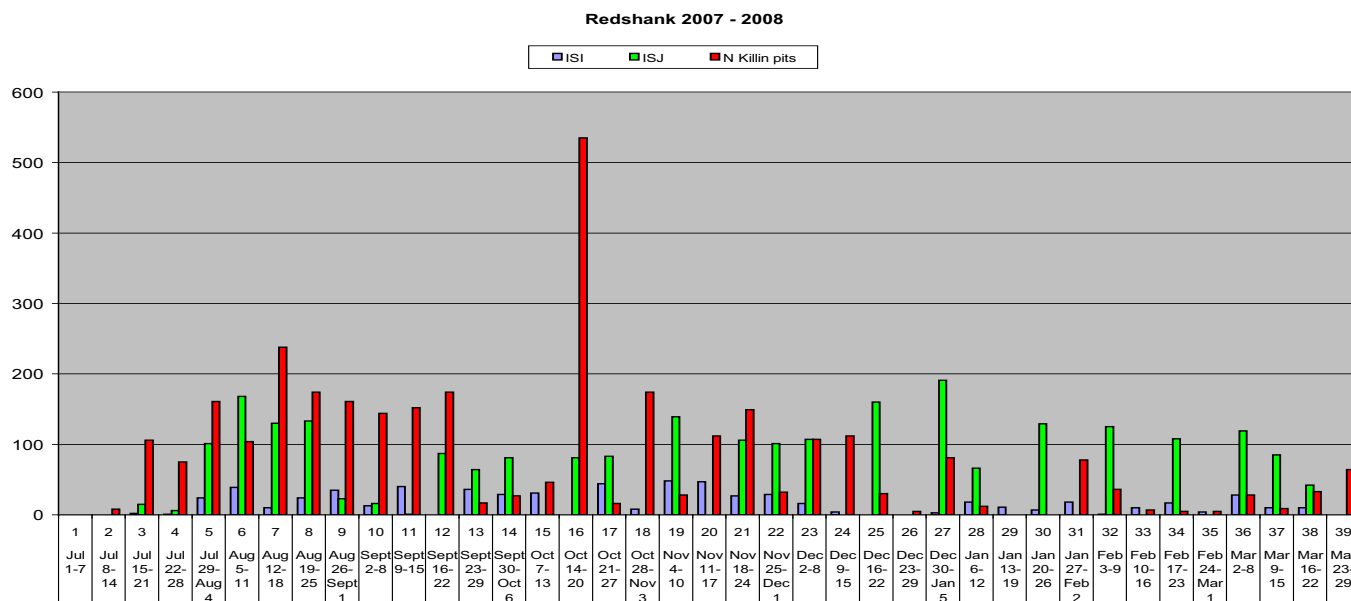
Redshank *Tringa totanus*

Status: Amber Listed

Humber status **International Importance** 5 year mean to 2003 / 2004 ---5578

There were only a few records of this species on fields adjacent to the inter-tidal areas in East Halton Marshes and all involved birds feeding around flood water pools within the fields. The peak of 15 in field 1 during week 32 coincided with an increase in flood water following heavy rains. No birds were found roosting in the fields at high tide.

At North Killingholme pits there was an obvious autumn passage peak in the high tide roost counts during August and September with an exceptional one off count of 535 birds in the roost in week 16, October 14th – 20th following which numbers fell below 200 with a further decline to mid December and less than 100 birds roosting in any subsequent period. The number of birds feeding on ISJ was typically larger than the North Killingholme pits high tide roost as many of the birds remained on the upper inter-tidal over high water or roosted on the stony upper edges of the inter-tidal.



Greenshank *Tringa nebularia*

Status Green Listed Schedule 1

One was in North Killingholme pits in week 9; this is another species which has inexplicably declined in abundance and regularity at North Killingholme pits in the most recent four years.

Green Sandpiper *Tringa ochropus*

Status Amber Listed Schedule 1

One at Rosper Road in week 17, October 21st -27th, was the only noted occurrence.

Common Sandpiper *Actitis hypoleucos*

Status Green Listed

This autumn passage species was recorded between week 4 and 9 on the inter-tidal sectors with a peak count of nine birds on ISI in week 5.

Turnstone *Arenaria interpres*

Status: Amber Listed

Humber status **National Importance**

5 year mean to 2003 / 2004 ---639

Two birds roosted in North Killingholme pits in weeks 15 and 17.

Most of the records on the inter-tidal occurred between weeks 8 and 21 with a marked absence of any significant numbers, maximum of 13 week 29, from late November through to March. The largest counts of 32, 31 and 33 in weeks 12-14 were well below the recent winter counts from ISJ. Changes in the composition of the lower reaches of the inter-tidal in ISJ, produced by silt deposition, have effectively removed the lower stony areas previously exploited by Turnstone on spring tides and this may be one of the major reasons for the reduction in winter abundance of this species in the area.

Additional relevant species:Marsh Harrier *Circus aeruginosus*

Status: Amber Listed Schedule 1

Odd birds were noted hunting in East Halton Marshes during July – September with a juvenile around Winter's pit on October 5th but there were surprisingly no winter records.

Common Buzzard *Buteo buteo*

Status: Green Listed

What is presumed to have been the same immature bird was observed several times in the area of fields 38, 42, 43 and 47 during the course of the winter.

Merlin *Falco columbarius*

Status: Amber Listed Schedule 1

A male was resting on field number 1 on November 8th.

Hobby *Falco subbuteo*

Status: Schedule 1

A male killed Skylark on stubble field number 24 July 16th, a male was seen over field 55 on the 22nd and a juvenile was hunting along Skitter road on September 9th.

Peregrine *Falco peregrinus*

Status: Amber Listed Schedule 1

An adult was seen moving south-east over fields 64 and 65 on December 23rd and an immature bird flew north-east across East Halton Marshes, fields 8, 5, 1, 3 and 2 on March 18th.

Barn Owl *Tyto alba*

Status: Red Listed Schedule 1

Single birds were hunting in the area of East Halton Skitter in late July.

Graham Catley BSc Env
Nyctea Ltd
April 2008

References:

Cramp S et al The Handbook of the Birds of the Western Palearctic Oxford University Press Volume II

Weekly Reports:

Survey period one; July 1st to 7th 2007

The first part of the week was once again affected by poor weather with frequent and sometimes heavy periods of rain as thunder storms built up and passed through the area on a fresh westerly wind. Temperatures remained well below the seasonal average particularly at night when it was often decidedly cool. From the 5th longer spells of sunshine developed during the day but a frontal system brought overnight rain during 5th – 6th before a warmer and drier end to the week.

Environmental conditions:

The major wader roost site at North Killingholme Haven pits remained flooded with no mud available for waders while water levels at Rosper Road and East Halton pits were also exceptionally high. Many of the arable and pasture fields within the study area had areas of standing water.

Tides week 1 High Tide at Grimsby Docks

July	1	Su	07 01	6.6	19 32	6.5
July	2	M	07 38	6.7	20 12	6.5
July	3	Tu	08 16	6.8	20 54	6.6
July	4	W	08 55	6.9	21 36	6.5
July	5	Th	09 36	6.8	22 20	6.4
July	6	F	10 20	6.8	23 07	6.3
July	7	Sa	11 06	6.6	23 59	6.1

Spring tides at the start of the period fell away rapidly from mid week.

Waders and wildfowl:

As none of the arable crops had been harvested the only fields available to feeding waders were grazed pastures or those permanent grasslands which had been cut for hay.

The only wader species recorded during the first survey period were Curlew and Lapwing. A flock of 33 Curlew was feeding on field 103; this permanent pasture field had been cut for hay and the crop removed in late May and June. The field was partly flooded at the western end and this large pool attracted a pair of Shelduck. The two Lapwing were breeding birds which had nested on the adjacent field number 28 during the spring and had moved into field 38 following breeding.

The inter-tidal areas held very few birds at low water; sector I produced a single Grey Heron and a family party of two adult and four juvenile Shelducks while there were ten Curlew and five Oystercatcher at the southern end of sector J.

The permanent wetlands had very low wildfowl totals due to the flooding which was still evident in the very high water levels in all of the three sites.

Survey period two; July 8th to 14th 2007

The unsettled spell of weather continued into the start of the second survey period; 1st dawned bright and remained fine during the morning but thunderstorms arrived in the area by mid afternoon and continued through to late evening. A similar day followed on the 9th but a short lived anti-cyclonic area built up during 10-11th before further fronts arrived from the west on the 12th.

Rainfall amounts were locally heavy but not widespread as in the previous weather events of the early summer.

Environmental conditions:

There had been dramatic changes in water levels from the start of week one to the start of week two throughout the area. The amount of standing water in fields had decreased throughout although there were still flood water pools in some of the hay meadows and pastures and water still stood in tractor tracks through some of the arable crops. The water levels in all three wetlands had fallen. At East Halton pits a channel had been dug connecting the main pit with the ditch to the west and this was draining the excess water from the pits. There was still up to 10 cm of water in field 29 and the two pits were still joined by water crossing the causeway something which had not been observed in 38 years of watching this locality. At North Killingholme Haven pits the level had been lowered by operation of the sluice and was back to a July norm with open mud available in the main wader roost site adjacent to the Humber estuary. At Rosper Road levels had also fallen with the upper 10cm of the weir being exposed above water height although the level in the reservoir was still exceptional for July.

The flooded ditch between fields 42 and 43 had returned to its normal condition and the flood water pool which had developed in field 42 had been drained.

Tides week 2 High Tide at Grimsby Docks

July	8	Su	11 59	6.5	** **	**
July	9	M	01 01	5.9	13 04	6.3
July	10	Tu	02 10	5.9	14 17	6.2
July	11	W	03 19	6.0	15 36	6.2
July	12	Th	04 27	6.2	16 51	6.3
July	13	F	05 24	6.4	17 55	6.5
July	14	Sa	06 14	6.6	18 49	6.6

Median midday tides at the start of the week began to build up to low springs by the end of the period.

Waders and wildfowl:

The only species recorded from the survey of the fields was Curlew. No birds were present in field 103, where conditions seemed to be very similar to the previous period but spraying was taking place in adjacent fields and the tractor and machinery had passed through this field and may have disturbed the birds. There were though no Curlew on the adjacent inter-tidal and only five birds roosted at North Killingholme Haven pits and it seems as if all of this Curlew flock had moved to field 38 where 41 birds were found at high water. This field of over-wintered stubbles was sprayed off in April but flooded extensively during the recent rains. The field was used by Curlew and Whimbrel during April and May and was one of the favoured fields used by Curlew in the previous winter. On flushing this flock of Curlew flew off towards East Halton Pits but they could not be re-located later in the survey anywhere in the area of the pits and it is assumed that they either returned quickly to field 38 or moved to Goxhill Marsh where a large flock of Curlew has returned to a traditional wintering site.

At the present time the number and variety of waders present in the fields is being dictated by the lack of suitable feeding areas as none of the arable crops have as yet been harvested. In Goxhill Marsh a field of rough plough held a roosting flock of 354 Golden Plover and 9 Lapwing plus Whimbrel and 15 Curlew during the same period.

The wetland sites were more suitable for wildfowl and waders during this period than in period one. East Halton Pits and Rosper Road only held waterfowl and variety and numbers were typically poor as neither of these sites acts as a summer moult area for waterfowl. (During the annual moult of flight feathers wildfowl typically gather on same, open, productive and usually large areas of water during their flightless period; along the south bank of the Humber the main areas are at New Holland, Barrow Haven and Barton pits and Blacktoft Sands.)

North Killingholme Haven pits attracted the first substantial roost of returning Icelandic Black-tailed Godwits with 109 birds present over high water on the 1st. All of these were adult birds in full summer plumage and were thus not the birds which were last recorded in May 2007. One colour ringed bird was present. Also recorded in the roost were nine Redshank, three Lapwing and five Curlew.

Survey period three; July 15th to 21st 2007

The procession of frontal systems and generally unsettled weather with heavy showers and thunderstorms continued to dominate the local weather during this period. Light rain fell by 06:00hrs on the 15th following a calm and dry night, intensifying through the afternoon as heavy showers moved north-east across the area. The following three days were a mix of heavy showers and warm sunny periods with light winds mainly from the south-west to west moving into the east on the 19th when there was some early fog around the estuary. The wind became a fresh easterly on the 20th but it remained fine until 17:00hrs when a belt of heavy rain arrived from the south.

Environmental conditions:

With the ground water table so high following the summer flooding even relatively small amounts of rainfall had the effect of accumulating standing water in the open fields within the study area. Such was the case on the 16th following the heavy showers of the 15th with large areas of standing water again apparent in fields such as number 38 which had been largely dry in the previous period.

The water level in East Halton pits and Rosper Road remained higher than at any time in the previous winter but draining of North Killingholme Haven pits via the sluice system had maintained open mud which was available to roosting waders.

Tides week 3 High Tide at Grimsby Docks

July	15	Su	06 57	6.8	19 37	6.7
July	16	M	07 28	6.9	20 20	6.7
July	17	Tu	08 17	6.9	20 59	6.6
July	18	W	08 55	6.9	21 36	6.4
July	19	Th	09 30	6.8	22 10	6.2
July	20	F	10 07	6.6	22 45	6.0
July	21	Sa	10 44	6.3	23 22	5.8

Spring tides occurred during the first part of the survey period but tidal heights fell away quickly towards the end of the week.

Waders and wildfowl:

Twelve Lapwing were feeding in the flooded eastern end of field number 38 but there were no other records of this species throughout the area with the exception of three roosting at North Killingholme Haven pits. Most of the Lapwing around the estuary appear to be concentrated at the head of the estuary at the present time with Alkborough Flats and Winteringham Haven being the only sites holding significant numbers of birds in excess of 500 individuals. A single Golden Plover flew south-west over East Halton Marshes and then returned to the north during the survey. There have been no records of flocks in the survey area to date this autumn but the number of birds in Goxhill Marsh continued to increase with a peak count of 900 birds roosting on a small ploughed field adjacent to Skitter Ness on the 18th and 19th.

Curlew was again the most numerous species within the study site during this period. The southern field along Rosper Road held a total of 44 birds with 11 on the partly flooded hay meadow in field 89 while 33 were feeding on the sprayed off set-aside field number 96. The latter field had not been utilised by Curlew in the previous winter surveys and was probably being used for feeding due to local flooding and also the lack of a long crop within the field. As it had been sprayed off there was open mud within the stubbles. Movements of birds were noted between these two fields and also the inter-tidal to the east ISJ (see map). Four birds roosted at North Killingholme pits at high tide but two moved towards the north-west. On the northern fields seven birds were feeding on field 38, the set-aside field, and a further 37 were found on field 24 another set-aside field north of the railway. This was the first time that a sizeable flock of Curlew had been found on field 24. Birds commuted between these two fields during the survey.

The inter-tidal areas held relatively few birds at low water; just five on ISI but 91 on ISJ. The latter count included 35 Black-tailed Godwits and 31 Curlew with 15 Redshank. The Redshank had roosted over high tide at North Killingholme Haven pits but the Curlew were probably the birds from the southern fields. Up to 320 Black-tailed Godwits were recorded from North Killingholme pits during the week but on the surveyed date there were just four individuals at high tide. The godwits seem to be unsettled at the present time with frequent movements in and out of the pits in contrast to the usual settled nature of the species during high tide roosts.

There was little change in waterfowl abundance or variety at any of the three wetland sites.

Survey period four; July 22nd to 28th 2007

The weather pattern continued to be unsettled in the extreme. A fine day on the 22nd became warm during the late morning but thunderstorms built during the afternoon although there was no local rainfall until evening. Scattered heavy showers affected the 23rd but the 24th was dry and at times warm but with a fresh westerly wind. Another front passed through on the 25th bringing a period of rain during the morning.

Environmental conditions:

The heavy rain which fell at the end of the previous period pushed up water levels again and produced widespread flooding of the fields in East Halton Marshes; the Skitter Beck over-flower for the fifth time in as many weeks. Levels in all of the main water bodies rose in spite of continuing drainage at East Halton pits and North Killingholme Haven pits. Water again backed up into Rosper Road with the main weir being covered to a depth of 8cm. There was less mud available for roosting waders at North Killingholme Haven pits than in the previous week. The ditch between fields 42 and 43 again flooded over and formed a large flood water pool in the eastern end of field 42. The fact that only a small part of the southern side of field 42 had been cut for hay meant that the flood water pool actually ran into long grass and this presumably made it less suitable to wildfowl than in the previous winter.

Tides week 4 High Tide at Grimsby Docks

July	22	Su	11 26	6.0	** **	**
July	23	M	00 08	5.6	12 18	5.7
July	24	Tu	01 07	5.5	13 28	5.5
July	25	W	02 20	5.4	14 50	5.4
July	26	Th	03 33	5.6	16 07	5.6
July	27	F	04 34	5.9	17 07	5.9
July	28	Sa	05 23	6.2	17 55	6.2

Neap tides throughout the week were insufficient to cover all of the inter-tidal mudflats in sectors ISI and ISJ. Some of the upper reaches of the inter-tidal started to dry out even with the frequent periods of rainfall.

Waders and wildfowl:

The week saw the first significant counts of Curlew in the survey area with a total of 171 birds being recorded during the survey date. Most of these were typically in the northern fields with 104 being logged in field 24 and a further 46 in field 38. Both flocks contained a single Whimbrel. The flock in field 24 remained faithful to this set-aside field throughout the survey taking flight but simply doing short flights around the local area before returning to the favoured feeding site. The flock in field 38, which were separate from the flock in field 24, took flight when disturbed by an unseen raptor and flew north-east and then turned to move east and continued across the estuary to the north bank. This proves a link between populations on the north bank of the estuary and the East Halton fields which was not fully confirmed in the previous winter. The remainder of the Curlew were at North Killingholme Haven pits where three roosted at high tide, on the ISJ inter-tidal where there were eight birds and on the harvested hay field number

89 where 10 birds were feeding. In addition to the two Whimbrel noted above, within the Curlew flocks, three other birds were feeding in the hay meadow, field number 30, close to the other two *Numenius* flocks. Single Lapwing were also found in field 24 and 38 while 28 roosted at North Killingholme Haven pits. There has been no substantial arrival of wintering Lapwing in the local area as yet. The high tide roost at North Killingholme Haven pits also included 75 Redshank and 51 Black-tailed Godwits. The latter species continues to occur in numbers which are well below the late July norm which has varied in recent years from 700 – 1650. A flock of up to 180 birds has been roosting at Paul Holme Strays and there have been up to 270 birds at Alkborough Flats but the Humber totals at present seem to be well down for late July possibly indicating a late departure from the Icelandic breeding grounds. Both of the adjacent inter-tidal areas only held low numbers of feeding waders and wildfowl but a count of five Common Sandpipers on ISI was significant and reflected the early autumn passage of this species. Neither of the other water bodies produced any records of significance.

Survey period five: July 29th to August 4th 2007

The first signs of summer developed during the early part of the week with temperatures reaching 22C on the 31st. The 29th although generally dry and warm was peppered with a few local heavy showers particularly in the evening but the 30th was dry and increasingly warm although much cooler overnight. August dawned bright and sunny but high cloud arrived from the north-west during the day. No rainfall fell through the 1st and 2nd and with spells of hot sunshine evaporation continued to reduce the amount of standing water across the area.

Environmental conditions:

With a general lack of rainfall and increasingly high temperatures on sunny days most of the standing water in the fields began to evaporate and disappear. There were still some fields with substantial amounts of rainwater evident in small low lying areas but in general the surface soil layers dried out rapidly. Some of the fields favoured by waders in previous weeks became quite hard on the surface, notable in fields 24 and 38 where Curlew had fed in good numbers in the previous week. The grass field, number 29, at East Halton pits dried up with the causeway between the two ponds reappearing; at Rosper Road the water level dropped 15cm below weir height and management at North Killingholme Haven pits lowered the level to produce a good area of mud for roosting waders.

Tides week 5 High Tide at Grimsby Docks

July	29	Su	06 05	6.5	18 37	6.4
July	30	M	06 43	6.7	19 18	6.7
July	31	Tu	07 21	7.0	19 58	6.8
August	1	W	07 59	7.2	20 37	6.9
August	2	Th	08 37	7.2	21 16	6.8
August	3	F	09 16	7.2	21 57	6.7
August	4	Sa	09 57	7.1	22 38	6.4

Spring tides predominated during the week with the mid week morning high tides being the highest recorded thus far in the survey.

Waders and wildfowl:

The only waders found on fields during the period were 22 Curlew on the permanent pasture in field 98 and a single Whimbrel in the pasture in field 30. There was extensive activity in many parts of the study area as harvesting operations continued apace during the hot weather and this could have affected wader presence on some of the fields. It would not explain the absence of the northern flock of Curlew which had been found in fields 24 and 38 in the previous week with no birds recorded at all in this area in week five. The set-aside fields which had held the large Curlew flock in the previous week had become much drier with some surface soil baking in the sun but there were still some damp areas within field 38 and the absence of birds is thus not easily explained. The southern flock were moving between the inter-tidal and the pasture field but none were present in field 89, the damp meadow which had been used in previous weeks.

The high tide roost at North Killingholme Haven pits held the first significant numbers of Icelandic Black-tailed Godwits with 1950 being recorded; all of these birds were moulting adults with the exception of a single fledged juvenile, the first of the autumn. A total of eight colour ringed birds were observed but only five full combinations could be ascertained. Although there had been a build up of Black-tailed Godwits at Alkborough Flats, peaking at 320 in late July there had been a recent loss of birds from that area and the large count from North Killingholme demonstrated the continuing attachment to this part of the Humber estuary and a probable movement between the two sites. A further three colour ring combinations were obtained from the inter-tidal sector J at low water. The inter-tidal areas produced the first significant counts of waders at low water during this period. On sector I a flock of 234 Black-tailed Godwits fed on the lower edge of the mudflats along with seven Common Sandpipers while the 24 Redshank fed on the middle and upper reaches of the inter-tidal. This inter-tidal sector is relatively narrow even on spring lows and is increasingly subject to disturbance from walkers, joggers and sea anglers on the raised inland embankment. Most of the waders located were therefore at the southern end of the section which has less easy access and is less disturbed. On the sector J there were 572 Black-tailed Godwits and 101 Redshank at low water while there were still 760 Black-tailed Godwits in the pits at North Killingholme Haven. The combined total of 1332 godwits fell short of the number present at high water with other flocks observed arriving from the south and the north-

east. While most of the Redshank that roosted in the pits at high water fed on the adjacent inter-tidal, 125 of 161, the remainder arrived with Black-tailed Godwits from the east, probably from the north bank of the estuary.

The number of waterfowl at the major wetlands remained relatively stable at North Killingholme and Rosper Road but there was a notable increase in Coot, Moorhen and Mallard at East Halton pits.

Survey period six: August 5th to August 11th 2007

The survey period commenced with the hottest day of the year to date when temperatures reached 28C; it remained hot to late evening with a huge emergence of flying ants and other winged insects but cloud increased overnight on a freshening south-westerly wind to produce a day of cloud and sunny intervals on the 6th. Hot sunshine dominated the next three days with variable amounts of high cloud drifting through on a light to moderate north-westerly wind becoming easterly on the 8th. Night temperatures dropped markedly after the 6th.

Environmental conditions:

Much of the surface water from the July rains had evaporated leaving most of the fields rather dry and baked on the surface following the spell of hot weather. Extensive farming operations, mainly harvesting and baling, during the period led to widespread disturbance of many of the fields which might have been used by waders. All of the oilseed rape fields in the East Halton Marshes area were cut during the intervening period but the stems left were quite tall, >20cm, making the fields rather unattractive to waders. Some of the over-wintered stubbles/set-aside were ploughed during this week but the exposed soil was hard and baked and offered few feeding opportunities to birds. The water level at North Killingholme Haven pits was dropped to produce more feeding and roosting area for the growing number of waders but the area was subjected to increased disturbance from the industrial site to the north and this seems to be impacting upon the wader roost particularly the Black-tailed Godwits. In essence frequent use of vehicle horns, which appear to be non-essential, along with shouting at certain times of day appear to be disturbing the roosting waders. Extensive observations have shown that the Black-tail roost has become less settled with birds taking flight more frequently than normal and the whole flock often leaving the roost even over the high tide period once they are disturbed. Whilst this is not intentional disturbance it could be easily avoided.

Tides week 6 High Tide at Grimsby Docks

August	5	Su	10 41	6.9	23 23	6.2
August	6	M	11 31	6.5	** **	**
August	7	Tu	00 19	5.9	12 37	6.1
August	8	W	01 35	5.7	14 07	5.9
August	9	Th	03 01	5.8	15 44	5.9
August	10	F	04 18	6.0	17 02	6.2
August	11	Sa	05 17	6.3	17 59	6.4

The week was characterised by a wide variation in tidal heights, the 0.7m difference between the two tides on the 5th being exceptional. For the bulk of the week tides were medians increasing towards springs by the end of the period.

Waders and wildfowl:

The bulk of the field remained in less than suitable condition for feeding and roosting waders; the only species recorded from the fields being Curlew and a single Whimbrel but a large flock of Black-tailed Godwits (approx 1400 birds) did attempt to land on field 103 when they were disturbed from the high tide roost at North Killingholme Haven. A flock of 35 Curlew were feeding on the mown hay field number 54 at high tide. As the flock was inadvertently disturbed 31 of the birds moved into the adjacent field number 55, another mown and baled hay field, where they remained until the end of the survey. The other four birds flew off to the north and headed out towards the estuary. A further seven birds were feeding in field 20, again a mown hay field, and were accompanied by a single Whimbrel; the latter bird left the flock and flew north-east and out onto the inter-tidal during the period of observation.

Low water counts on the two sectors failed to produce any large counts of Black-tailed Godwits but there were 168 Redshank on sector J, the highest count of this species thus far; a further 39 birds were feeding on sector ISi but the only other notable birds were six Common Sandpiper on the latter section. Disturbance continued to be a major feature of ISi especially on hot days when the number of walkers and anglers was a constant source of disturbance along the northern 70% of the sector. At high tide the roost of Black-tailed Godwits at North Killingholme Haven was disturbed by a loud, resonant, metallic banging from the adjacent Simon Storage site to the north of the pits. All of the 3280 birds left the roost and flew off in three directions; north up the estuary towards East Halton Skitter, east across the estuary to the north bank and mainly south-east towards Immingham Dock. The latter group was split into three main flocks. One flock attempted to land on field 103 but farming operations in the adjacent fields again flushed the birds which then landed on the inter-tidal between the northern lighthouses. The remainder of the flock continued south-east past Immingham Docks and were lost to sight. The birds did not return to the roost in spite of it being high water.

A total of six Little Egrets at North Killingholme Haven pits was the highest ever count of this species at this locality; four Grey Herons were also feasting on the abundance of small fish which were present around the inlet channel. In addition to the rapidly

increasing number of Black-tailed Godwits the high tide roost held 104 Redshank and 40 Lapwing. The number of Redshank was not equivalent to the higher number of 207 recorded from the two inter-tidal areas and it is assumed that some birds roosted on the upper reaches of the inter-tidal, which were not covered by the median tides, or used an alternative roost site. A total of ten Curlew roosted overnight at the site.

The most notable addition to the wildfowl totals at East Halton pits was the arrival of 16 Teal the first significant count of this species for the autumn. The brood of Shelduck and the remaining five Mute Swan cygnets continued their presence and a brood of three small Ruddy Ducks was seen on the southern pond. A newly hatched brood of six Tufted Ducks was seen at Rosper Road where two pairs of Little Grebes were confirmed both with new broods of young. The late nesting by several wildfowl species has clearly been a response to the frequent flooding earlier in the spring / summer.

Additional information included the presence of a roost of 120 Swallows in the pit west of the railway tracks at North Killingholme Haven.

The roadside drain adjacent to Rosper Road held an ovi-positing pair of Small Red-eyed Damselflies and a single male on the 8th. These formed the first records of this species for North Lincolnshire. A female Emperor was also ovi-positing in the same drain while three males were in the Rosper Road area.

Survey period seven; August 12th to August 18th 2007

The hot weather of the previous week continued through to the 14th when a frontal system brought a period of prolonged rain on a fresh southerly wind. The week continued on an unsettled theme with further spells of light rain and extensive cloud although daytime temperatures remained high producing sultry and humid conditions through to the 16th. North-westerly winds kept temperatures pegged back for the remainder of the week but it was the 18th before extensive rain arrived in the area.

Environmental conditions:

The spell of hot weather quickly baked the surface soil layers in the area with the result that dragging of harvested fields and ploughing of set-asides failed to produce any suitable feeding for waders as the soil was hard and impenetrable with very few invertebrates being revealed at the surface. Most of the remaining crop fields in the area were harvested and several were dragged or ploughed with the exception of spring sown crops of barley and beans. The majority of the over-wintered stubbles which had been left as set-aside during the spring and summer were all dragged or ploughed during the period under review changing the overall character of some of the more suitable wader feeding sites noted in previous weeks. Most of the pastures still held grazing cattle or horses and some of the hay fields were mown for a second crop.

North Killingholme Haven pits remained in good condition for roosting waders with an increased area of exposed mud on the eastern pit while water levels dropped even further in Rosper Road revealing a small area of mud amongst the abundant Mare's tail at the eastern end of the pool.

Tides week 7 High Tide at Grimsby Docks

August	12	Su	06 05	6.6	18 46	6.6
August	13	M	06 44	6.9	19 24	6.7
August	14	Tu	07 21	7.0	19 59	6.7
August	15	W	07 55	7.1	20 31	6.7
August	16	Th	08 29	7.0	21 01	6.6
August	17	F	09 01	6.9	21 29	6.4
August	18	Sa	09 32	6.7	21 59	6.3

A week of increasingly high spring tides to mid week from when tidal heights fell towards the weekend.

Waders and wildfowl:

With the exception of two Lapwing seen on one of the tracks which bisects field number 4 the only waders encountered on the fields in week seven were again Curlew. A flock of 80-100 Lapwing was seen in flight in the vicinity of field 30 during surveys of fields centred on field 42 but this flock was not encountered again during the remainder of the surveys and it could not be confirmed that they had been feeding in the survey area. A single Curlew was feeding in field 76 and later flew north-east towards the favoured area around fields 55 to 42 and a single bird was also noted in field 89 where 10 -11 birds were noted in weeks 3 and 4. A large flock of 67 birds was feeding in field 103 at high water when there were an additional 5 birds in the North Killingholme Pits roost. The favoured fields south of the old East Halton – Killingholme railway track held a minimum of 37 birds, counted in field 42, but there was considerable movement between different pasture field sin the area with 3 birds noted in field 31 probably being different to the main flock. Only two Curlew were feeding on inter-tidal sector ISI at low water but there were 29 in sector ISJ while the remainder of the southern flock fed in field 103 and on the grasses banks of the Texaco compound to the south.

A total of 1449 Black-tailed Godwits was counted on the two inter-tidal sectors at low water, the vast majority 1412 on ISJ and 37 on ISI. The subsequent high tide roost in North Killingholme Haven pits held 2740 godwits confirming the arrival of birds from feeding sites outside the survey area. Twelve colour ringed Black-tailed Godwits have been seen this autumn at Killingholme with two notable birds having been recorded in most years since they were ringed in 1998 confirming a strong connection with feeding

and roosting sites on the Humber estuary. Additional species counts from the inter-tidal at low water revealed a total of just 11 small waders, 7 Ringed Plover and 4 Dunlin, plus a total of 140 Redshank on the two sectors with the majority again on ISJ, 130 birds. The high tide wader roost at North Killingholme pits attracted 238 Redshank of which 57 arrived within the 30 minutes prior to peak high water suggesting a movement from across the estuary. A total of 38 Lapwing found at high tide were still present in the pits at low water, presumably feeding at night.

The number of waterfowl in the three major sites remained relatively low with the only notable events being the increased presence of Shoveler with 7 at East Halton pits, 14 North Killingholme and 12 at Rosper Road. Family parties of Shelduck remained at East Halton pits but the brood from North Killingholme began to disperse to the adjacent inter-tidal.

Additional Information:

[Small Red-eyed Damselies were found on the southernmost of the pits at East Halton were pairs were observed ovi-positing; this is the second confirmed location in North Lincolnshire where this expanding species has been discovered.](#)

Survey periods eight to eleven; August 19th to September 15th 2007

The first five days of this four week period saw a run of cool northerly winds affecting the local area with some spells of rain and generally lower than average temperatures. Thereafter a high pressure system became established to the east of the British Isles and although it shifted position slightly this remained the dominant weather feature for the ensuing three weeks. Weather conditions became settled with only light winds which were mainly from the north-west or west and virtually no rainfall. Cloud cover varied but there were long spells of hot sunshine and higher than normal temperatures.

Environmental conditions:

The long settled spell of weather and particularly the exceptional sunny month with a lack of rainfall meant that the surface soil layers became hard baked and water levels fell quickly in the major wetlands taking them to their lowest levels since April. Standing water became restricted to the larger water bodies with many of the smaller ponds and wetlands in the area drying out completely.

Tides week 8 – 11

August	19	Su	10 04	6.4	22 29	6.0
August	20	M	10 38	6.1	23 07	5.8
August	21	Tu	11 22	5.7	23 58	5.5
August	22	W	** **	**	12 28	5.3
August	23	Th	01 17	5.3	14 09	5.2
August	24	F	02 50	5.4	15 42	5.5
August	25	Sa	04 04	5.8	16 46	5.9
August	26	Su	04 58	6.2	17 36	6.3
August	27	M	05 41	6.6	18 18	6.6
August	28	Tu	06 19	7.0	18 57	6.9
August	29	W	06 57	7.2	19 35	7.0
August	30	Th	07 35	7.5	20 13	7.1
August	31	F	08 13	7.6	20 50	7.0
September	1	Sa	08 52	7.5	21 28	6.8
September	2	Su	09 33	7.3	22 07	6.6
September	3	M	10 18	6.9	22 51	6.2
September	4	Tu	11 13	6.4	23 47	5.9
September	5	W	** **	**	12 29	5.9
September	6	Th	01 10	5.6	14 19	5.7
September	7	F	02 51	5.7	15 54	5.9
September	8	Sa	04 11	6.0	17 02	6.2
September	9	Su	05 06	6.4	17 51	6.5
September	10	M	05 48	6.7	18 29	6.7
September	11	Tu	06 23	6.9	19 00	6.7
September	12	W	06 56	7.1	19 29	6.8
September	13	Th	07 28	7.1	19 58	6.8
September	14	F	07 59	7.1	20 24	6.7
September	15	Sa	08 30	6.9	20 51	6.6

Neap tides in week 8 increased to high springs at the end of week nine with median neaps again in week ten and lower springs in week eleven.

Waders and wildfowl:

The first Golden Plovers of the autumn were roosting in field number 1 in weeks 10 and 11 with 197 and 41 birds respectively. The number of Golden Plover on the estuary has been low thus far in the autumn with early returning adults moving inland to moult while wintering birds have yet to arrive in any decent numbers. Curlew continued to be the most widespread wader on the fields but the number of birds fell from the highs of late July and early August. A similar decline in numbers was recorded at Alkborough Flats and on the Goxhill sector of the estuary and may again be related to moult in adult birds which arrive first in the autumn. The desiccation of the soil in the fields during the period may also have had a negative impact upon feeding birds which tended to be found on pastures rather than worked arable fields where the clay surface soils were baked hard. The northern fields which were important for the species in the previous winter held insignificant numbers although the permanent pasture in fields 54 and 55 did attract a few birds. In the southern area field 103 continued to be favoured with a peak of 55 birds in week 8 but the pastures along Rosper Road held fewer birds.

At East Halton pits the number of all wildfowl species fell dramatically following the start of the shooting season on September 1st. At North Killingholme Haven pits the number of Mallard and Shoveler increased significantly from week nine onwards possibly as a result of birds disturbed by shooting moving into the distribution free area. The high tide wader roost was composed in the main of Black-tailed Godwits and Redshank. Black-tail numbers varied weekly reaching an autumnal high of 3500 in week 10. Redshank numbers remained low in comparison with recent years with a maximum of just 174 in week eight. Lapwing numbers are still very low reflecting the lack of arrival of wintering birds on the estuary. At Rosper Road the number of Teal and Shoveler increased from week nine while Moorhen and Coot numbers appeared to fall but the latter could have been partly due to the rapid growth of vegetation and falling water levels which made birds more difficult to locate. The most significant development at Rosper Road was the use of the site by Black-tailed Godwits. The shallow eastern end of the reservoir was being used as a roosting and feeding area by eight birds in week ten but this had increased to 64 individuals in week eleven. Significantly the vast majority of the birds were juveniles, all of which were of the Icelandic breeding race *L l islandica*. This water body has occasionally been used by Black-tailed Godwits in spring and summer but not previously for any extended period during autumn.

Survey period 12; September 16th to 22nd 2007

The first signs of the breakdown the high pressure system that had dominated the weather for several weeks came on the 16th as a strong south-westerly wind grew in intensity through the 16th; temperatures remained high with long sunny periods but dropped overnight over 16-17th as the wind swung into the north-west. The 17th was a much cooler day with a freshening north-westerly wind and increasing cloud cover as a frontal system slid south-east across the country bringing some heavy showers in the afternoon and evening. The following night was the coldest of the autumn with temperatures down to 4-5C.

Environmental conditions:

Most of the arable fields had been worked down and sown with either autumn/winter cereals or oilseed rape; some of the fields in East Halton Marshes were still being dragged and worked at the start of the week. Following the prolonged dry spell surface soil layers were baked hard with finely worked fields resulting in surface blow off during the windy weather.

Tides week 12 High Tide at Grimsby Docks

September	16	Su	08 59	6.7	21 18	6.5
September	17	M	09 28	6.4	21 47	6.2
September	18	Tu	09 59	6.1	22 20	5.9
September	19	W	10 38	5.7	23 06	5.6
September	20	Th	11 43	5.3	** **	**
September	21	F	00 21	5.4	13 34	5.2
September	22	Sa	02 06	5.4	15 12	5.5

Waders and wildfowl:

The survey was undertaken on the 16th in a very strong south-west wind. This may have affected wader movements. The vast majority of the Black-tailed Godwits which roosted over high water at North Killingholme Haven pits moved a short distance onto the inter-tidal sector ISJ to feed at low water. Feeding was concentrated in the period 3 – 4 hours after high water to 1-2 hours after peak low water. After feeding the birds returned to the relative shelter of the pits to roost and loaf. One flock of 35 birds was followed north to a feeding area off Skitter Ness at Goxhill and 6 birds fed on the inter-tidal at East Halton Skitter. There was again a flock of Black-tailed Godwits at Rosper Road where 48 were present at high tide along with at least 7 Snipe.

A flock of Golden Plover roosted on field number 1 with 203 birds being counted, a very similar figure to the 197 recorded in week 10, while 11 birds were feeding on field number 4 as it was being cultivated. The similarity of the two Golden Plover counts must suggest that it is the same small flock which has been frequenting the local area. There has yet to be a marked arrival of winter Golden Plover or Lapwing in the area. Curlew was the only other wader species recorded from the fields but there was a notable increase in the number of birds from the previous two weeks. A minimum of 96 birds were present on the northern fields but they were spread over eleven different fields. There was movement between the different feeding areas with worked arable as well as pasture fields being frequented. The majority of the Curlew recorded were in the fields from East Halton Skitter south to field 54;

at the southern end of the survey area there were only five birds in field 103 and 19 on the adjacent inter-tidal suggesting that this sub-population of birds has yet to arrive in any numbers or is frequenting a different part of the estuary.

A flock of 12 Dunlin flew across the Humber from the north bank, 40 minutes after high water, and continued onto the Able storage area, south of North Killingholme Haven pits where they appeared to land. Further observations failed to reveal just where they had landed but it was probably on the working area at the south-west corner of this site.

Survey period 13: September 23rd to 29th 2007

The unsettled weather continued through this period as some strong September depressions tracked eastwards across the UK producing gales in the northern isles and often strong winds further south. The week began quite warm and sunny but with a strong south to south-westerly wind bringing rain overnight through to the Monday. As the wind swung into the north-west on the Tuesday temperatures began to fall and isolated squally showers moved south. The wind intensified during the 26th reaching force 5-6 from the north-north west and sending temperatures tumbling to 9C at midday, below average for late September. Strong winds continued to source from the north through the 27th and 28th swinging into the north-east by midday on the 28th as persistent drizzle and rain spread northwards up the East coast.

Environmental conditions:

Most of the fields within the survey area had been worked down and sown with autumn cereals or oilseed rape by the start of this survey period. Very few stubbles remain with no substantial areas of set-aside contra the previous winter period when these fields proved to be important feeding areas for Curlew at various times during the winter-spring period.

Tides week 13 High Tide at Grimsby Docks

September	23	Su	03 26	5.8	16 17	6.0
September	24	M	04 24	6.3	17 07	6.4
September	25	Tu	05 09	6.7	17 50	6.8
September	26	W	05 50	7.1	18 29	7.0
September	27	Th	06 28	7.4	19 07	7.2
September	28	F	07 07	7.6	19 44	7.2
September	29	Sa	07 48	7.7	20 22	7.1

Tides built up quickly from high medians to peak spring by the 27th with all inter-tidal areas being covered at high water from mid week onwards.

Waders and wildfowl:

The number of Golden Plover on field 1 increased to 443 but no birds were recorded on any of the other fields and all of the birds were roosting rather than feeding. Curlew numbers fell away again with just 24 birds found in the northern fields, all of which were feeding in permanent pastures. Five birds were in field 89 but the grass in the favoured field 103 appears rather long and this field is not being used by this species at present. The number of Curlew on the inter-tidal areas also remained low with just 15 on sector ISJ at low water suggesting that there is at present a dearth of birds throughout the survey area.

Intensive shooting at East Halton pits appeared to be the cause the reduction in waterfowl with all but the most resilient species being reduced in number.

The count of 3400 Black-tailed Godwits in North Killingholme Haven pits was the second highest total of the autumn. At low water all of the godwits were again in the pits and observations suggest that at this time of year birds only feed on the inter-tidal for about 90 minutes to 2 hours between tides before returning to the pits to loaf, bathe and roost. Departure from the roost usually takes place 2-3 hours after high water depending somewhat on the height of the tide. Windy conditions usually bring birds back into the pits more quickly than when it is calm or winds are light. The high tide roost at Killingholme was otherwise very unremarkable with particularly low numbers of Redshank and Lapwing. The number of Mallard continued to increase and there was a notable early autumn Teal count. At Rosper Road the totals of Teal and Shoveler remained fairly static but Mallard totals fell no doubt reflecting a move to Killingholme pits. The flock of Black-tailed Godwits remained with 38 birds being present along with at least four Snipe.

Survey period 14: September 30th to October 6th 2007

The strong north-easterly winds which had dominated the end of the previous survey period eased by the 30th as a high pressure system developed over southern Scandinavia and the North Sea producing a light to moderate east to south-easterly airflow over eastern Britain with varying amounts of cloud. Temperatures fell to <5C at night but rose to the low teens centigrade at midday. The anti-cyclone persisted throughout the week but a weak frontal system tracked southwards through the region overnight from the 17th – 18th.

Environmental conditions:

Most fields in the survey area had already been sown with autumn/ winter cereals; the warm weather clearly favoured germination and many of the fields were already showing a crop with a height of 2-4cm by the start of this period. The continuing lack of rainfall

meant that most fields were very dry to baked while water levels fell further in Rosper Road and East Halton pits.

Tides week 14 High Tide at Grimsby Docks

September	30	Su	08 30	7.5	20 59	6.9
October	1	M	09 15	7.2	21 40	6.7
October	2	Tu	10 06	6.7	22 27	6.3
October	3	W	11 06	6.1	23 24	5.9
October	4	Th	** **	**	12 36	5.7
October	5	F	00 50	5.7	14 20	5.7
October	6	Sa	02 33	5.7	15 43	5.9

From the highest spring tide of the year on September 29th there was a rapid fall off in tidal height to midday means by the middle of the week.

Waders and wildfowl:

The fields in the survey area failed to produce any notable counts of roosting waders in the neap high tides as all of the birds seen on the inter-tidal either roosted in North Killingholme Haven pits or on the upper areas of the inter-tidal which were not covered at high water. Curlew was the only species found on the fields with the northern flock initially split between field 29 and field 31 but most of the birds from field 29 moved to field 31 during the survey with a eight going onto the adjacent inter-tidal. The only other Curlew found were also on permanent pasture with 7 birds in field 54 and 5 in field 98. The preference of this species for permanent pastures is presumably related to food availability as the surface layers of the pasture fields are more likely to retain moisture and hence available worms and invertebrates whereas the dry and often baked clay soils under arable cultivation will presumably be less productive for foraging.

The low water counts on the inter-tidal areas produced high totals of waders with an exceptional Knot count in ISI and a high Black-tailed Godwit count in both sectors. The bulk of the Black-tailed Godwits were in North Killingholme Haven pits at low water with dispersion to feeding areas taking place in the two hour period from 30 minutes before high water to 90 minutes after. This was possible as the high neap tide on the survey date left considerable areas of the upper inter-tidal uncovered. Dunlin numbers increased slightly but overall totals remain particularly low for this species.

Die back of vegetation in Rosper Road accompanied by a fall in water levels has revealed a large muddy area at the eastern end of the reservoir; in addition a large area of shallow water amongst the Mare's tail also offers good feeding for dabbling duck with Teal increasing to 54 birds but the most notable increase was in the Black-tailed Godwit flock which increased to 83 birds. This species is maintaining a continuous presence at this site at the moment.

Survey period 15; October 7th to October 13th 2007

High pressure continued to be the dominant feature of the weather at the start of the survey period with the 7th being particularly hot for October, temperatures reaching 17C in what was almost unbroken sunshine throughout the day. Variable high cloud drifted into the area during the 8th on a light south-easterly wind but temperatures were again high. Several weeks without rainfall ended on the 9th as a period of often heavy rain lasted throughout the day. Rain fell for 14 hours and substantial amounts accumulated particularly following torrential periods in the late afternoon. As the front passed into the North Sea the wind swung from North to South-east and then round to south-west by the 11th. The 10th and 11th were dry but slightly cooler but temperatures rose quickly on the 12th to peak at 21C an exceptional high for mid October. Winds remained light from the north-west with variable cloud cover but long periods of sunshine on the morning of the 12th.

Environmental conditions:

The heavy rain on the 9th was the first precipitation for several weeks and its effects were immediately evident in all areas with flood water pools forming on tracks and roads while levels in the main water bodies rose quickly. Most of the fields in the area had been put down to autumn sown cereals, in contrasts to the previous winter there was little oilseed rape, and many of the fields already showed plant growth of 3-5cm height. The heavy rain dampened the surface of the fields but there was no surface water within any of the fields.

Tides week 15 High Tide at Grimsby Docks

October	7	Su	03 49	6.1	16 42	6.3
October	8	M	04 42	6.4	17 26	6.5
October	9	Tu	05 22	6.7	17 59	6.6
October	10	W	05 55	6.9	18 29	6.7
October	11	Th	06 28	7.0	18 56	6.8
October	12	F	07 00	7.0	19 24	6.8
October	13	Sa	07 31	7.0	19 51	6.8

Tidal heights rose to springs from mid week.

Waders and wildfowl:

Pink-footed Goose was recorded for the first time in these surveys with a family party of eight birds found feeding in field 18 and later presumably the same flock being seen on the stubble in field 44, one of the few stubble fields left in the area. A total of 81 Lapwing were located in three fields at East Halton, 8, 12 and 26 with 84 birds roosting at North Killingholme pits. There was also a large flock of 200+ Lapwing on arable fields outside the survey area to the east of Thornton Abbey. Curlew was the only other wader noted from the fields with just three in field 31 and a single bird in field 55. The lack of birds in the survey area could have been accounted for by the presence of at least 43 birds which were feeding on arable fields to the north of Skitter Beck at East Halton Skitter. None were again located on the southern fields.

Following the heavy rain the number of wildfowl at North Killingholme Pits fell by 55% with the high Mallard counts of recent weeks evaporating; although Teal built up slightly Shoveler totals fell away again. Wader totals were also dramatically reduced on the count date, in spite of the high spring tide, as Black-tailed Godwits fell to 1376 just 38% of the previous weeks autumn high. In spite of the huge fall in godwit numbers 16 colour ringed birds were observed of which one individual was a bird first recorded at the site in 1996 having been ringed in the Wash in 1993 making it at least 15 years old. The low number of roosting Redshank is a cause of concern. It is possible that some of the wintering population has yet to arrive on the Humber and it may also be that birds from the north bank, which formerly used Killingholme on spring tides, may have adopted a new roost at Patrington haven. With a sudden rise in water levels at Rosper Road the area which had been used by the Black-tailed Godwits and Snipe in recent weeks was flooded out and no waders were recorded. The number of dabbling duck at the site also remained at relatively low levels suggesting that the higher water levels also affected these key species.

Survey period 16: October 14th to October 20th 2007

High pressure systems continued to be the dominant feature on the local weather with light winds and a general lack of precipitation again a feature of the week. Temperatures varied from 18C at the start of the week to peaks of 14C in the latter part with the first noticeable overnight ground frost on the morning of the 18th. Rain fell for a few hours on the 16th but there was little in total and there was a general drying out of some of the wetter areas created by the heavy rainfall in the previous week.

Environmental conditions:

The fields remained in similar condition to the previous period but it was notable that the autumn sown cereal crops were growing at a rapid rate with shoots in excess of 12cm in height in many of the early sown fields.

The major difference in the wetland sites from previous surveys was the lowered water levels in North Killingholme Haven pits where extensive areas of mud were available to roosting and feeding waders in contrast to the previous surveys when water levels had been rather too high. The effect upon the number of small waders and Redshank was immediate.

Tides week 16 High Tide at Grimsby Docks

October	14	Su	08 02	6.8	20 19	6.7
October	15	M	08 33	6.6	20 45	6.6
October	16	Tu	09 02	6.3	21 14	6.4
October	17	W	09 33	6.0	21 47	6.1
October	18	Th	10 15	5.7	22 32	5.8
October	19	F	11 20	5.4	23 41	5.6
October	20	Sa	** **	**	13 00	5.4

Tidal heights fell from springs at the start of the period to low neaps by the following weekend.

Waders and wildfowl:

In spite of large increases in Golden Plover numbers around the estuary; in excess of 4000 were estimated across the estuary from East Halton Skitter, and 7000+ were between Read's Island and Alkborough Flats during the week, there were no roosting birds on the favoured fields at East Halton Skitter. Lapwing numbers are still relatively low around the estuary and although the high tide roost at Killingholme was the highest to date at 182 birds there were again no records from the fields in the survey area but 70+ were on fields north of East Halton Skitter. Curlew was the only wader species found in the fields with 44 birds in the northern fields, mainly again all on permanent pastures, and a further 32 birds on the permanent pastures in south Killingholme marshes. The number of Curlew is still lower than in the previous winter period possibly reflecting the loss of over-wintered stubbles, the nature of the surface soil and also perhaps the fact that some wintering birds have yet to arrive in the area.

The high tide roost at North Killingholme Haven pits produced the first notable counts of Dunlin 657 and Redshank 535. The increased Dunlin count presumably reflected the arrival of wintering and passage birds, peak counts often being recorded in early October in the pits, but also the availability of large areas of bare mud for the birds to roost and feed on. Both a proportion of the Dunlin and Redshank came from and departed across the estuary as well as moving to the adjacent inter-tidal. Black-tailed Godwits increased from the previous week's low but total numbers were still well down on the autumn's peak. As they departed from the roost about 15% of the birds moved north up the estuary with 10% moving across the Humber. Most of the birds moved down river towards inter-tidal section ISJ or passed south over Immingham Docks. Up to 700 birds however, flew inland and appeared to attempt landing at Rosper Road before moving off south-west. The count of 38 Snipe at Killingholme pits came at a time when obvious arrivals of this species were taking place down the East coast; 14 birds were also on the inter-tidal at East Halton Skitter.

Survey period 17: October 21st to October 27th 2007

High pressure systems were again the dominant feature of the weather during the period but weak frontal systems moved south during the mid week period. Winds were again mainly light moving from west-north-west through north to south-east during the period. There were long spells of hot sunshine at the start of the week but with light winds temperatures fell rapidly at night and sharp ground frosts occurred from the 21st onwards under clear skies. Mist and fog also developed in areas near the estuary at the start of the week.

Environmental conditions:

Little changed from the previous period with further growth of autumn sown cereal crops and the continued desiccation of the surface layers of the soil being evident; Virtually all of the fields in the survey area had been sown by the start of this survey period with odd exceptions being half of field 65, still stubble, field 25 still rape stubble with manure being spread across the field and field 44 which was also still cereal stubble. The vast majority of the fields in the survey area had been sown with autumn cereals.

Tides week 17 High Tide at Grimsby Docks

October	21	Su	01 15	5.6	14 33	5.6
October	22	M	02 40	5.9	15 39	6.0
October	23	Tu	03 40	6.3	16 32	6.4
October	24	W	04 29	6.8	17 17	6.8
October	25	Th	05 14	7.2	17 58	7.0
October	26	F	05 58	7.4	18 37	7.2
October	27	Sa	06 42	7.6	19 17	7.2

Tidal heights increased from neaps at the start of the period to high springs at the end of the week.

Waders and wildfowl:

Golden Plover remains a scarce species in the survey area in spite of large numbers building up in the estuary as a whole. A flock of 145 birds roosted on field number 1 over high tide but there were no other birds in the area as a whole. Lapwing were found in two fields with 57 in field 26 and just 5 in field 104. A flock of 49 birds roosted through the day on the inter-tidal ISJ sector with birds commuting between North Killingholme pits, field 26 and the inter-tidal during periods of disturbance.

The hard baked surface on most of the arable fields may be the reason that so few waders are feeding in these fields with Curlew in particular clearly favouring permanent pastures. Curlew were again concentrated in two areas the pastures in fields 29, 30 and 31 in the north and fields 103 and 89 in the south. Six birds also roosted on field 105 for a brief spell at low water. The bulk of the northern flock commuted between fields 29 and 31 using the edge of the wetland in field 29 for bathing during their stay in that pasture.

The high tide roost at North Killingholme Haven pits held all of the local feeding Black-tailed Godwits with a further 350 birds arriving shortly before high water from the north. Disturbance moved the birds frequently with the passage of an adult Peregrine and a hunting Sparrowhawk were the most obvious sources of disturbance. As some areas of the upper inter-tidal were not covered at high water the majority of the Dunlin and Redshank which had been feeding on the inter-tidal roosted at the southern end of sector ISJ adjacent to the HIT terminal. Snipe numbers remained fairly good and it was estimated that several more birds were roosting in the long grass in addition to the 21 birds which were visible at the maximum count.

The link between wildfowl and waders using Rosper Road pool and North Killingholme Haven pits was clearly shown by the movement of the flock of 35 Shoveler from the former site to the latter during the period of observations. Mallard also moved between the two sites and there was also evidence of a movement of Mallard from North Killingholme Haven pits to the permanent pond in field 64. Four Wigeon were observed on the pond in field 64 but flushed from the site during the survey; later four Wigeon were found at East Halton pits suggesting they were the same birds and demonstrating a link between these two wetlands. No Black-tailed Godwits were present at Rosper Road during the survey but a single Green Sandpiper was seen along with the usual small number of Snipe which flushed from the beds of Mare's tail.

Survey period 18: October 28th to November 3rd 2007

The week started with a strong south-westerly wind blasting the area accompanied by unseasonably mild temperatures, up to 19C on the Sunday, and a period of fairly heavy rain from mid morning to mid afternoon. As the front which brought the rain cleared the area winds dropped away almost immediately and temperatures fell back slightly but it remained mild overnight. As high pressure became established over the British Isles long periods of sunny and mild weather became the norm for the week. A fresher westerly wind developed on November 1st with some very light showers in the morning but temperatures rose again by evening as the cloud broke up. Light winds were the norm during the next two days with a fresher northerly getting up by late on the 3rd. The morning of the 3rd produced some of the highest temperatures of the autumn with 19C recorded locally in T-shirt weather.

Environmental conditions:

There was little apparent change in most of the fields from the previous week with odd late stubbles being ploughed.

Tides week 18 High Tide at Grimsby Docks

October	28	Su	06 28	7.6	18 56	7.2
October	29	M	07 16	7.3	19 37	7.0
October	30	Tu	08 05	7.0	20 21	6.7
October	31	W	09 00	6.5	21 10	6.4
November	1	Th	10 05	6.1	22 06	6.1
November	2	F	11 29	5.8	23 21	5.8
November	3	Sa	** ** *	**	12 56	5.7

Tidal heights fell from some of the highest springs of the year at the start of the period to median neaps at the end of the week.

Waders and wildfowl:

A concentration of wildfowl was again found in the ponds in field 64 where the main species was Mallard, 61 birds but with an increase to 18 Wigeon, 4 Shoveler and 9 Teal. The reason for the presence of the wildfowl was the adjacent stubble, which had been left in the western half of field number 65, and was being used as a feeding area by the ducks. The low number of Mallard recorded from North Killingholme Haven pits on the same date and the observation of birds moving between that site and field 64 confirmed the link between the two groups of birds.

Confirmation was also obtained of the perceived extensive shooting at East Halton pits when a wildfowler was observed leaving the area on the morning of the survey. The particularly wary nature of all wildfowl, including Coot and Moorhen, on this site had led to the conclusion that shooting was prevalent here in the winter months but this was the first direct evidence of the effects. The number of waterfowl at Rosper Road was the highest yet recorded due to an increase in Mallard and the apparent presence of all of the Shoveler.

A total of 82 Golden Plover roosted on field number 1 and in addition a flock of 38 birds was observed flying west over the area just north of East Halton pits and heading inland towards the Thornton Abbey area. In Goxhill Marsh a flock of 1340 Golden Plover was found during poor weather roosting on a winter cereal field.

At first light a total of 57 Curlew were found roosting at North Killingholme Haven pits, where they had been all night (previous day's observations). The birds left in three parties 40 minutes after sunrise and moved off west-south-west and the turned north-west. Subsequent field surveys located a total of 61 birds in three pastures, fields 64, 55 and 41, all fields which have previously held feeding Curlew. There was some movement between all three of the fields during the survey. The almost exact correlation between the number of birds at North Killingholme and in these fields confirms that they were the same population. In addition four birds were feeding in a stubble field north of East Halton Skitter Beck with one individual moving onto field number 1 and a single bird was foraging on field number 6. The lack of any birds in field 29 was almost certainly due to the presence of the wildfowler. At the southern end of the survey area Curlew numbers remained low with just seven birds on the pasture in field 88. Of interest on the same survey date incidental observations revealed the presence of 52 Curlew and 120 Lapwing in fields around Thornton Abbey and a further 21 Curlew in fields by Butterswood (south-west of Goxhill). These birds are considered to be part of the flock which roosts between Goxhill Skitter Ness and East Halton Skitter.

Waterfowl numbers at North Killingholme pits were low, just 27 birds, over high tide but the wader roost produced the highest cumulative total to date with 4175 birds present at high water. The bulk of these were as usual Black-tailed Godwits, 2550 but the count of 1250 Dunlin was one of the highest counts of this species in recent years. Most of the Dunlin were of the shorter billed race *C a alpina* which winters on the estuary often following a post-breeding moult stop-over in the Wash or the Waddenzee. Redshank and Lapwing numbers by contrast remained low but the count of 57 Curlew mentioned above was by far the highest count of this species in the roost this autumn – winter.

Survey period 19; November 4th to November 10th 2007

The mild conditions prevailed through the first two days of the week but with somewhat different conditions. The 4th was cloudy with sunny spells and a light westerly wind while the 5th was particularly dull and grey through most of the day with a fresh westerly wind and a heavy rain shower mid afternoon following which the sky cleared and a colder north-westerly wind set in during the evening. A cool north-westerly airstream affected most of the remainder of the week with a short-lived period of rain on the afternoon of the 5th and again on the morning of the 8th but no substantial amounts were recorded. Temperatures fell below the seasonal average for the first time in the autumn as the north-westerly wind increased to strong on the 9th and 10th.

Environmental conditions:

There was no appreciable rainfall in the previous week so the condition of the fields remained the same as in recent weeks, rather dry on the surface. Field 44 was ploughed and fields 58 and 59 sown with the inevitable winter wheat that had pervaded all parts of the survey area. Incredibly even field 109 was dragged during the week in preparation for sowing.

The only small area of stubble remained was in the western half of field 65 which the farmer appeared to be leaving as an attraction to the large number of wildfowl which were feeding on the field and using the pond in the adjacent field 64 for roosting and loafing.

Tides week 19 High Tide at Grimsby Docks

November	4	Su	00 53	5.8	14 08	5.9
November	5	M	02 09	6.0	15 04	6.1
November	6	Tu	03 04	6.3	15 48	6.3
November	7	W	03 48	6.5	16 24	6.4
November	8	Th	04 26	6.6	16 55	6.6
November	9	F	04 59	6.7	17 25	6.7
November	10	Sa	05 35	6.8	17 53	6.8

Tidal heights rose from high neaps at the start of the period to low springs at the end of the week.

Waders and wildfowl:

Total of 65 Lapwing came into North Killingholme pits before high tide from the north bank and roosted there over the high tide period. There were again no birds on the survey fields but a flock of about 250 birds was again noted in fields to the north-west of Thornton Abbey along with 100+ Golden Plover. Only two Golden Plover were roosting on field 1 at high water; the Humber bank along section ISi has of late been heavily disturbed by sea anglers around the high tide period with multiple vehicles parked on the embankment and colourful dressed anglers and dogs much in evidence. Whether this is having any effect upon the choice of roost site by waders is not evident at the present time.

A total of 356 Dunlin fed on the inter-tidal, !SJ, throughout the low and mid tide periods and all of these birds roosted at high water on the uncovered upper shore at the southern end of ISJ at high tide with just 22 birds appearing in North Killingholme Haven pits. A flock of 37 Dunlin flew north-west gaining height all the time from the Humber over North Killingholme Haven pits before being lost to the north-west prior to high water. This was probably a flock of incoming migrants. A total of just 40 Curlew were recorded from the northern permanent pastures with two birds in the southern field 88. The continuing low totals of this species in the survey area could be a result of the movement of birds to fields further inland but at dusk a total of 11 birds were noted flying across the estuary from the direction of field 31 towards the north bank so it is possible that some of the birds which normally frequent the south bank fields are remaining on the north bank at the present time.

Up to 610 Black-tailed Godwits remained in Killingholme pits throughout low water but the majority moved to the inter-tidal area north of Pywipe to feed and returned to the pits 90 minutes before high tide. A total of 2840 birds roosted, probably the vast majority of the Humber population; (up to 170 birds have been regular at Alkborough Flats in recent weeks) but only 28 Redshank and 110 Lapwing.

High numbers of wildfowl remained on field 64 (roosting bathing) and 65 (feeding); the survey inadvertently flushed the birds the majority of which moved to North Killingholme Haven pits where some individually recognisable Mallard and the eight Wigeon were recorded later in the survey. Most of the Mallard and Shoveler from Rosper Road also flushed in the direction of North Killingholme Pits and the combined totals of all of the wildfowl from the three feeding areas gave rise to the highest totals so far recorded for Mallard, Shoveler and Wigeon with 181, 78 and 8 respectively being noted.

The shooting pressure on East Halton pits was clear with a gunman leaving the area in the morning and virtually no wildfowl located there during the remainder of the day. This type of shooting pressure is undoubtedly detrimental to the ecology of the site and to the use of the area and adjacent fields by waterfowl and waders.

Survey period 20; November 11th to November 17th 2007

The strong to gale north-westerly winds which had dominated the end of the previous week continued throughout Sunday 11th with frequent showers pushing down the east coast. The winds fell away overnight and left a sharp ground frost on the morning of the 12th. The bulk of the week was then settled with sunny days and cold nights with occasional frosts. It became duller towards the weekend but winds were still light, as a front approached from the north-west.

Environmental conditions:

There was very little change in the conditions of the fields within the study area during the period. The area of stubble in field 65 was still left un-ploughed by the farmer and hence continued to attract large number so wildfowl.

Tides week 20 High Tide at Grimsby Docks

November	11	Su	06 08	6.7	18 22	6.8
November	12	M	06 41	6.6	18 52	6.8
November	13	Tu	07 14	6.5	19 23	6.6
November	14	W	07 47	6.3	19 54	6.5
November	15	Th	08 25	6.1	20 32	6.3
November	16	F	09 10	5.9	21 17	6.1
November	17	Sa	10 09	5.7	22 16	5.9

Tidal heights rose fell from high springs to median heights by the end of the period.

Waders and wildfowl:

A single White-fronted Goose was found in field 31 at dawn and subsequently it moved into field 25 and then field 29 before flying south-west over the old railway tracks and being lost to view. This was the first record of a bird of this species in the local area for over four years. Mallard, Wigeon and Shoveler were again noted moving between North Killingholme Haven pits and fields 64 and 65 and Rosper Road. Although there had been no shooting in the immediate hours prior to the survey the number of waterfowl at East Halton pits remained depressed. Teal numbers in the major wetlands remain very low compared with the previous winters with even the favoured Rosper Road holding less than 20 birds. Mallard remain in good numbers as they favour the over-winter stubble in field 65 and roost at North Killingholme and Rosper Road while Shoveler numbers are slightly up on the recent winter average.

Curlew were at their lowest levels to date with just 12 birds found in the East Halton pastures and two in field 88 but see incidental observations below. Lapwing were recorded in significant numbers for the first time in the survey fields with 82 and 42 in autumn cereal fields 24 and 26 and a further 15 birds in the permanent pasture in field 30. The only Golden Plover were 13 accompanying Lapwing in field 24.

Northerly winds had pushed much of the water in North Killingholme pits away from the northern edge and revealed large areas of mud which was being exploited by the flocks of Dunlin and Redshank even at low water. Most of the Black-tailed Godwits arrived from the traditional feeding sites south of Immingham Docks in the two hours prior to high water.

Incidental observations revealed the presence of a flock of 44 Curlew feeding in a pasture field immediately east of Thornton Abbey. This field was flooded for a number of weeks during the summer. In the same general area arable fields to the west of Thornton Abbey held a flock of 202 Golden Plover and 160+ Lapwing. It seems likely that some of these birds are those which are typically found in the survey area particularly the Curlew which have been noted flying in that direction over the East Halton area and have been much reduced in number in the East Halton Marshes complex thus far during the present winter surveys.

Survey period 21; November 18th to November 24th 2007

The first substantial rainfall for several weeks arrived during the 18th with more heavy rain following on the 19th and lighter rainfall during the late afternoon of the 20th. Winds were from the south-east at the start of the period, an unusual direction for late November. The 21st started out dull but brightened during the day with temperatures dropping to 3c overnight. Variable cloud on the 22nd was accompanied by a freshening north-westerly wind which brought more rainfall to the area after dark. Showers continued through the early part of the 23rd after which the day was fine and sunny. A sharp overnight frost gave way to a freshening westerly wind on the 24th.

Environmental conditions:

Following the rainfall at the start of the period there was some standing water in the wetter areas of some of the arable fields and clearly the surface layers of the soil were softer than for many weeks.

Tides week 21 High Tide at Grimsby Docks

November	18	Su	11 22	5.6	23 28	5.9
November	19	M	** **	**	12 45	5.7
November	20	Tu	00 44	6.0	13 54	6.0
November	21	W	01 51	6.4	14 52	6.3
November	22	Th	02 49	6.7	15 42	6.6
November	23	F	03 42	7.0	16 29	6.8
November	24	Sa	04 34	7.2	17 12	7.0

Neap tides at the start of the week built up to some moderate springs by the end of the period.

Waders and wildfowl:

This period saw an obvious influx of Lapwing into the survey area and the inner Humber in general with a build up of Golden Plovers also occurring in many areas although not within the surveyed region. Lapwing were observed moving west up the estuary and there were considerable movements of flocks around the estuary typical of the dispersal of newly arrived migrants. In the survey area the high tide roost at North Killingholme Haven pits held the highest number of Lapwing thus far with 665 birds recorded. The two inter-tidal areas also held Lapwing with 67 roosting on the southern section of ISI and 342 on ISJ at low water. In the fields there were a total of 458 Lapwing with 254 feeding in field 1, 132 in field 17 and 72 in field 24. These are the first substantial counts of this species in the fields during the present survey. By contrast there were only 44 Golden Plover, all feeding in field 17 with Lapwing; (but see below). Golden Plover were noted flying west over East Halton pits during surveys and their feeding area was located later in the day see below.

Incidental observations led to the discovery of a large flock of Golden Plover, Lapwing and Curlew in the area between South End Goxhill and Thornton Abbey. During observations North Killingholme pits after high water four of the five Ruff which had roosted there at high tide were observed to fly off to the north-west. The observation of a large flock of Golden Plovers in the fields north-west of Thornton Abbey led to the re-discovery of the same four Ruff which were feeding on fields between South End Goxhill and Thornton Abbey at approximate Grid Reference TA110196 with a large flock of Golden Plover and Lapwing. The four birds

were individually identifiable from differences in head plumage. The same fields held a total of 2600 Golden Plover and 34 Curlew. Curlew were also noted in fields to the west of Thornton Abbey at TA113193, 19 birds, along with 290 Lapwing and an additional 600 Golden Plover.

Curlew numbers were again low in the survey area probably due to the movement of birds to the feeding areas noted above. A total of 29 birds was found in six different fields in the northern part of the survey area with 22 noted on field 103 but none along Rosper Road. The number of birds using the southern inter-tidal sector ISJ also remains low with 27 birds being the peak count there.

The number of Black-tailed Godwits at North Killingholme pits fell away but the survey was on a neap tide and it is possible that birds remained on the favoured feeding areas towards Pywipe during the survey.

Mallard again made frequent movements between fields 64 and 65 and North Killingholme pits during the day and a single movement was also noted between Rosper Road and North Killingholme. Mallard were also seen moving from the north bank of the estuary and into North Killingholme pits prior to high tide. These three movements showed that Mallard roosting and loafing at North Killingholme pits were feeding in three different areas all of which were considerable distances from the pits. The number of Teal remains surprisingly low compared to recent winters with all of the water bodies only producing small numbers of birds. Shoveler numbers also dropped drastically during this period a fact which coincided with a sudden rise in abundance at Barton pits possibly suggesting a connection between the two widely separated areas. There was a sudden jump in the number of Coot at Rosper Road an unexpected phenomenon in this little studies species.

Survey period 22: November 25th to December 1st 2007

It was a cold start to the week with a north-westerly airstream and a chilling breeze but it remained dry through to mid week. Winds were light with some mist and fog forming on the 27th as warmer air from the Atlantic came into contact with cool air over eastern England. Temperatures rose rapidly during the middle of the week as the Atlantic depressions exerted control over local weather patterns; winds increased in strength from the west with some rain falling from late on the 28th. The remainder of the week was fairly settled with light winds from the west but temperatures dropping again on the 29th before a vigorous frontal system approached from the north-west on the Saturday evening.

Environmental conditions:

A surge tide and some rainfall pushed up the water levels in North Killingholme pits at the weekend with the result that the area of mud was severely reduced. Continued growth of autumn sown cereals in a large percentage of the fields within the survey area produced a crop with a height of 5-10cm. Surface layers remained damp from the previous week's rainfall but there was no obvious extent of standing water in any of the fields.

The increase in sea angling along the seawall between East Halton Skitter and North Killingholme Haven, ISI, continued with anglers spread along the whole length of the embankment through to the old seaplane jetty on each visit to the site even at peak low water. During falling and rising tides anglers walk out onto the inter-tidal and cause disturbance to any feeding waders throughout this section. This disturbance also affects the fields immediately inland of the seawall as brightly dressed humans on an elevated embankment have a negative impact upon the use of fields close to the bank by roosting and feeding waders.

Tides week 22 High Tide at Grimsby Docks

November	25	Su	05 26	7.3	17 56	7.1
November	26	M	06 18	7.3	18 39	7.1
November	27	Tu	07 10	7.1	19 23	7.0
November	28	W	08 02	6.8	20 08	6.8
November	29	Th	08 56	6.5	20 54	6.6
November	30	F	09 52	6.1	21 45	6.3
December	1	Sa	10 57	5.9	22 43	6.1

Some high springs under a full moon began the week with tidal height falling away rapidly from mid week to the end of the period.

Waders and wildfowl:

The mid-week survey coincided with the arrival of milder Atlantic air and the still high water levels in North Killingholme Haven pits as tidal heights fell.

Waders on fields were still in short supply but a flock of 586 Lapwing and 8 Golden Plover roosted in field number 1 at high water. There were still flocks of Lapwing in the fields around Thornton Abbey but the large flock of Golden Plover had disappeared from that site; up to 65 Curlew continued to feed in the same fields at Thornton Abbey probably representing a substantial proportion of the flock normally found in East Halton marshes. A large flock of 569 Lapwing were day roosting on the southern end of the inter-tidal ISJ on the rising tide but they moved off inland at dusk presumably to feeding areas beyond the survey site. A flock of 70 birds was observed moving westwards over East Halton village in the direction of Thornton Abbey just before dark.

Curlew numbers were again very low with just 18 in the northern fields, the bulk of these, 15 in the permanent pasture in field 54. At the southern end of the area 42 birds were feeding in the grass field number 103 but all moved onto the upper inter-tidal to roost at dusk. The count of 63 birds on inter-tidal sector ISJ was in fact the highest total from this area so far this winter.

The large number of waterfowl normally encountered in fields 64 and 65 were reduced to just 15 birds of four species but it was

evident that the site had been disturbed prior to the survey and presumably most of the birds had moved to roost sites. This was confirmed by the presence of 71 Mallard at North Killingholme and 46 at Rosper Road. The number of Shoveler at Rosper Road returned to recent levels following the decrease in the previous week. Most of these birds left the site during the survey and were subsequently relocated at North Killingholme pits.

The increased water level in North Killingholme pits made the site much less suitable for roosting waders with the remaining exposed mud along the northern edge where the birds are forced to roost up against the boundary hedge. Waders are unwilling to use this part of the pits as it offers hunting perches for Sparrowhawks which often disturb the waders.

With the increased water levels at North Killingholme pits there were in fact more wildfowl than waders for the first and probably the only time this winter. Teal showed signs of a small increase with 30 birds at Rosper Road and North Killingholme, being different flocks.

Survey period 23; December 2nd to 8th 2007

The 2nd was a very wet day with rain falling almost continuously and being heavy it produced some local accumulations of standing water within the arable and pasture fields. Winds varied in strength through the day and swung from south to north-west. The 3rd started out bright and sunny but cloud increased by midday with heavy rain arriving in the early afternoon; this cleared by 15:00hrs and the night was mainly clear. The 4th was particularly dull with low cloud and fresh south-westerly wind bringing some light drizzle around midday. The 5th was again dominated by westerly winds and total cloud cover with some afternoon showers before more general light rain developed on the 6th backed by a moderate westerly.

Environmental conditions:

The fields within the survey area became wetter during the period due to the frequent rainfall. Vegetation die back in Rosper Road allowed the greener Mare's tail to flourish and provided increased feeding for dabbling duck. Water levels in North Killingholme pits were lower than in the previous week but were still relatively high and unsuitable for small waders. The over-wintered stubble remained in field 65 allowing large numbers of Mallard to feed in that area.

Sea angling continued to be a source of disturbance along the sea wall between East Halton Skitter and North Killingholme Haven, ISI, with the vast majority of the waders present along this inter-tidal sector being located at the southern end of the sector throughout.

Disturbance events:

Possible disturbance may have affected the fields immediately inland of the seawall between East Halton Skitter and North Killingholme Haven but as no waders were found in these fields it was not possible to analyse whether there had been disturbance of the potential roost site or if the area was simply not being used by birds. A flock of 650 Lapwing, 47 Knot, 23 Redshank and 124 Dunlin was feeding on the southern edge of the inter-tidal sector ISG on the mid tide the Lapwing had moved prior to the high tide count and were not present in any of the adjacent fields although the other waders roosted on the uncovered upper edges of the inter-tidal as this was a neap high.

Surveying the permanent pond in field 64 and also counting wildfowl on Rosper Road inevitably leads to disturbance of waterfowl present and it has been found that these birds in the main then move to North Killingholme Haven pits. It is not possible to count the wildfowl at these two sites without causing disturbance. Similarly surveying the permanent pastures in the area of field numbers 42, 54 and 55 often leads to disturbance of feeding Curlew as the birds are often located close to the access footpaths; movements area generally limited to adjacent fields but longer movements are mapped. Curlew also move between the same fields when they have not been disturbed and it is clear that they utilise all of the permanent pastures certainly over the course of a week and usually within the course of a single day.

Major disturbance events at North Killingholme Haven pits are usually caused by hunting Sparrowhawks; the growth of tall thorn hedgerows around the roost site has provided a perfect ambush location for hunting Sparrowhawks and this is has been pointed out as a major threat to the wader roost. Simple cutting of the roadside hedgerow and that along the railway would alleviate this problem. Occasional disturbance of roosting waders on the side of the roadway results from the movements of pedestrians while dog walkers also produce disturbance events when walking along the Humber embankment.

During this survey period most of the roosting waders were moved out of the pits and onto the upper inter-tidal in ISJ over high water by frequent Sparrowhawk attacks.

East Halton pits continued to suffer from frequent, if not daily, wildfowling and the number of waterfowl remains particularly low as a result.

Tides week 23 High Tide at Grimsby Docks

December	2	Su	12 06	5.7	23 53	5.9
December	3	M	** **	**	13 12	5.7
December	4	Tu	01 07	5.9	14 11	5.8
December	5	W	02 14	6.0	15 01	5.9
December	6	Th	03 07	6.1	15 45	6.1
December	7	F	03 53	6.2	16 22	6.3
December	8	Sa	04 36	6.4	16 57	6.5

Waders and wildfowl:

The large flock of wildfowl found on the pond in field 64, 132 Mallard, 16 Teal and 4 Wigeon mainly moved to North Killingholme pits following the survey with the exception of 12 of the Teal and 2 Wigeon. The adjacent over-winter stubble continues to be the

main feeding source for this sizeable concentration of birds. Apart from the increase to 43 Coots, East Halton pits continued to hold very few waterfowl due to regular shooting disturbance. The exceptional count of 106 Mallard at Rosper Road probably included most of the birds from North Killingholme Haven pits and field 64 although there were observed movements of birds across the estuary to the north bank. Shoveler numbers dropped away again and Teal continued to be recorded in below average numbers from this site which appears to be generally disturbance free.

The only waders found on the fields in the survey area were Curlew which was somewhat surprising as Lapwing numbers had increased markedly with 1468 found on the inter-tidal sectors at low water and 325 in North Killingholme pits at high tide. Curlew were found in five areas; the northern flock of 30 birds was observed in five different fields; permanent pastures in field number 29, 30, 42 and 54 and the oilseed rape stubble in field 25. Birds were observed moving between the different fields during the survey period. Five birds were in field 76, the first time that this site has been used this winter while a flock of 20 birds observed flying inland over Rosper Road at first light were tracked down to the playing fields on the Conoco – Phillips site alongside the A180 where they were feeding throughout the day. A total of 19 birds from the southern flock fed in field 89 and a further 20 birds moved from the inter-tidal into field 98 at high water.

In the fields around Thornton Abbey (outside the survey area) there were 1650 Lapwing, 38 Curlew but just five Golden Plover on the survey date.

The southern end of inter-tidal sector ISI held a large roosting flock of Lapwing, 1350 birds, and a feeding flock of 164 Dunlin at low water when ISJ had 311 Dunlin, 423 Black-tailed Godwits, 43 Curlew and 107 Redshank. The December count of Black-tailed Godwits was quite exceptional as most of the winter flock feed on the southern inter-tidal sectors between Immingham Docks and Pywpe from mid November through to mid February and are seldom found on the Killingholme sectors.

A colour ringed Black-tailed Godwit, Orange/Red Lime/Red flag, which had been present at Alkborough Flats in late November was seen at North Killingholme pits on December 4th further reinforcing the connection between these two major wintering areas on the Humber estuary.

Survey period 24: December 9th to 15th 2007

Heavy and persistent overnight rain during the 8th – 9th added to the local accumulations on fields in the study area. Further rain fell during the ensuing night and on the 10th. Temperatures fell to the seasonal norm with winds being rather variable moving from south to north-east during the course of the 9th. From mid morning on the 10th a high pressure system built over the British Isles producing an area of almost static air and bringing a series of sharp overnight frosts with the freezing conditions persisting throughout the day where the warm sun failed to reach. Most of the week was bright and sunny but cloud cover increased from the 14th although winds remained very light.

Environmental conditions:

Recent rainfall started to impact upon the fields within the study area with permanent pastures and some of the lower lying arable fields accumulating areas of standing water. Water levels also rose in all of the three major wetlands with the amount of exposed mud at North Killingholme Haven pits being considerably reduced making the site unsuitable for small waders to roost.

Disturbance events:

Sea angling continued to be a source of disturbance along the sea wall between East Halton Skitter and North Killingholme Haven, ISI, with the vast majority of the waders present along this inter-tidal sector being located at the southern end of the sector throughout. Dog walking has also increased dramatically in the East Halton Marshes area and also along the sea embankment at North Killingholme. The majority of walkers follow roads and the sea embankments but their conspicuousness is often enhanced by the wearing of high visibility clothing. Disturbance of waders and wildfowl is usually due to the sight of people rather than direct disturbance from dogs themselves. The presence of people in raised positions, such as on the sea embankment is likely to be seen as a threat to birds roosting and feeding in fields adjacent to the bank which are lower in elevation. Whereas very few walkers or dogs were seen in the East Halton Marshes in the previous winter the numbers this winter probably average five to ten every hour. A favoured route which is being adopted is to follow the minor road to Winter's pits then the seawall to East Halton Skitter and back along Skitter road. This produces disturbance of many of the key wader roost areas in the marsh. During the present survey a roosting and feeding flock of Curlew in the vicinity of fields, 4, 6, 10, 17 and 24 were frequently put to flight by dog walkers during the period of the survey in the area (2 hours) with the birds being forced to move between fields. While this disturbance did not result in the birds leaving the area altogether this was perhaps as a result of their desire to feed in the area; had these been roosting waders then the frequent disturbance could have resulted in the movements of birds to a different less suitable roost site.

Tides week 24 High Tide at Grimsby Docks

December	9	Su	05 15	6.4	17 30	6.6
December	10	M	05 53	6.5	18 03	6.7
December	11	Tu	06 28	6.5	18 35	6.7
December	12	W	07 03	6.4	19 09	6.7
December	13	Th	07 41	6.4	19 44	6.7
December	14	F	08 21	6.3	20 23	6.6
December	15	Sa	09 03	6.2	21 06	6.5

Tides were moderate springs throughout the period.

Waders and wildfowl:

A flock of 105 Curlew was found roosting in field number 10 at first light suggesting that they had in fact roosted overnight in this location. From there they dispersed into feeding sites in the local area with birds being noted feeding in fields 11, 17, 24 and 30; all of these birds were from the same roosting flock with movements being recorded between all of the fields. Four birds were also roosting in field number 8. In addition to this flock a single bird was found in field 47 with three Lapwing and two birds were feeding in field 63 before moving into a pasture field outside the survey area on the western side of East Halton village. At the southern end of the survey area just one Curlew was feeding in field 88 and six birds were again on the Connoco playing fields.

At first light a flock of 34 Golden Plover were found roosting on field number 4 with an additional 53 birds on field number 6. A flock of 21 birds flew east over field number 1 and continued across the estuary thirty minutes later; when field 4 was checked to ascertain whether these had been birds from that roost area the flock in that field had increased to 105 birds. This suggests that Golden Plover that may have been feeding overnight on inland fields were using this site as a roost, or feeding area, before moving back to the estuary to loaf during the day.

A small flock of 35 Lapwing attempted to roost adjacent to the seawall in field number 1 but they were flushed by anglers and joined the large gathering of this species on the inter-tidal at the southern end of ISI. The upper reaches of the inter-tidal were not covered at high water and Lapwing roosted there and on the old seaplane jetty with a count of 950 birds at high tide. A further flock of 500 birds was noted over the foreshore on sector ISG, north of East Halton Skitter and all these birds moved south to join the 950 above as the tide fell. Only 180 Lapwing were found roosting in North Killingholme Haven pits in spite of the presence of 1400 Black-tailed Godwits; the raised water levels forced short-legged waders closer to the hedges on the northern side of the pits which may well have had a negative impact upon the choice of roost site by Lapwing which can be particularly flighty when subject to frequent raptor disturbance as noted in the previous report.

The pond in field 64 and feeding area in field 65 appeared to have been disturbed prior to the survey as there were just five Mallard in this normally wildfowl rich area. The birds were not however, in North Killingholme pits and it is possible that they had moved to a newly available feeding site, outside the survey area, following the heavy rains.

The total of nine Ruff at North Killingholme pits was the highest count of this species thus far in this series while the large Black-tailed Godwit roost was also unusual for December.

Although no wildfowlers were present at East Halton pits at dawn the area held few waterfowl and frequent disturbance has clearly had a negative impact upon this formerly productive locality.

Outside the survey area the fields around Thornton Abbey held 1100 Lapwing and 80 Golden Plover but fewer Curlew, down to 18 birds. The increased number of Curlew in East Halton Marshes during this survey therefore suggests that there has been a link between the Curlew feeding in these two areas.

A colour ringed Curlew seen on the inter-tidal off South Killingholme lighthouses, ISJ, had been ringed at Cherry Cobb Sands on the north bank of the estuary in the 2006 – 2007 winter (no more specific details being available).

Survey period 25; December 16th to 22nd 2007

Following the severe frosts which occurred at the end of the previous survey period the 16th was again cold but with total cloud cover temperatures remained above freezing all day. By nightfall skies cleared allowing a penetrating frost to develop before cloud increased again in the early hours and temperatures again rose above freezing with the 17th being warmer but still very dull with complete cloud cover and a light easterly wind. The cold, dull and murky anti-cyclonic conditions continued through to the end of the week with generally cold nights but typically with no frost as cloud cover was total. The 19th was the exception of the week with the sun breaking through from mid morning.

Environmental conditions:

At the start of the survey most of Rosper Road was still frozen with all the waterfowl concentrated in two small areas of open water. The larger of the East Halton pits was ice free but the smaller pit was completely frozen over. At North Killingholme Haven pits 50% of the main pit was frozen at the start of the survey on the 17th but as the wind increased during the day most of the ice dissipated. Many of the fields were clearly still frozen following four days of frosty weather and this fact affected bird distribution on the survey date at the start of the period.

Disturbance events:

Sea angling continued to be a source of disturbance along the sea wall between East Halton Skitter and North Killingholme Haven, ISI.

A bird surveyor spent all of the survey period on the 17th in field 88 and consequently no waders were present in that area. Tree surveyors, in brightly coloured high visibility clothing were also active, in the area of fields 42, 43, 55 and 54 in East Halton Marshes and here any feeding Curlew would have been disturbed.

Tides week 25 High Tide at Grimsby Docks

December	16	Su	09 51	6.0	21 52	6.4
December	17	M	10 45	5.9	22 47	6.3
December	18	Tu	11 50	5.8	23 52	6.2
December	19	W	** **	**	13 02	5.9
December	20	Th	01 03	6.3	14 09	6.1
December	21	F	02 14	6.4	15 10	6.3
December	22	Sa	03 20	6.6	16 06	6.5

Typically December tides are medians with the present week experiencing low to mid springs at the start and end of the week.

Waders and wildfowl:

With many of the fields being frozen or partly frozen on the survey date there was an obvious change in wader distribution. The northern flock of Curlew were mainly concentrated in the permanent pasture in field 64 where 44 birds were feeding while a party of nine birds moved between fields 38, 39 and 40. On the southern fields 88 was disturbed by a surveyor but there were 13 birds in the northern part of field 89; birds were noted flying inland over Rosper Road soon after first light from the inter-tidal and they were again located feeding on the playing fields at the Connoco Phillips site alongside the A180. The count of 49 birds recorded from this site was a significant part of the southern flock. In addition five Curlew were feeding in the permanent pasture in field 98 along with 108 Lapwing. An additional 34 Lapwing were feeding in the adjacent autumn cereal field number 97. All of these Lapwing were part of a flock of 177 birds which had previously been roosting at low water on the inter-tidal at the southern end of ISJ. In addition a flock of 148 Lapwing was found on the autumn cereals in field 26 at high tide. Golden Plover remain scarce with just nine birds roosting on field number 4 and 15 feeding with Lapwing in field 26.

On the inter-tidal areas there were no waders on ISI but a total of 699 birds on ISJ included 160 Redshank, 251 Dunlin and 177 Lapwing; Black-tailed Godwits numbers were reduced to just 33 birds.

As some of North Killingholme pits was frozen at high tide this may have affected the wader roost but it is also possible that the roost had been disturbed as most of the waders which had been feeding on the adjacent inter-tidal areas roosted on the exposed upper reaches of the ISJ inter-tidal. The pits did hold good numbers of wildfowl with the count of 125 Mallard reflecting the high total recorded from the pond in field 64 earlier in the day when 177 birds were in that spot. As the Killingholme count was lower than this single total and there were also 95 birds at Rosper Road then it was clear that some of the Mallard moved to other areas on the estuary when they left field 64 and Rosper Road. The number of Teal remains much lower than in the previous winter at both Rosper Road and Killingholme pits.

Waterfowl variety decreased even further at East Halton pits but the total number of birds increased as a more accurate count of Moorhens was possible due to the birds being forced out into open feeding areas by the recent frosts.

A flock of 85 Lapwing were feeding in a permanent pasture field just west of the survey boundary at east Halton at TA 139188; this field had feeding Curlew in the previous period and appears to be a connected feeding site with some of the permanent pastures in the East Halton area to the east.

In the fields around Thornton Abbey there were 1500 Lapwing and 90 Golden Plover but again no Curlew.

Survey period 26: December 23rd to 29th 2007

The cold, frosty and often foggy weather of the previous period continued into the start of this week but by the 24th there were signs of the approach of an Atlantic front bringing milder air but it was the 27th before the real effects of the milder weather were apparent locally. Rainfall amounts were low throughout but the south-westerly winds increased markedly towards the end of the period with gales evident on the 28th prior to the arrival of a period of intense rain in the late afternoon.

Environmental conditions:

The beginning of the week saw some ice persisting on the larger water bodies and over many of the fields but this dissipated by the 25th. Water levels were up in North Killingholme Haven pits leaving little room for roosting waders but appeared to be down in Rosper Road where vegetation die back had revealed some excellent feeding for dabbling duck and waterfowl.

Disturbance events:

Sea angling continued to be a source of disturbance along the sea wall between East Halton Skitter and North Killingholme Haven, ISI and this appears to be impacting upon the use of the fields adjacent to the seawall by waders.

Tides week 26 High Tide at Grimsby Docks

December	23	Su	04 23	6.8	16 57	6.8
December	24	M	05 22	6.9	17 43	6.9
December	25	Tu	06 17	7.0	18 28	7.0
December	26	W	07 07	6.9	19 12	7.0
December	27	Th	07 55	6.8	19 54	7.0
December	28	F	08 40	6.5	20 35	6.8
December	29	Sa	09 24	6.3	21 17	6.6

Tidal heights were rather high throughout with spring tides peaking in mid week.

Waders and wildfowl:

The food resource on the over-wintered stubbles in field 65 maintained large numbers of waterfowl which loafed on the pond in field 64. On the survey date there were still in excess of 100 Mallard but of more significance was the increase Teal to 24 and the return of Wigeon with 26 birds present. All the birds apart from the Teal flew off to the north-east and were not relocated at North Killingholme pits but are presumed to have moved across the estuary to the north bank sites. At Rosper Road Mallard and Shoveler numbers were way down on recent counts but Teal rose to their highest count to date with 48 birds feeding on the exposed Mare's tail at the eastern end of the pool while a record 86 Coot had gathered on the ice free pools at the western end of the site. Coot numbers also increased at East Halton pits to 63 birds which was also the highest count of the species at that location this winter; these increases seem to have been the result of the freezing of water bodies outside the survey area forcing birds to move to ice free feeding sites. The reasons for the low number of Shoveler and Mallard at Rosper Road are not clear; at North Killingholme pits Shoveler maintained an average abundance but Mallard numbers were also down at that site suggesting that the freeze had in fact moved birds out of the survey area.

The high water levels at North Killingholme pits may have been partly responsible for the low numbers of roosting waders but even Redshank were well in minimal numbers and Lapwing totally absent suggesting that this was not the sole reason for the lack of waders on what was in fact quite a high spring tide. The long period of frost had a negative effect upon feeding conditions for waders with the series of frosts affecting the surface layers of the soil in the fields and even the upper reaches of the inter-tidal and thus waders may have been conserving energy by roosting closer to their feeding areas and continuing to feed on any exposed inter-tidal sites throughout the high tide period. Anecdotal observations of Redshanks feeding on grass road verges in New Holland and even on the outskirts of Barton, on the side of busy main roads, suggested that food resources were difficult to access during this period. Lapwing numbers on the fields were the highest to date with a total of 681 birds in the two winter cereal fields, 24 and 26, at East Halton; a further five birds were on the permanent pasture in field 30. [Outside the survey area there were still in excess of 1600 birds on fields around Thornton Abbey but it was notable that 600 of these were feeding on pasture fields during this period as opposed to winter cereals.](#)

The 212 Golden Plover found of field number 4 flew off west during the survey in the direction of Thornton Abbey where 500+ birds were present with Lapwings earlier in the day.

Curlew in some ways continued to perplex with the southern flock being reduced to just nine birds on the Connoco playing fields and none being recorded from the other pastures along Rosper Road while the northern flock increased to its highest total to date with 109 being present in field 14 alone. It is possible that the 19 birds which had been feeding in field 64 but left during the survey were included in this total but the six birds on field 40 were probably additional. Field 14, a relatively small permanent pasture field, had not been used by Curlew previously in this survey series but its significance in periods of frost was clearly obvious from this high concentration of Curlew. The birds were still feeding in the field at 16:26hrs, in almost complete darkness, but with a full moon and it seems likely that they would have possibly fed there through the night.

An adult Peregrine was seen over field 65 during the survey.

Survey period 27: December 30th to January 5th 2007 – 2008

The year ended with dull and cloudy but mild conditions with light westerly winds; new year's eve was cool with clearing skies but cloud increased overnight with light rain setting in by dawn and this intensified during the day bringing an almost constant stream of showers through the area on a light south-easterly wind which was also accompanied by mist and murk in what were quite un-seasonally high temperatures of 8-10C. The rain band cleared the area by the 2nd with variable amounts of cloud being pushed through the region on a strengthening south-easterly wind which sent temperatures tumbling as the cold air arrived from the near continent. Dawn on the 3rd saw the area covered in up to 10cm of snow; temperatures hovered around 1-2C throughout the day (this was the weekly survey date) with a strong south-easterly wind bringing further light showers of hail and sleet but the snow cover disappeared by late morning. The 4th remained cold with occasional snow flurries but increasing winds from the south brought heavy rain by late afternoon and this continued through to the middle of the night. The 6th was warmer with periods of sunshine but variable cloud cover.

Environmental conditions:

The rain of the 1st although generally light produced some substantial falls across the region with surface flooding apparent in some of the fields and the upper soil layers becoming saturated. The water level in North Killingholme Haven pits was too high for roosting waders with only a small area of mud available by the roadside.

Disturbance events:

Sea angling continued to cause disturbance along the section between East Halton Skitter and North Killingholme seaplane jetty. On

the survey date Lapwing flocks were attempting to roost in the fields adjacent to the estuary embankment (fields 6 and 12) but they were frequently disturbed by anglers and moved between these fields and the small area of upper inter-tidal which remained exposed at high water to the south of the seaplane jetty.

Tides week 27 High Tide at Grimsby Docks

December	30	Su	10 07	6.0	22 00	6.3
December	31	M	10 55	5.8	22 51	6.0
January	1	Tu	11 50	5.6	23 52	5.8
January	2	W	** **	**	12 53	5.5
January	3	Th	01 50	5.6	13 58	5.6
January	4	F	02 19	5.6	15 00	5.7
January	5	Sa	03 25	5.8	15 51	6.0

Tidal heights were low throughout the period.

Waders and wildfowl:

The morning snow cover on the survey area had all but disappeared by the time of the mid afternoon high tide. The pond in field 64 held the highest total of Wigeon thus far during the winter with 48 birds but there were only 29 Mallard in the same area. Much higher Mallard totals were recorded at Rosper Road and North Killingholme pits and there were 32 birds on the ISJ inter-tidal sector. Shoveler numbers have fallen markedly at Rosper Road while the number at North Killingholme pits is also well down on the recent winter peaks following a good concentration earlier in the autumn. Teal are still much reduced in comparison with recent winter periods in the Killingholme area. The count of 17 Gadwall at Rosper Road was though, the highest count of this species during the present surveys.

The southern flock of Curlew was located in field 88 where 91 birds were present; later 27 Curlew were found in field 98 and these were considered to be different birds to the main flock as there had been 30 birds on the inter-tidal sector ISJ prior to these birds being found when the main flock were still on field 88. The northern flock however, remained elusive with just single birds being located in fields 63 and 64 and two in field 29 adjacent to East Halton pits.

A total of 1388 Lapwing were counted on the two inter-tidal sectors at high water in addition to which 92 birds roosted in North Killingholme Haven pits and 419 birds were attempting to roost on fields 6 and 12 (see above under disturbance). No Golden Plover were present but see below.

The high water levels in North Killingholme Haven pits prevented a sizeable roost of waders developing at high water as roosting areas were particularly limited. In spite of the strong winds many waders were thus forced to roost on the remaining areas of uncovered inter-tidal at the southern end of sector ISJ.

The favoured fields around Thornton Abbey held a total of 620 Golden Plover and 720 Lapwing on the survey date but no Curlew were located in the area.

Survey period 28: January 6th January 12th 2008

The heavy rain from the night of the 5th cleared the region by dawn on the 6th with the day then being mainly bright and clear with long sunny spells and limited cloud; after a slight frost temperatures rose to 7C by midday. A front approached from the west by late evening bringing overnight rain and a blustery and showery day on the 7th. The remainder of the week was somewhat unsettled with periods of rain and generally light winds but some over-night frosts.

Environmental conditions:

Water levels remained high in North Killingholme Haven pits and hence there was no wader roost at high tide. Conditions in the fields were similar to the previous week with some small areas of surface water but no extensive flooding.

Disturbance events:

A wildfowler was present at East Halton pits at the start of the survey and hence there were very few birds visible at that locality. Sea angling continued to cause disturbance to the fields adjacent to the sea wall on the section between East Halton Skitter and North Killingholme Haven while dog walkers were again prevalent in the loop around East Halton Marshes even from first light when birds are particularly prone to disturbance.

Tides week 28 High Tide at Grimsby Docks

January	6	Su	04 17	6.0	16 33	6.2
January	7	M	05 01	6.2	17 11	6.4
January	8	Tu	05 40	6.3	17 46	6.6
January	9	W	06 17	6.4	18 21	6.7
January	10	Th	06 52	6.5	18 56	6.9
January	11	F	07 29	6.6	19 31	6.9
January	12	Sa	08 07	6.6	20 08	6.9

Tidal heights increased from neaps at the weekend to median springs by the end of the week.

Waders and wildfowl:

A total of 414 Lapwing roosted in field number 1 on the evening high tide but there were much higher numbers of Lapwing in the survey area with 2180 being recorded from the inter-tidal sector ISI at low water and a further 210 on ISJ. It appeared that some of these birds had moved inland into fields outside the boundary of the survey area at high water although on the survey date up to 80% of the large flock remained on the upper reaches of the inter-tidal at high water. Just eight Golden Plover were present in field number 4 but some flocks were seen flying north-east across the northern fields and out over the estuary towards the north bank presumably having come from inland fields outside the survey area.

Most of the southern flock of Curlew were again in pastures along Rosper Road with 32 in field 88 and 28 in field 98 plus 2 in field 95 and two on the Connoco playing fields. There were fewer birds present in the northern fields than in week 26 but a slight resurgence from week 27; the birds found in field 12 at first light may well have roosted there but disturbance from shooting around East Halton pit may have affected the number of birds present. Other birds were on the regular permanent pasture in field 54 while there were also 19 birds in field 17 a field which was used extensively by feeding birds in the previous winter.

The record of a flock of nine Ruff on the inter-tidal section ISI was the first sighting of this wintering flock for some time. In the interim period Ruff have been observed in fields in South End Goxhill and also in permanent pastures in Goxhill Marsh and these are presumed to be from the same wintering flock.

The Wigeon flock on field 64 increased to its highest level to date but Mallard numbers were down on all the wetland sites; Shoveler numbers were up at both Killingholme pits and Rosper Road while three were also present on the field 64 pond. Teal numbers at Rosper Road reached their highest total to date with 73 birds counted while 18 were in the field 64 pond but none were recorded from Killingholme pits. The female Smew returned to North Killingholme pits for its 11th successive winter.

The favoured fields around Thornton Abbey held a total of 120 Golden Plover, 500 Lapwing and 31 Curlew.

Survey period 29; January 13th January 19th 2008

Although the week started out fine with a mix of bright and cloudy spells on the 13th showers built on a stiff south-westerly wind on the morning of the 14th before clearing in the afternoon. A vigorous depression then brought a day of heavy and persistent rain on the 15th with several centimetres of rain falling through the day and the ensuing 24 hours. Rain continued to be a feature of the remainder of the week with persistent precipitation falling through the 17th and 18th.

Environmental conditions:

The survey took place on the 16th following the period of heavy rain and the immediate effects of the downpours were evident in extensive flooding of many of the fields within the survey area. The East Halton Skitter beck had burst its banks in several areas around Thornton Abbey while many other ditches were also overflowing onto roads and tracks. The arable fields in East Halton Marshes were particularly badly affected with surface flood water apparent in most fields; field number 1 for example was estimated to have 15% - 20% of its surface area covered by flood water on the survey date.

All of the three main wetland sites were also affected by the extensive run-off; North Killingholme Haven pits were completely flooded out with just two waders being recorded standing on the remaining islands. At Rosper Road the water level was estimated to have risen by over 1m with 20cm of water over the weir and at east Halton pits there was partial flooding of the grass field to the west of the pits.

Disturbance events:

Nothing was evident during the survey which was undertaken in poor weather.

Tides week 29 High Tide at Grimsby Docks

January	13	Su	08 44	6.5	20 46	6.9
January	14	M	09 25	6.3	21 27	6.7
January	15	Tu	10 09	6.1	22 14	6.6
January	16	W	11 02	5.9	23 12	6.3
January	17	Th	** **	* *	12 10	5.8
January	18	F	00 27	6.1	13 30	5.8
January	19	Sa	01 51	6.1	14 47	5.9

Tidal heights fell from weekend springs to median neaps by mid week but the extensive run-off from the heavy rains and flooding kept coastal levels high in the mid week period.

Waders and wildfowl:

Shelduck were recorded from the fields for the first time with a party of five in field 8 and 2 in field 98, the former being on a flood water pool in a winter cereal field and the latter on a flood water pool in permanent grassland. The main Mallard concentration in the fields was as usual in fields 64 and 65 but there were also 14 birds on flood water in field 25. The number of Wigeon on the pond in field 64 peaked at 54 birds and there were also 16 Teal in the same area, two less than the previous week.

On the main wetland sites particularly high water levels had clearly had a detrimental effect upon wildfowl numbers with all species

showing declines. Flooding at Rosper Road clearly stopped dabbling duck reaching their preferred foods and there appeared to have been a small movement of Teal to North Killingholme pits where 27 birds were recorded but overall there was a loss of waterfowl from the entire survey area; extensive flooding of inland fields may have encouraged wildfowl to feed in different areas to those typically used.

The flooding on the arable fields produced suitable feeding for waders and the majority of the Lapwing and Curlew which were found on the fields were actively feeding. It was another very poor week for Golden Plover with just six birds on fields 1 and 8 but there was a huge flock estimated in excess of 20,000 birds over the north bank of the estuary opposite East Halton pits. Lapwing numbers between East Halton Skitter and North Killingholme Haven were similar to the previous week with 1400 birds on the inter-tidal and 896 on the fields adjacent to the estuary, mainly fields 1 and 6. The fact that the Lapwing fed in these fields with no anglers on the adjacent embankment may prove that disturbance has been affecting the presence of birds in these fields but clearly the change in environment conditions was also of paramount importance. A single Ruff was feeding with Lapwing on field 1 and two birds were on field 6 while four Redshank were feeding around a flood water pool in field number 1; these are the first records of these two species in these fields this winter. although there was considerable movement of Curlew between the different fields in East Halton Marshes it was considered that there were in excess of 110 birds present while the southern flock was concentrated in the permanent pasture in field 98 where 25 birds were feeding and 17 in field 103.

With the exception of five Curlew feeding around a flooded area in permanent grassland by East Halton Beck at Thornton Abbey this usually productive area held no other waders on the survey date.

Survey period 30: January 20th - 26th 2008

Although the week started out without rainfall the Monday produced more exceptional accumulations of rain as a slow moving front became stationary over the region for 24 hours. The front moved away by the start of the 22nd which dawned with a light frost following which the day was cool but fairly bright and with light winds. Wednesday was again very mild with fresh westerly winds and some broken cloud cover remaining fine throughout. By the 24th the wind had swung into the north-west and strengthened to force six by the afternoon although the bulk of the day was sunny and mild. The strong winds continued to affect the area over the next two days being up to force seven on the 25th before dying away late on the 26th as they swung into the south-west. It remained mild for the time of year with temperatures up to 9C.

Environmental conditions:

The effects of continuing periods of heavy rainfall were apparent throughout the survey area with increases in the areas of flood water in all of the affected fields and rises in the levels of the three major wetland sites. Spring tides during the week blocked drainage of the main arterial systems and the East Halton Skitter beck flooded further areas of its floodplain. The high water levels at North Killingholme Haven pits prevented any waders roosting at high water while the extensive flooding of Rosper Road appeared to have a detrimental effect upon its usage by waterfowl with most species falling in numbers or leaving the site; there was to some extent, a concomitant rise in the number of some wildfowl at North Killingholme pits, notably Teal and Shoveler but the latter species remained in numbers below the annual average for the localities concerned.

Disturbance events:

Sea angling seemed to have declined somewhat along the East Halton Skitter to Killingholme Haven sector but dog walking appears to be on the increase with this sector of the Humber embankment becoming increasingly popular throughout daylight hours. The use of the main roads and tracks to the north of the old railway tracks in east Halton Marshes by dog walkers has also increased the levels of disturbance of the adjacent fields.

Tides week 30 High Tide at Grimsby Docks

January	20	Su	03 17	6.2	15 55	6.2
January	21	M	04 29	6.4	16 50	6.6
January	22	Tu	05 26	6.7	17 36	6.8
January	23	W	06 14	6.8	18 17	7.0
January	24	Th	06 58	6.8	18 56	7.1
January	25	F	07 37	6.8	19 34	7.1
January	26	Sa	08 14	6.6	20 11	7.0

Tidal heights increased from medians to high springs during the mid to late week period.

Waders and wildfowl:

The 361 Golden Plover which roosted in fields 4 and 6 all moved off across the estuary as the tide fell demonstrating a link between the large north bank flocks and the survey area fields. There were no Lapwing on the fields in the area in spite of the high spring tides and the extensive flooding of fields in the survey area but it could have been the extensive and widespread flooding of other inland fields which had attracted the Lapwing flocks away from the surveyed area. The inter-tidal areas were also largely devoid of the large Lapwing flocks which are normally such a feature of ISI in particular.

Only 29 Curlew were found in the northern fields and 59 in total in the southern fields, numbers which were lower than expected given the extensive flooding. The 59 southern birds all left the fields after high tide and moved to the inter-tidal in ISJ where they

joined another large flock of Curlew. The combined flocks totalling 115 birds then roosted for much of the remainder of the day on the inter-tidal; the fact that they were roosting there rather than feeding suggests that either they had been feeding overnight or in the particularly mild weather with abundant food available in all habitats they had maybe fed well and had no need for extensive day feeding.

It appeared that the vast majority of the Humber winter population of Black-tailed Godwits spent the day on the inter-tidal in ISJ where they roosted for long periods and fed on the rising tide. Where they roosted at high water was not apparent as the spring tide would have covered the inter-tidal where they fed and they were not located on the fields in the survey area. The number of Dunlin on the inter-tidal was particularly low while ISJ held up to 129 Redshank. The count of 45 Shelduck on ISJ was the highest total for this species during the present winter. As noted above a total of 115 Curlew roosted for most of the day on the inter-tidal at the southern end of ISJ with some birds making occasional movements to the permanent pastures inland.

East Halton pits held the highest number of wildfowl for some weeks with an obvious influx of diving duck including the first Pochard and Tufted Duck of the winter. The fact that the Moorhen flock was also visible suggest that there had been no shooting disturbance in the recent past.

There was extensive flooding in the area of Thornton Abbey where large numbers of Golden Plover, Lapwing and Curlew have been recorded in recent weeks but there were no waders of any species in the area during the survey date which adds weight to the suggestion that the Lapwing flocks had moved to additional feeding areas outside of those included in this survey.

Survey period 31; January 27th – February 2nd 2008

The cool north-westerly airstream continued to produce blustery conditions on the 27th but with long periods of sunshine. The 28th started out dull was predominantly sunny later in the day and with lighter winds temperatures were higher than of late. Winds increased again from the south-west on the 29th bringing some light rain after dark before a ridge of high pressure gave rise to a fine and clear night with a slight frost followed by a mainly sunny and clear day on the 30th but with an increasing north-westerly breeze. The westerly wind increased dramatically overnight with heavy rain showers accompanied by occasional thunder on the morning of the 31st before the front cleared in the afternoon. The westerly gales though intensified through the 1st before easing somewhat as they swung to more southerlies on the 2nd. A period of heavy rain on the afternoon of the 1st failed to turn into snow as predicted.

Environmental conditions:

Following the extensive flooding of the previous week the strong winds at the end of the previous period and extensive spells of sunshine had a marked effect upon the areas of standing water in the fields with only a few small areas remaining through to the start of this survey period. Water levels in the main water bodies also fell with the water height in Rosper Road pools falling below the height of the weir while drainage of North Killingholme pits produced an area of mud in front of the hide although levels here were still relatively high compared to those which produce the best wader roosts.

Disturbance events:

Dog walking continued to be a major factor throughout the East Halton Marshes area but at East Halton pits there appeared to have been less shooting with the number of waterfowl starting to increase following the poor winter presence.

Sea angling was again apparent along the East Halton Skitter to North Killingholme Haven sector.

Tides week 31 High Tide at Grimsby Docks

January	27	Su	08 47	6.4	20 46	6.8
January	28	M	09 20	6.2	21 21	6.5
January	29	Tu	09 53	5.9	21 59	6.1
January	30	W	10 33	5.7	22 47	5.8
January	31	Th	11 28	5.4	23 54	5.4
February	1	F	** **	**	12 44	5.3
February	2	Sa	01 26	5.3	14 08	5.4

Tidal heights fell from the springs of the previous period to a series of neaps from mid week onwards.

Waders and wildfowl:

Only two Lapwing were found on the fields, on number 8, and no Golden Plovers but a huge flock of Golden Plover was evident over the north bank of the estuary opposite East Halton pits. Curlew numbers in the north of the study area were well up with a minimum of 99 birds located. There was as usual some movement between different feeding fields but 81 birds were feeding around a flood water pool in field number 11 with nine in field 8 and nine in field 29 at the same time. A further seven birds were on the permanent pastures centred upon fields 40, 42 and 55 making a total of 106 birds in this northern area. Birds were seen arriving into the area from the north bank of the estuary juts after first light suggesting that they had roosted there. Only 20 birds were found on the southern fields all in permanent pastures.

The number of Lapwing on the inter-tidal ISI was down to 800 birds confirming the exodus of birds noted in the previous survey period. This could be due to a movement of feeding areas or possibly a first stage migration by this species which typically leaves the estuary in large numbers by the end of February. It was however, notable that a large gathering of Lapwing occurred at the head

of the estuary during this period with 10,500 birds at Alkborough Flats and a further 3-4,000 birds on the adjacent estuary and this could account for some of the birds lost from the survey area.

At East Halton pits there was a notable increase in the variety and abundance of wildfowl with 134 birds of ten species being recorded. Rosper Road also witnessed a dramatic increase in waterfowl abundance as the flood water subsided allowing dabbling but also diving duck to exploit the feeding opportunities on the site. Shoveler, Mallard and particularly Gadwall all increased but the number of Teal was down to just three birds. At North Killingholme Haven pits Shoveler maintained their recent level of abundance at 46 birds while Mallard numbers increased but Teal fell away suggesting a co-ordinated movement away from the area as witnessed at Rosper Road. Although there was a moderate high tide roost of Redshank and two Ruff were the first for seven weeks there was a general dearth of the large number of roosting waders typical of the site probably due to a combination of the recent lack of mud and the neap tides.

The flooded fields in the area of Thornton Abbey had no waders of any species on the date of the survey.

Survey period 32: February 3rd – February 9th 2008

The strong westerly winds which had been such a characteristic of the previous week persisted through the 3rd with rain arriving in the area by nightfall. The 4th was mainly clear and sunny but with cloud and wind increasing from the west by late afternoon following which overnight rain occurred clearing by dawn in a fresh to strong south-westerly wind which also raised the temperatures to 10C by midday on the 5th. Heavy showers developed by mid afternoon. High pressure built from the continent from the 6th onwards bringing fine and settled weather with light winds and temperatures rising to a peak of 12C on the 9th.

Environmental conditions:

The intermittent overnight rain during the week increased the areas of standing water in many of the arable fields and further softened the soil. Recent strong winds appeared to have led to a redistribution of some of the waders around the estuary with for example a large decline in Lapwing numbers at the head of the estuary around Alkborough Flats and Whitton Sand where Golden Plover numbers conversely remained high.

Many of the autumn sown cereal crops were in excess of 15cm in height making them less suitable for waders.

Disturbance events:

Dog walking continued to be a major factor throughout the East Halton Marshes area but at East Halton pits there appeared to have been less shooting with the number of waterfowl starting to increase following the poor winter presence.

Tides week 32 High Tide at Grimsby Docks

February	3	Su	02 57	5.4	15 18	5.7
February	4	M	03 59	5.7	16 10	6.0
February	5	Tu	04 45	6.0	16 51	6.3
February	6	W	05 25	6.3	17 28	6.6
February	7	Th	06 00	6.5	18 03	6.9
February	8	F	06 35	6.7	18 38	7.1
February	9	Sa	07 10	6.8	19 13	7.2

Tidal heights increased from low neaps at the weekend to high springs by the end of the period.

Waders and wildfowl:

The fields in East Halton Marshes held large numbers of waders during the survey with record numbers of Lapwing and Curlew being recorded along with the total local wintering flock of Ruff and the highest winter count of Dunlin on the survey area fields.

A sequential count of the fields in the East Halton Marshes area produced a combined total of 3892 Lapwing by far the highest count of this species within the survey area during the present survey. In addition to the birds noted on the fields there were 266 Lapwing on the adjacent inter-tidal at the same time making a combined total of 4158 Lapwing. The vast majority of the Lapwing recorded in the fields were feeding or bathing with few noted roosting. Following the decline in numbers recorded in the previous period this exceptional count shows the complexity of the movements of some of the wader species around the estuary.

Field number 1 also held 447 Golden Plover and 53 of the overall total of 71 Dunlin the remainder being located in field 6 where they were feeding around a flood water pool. As noted above it appeared that all of the local wintering flock of Ruff were in the survey fields during the survey with 9 in field 11 and an additional bird in field 12. There were also 17 Redshank in fields 1, 6 and 12 where they were all feeding around the edges of flood water pools.

The northern flock of Curlew held a combined total of 139 birds the majority of which were feeding in fields 8, 9, 11 and 12. There was some movement of birds during the survey with all of the 56 birds from field 11 moving into field 17 when disturbed by an unseen source. The southern flock of Curlew totalled at least 155 birds with 121 being found on the inter-tidal, ISJ, and 24 in the permanent pasture in field 88. The 52 birds which were feeding on field 104 were commuting between that site and the adjacent inter-tidal where they roosted. A flock of 960 Black-tailed Godwits roosted on the upper inter-tidal sector ISJ at high water but were not observed in the area at any other period presumably moving to the inter-tidal areas south of Imminham Docks to feed.

The number of wildfowl on the pond in field 64 increased as Mallard jumped to 66 and Teal to 28 the highest count of the latter species at this locality during the present survey series. Wigeon numbers fell slightly to 48 and Shoveler increased to five birds.

On the wetland sites the number of waterfowl fell slightly at all localities; the major species decline at Rosper Road was in Mallard

numbers whereas Gadwall maintained their recent high presence but Teal numbers remain well down on recent winters. Strangely only two Teal were seen at North Killingholme pits and the high water levels there meant that there was no exposed mud to attract roosting or feeding waders with the few birds recorded roosting on the small islands in the pit.

The fields in the area of Thornton Abbey held a flock of 220 Lapwing some of which were observed arriving from the east from the East Halton area.

Survey period 33; February 10th – February 16th 2008

The anti-cyclone which had dominated the end of the previous week continued to produce settled weather through the first half of this survey period; with a lack of wind, sharp overnight frosts but warm sunny weather by day temperatures rose to the low teens centigrade by day but fell to -2C at night. From midday on the 13th an easterly wind increased in strength bringing in cloud from the cold North Sea and reducing temperatures to around 5C – 6C. The easterly airflow continued into the 14th with heavy drizzle in the morning and temperatures pegged back by the cold easterly air. With complete cloud cover there were no overnight frosts until the 15th when the cloud broke in the afternoon to allow a severe overnight frost to develop.

Environmental conditions:

Virtually all of the flood water on the fields had evaporated or drained away by the start of this period; the combination of drying winds and long hours of sunshine dried out the surface layers of many of the arable fields. Water levels however, remained high in the main water bodies with only a limited area of mud still available to waders in North Killingholme pits.

Disturbance events:

There appeared to be less sea angling on the East Halton – North Killingholme Haven sector but dog walking remained as a fairly constant presence along the embankment and surrounding roads. On the survey date a character carrying a fishing rod, gun and accompanied by a dog walked down the road to East Halton pit and along the sea embankment.

Tides week 33 High Tide at Grimsby Docks

February	10	Su	07 47	6.8	19 48	7.2
February	11	M	08 22	6.7	20 25	7.2
February	12	Tu	08 59	6.5	21 04	7.0
February	13	W	09 38	6.3	21 49	6.6
February	14	Th	10 26	6.0	22 47	6.2
February	15	F	11 30	5.7	** **	**
February	16	Sa	00 08	5.8	13.03	5.5

Tidal heights fell from high springs at the start of the period to low neaps at the weekend.

Waders and wildfowl:

The difference between the large numbers of waders found on the East Halton fields in the previous period and the limited number of two species found in this week could not have been more marked. The physical condition of the fields in question was certainly somewhat different with the loss of flood water pools but the overall number of Lapwing in the area, including the inter-tidal, fell markedly and it seems that a redistribution of birds around the estuary may have been responsible for some of the changes in abundance. It is also possible given the severe overnight frosts at the start of the week, which would have frozen the surface layers of the fields, that birds could have been forced to move to frost free areas to feed. Thirdly there is also the possibility that early spring movements of species including Lapwing could have been engendered by the longer day length and the warm and settled weather.

On the fields the only two species recorded were Curlew and Ruff with five of the latter species in field 11 along with a flock of 27 Curlew. In total 40 Curlew were on the northern East Halton fields and a further 28 in the permanent pastures of fields 54 and 55. The southern flock totalled just 16 birds in the permanent pastures in fields 88 and 89 but there may have been larger numbers on the inter-tidal ISJ which was not visible due to coastal fog on the survey date.

The usual flock of waterfowl remained on the pond in field 64 along with four Curlew; the number of Wigeon fell slightly to 30 and Mallard numbers there were very low compared to the previous week. On the major wetlands North Killingholme pits held just 29 waders of which 22 were Lapwing and waterfowl numbers fell again whereas the waterfowl total at Rosper Road remained stable with Shoveler increasing to a record 56 birds at that site. At East Halton pits the immediate response to the end of the shooting season was evident in a further dramatic rise in waterfowl numbers with Pochard and Tufted Duck both reaching winter peaks.

On inter-tidal sector ISI a Little Egret at East Halton Skitter was the first bird of this species to be recorded since the party of six birds was found at North Killingholme pits in week six. The flock of 1300 Lapwing all roosted on the upper exposed area of the inter-tidal, not covered by the neap tide, between North Killingholme Haven and the old seaplane jetty where the 43 Dunlin were also feeding. There were 45 Teal on the inter-tidal at East Halton Skitter.

Survey period 34; February 17th – February 23rd 2008

The anti-cyclone which had built over the British Isles at the end of the previous week became more prevalent with sharp overnight frosts developing between the 16th and 20th; by day it was bright and sunny during the 17th but fog arrived overnight and was reluctant to clear on the 18th only thinning early afternoon and returning again overnight and persisted for most of the day on the 19th; the combination of temperatures which dipped to -9C and fog produced some spectacular hoar frosts. By the 20th the approach of Atlantic weather systems began to break down the high pressure and bring increasing cloud from the west although there was still a hard frost during the morning of the 20th. Temperatures rose during the 21st in a strong westerly wind but there was 100% cloud cover and even some light showers during the morning. The westerly wind increased to near gale on the 22nd but temperatures rose to 13C. The wind eased somewhat by dawn on the 23rd but increased again in the afternoon; there was again 100% cloud cover all day but no rainfall prior to darkness.

Environmental conditions:

The severe frosts at the start of the week in combination with a lack of wind meant that most of the water bodies in the area were locked in ice for the first half of the week. Freezing of the fields meant that there was some movement of waders while wildfowl frozen out of the major wetlands resorted to the open estuary.

Disturbance events:

Apart from the inevitable dog walkers there was little evidence of any disturbance in most of the parts of the survey area with no sea anglers present for the first time in several weeks.

Tides week 34 High Tide at Grimsby Docks

February	17	Su	01 55	5.7	14.37	5.7
February	18	M	03 29	6.0	15 49	6.1
February	19	Tu	04 34	6.3	16 41	6.5
February	20	W	05 23	6.6	17 23	6.8
February	21	Th	06 04	6.8	18 01	7.0
February	22	F	06 39	6.8	18 37	7.1
February	23	Sa	07 12	6.8	19 10	7.2

Tidal heights rose from neaps at the weekend to high springs by the end of the period.

Waders and wildfowl:

The period of severe frosts which had affected the local area over the previous weekend and in the early part of this survey period had been replaced by a strong westerly wind and temperatures of 4C – 6C by the time of the survey on the 21st. All of the water bodies were open again following the freeze which had affected all areas with the exception of East Halton pits which had retained some open water. The hard frosts had a major effect upon wildfowl and wader distribution around the estuary with a lack of many species being obvious in several areas. In the survey area the fields were all ice free but there was an almost total lack of waders with just two Curlew being present in field number 29; these two birds were seen arriving from the north bank of the estuary just after first light and at high tide. The whole of the northern part of the survey area in fact showed that an almost total exodus of Curlew had occurred. In the southern part of the area a total of 61 Curlew were found on the inter-tidal ISJ and mainly, 53 birds, on the pasture amongst the Texaco compound near the South Killingholme lights. No Golden Plover were found anywhere and the only Lapwing were a flock of 321 birds which were roosting on the inter-tidal at the southern end of ISJ. These two species are some of the first birds to respond to persistent freezing conditions as they are unable to change to alternative food resources if the upper layers of the soil are unavailable. The inter-tidal areas in fact held good numbers of birds probably as a response to the freezing weather earlier in the week. At East Halton Skitter a total of 85 Teal were feeding in the Haven itself while the first Avocets of the spring, six birds, were roosting on the upper inter-tidal at the mouth of the Haven. On ISJ there was the highest count of Dunlin since the first week of the year with 343 birds present while the count of 646 Black-tailed Godwits was also an exceptional one for February.

At North Killingholme pits in spite of all the water being open and large areas of mud being available to waders there were just 12 waders present, five Snipe, five Redshank and two Curlew and just 35 wildfowl. Rosper Road held more waterfowl with the overall number being very similar to the previous two weeks and there were also similar numbers of waterfowl at East Halton pits as in the previous week. The pond in field 64 had thawed off but clearly most of the wildfowl had not returned to the site with a total of just 25 Teal, Wigeon and Shoveler present compared to 55 birds in the previous week.

The fields adjacent to Thornton Abbey held totals of 1500 Lapwing and 1250 Golden Plover but no Curlew.

Survey period 35; February 24th – March 1st 2008

The week started out unsettled with blustery south-westerlies and some rain on the 24th before a ridge of high pressure brought more settled weather for the middle of the week with some long periods of sunshine, light winds and high midday temperatures reaching 15C on the 28th. Although it remained clear and calm overnight by dawn on the 29th cloud cover had increased to 100% and a freshening south-westerly wind brought light rain to the area by early afternoon; temperatures were well down on recent days and with the strong wind it felt particularly chilly. Winds increase further at the end of the week with further rainfall on March 1st.

Environmental conditions:

There was little change in the condition of most of the survey area from those of the previous period. Some water did back flow into Rosper Road from the adjacent drain, over the weir, at the start of the week which seemed somewhat strange given the lack of significant rainfall?

Disturbance events:

Apart from the inevitable dog walkers there was little evidence of any disturbance in most of the parts of the survey area with only two sea anglers present.

Tides week 35 High Tide at Grimsby Docks

February	24	Su	07 41	6.7	19 44	7.1
February	25	M	08 11	6.6	20 16	6.8
February	26	Tu	08 39	6.4	20 47	6.5
February	27	W	09 07	6.2	21 20	6.2
February	28	Th	09 41	5.9	21 59	5.7
February	29	F	10 24	5.5	22 58	5.3
March	1	Sa	11 32	5.2	** **	**

Tidal heights fell from springs at the weekend to low neaps by the end of the period.

Waders and wildfowl:

A flock of 195 Lapwing was feeding on field 27 and there was an observed movement of 190 additional birds from the inter-tidal ISI in a westerly direction which would have taken them to the favoured feeding areas around Thornton Abbey. Just 13 Golden Plover were on field number 1 continuing the poor showing by this species during the present winter; note that there were 600 Golden Plover in the fields around Thornton Abbey on the survey date.

The northern Curlew flock was limited to just 27 birds with 18 on the permanent pasture in field 49, a field not previously favoured, 8 in field 64 and a single bird remained in field 29. On the fields along Rosper Road there were just 4 birds in field 88 and none noted elsewhere but a survey was not undertaken on the grassed areas around the Texaco terminal where the majority of this flock of birds were in the previous week. The pond in field 64 may have been disturbed as there were fresh tractor tracks in the field but even so the number of wildfowl seems to be declining rapidly with just 12 Teal, 2 Mallard and 17 Wigeon present. Only 106 Lapwing were present along the inter-tidal section ISI suggesting an early spring departure had taken place at a date which is fairly typical for this species.

Waterfowl numbers remained high at East Halton pits but there was a fall in the number of birds at Rosper Road mainly accounted for by the reductions in Teal and Shoveler. At North Killingholme pits waterfowl numbers were at their lowest since July 2007 with just 20 birds recorded and a total lack of Shoveler; the reasons behind this decline are unclear. The high tide wader roost held an exceptional February total of 1440 Black-tailed Godwits but just five Redshank and six Curlew. By February most of the wintering flock of Black-tailed Godwits have usually moved south to staging areas in North Norfolk and on the Ouse and Nene Washes where they feed up and moult prior to their northbound migration to Iceland in April.

The fields adjacent to Thornton Abbey held totals of 800 Lapwing and 600 Golden Plover but no Curlew.

Survey period 36; March 2nd - March 8th 2008

The gale force winds which dominated the end of the previous survey period continued through the 2nd turning to a north-westerly on the 3rd but falling light overnight as temperatures fell and an approaching front brought a covering of snow along with a sharp overnight frost. The northerly airflow continued through the 4th but it was mainly bright and sunny during the morning allowing the frost to give quickly and the covering of snow to melt by 09:00hrs; further showers of rain and sleet arrived during the afternoon but skies cleared again by dusk. Following a sharp overnight frost the 5th was dry and sunny but cloud increased during the afternoon on a freshening westerly wind. The strong westerly kept temperatures high on the 6th but it was mainly cloudy with further rain falling during the night. The 7th was mild with lighter winds and long spells of sunshine but the dominant westerly weather pattern persisted bring more showers and a strong westerly wind to end the week.

Environmental conditions:

There was little change from the previous period throughout the survey area. Water levels at North Killingholme pits were lower than in the previous week increasing the area of exposed mud available for roosting waders.

Disturbance events:

Apart from the dog walking in the East Halton Marshes area nothing was observed.

Tides week 36 High Tide at Grimsby Docks

March	2	Su	00 37	5.1	13 13	5.2
March	3	M	02 22	5.2	14 40	5.5
March	4	Tu	03 32	5.6	15 39	5.9
March	5	W	04 20	6.0	16 23	6.3
March	6	Th	04 59	6.4	17 01	6.7
March	7	F	05 36	6.6	17 37	7.0
March	8	Sa	06 11	6.8	18 13	7.2

Tidal heights rose from low neaps at the weekend to high springs by the end of the period.

Waders and wildfowl:

The expected early spring exodus of Lapwing was very apparent with no birds on the fields and just four on the ISJ inter-tidal area; conversely there were 91 Golden Plover roosting in field number 1 which also held a single Redshank. Curlew were the most numerous wader on the fields but their numbers were also reduced with 31 in permanent pasture field number 29 adjacent to Eat Halton pits and a further 14 on the pastures inland of East Halton. The southern flock were concentrated in field 103 where 62 birds were feeding.

The pond in field 64 was partly frozen but still held 22 Teal, 20 Wigeon and a pair of Shoveler.

The number of waterfowl at Rosper Road fell again with both Mallard and Shoveler showing declines from the previous week but on the positive side Gadwall reached their highest total of the survey period with 23 birds present. At East Halton pits waterfowl abundance and variety remained high with Gadwall increasing to 16 birds. At North Killingholme pits waterfowl were more numerous than in the previous week but the overall decline from the winter peaks was notable. The high tide wader roost held the first substantial flock of Avocets of the spring, 18 birds, with 168 Black-tailed Godwits but just 28 Redshank.

The inter-tidal areas revealed few surprises but the early spring movement of Ringed Plovers was noted with 10 birds on ISJ where 296 Black-tailed Godwits roosted at high tide; this flock was additional to the birds at North Killingholme Haven pits.

The fields adjacent to Thornton Abbey held totals 30 Golden Plover along with 8 Curlew but no Lapwing in line with the exodus noted at all the other sites during this period.

Survey period 37; March 9th - March 15th 2008

Although the week began with some fairly quiet weather, light south-west winds and long sunny spells, on the Sunday it quickly deteriorated as a deep depression tracked eastwards across the UK over the ensuing 36 hours bringing some periods of heavy rain and strong westerly winds. Temperatures though were quite high being in the low teens centigrade. Rain and wind became the main feature of the week with the first bands of rain arriving on a stiff westerly on the 10th. The 11th was quieter and dry but with extensive cloud and an increasing wind which developed into a near gale by the morning of the 12th. A much calmer day on the 13th saw some welcome sunshine and only light north-westerly winds with the wind falling away and skies clearing overnight to produce a slight ground frost. The 14th started cold and frosty with a light north-westerly wind and lots of sunshine but cloud built during the day as temperatures rose and the wind swung back into the south-west. The week ended with a dull and murky theme as more Atlantic depressions approached from the west.

Environmental conditions:

Apart from the expected early spring growth of vegetation in the fields there was little change within the surveyed area; the water levels in North Killingholme Haven pits rose and reduced the area of exposed mud to a small area by the tide meaning that there was little area available for roosting waders.

Disturbance events:

Apart from the dog walking in the East Halton Marshes area nothing was observed.

Tides week 37 High Tide at Grimsby Docks

March	9	Su	06 46	6.9	18 49	7.4
March	10	M	07 22	7.0	19 26	7.4
March	11	Tu	07 57	6.9	20 05	7.3
March	12	W	08 33	6.6	20 47	6.9
March	13	Th	09 13	6.3	21 37	6.5
March	14	F	10 02	6.0	22 40	6.0
March	15	Sa	11 09	5.6	** **	** **

Tidal heights rose from fell from high springs at the weekend to median highs by the end of the period.

Waders and wildfowl:

On the fields Curlew was typically the most prominent species with a total count of 58 birds in the northern fields commuting

between the permanent pastures in fields 29, 42 and 64 and the autumn sown cereals in fields 24 and 26. At the southern end of the survey area just a single bird was in the permanent pasture in field 88 but 33 were feeding in the favoured field number 103 in addition to which 3 birds were observed flying south-south-west over Rosper Road pools heading out of the survey area. There were 19 Lapwing on the rape stubble in field 25 and 131 Golden Plovers roosted in field number one. The flock of Lapwing were the only birds of this species to be seen during the survey which is expected as wintering birds will have left the estuary and the remnant birds are mainly prospective local breeders. Golden Plover linger later in the spring but additional passage flocks also move through the area from March through to late April so these may not have been wintering birds but the last three weeks have seen a roost of this species on this favoured field which would suggest that they are in fact part of the local wintering population. The number of wildfowl using the permanent ponds in field 64 continued to decline with just 14 Wigeon and 6 Teal plus a pair of Mallard and a pair of Shoveler. At the other wetland sites the waterfowl total at East Halton pits was almost the same as the previous two periods but with some change in the numbers of individual species while the low wildfowl totals noted in recent weeks at North Killingholme pits were repeated; the wader roost there was pitiful with just 30 birds present reflecting the recent poor showing at this site which in part seems to be as a result of high water levels. The strong Gadwall presence at Rosper Road was maintained through this period, Teal numbers rose to 36 the highest total since early January but Shoveler fell to just nine birds.

On the inter-tidal a notable flock of 33 Avocets was on ISI and these were additional to the eight birds which roosted at North Killingholme Haven pits. The very strong winds appeared to have an adverse effect upon waders on the inter-tidal mudflats with just 68 birds counted on ISI and 145 on ISJ; of note however, was the count of 38 Shelduck on ISJ the highest total for this species since January 20th – 26th.

The fields adjacent to Thornton Abbey were devoid of all waders during this period.

Survey period 38: March 16th - March 22nd 2008

The first three days of the week saw the local area affected by a constant run of cold northerly to north-easterly winds running down the North Sea and bringing occasional showers of sleet and rain. Temperatures were up to 9C but with the wind chill it felt much cooler in exposed areas though in sheltered spots when the sun was shining it was pleasantly warm. Heavy rain fell for most of the 19th with the cold northerlies and showers peppering the day on the 20th before the wind increased in strength and swung into the north-west by the 21st a theme which persisted to the end of the week with showers becoming more wintry towards the weekend.

Environmental conditions:

Apart from the expected early spring growth of vegetation in the fields there was little change within the surveyed area.

Disturbance events:

Apart from the dog walking in the East Halton Marshes area nothing was observed.

Tides week 38 High Tide at Grimsby Docks

March	16	Su	00 18	5.6	12 49	5.5
March	17	M	02 08	5.7	14 28	5.7
March	18	Tu	03 28	6.0	15 37	6.1
March	19	W	04 24	6.4	16 24	6.5
March	20	Th	05 08	6.6	17 04	6.8
March	21	F	05 42	6.7	17 39	7.0
March	22	Sa	06 13	6.7	18 11	7.1

Tidal heights rose from neaps at the weekend to median highs by the end of the period.

Waders and wildfowl:

On the fields a small flock of Lapwing was split between the oilseed rape stubble in field 25 and the permanent pasture at the western end of East Halton pit; the total of 24 birds probably represented a possible breeding population. Four Lapwing also roosted at North Killingholme pits at high tide.

Curlew were found in five fields; 74 were feeding in field 24 in what was quite tall autumn cereals but in a field which had been set-aside in the previous winter and spring, 26 were in field 30 a frequent feeding area of permanent pasture, 10 in the pasture in field 64, 36 in field 103 and 11 birds were feeding in field number 12, around a flood water pool, along with two Redshank and a record flock of 11 Ruff. The Ruff count was the highest of the winter period. A single Redshank was also feeding in field number 1 again around a flood water pool. Two Black-tailed Godwits were also feeding in the pasture field at the western end of East Halton pits along with a pair of Oystercatcher.

There was a small increase in Wigeon and Teal numbers in field 64. In the major wetland sites wildfowl numbers fell slightly at East Halton pits where there were no Gadwall and fewer Pochard but Coot numbers strangely increased again probably reflecting the arrival of spring passage birds. At Rosper Road waterfowl numbers increased to 150 birds largely as a result of a sudden jump in Teal numbers with a winter high count of 74 birds being recorded. At the eastern end of the wetland a flock of 20 Curlew and 6 Lapwing were roosting in the shallow water while seven Snipe flushed with the wildfowl and a single Water Rail was calling.

At North Killingholme pits there was also a slight rise in Teal numbers but otherwise waterfowl abundance was similar to the previous week but the high tide wader roost held 302 birds including 229 Black-tailed Godwits and 33 Avocets.

The fields adjacent to Thornton Abbey were devoid of all waders during this period.

Survey period 39; March 23rd - March 29th 2008

Heavy snow fell overnight from the 22nd to the 23rd with 10-12cm accumulated by dawn on the 23rd; rising temperatures produced a quick melt with 95% of the standing snow having disappeared by midday on the 23rd following which the day was punctuated by a scatter of heavy showers pushed south-west on a light but cold north-easterly wind. The wind moved into the north-west by the Monday and stayed in that quarter for two days with a biting wind and occasional light showers pushing south between long sunny periods. Although the wind moved into a more southerly direction later in the week it remained cold for the end of March with occasional rain mid-week but no substantial amounts fell after the Sunday.

Environmental conditions:

Rainfall at the end of the previous week and the heavy snow fall and subsequent melt on the 23rd produced some localised increases in standing water on some of the fields in the survey area; some of the arable fields in East Halton Marshes had flood water pools in areas where they had been evident earlier in the winter while some of the permanent pasture fields were also wetter than normal with some flooding evident in fields 88 and 89 in particular.

Disturbance events:

Apart from the dog walking in the East Halton Marshes area nothing was observed.

Tides week 39 High Tide at Grimsby Docks

March	23	Su	06 41	6.8	18 45	7.0
March	24	M	07 09	6.7	19 17	6.9
March	25	Tu	07 37	6.7	19 48	6.7
March	26	W	08 04	6.5	20 19	6.4
March	27	Th	08 32	6.3	20 58	6.1
March	28	F	09 03	6.0	21 27	5.7
March	29	Sa	09 42	5.7	22 20	5.3

Tidal heights fell from high springs at the weekend to a low neap at the end of the survey.

Waders and wildfowl:

Four Gadwall feeding on flooded pools in field 88 were the first birds of this species to be recorded from the fields during these surveys; the same field also held six Mallard. The usual gathering of wildfowl on the permanent ponds in field 64 still held 17 Wigeon and 8 Teal.

Lapwing were present again in field 25, twelve birds, with an additional eight resting on the pasture at the western end of East Halton pits. The highest count of Ruff was logged during the week with ten feeding with Lapwing in field 25 and an additional three birds in field 12. Nine of these birds moved into North Killingholme pits in the late afternoon presumably to roost. A single Redshank was again found in field number 1.

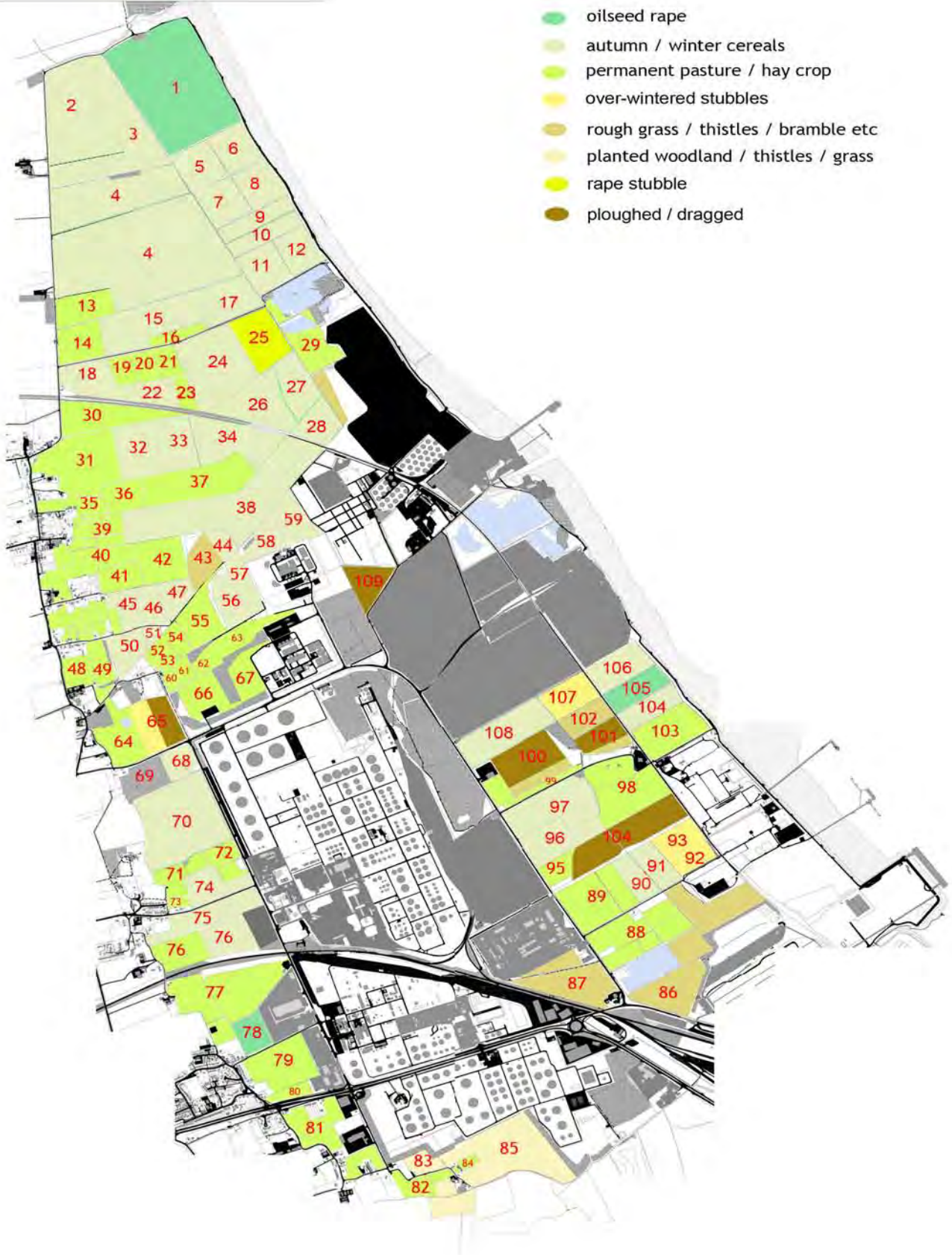
Curlew were found in exceptional numbers with a total count from the whole survey area of 338 birds, by far the highest count of the whole series. This was an accurate accumulated count from all of the surveyed fields with no observed interchange between the different sites. The large increase in abundance was spread between the two major sites, East Halton Marshes and Rosper Road pastures. In the latter site, field 88 held 141 birds, the largest single concentration of this species thus far recorded from the survey area, while a further nine birds were in the adjacent field 89. The early spring concentration in these fields was also noted during the same period in 2007. In East Halton Marshes 170 Curlew were concentrated in winter cereals, oilseed rape and oilseed rape stubbles in fields 1, 6, 8, 12 and 25. It seems likely that the survey area attracts spring passage birds in addition to the wintering flocks which would account for the sudden increase in numbers over a short time span.

The inter-tidal areas were virtually devoid of birds in the strong northerly winds on the survey date but North Killingholme pits held 1492 waders at high tide including the first notable Dunlin count for five months. The flock of 1150 roosting Icelandic Black-tailed Godwits included three colour ringed birds one of which had been seen at Alkborough Flats in late November 2007 then at Killingholme in December and January 2007-2008. The count of 219 Dunlin was the highest count in the pits since week 20 in spite of some good number shaving been recorded from the adjacent inter-tidal ISJ in the intervening period. Avocet numbers increased to 43 with pairs in display and mating in advance of the breeding season. By contrast the pits held just 13 wildfowl, the lowest count since the start of the survey. Wildfowl numbers remained high at East Halton pits but fell again slightly at Rosper Road where Teal fell to 52 accounting for most of the difference in overall waterfowl abundance from the previous period. Five Lapwing were probably pre-breeding birds.

Field cropping during survey							
Field number	GR	July 1st crop	July 1st grazing	crop cut week	plough week	sown week	crop
1	147225	AW cereals		wk 6-7		10	OSR
2	141224	OS Rape		wk 4-5		10	AW cereals
3	144223	AW cereals		wk 6-7		10	AW cereals
4	145216	OS Rape		wk 5-6		12	AW cereals
5	149220	OS Rape		wk 5-6		13	AW cereals
6	151222	OS Rape		wk 5-6		14	AW cereals
7	152219	OS Rape		wk 5-6		12	AW cereals
8	150218	OS Rape		wk 5-6		12	AW cereals
9	152217	OS Rape		wk 5-6		12	AW cereals
10	152216	OS Rape		wk 5-6		12	AW cereals
11	152214	OS Rape		wk 5-6		12	AW cereals
12	152215	OS Rape		wk 5-6		12	AW cereals
13	141211	PP	cattle				PP
14	142209	PP	hay May				PP
15	145210	OS Rape		wk 5-6		13	AW cereals
16	147209	PP	hay May				PP
17	150212	OS Rape		wk 5-6		13	AW cereals
18	142207	AW cereals		wk 6-7		10	AW cereals
19	144208	PP	hay May				PP
20	146208	seeded grass	hay May	wk 4-5			leys
21	147208	PP	uncut				PP
22	146206	OW Stubble	set-aside		wk 10	10	AW cereals
23	148206	PP	hay May				PP
24	150208	OW Stubble	set-aside		wk 7	10	AW cereals
25	152209	OS Rape		wk 5-6			rape stubble
26	152205	beans				12	AW cereals
27	154206	S cereal		wk 10		12	AW cereals
28	155204	beans		wk 10		12	AW cereals
29	155209	PP					PP
30	142204	PP	hay May				PP
31	142202	PP	cattle				PP
32	145202	AW cereals		wk 7		12	AW cereals
33	147203	AW cereals		wk 7		12	AW cereals
34	151203	S cereal				12	AW cereals
35	142199	PP	cattle				PP
36	144199	PP	hay May				PP
37	48200	PP	hay May				PP
38	151199	OW Stubble	set-aside		wk 5-6	13	AW cereals
39	143197	PP	cattle				PP
40	143196	PP	cattle				PP
41	144199	PP	horses				PP
42	146195	PP	hay May				PP
43	149196	rough grass					rough grass
44	150197	AW cereals		wk 6-7		17	ploughed
45	144193	AW cereals		wk 4-5		10	AW cereals
46	146192	AW cereals		wk 4-5		10	AW cereals

47	147193	AW cereals		wk 7	15	AW cereals	
48	141188	PP	horses			PP	
49	143189	PP	horses			PP	
50	144190	AW cereals		wk 4-5	10	AW cereals	
51	146191	fallow			wk 6	10	AW cereals
52	146190	PP					PP
53	147189	PP					PP
54	147190	PP	hay May				PP
55	149191	PP		wk 5-6			PP
56	150193	AW cereals		wk 6-7	wk 11		AW cereals
57	151193	AW cereals		wk 6-7	wk 11		ploughed
58	152197	AW cereals		wk 6-7		12	AW cereals
59	154198	AW cereals		wk 8-9		12	AW cereals
60	147188	PP	cattle				PP
61	147189	PP	cattle				PP
62	149189	leys					leys
63	151190	leys					leys
64	144184	PP	cattle				PP
65	146185	AW cereals		wk 4-5			stubbles
66	148187	leys					leys
67	151188	leys					leys
68	147113	AW cereals		wk 6-7			leys
69	144179	PP					PP
70	147179	OS Rape		wk 5-6		13	AW cereals
71	147176	PP					PP
72	150177	PP					PP
73	147174	PP					PP
74	149175	OS Rape		wk 4-5		15	AW cereals
75	149173	AW cereals		wk 6-7		14	rape
76	150172	AW cereals				13	AW cereals
77	150168	PP	cattle				PP
78	151166	OW Stubble			wk 6-7		rape
79	153164	S cereal					PP
80	153162	PP	horses				PP
81	156160	PP					PP
82	159156	PP	horses				PP
83	161157	rough grass					rough grass
84	164157	PP					PP
85	167158	wood					wood
86	176168	rough grass					rough grass
87	170169	rough grass					rough grass
88	175173	PP	horses				PP
89	171174	PP	hay May				PP
90	173176	beans		wk 10		12	AW cereals
91	175176	OW Stubble			wk 7	15	AW cereals
92	176178	AW cereals		wk 5-6			OW stubble
93	177177	AW cereals		wk 5-6			OW stubble
94	173178	AW cereals		wk 5-6			ploughed
95	169176	PP	cattle				PP
96	170179	OW Stubble			wk 10	12	AW cereals
97	169180	OS Rape		wk 3		12	AW cereals
98	173181	PP	cattle				PP
99	166181	PP	horses				PP
100	168173	S cereal					ploughed
101	171184	S cereal					ploughed

102	171186	rough grass			rough grass
103	176186	leys	hay May	wk 5-6	leys
104	174186	AW cereals		wk 5-6	10 AW cereals
105	173187	AW cereals		wk 5-6	10 oilseed rape
106	173189	OS Rape		wk 4-5	13 AW cereals
107	170187	rough grass			rough grass
108	166184	OS Rape		wk 4-5	12 AW cereals
109	158194	rough grass			ploughed



- oilseed rape
- autumn / winter cereals
- permanent pasture / hay crop
- over-wintered stubbles
- rough grass / thistles / bramble etc
- planted woodland / thistles / grass
- rape stubble
- ploughed / dragged

Wigeon movements week 17



Mallard movements week 17



Mallard movements week 19



Mallard movements week 21



Mallard movements week 23



wildfowl movements week 26 (Mallard, Wigeon)



Shoveler movements week 17



Shoveler movements week 19



Golden Plover movement week 18



Golden Plover movements week 21



Golden Plover movements week 24



Golden Plover movements week 26



Golden Plover movements week 30



Lapwing movements week 17



Lapwing movements week 19



Lapwing movements week 22



Lapwing movements week 24



Lapwing movements week 25



Lapwing movements week 27



Lapwing movements week 29



Lapwing movements week 35



Ruff movements week 21



Ruff movements week 31



Black-tailed Godwit movements week 5



Black-tailed Godwit movements week 6



Black-tailed Godwit movements week 7







Black-tailed Godwit movements week 14



Black-tailed Godwit dispersal from roost week 16



Black-tailed Godwit movements week 17



Black-tailed Godwit movements week 19



Black-tailed Godwit movements week 23



Whimbrel movement week 6



Curlew movements survey period 3



Curlew movements week 4



Curlew movements week 5



Curlew movements week 6



Curlew movements week 7





Curlew movements week 9



Curlew movements week 10







Curlew movements week 13



Curlew movements week 14





Curlew movements week 17



Curlew movements week 18



Curlew movements week 21



Curlew movements week 23



Curlew movements week 24



Curlew movements week 25



Curlew movements week 26



Curlew movements week 29



Curlew movements week 30



Curlew movements week 31



Curlew movements week 32



Curlew movements week 33



Redshank movements week 5



Redshank post roost dispersal week 16



APPENDIX E

**NORTH LINCOLNSHIRE WINTER SURVEY JANUARY – MARCH 2009. G.P.
CATLEY. NYCTEA LTD.**

North Lincolnshire winter survey January – March 2009

Week 1 January 1st – 7th

Survey date January 1st

High tide 08:50 spring tide at 6.3m

Weather:

After several days of hard frosts with temperatures falling as low as -6C the previous night was again cold with temperatures of -3C but it was -1C by dawn with eight octas cloud cover and very dull; temperatures rose to 3C by midday but it remained dank and murky with total cloud cover; calm throughout.

All shallow water bodies and flood-water pools in the fields were frozen solid but surface soil layers were medium hard but not frozen beyond the immediate surface layers. The Skitter Beck and Parker's Pond TA140241 were ice-free.

Three Black-tailed Godwits flew west up the estuary at high tide.

Teal were feeding on the Skitter Beck with 24 adjacent to the ponds in field 136 (the ponds were all frozen) and 42 along 100m of the Beck adjacent to fields 49 and 50; a pond in the willows on the eastern side of the Beck was frozen over.

Two Marsh Harriers were on the Grues by field 129 (a young adult male and a female).

A male Stonechat was on the Grues at East Halton Skitter.

A flock of 85 Stock Doves were feeding in field number 67 over-wintered stubbles.

A Barn Owl was hunting along the edge of the drain opposite field 123 and flew back to the known breeding site in Mollit's barn.

While conducting surveys around Thornton Abbey Lapwings and Golden Plovers were noted in adjacent fields to those surveyed but outside of the survey area; these counts have been incorporated into the sheets as fields X – Z.

Week 2 January 8th – 14th

Survey date January 8th

High tide 15:24 a median tide at 6.1m

Weather:

The severe temperatures of recent days continued throughout the previous week with penetrating overnight frosts and cold days. Winds were generally light but cloud amounts had been very variable. On the 8th temperatures rose from a low of -2C overnight to a peak of 5C by early afternoon; total cloud cover during the morning dissipated by early afternoon with pleasant hazy sunshine persisting to darkness when temperatures plummeted again with a hard frost and freezing fog developing.

Most of the flood-water pools in the fields and those on the grues remained frozen but Parkers Pond was ice free although the water at Dawson City was still frozen solid.

Parties of Teal were again found along the Skitter Beck with three by field 50, 9 south of the railway bridge, 42 adjacent to field 19 and 12 by field number 2.

The same two Marsh Harriers were moving between Dawson City, the grues and the fields towards Goxhill Haven.

A pair of Stonechats were on the Grues by field number 108.

A Water Pipit was seen on the grues at East Halton Skitter.

Single Woodcock were flushed from the plantation between fields 28 and 50 and on the Beck side in the scrub on the edge of field 81.

A Green Sandpiper was feeding along the Beck side between fields 75 and 81.

At Goxhill Haven 120 Turnstone and 880 Dunlin were feeding on the mid tide. At high tide most of the diving duck that feed off the pier at New Holland moved from the estuary to loaf off the area between Goxhill Haven and Skitter Ness; totals were as follows;
Pochard 400 Tufted Duck 300 Goldeneye 420 Scaup 3

Week 3 January 15th – 21st

Survey date January 15th
High tide 08:42 a spring at 6.8m

Weather:

The freezing spell that had affected the area since the end of December came to an end on the 11th as a vigorous Atlantic depression brought strong south-westerly winds and rain to the region. The front continued to affect the area through the following day with heavy rain falling for several hours on the 12th; as this fell on partly frozen ground there was some localised flooding of fields in the survey area. Notably by the 15th water levels in most of the ponds and in several of the fields had risen by 6-8cm from the previous survey. A frost on the night of the 13th gave way to a bright and sunny day on the 14th but another deep depression approached from the west during the 15th with mainly light rain falling from mid morning pushed westwards by a fresh south-south-west wind.

In the survey area the area of floodwater in field 101 increased to cover 30% of the field; the permanent pasture in field 103 was also particularly wet.

At first light most of the waders in the area were found on the grues roosting on the outer edge of the foreshore adjacent to field 113. The total of 176 Curlew all moved inland to feed on permanent pastures while the flock of Lapwing split and moved widely around the area occurring on different fields including field 101 where 420 birds were present 30 minutes after high water. The flock then moved onto favoured permanent pasture in field 110 with some of the birds moving to the winter cereal field 122. Although there were 300 Dunlin on the shore roost a single flock of 26 birds was the only noted movement to an inland field where they fed on field 101; the attraction to this winter cereal field being due to the extensive flooding.

Only three Teal were found along the Skitter Beck in the section south of the railway bridge adjacent to field number 24. A single Woodcock was also flushed from the edge of the plantation on the Beck side at this point.

Dawson City pits held a pair of Mallard and a pair of Gadwall but there were no birds on Parker's ponds.

Week 4 January 22nd – 28th

Survey date January 22nd
High tide 15:17 a neap at 5.8m

Weather:

A series of frontal systems had affected the local area in the interim period between the third and fourth surveys with considerable amounts of rainfall occurring. This had increased water levels still further on several of the fields with field number 101 in particular now having 35% water coverage. The level in the East Halton Beck was the highest yet and there was considerable run-off from the fields turning the beck a murky brown.

On the survey date heavy rain fell for most of the morning with the weather system clearing the area by midday after which the weather became progressively better with winds dropping

to a light south-westerly and the sky clearing to leave a sunny end to the afternoon. Temperatures were around the seasonal average at 6C to 8C.

The survey continued through to darkness at 17:20hrs with sunset at 16:21hrs.

Initially an adult and a juvenile Peregrine were sparring noisily over field 101 and this had dispersed all of the waders from this favoured flooded field; one of the Peregrines was then seen eating prey in field 110 and this again caused considerable disturbance amongst the Lapwings and Curlew which all moved to the upper inter-tidal on the adjacent edge of the grues. As the falcons left Lapwing and Curlew returned to favoured feeding fields in the area. There were also considerable movements of Lapwing between the north bank and field 101; in the late afternoon a flock of 8000+ Golden Plovers was noted in flight over Paul Holme Stays and 660 of these birds moved across the estuary and gathered on field 101 towards dusk.

The late afternoon high tide was a relatively low neap and most of the waders in the area gathered to roost on the remaining areas of exposed mud on the upper inter-tidal adjacent to field number 130 where they remained until darkness. The totals of 2200 Dunlin and 198 Bar-tailed Godwits were somewhat unusual in that neither species had been noted in other than small numbers at low water along the adjacent stretches of the south bank. The total of 380 Curlew was considered to be at the lower limit for the flock but without disturbing the birds there was no way of obtaining a more accurate count.

Birds on the Grues included three Water Pipits, a female Stonechat and two Short-eared Owls. The latter species, although recorded from this area in every winter since 1969-70, had not previously been recorded in the present winter following the ploughing of favoured fields numbered 127, 128 and 129 that had been rough grass for several years.

At 17:00hrs a Bittern flew along the Grues and over Dawson City pit and appeared to drop into Clondyke presumably to roost; whether it had been feeding in borrow pits on the grues or in Parker's pond is not clear as it was not seen until passing over the Grues at the Goxhill end.

A Barn Owl was hunting the Skitter Beck banks around fields 3, 75 and 78 and a Woodcock was flushed from the edge of field 78 where a Kingfisher was also present.

A female Marsh Harrier moved north-west over Dawson City mid afternoon.

Week 5 January 29th – February 4th

Survey date January 29th
High tide 07:31 a spring at 6.6m

Weather:

The previous week was mainly fairly mild with temperatures typical of the seasonal norm; rainfall amounts were low in comparison with the previous week and winds had been generally light.

On the survey date a misty start with temperatures of 4C and a light south-westerly wind at first light turned into a mainly sunny afternoon as a freshening southerly wind cleared the mist and low cloud by early afternoon.

Field 101 remained very wet with 35% water cover in floodwater pools and some of the other fields in the survey area also had small amounts of standing water. The Skitter Beck was still deep and cloudy along most of its length covered by the survey area.

There was considerable disturbance of waders throughout the day due to the presence of three Marsh Harrier and a juvenile Peregrine. The Harriers were mainly moving around the fields to the north and west of Dawson City where they were in active display and territorial chasing over the fields thus disturbing feeding waders. The female also hunted the pasture fields to the south of Dawson again disturbing feeding birds. The juvenile Peregrine chased

Curllew and other waders on the foreshore for over an hour at midday and produced considerable disturbance.

No waders were found in the Thornton Abbey area fields where Lapwing, Golden Plover and Curllew are usually present.

The area of the foreshore favoured by feeding waterfowl and most of the waders extends from Dawson City to the southern end of field 130.

A flock of 30 Stock Doves was feeding on field 87.

The wildbird seed crop in field 117 held 35 Tree Sparrows and 25 Reed Buntings.

Week 6 February 5th – 11th

Survey date February 8th
High tide 16:50 a spring at 6.7m

Weather:

The cold winter weather continued to affect Britain throughout the week but the local area escaped most of the snowfalls that affected large areas of the country; snow did fall during the morning of the 5th but as this turned to rain by midday the snow dissipated. Overnight frosts were a feature of the period with most of the survey area being hard frozen throughout. On the night prior to the survey temperatures fell to -5C.

On the 8th winds were light north-westerly with variable cloud cover but some sunny spells during the late morning; temperatures varied from -3C at first light to 2C during the late morning but it remained dry throughout.

All of the standing water in the arable and pasture fields was frozen but permanent pasture s were clearly more accessible to feeding waders as shown by the distribution of Curllew and Lapwing in particular. This dependence on permanent pasture during periods of severe frosts is clearly critical to the survival of many of these birds during hard winters.

The large flock of Lapwing and smaller numbers of Golden Plover in the Thornton Abbey fields were roosting in the tiled fields, that were still frozen, but then moving into the permanent pasture field X where they fed with grazing sheep.

Successive counts of flocks of Curllew in fields 114, 118, 105 and 106 produced a combined total of **509** birds; there was considerable movement of birds around other fields in the area but this was the minimum of birds present.

It was also notable how important permanent pasture fields were for thrushes during this period of hard frosts with several parties of Fieldfares in many of the fields that held feeding waders; in field 139, a small pasture field on the edge of East Halton village a flock of 148 Redwings was feeding; this was the only concentration of this species noted during the survey.

Over-winter stubbles clearly also proved to be of high importance for several species of passerines; one scan of field 87 produced counts of 80 Meadow Pipits, 90 Skylarks, 22 Yellowhammers and 18 Reed Buntings.

The wildbird seed crop in field 117 held 36 Tree Sparrows and 18 Reed Buntings.

The female Marsh Harrier was in the vicinity of Dawson City throughout the afternoon and a Barn Owl was seen to catch a shrew on the embankment by the northern end of the grues where a male Stonechat was also seen.

Three Teal were in East Halton Beck adjacent to field number 75 and a total of 33 birds were in the stretch by the old railway bridge over the Beck where a young Roe Buck was seen.

Week 7 February 12th – 18th

Survey date February 12th

High tide 07:36 a high spring at 7.0m

Weather:

Another week of cold weather with frequent overnight frosts preceded the survey period. The night of the 11th – 12th produced a severe and penetrating frost with temperatures falling to -5C. Although the 12th started out fine and sunny but very cold at -2C, cloud increased quickly arriving from the north-west by 09:00hrs and thickening through the morning with snow falling from 13:15hrs and intensifying through the early afternoon. The snow continued through to the evening producing an accumulation of 3-5cm.

Most of the standing water in the arable and pasture fields was frozen at first light but the frost did ease somewhat during the morning.

The high spring tide covered all of the upper foreshore at first light and this forced roosting waders to use the grues.

Two wildfowlers were on the edge of the grues adjacent to field number 108 from dawn to 09:00hrs.

Over the high tide all of the Curlew in the area were roosting; a flock of 21 birds was located in field 122 but they moved to join the main flock of birds on the grues by fields 113 / 114 where a total of 488 birds was counted. The same roost also held 560 Lapwing, 30 Black-tailed Godwits and single Knot and Bar-tailed Godwits. After high tide the birds moved into permanent pastures where they either roosted or fed. The Curlew that moved into field 103, 218 were all roosting but later during the morning moved again into field 105 where they all settled to feed.

The flock of Lapwing in field 122 at first light were roosting. The flock in field 129 were roosting when first seen but later started to feed by pecking at the surface of the field from where they appeared to be obtaining very small items of food if indeed they were obtaining food. A total of 730 Lapwing was counted in the two roosting flocks but there was movement between the grues roost and field 129 and also field 122.

Field 131 held a mixed flock of Curlew, Redshank, Black-tailed Godwit, Golden Plover and Lapwing all of which were feeding avidly by late morning.

From early afternoon small parties of Lapwing and Golden Plover were seen arriving from the direction of East Halton village and passing over the Skitter Beck by the railway bridge before moving to the fields at Thornton Abbey. Due to the presence of the plantation on the Beck side it was not possible to see where the birds had originated. The flock of Lapwing and Golden Plover feeding in field X in the early afternoon all moved into field 68 as the snow intensified and roosted there for the remainder of the afternoon.

A total of 52 Teal were feeding on the East Halton Beck around the old railway bridge adjacent to fields 49 and 136.

The plantation between the Beck and fields 24 / 27 held a flock of 32 Goldfinch, 9 Lesser Redpoll, 3 Siskin and a probable Coue's Arctic Redpoll. Two Common Snipe and a Woodcock were also feeding on the side of the Beck by this plantation and a juvenile female Marsh Harrier was hunting the Teal along the Beck at this point.

Three Marsh Harriers, a 3cy male and two females, were in the vicinity of Dawson City with all three birds performing sky-dancing displays during the morning; this is most unusual so early in the year.

A juvenile Peregrine arrived from the west and chased waders and wildfowl in the region of the grues and the adjacent estuary from mid morning.

A pair of Grey Partridge was present in field 28.

A flock of 40 Yellowhammers was feeding on the grues in the field opposite field number 103.

Week 8 February 19th – 25th

Survey date February 22nd

High tide 16:37 a rising spring at 6.2m

Sunrise 07:07 Sunset 17:22

Weather:

Much milder weather occurred during the week with temperatures rising to highs of 11C during the day but not falling below 3C at night producing an average of 6C – 7C. There was no rainfall but the final release of the water trapped in frozen ground and pools effectively raised water levels in some of the fields; the East Halton Skitter Beck remained relatively high but the levels had fallen by the day of the survey on the 22nd. On the survey date winds were force 3-4 from the west-north-west with 8 octas cloud cover for most of the day but odd short sunny spells developed in the afternoon. Temperatures peaked at 9C late morning falling to 4C by darkness.

Wader distribution was particularly limited with most of the birds in the area around the Goxhill end of the Grues opposite Dawson City with Curlew and Lapwing moving onto the closest pasture fields in the late afternoon as they were forced off the inter-tidal by the rising tide.

There was a departure of some of the Lapwing from the inter-tidal as birds headed off west up the estuary towards high tide.

A flock of 7 – 8000 Golden Plover was visible over Paul on the north bank and at high tide a total of 780 birds flew north-west over the survey area between East Halton Skitter and Goxhill tiliary (see map). It was not possible to see where the birds were heading but all the flocks seen were moving at height and could have been moving as far as the inner estuary.

The first Avocets of the spring were roosting on the inter-tidal towards high tide and moved off up river.

Twelve Teal were on the Skitter Beck by the old railway bridge.

A single Woodcock was present in the plantation by the Skitter Beck railway bridge and the corpse of a second bird was found in the same location.

The flock of finches feeding in the alders in the plantation on the Skitter beck side by field 24 held 60+ Goldfinch, 20 Siskins, 6 Lesser and two Mealy Redpolls and the Coue's Arctic Redpoll was seen again.

Three Marsh Harriers were in the vicinity of Dawson City where two males were involved in a 90 minute long fight in the late afternoon.

Week 9 February 26th – March 4th

Survey date February 27th

High tide 07:06 a spring at 6.7m

Sunrise 06:52 Sunset 17:35

Weather:

The intervening period between the week 8 survey and week 9 was very mild with temperatures up to 12C as a high-pressure system fed warm westerly winds over the region. In spite of the extensive cloud cover there was little rainfall during the period and with

increasingly strong winds from the weekend onwards areas of surface water in the fields diminished and water levels in the Skitter Beck also fell considerably.

The warmer weather had apparently led to a departure of some of the wintering waders from the survey area a feature that is typical of the late February period in milder winters. No waders were found in the East Halton or Thornton Abbey areas and most of the waders in Goxhill marsh were on the foreshore with few birds using the fields. Field 101 that still had 30% water coverage held 89 Lapwing, 14 Curlew and 48 Golden Plover.

The vast majority of the Curlew were found on the upper foreshore where they were roosting at high water. These birds were still roosting in the same location four hours later with no movements to feeding areas being noted during the morning period. In milder weather waders can sometimes obtain enough food for their daily requirements in a short period of time and then spend much of the day roosting; this is also a feature of the late winter prior to migration when birds roost extensively prior to evening departures on long migratory flights.

The Lapwing were also mainly found roosting on the upper inter-tidal but some birds moved off up the estuary along with 24 Curlew.

There were still good numbers of dabbling duck on the foreshore adjacent to fields 113 and 130 but all of these birds were roosting.

The Bittern was seen again dropping into Dawson City.

A Little Egret was feeding on the grues between East Halton end and Parker's plantation; there were 14 Common Snipe on the grues at East Halton and a Merlin was chasing a Skylark over the shore.

Meadow Pipits had already returned to territories on the grues where some males were indulging in early season display flights.

Week 10 March 5th – 11th

Survey date March 5th
High tide 11:19 neap tide at 5.6m

Weather:

The weather during the intervening week had been relatively mild but a sharp overnight frost occurred prior to the survey and patchy fog lingered around the area to mid morning. The night of the 3rd saw strong southerly winds and heavy rain affecting the local area but otherwise winds were generally light and from a west to north-west direction. On the day of the survey after clearance of early fog the day was pleasantly warm with extensive periods of bright sunshine and thin cumulus cloud.

The over-wintered stubbles in fields 67, 87 and 92 had all been ploughed during the previous week.

As expected virtually all of the wintering Lapwing and Golden Plover had left the survey area leaving Curlew as the one species still found to be using the fields in the area. All of the Curlew located were feeding in permanent pasture fields. As the tide was a neap the upper inter-tidal was not covered and most of the waders and wildfowl other than Curlew remained on the inter-tidal over the high water period.

Flood water pools on the grues held a feeding party of nine Redshank and a single Lapwing.

A flock of nine Pink-footed Geese flew up the estuary off Goxhill Skitter Ness; a flock of eight birds had been feeding on field 111 on February 22nd and this could have been the same group.

A female Hen Harrier was hunting the fields around field 101 and caught prey on the side of the road taking it into the stubble field 100 to consume. This was the first record of this species during this survey in this area.

A pair of Stonechats were on the grues by Parker's plantation and a single male between Goxhill Haven and Skitter Ness; the flock of 40 Tree Sparrows was still on the wild bird seed in field 117. A Scandinavian Rock Pipit (*A p littoralis*) was on the foreshore by Dawson City reserve.

A Kingfisher was along the Skitter Beck by the old railway bridge.

Single Barn Owls were hunting the boundary of fields 77 / 101 and along the Skitter Beck by the old railway bridge.

Week 11 March 12th – 18th

Survey date March 14th
High tide 08:10 a spring at 6.9m

Weather:

Between the previous survey and week 11 the weather conditions changed markedly with cool temperatures through to the middle of the week after which a high pressure system became established to the south-west of the British Isles bringing warmer southerly air and raising midday temperatures to 13C on the 14th. There was some light rain on a few days but it was generally dry with wind and sun drying the surface layers of the soil in arable fields. On the survey date the wind was force five westerly at first light increasing to force six by late morning; periods of sunshine were relatively brief with large amounts of high cloud being driven across the region on the strong winds.

Fields 57, 62 and 65 had been ploughed between the two survey dates.

The only waders found on the fields were Curlew; no Lapwing or Golden Plover were seen anywhere in the area but this is typical for the date of the survey with the only Lapwing remaining around the estuary typically being breeding birds as the wintering population has normally departed by the first week in March. The Curlew were concentrated in the permanent pasture fields in Goxhill Marsh where they moved between fields and the inter-tidal but feeding was much more apparent than in the previous week with the birds only spending short periods on the upper foreshore. Only a small party of Curlew was on the foreshore over the high tide period with most birds already having dispersed to feeding fields.

A young adult male Marsh Harrier was seen in the region of Dawson City reserve where one of the 3cy males was also still present.

The number of waterfowl on the foreshore had declined markedly with all of the wintering Wigeon apparently having departed and the number of Mallard much reduced on recent weeks.

Week 12 March 19th – 25th

Survey date March 19th
High tide 11:15 a neap at 5.4m

Weather:

Spring like conditions prevailed between the two survey dates with daytime temperatures reaching 13C but with clear skies under anti-cyclonic conditions there were some ground frosts. Winds varied from west to south-east but were generally light and there was gain a lack of significant rainfall. On the survey date a bright dawn quickly gave way to a cool and cloudy day as the easterly wind brought in cloud from the cold North Sea. Brief spells of

sunshine in the late morning and afternoon were short-lived but temperatures did rise from a low of 4C in the early morning to 10C in the early afternoon.

The neap tide left a significant area of the upper inter-tidal uncovered and there were a few waders and wildfowl roosting there but in contrast to recent weeks the number of waders and wildfowl were significantly reduced particularly Curlew.

A single pair of Lapwing performing display flights was found in field 136 where flood water pools remained in the rough grass but there were no other observations of this species.

The number of Curlew found in the survey area was significantly lower than in recent weeks and there were only eight birds roosting on the inter-tidal at high water so there had clearly been an overall loss of birds from the survey area. All of the birds found were in permanent pastures in the Goxhill Marsh area. During the survey two observations suggested that Curlew were using other feeding areas outside those surveyed. The most significant was the flock of 91 birds that were observed flying towards the estuary over fields west of field 101 from somewhere inland and to the west of the survey area (see flight line map). There were also 33 Curlew feeding in a permanent pasture field immediately west of field 101 by Spring Farm at TA128234. Later a flock of ten Curlew flew high north-west over the Skitter Beck railway bridge towards East Halton Skitter.

On the Skitter Beck there were 7 Teal around the old railway bridge and a total of 12 Mallard were in the same area mainly in pairs.

The Barn Owl was again seen by the East Halton Skitter Beck railway bridge hunting in the young plantation.

A singing male Willow Tit was moving along the old railway track between the railway bridge and Chapel Field road.

A singing Chiffchaff was in the hedges around Dawson City reserve where a pair of Mute Swans were nest building and a pair of Little Grebes present and displaying.

An adult female Marsh Harrier was in the vicinity of Dawson City reserve.

Week 13 March 26th – 31st

Survey date March 26th
High tide 18:07 a spring at 6.9m

Weather:

In contrast to the previous week the weather was much cooler and unsettled with strong to gale force winds from the north-west dominating the British weather from the 23rd onwards as a deep Atlantic depression moved eastwards across Scotland. Rainfall amounts were however, small and did not make any difference to the general theme of desiccation of wetlands and floodwater pools within the survey area. On the survey date some heavy rain showers passed through the area through the day pushed eastwards on a force 6 westerly wind that gusted to force seven during the showers. Cloud amounts varied rapidly with passing showers but there was a long sunny spell from midday through to mid afternoon; temperatures were in the range of 7C – 10C but the wind chill was notable.

Most of the floodwater pools on the arable fields, including those in field 136, had virtually dried up by the survey date.

Field 87 was being tilled down during the survey and had attracted eight Lapwing; these were probably prospective breeding birds as all of the wintering population had left the area prior to the survey.

Curlew were again concentrated in the permanent pasture fields in Goxhill Marsh, commuting to the inter-tidal when disturbed from their favoured fields.

Field 112 was being disked after having manure spread on the grass while field 130 was being rolled.

Field 35 had been tilled by the start of the survey.

A female Goosander was associating with Mallard on the foreshore at Goxhill Skitter Ness.

At Dawson City the pair of Mute Swans were still present along with two pairs of Coot and one of Little Grebe; a female and three male Pochard were on the pit closest to the grues. A second pair of Mute Swans was on Clondyke.

Three Water Pipits were on the grues at the Goxhill end of the foreshore.

Graham Catley
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APPENDIX F

**WEEKLY SURVEY REPORTS AUGUST 2009 – MARCH 2010. G.P. CATLEY.
NYCTEA LTD.**

Weekly survey reports:

Week 1 August 1st – 7th 2009

Survey date August 1st

High tide 15:32 neap tide at 5.6m

Weather:

The week prior to the survey saw a continuing theme of unsettled conditions with some hot and sunny periods but with frequent often thundery showers that were isolated and affected different parts of the region. According to the Met Office provisionally, it was the wettest July on record over England and Wales (in a series from 1914), being slightly wetter than July 2007 and much wetter than July 2008.

The survey date was mostly cloudy with outbreaks of light rain becoming thundery in the afternoon.

Waders and Wildfowl:

As the majority of the arable fields in the survey area were still under growing crops there were limited areas where waders could roost and feed and these were mainly in permanent pasture or on the set-aside, dragged / ploughed fields and harvested stubbles.

Many of the permanent pasture fields were in fact also unsuitable for waders due to the height and density of the grass. This also applied to the grues where there had been no grazing and the grass was rank, up to 1m high, and dense and thus not suitable for even the longest legged waders.

Three species of wader were found in the fields but Curlew was typically the most frequent. A single Whimbrel and three Black-tailed Godwits were in field 112 with Curlew but these were the only waders other than Curlew recorded from the surveyed area. Only 52 Curlew were found within the survey area most of these on areas of permanent pasture with two in a dragged field that had been stubble in the previous winter. In addition to the 52 birds found within the survey area incidental observations of fields around the surveyed area revealed the presence of an additional 102 birds in four fields shown on the attached map as A – D. Field A was over-wintered stubbles, fields B and C were harvested cereal stubbles and field D was permanent pasture that had been cut and baled for hay. The location of these fields is shown on the map.

As it was a neap tide there was an extensive area of mud still available to waders at high water and counts produced totals of 74 Black-tailed Godwits, 6 Dunlin, 3 Ringed Plover, two Bar-tailed Godwit and two Knot plus 18 Turnstone and a family party of five Shelduck, three juveniles, the only wildfowl present. In the late evening a total of 131 Curlew had gathered on the upper inter-tidal presumably in preparation for the over-night roost.

Other observations:

A flock of 31 Tree Sparrows was feeding in the edge of the oilseed rape and wheat fields between Goxhill Haven and Dawson City. Willow Tits were seen in Dawson City, three birds, and in the hedge just north of Parker's Plantation confirming records at both localities in the earlier part of the year.

Two broods of Little Grebes were present on the Skitter Beck by the bridge adjacent to field number 3 and by field 113. A kingfisher was feeding along the beck by field 73.

Week 2 August 8th – 14th 2009

Survey date August 10th

High tide 09:15 a falling spring at 6.9m