Annex 35.4

Cherry Cobb Sands Compensation Site: Bird Survey Results - August 2010 to March 2011

(Institute of Estuarine and Coastal Studies University of Hull)

the INSTITUTE of ESTUARINE and COASTAL STUDIES

Cherry Cobb Sands Compensation Site: Bird Survey Results - August 2010 to March 2011

Report to Able UK Ltd

Institute of Estuarine and Coastal Studies
University of Hull

20th June 2011

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Report: SBB327-Final-2011

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Cherry Cobb Sands Compensation Site: Bird Survey Results - August 2010 to March 2011

17th June 2011

Reference No: SBB327- Final-2011

For and on behalf of the Institute of Estuarine and Coastal Studies	
Approved by:	_____
Signed:	_____
Position:	_____
Date:	_____

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TABLE OF CONTENTS

1. INTRODUCTION

1.1 Able UK Ltd (Able) proposes to submit an application to the Infrastructure Planning Commission (IPC) for the construction of the Able Marine Energy Park (AMEP) which will incorporate a new quay together with manufacturing facilities for offshore wind turbines on the south bank of the Humber Estuary.

1.2 The development on the south bank, east of North Killingholme, will comprise a Marine Energy Park (MEP) and will lie partly within the Humber Estuary, which is designated under European law as an important site for nature conservation and forms part of the Natura 2000 network of sites. In order to ensure the coherence of the Natura 2000 network of sites is maintained, new intertidal habitat will be created on the north bank of the Humber in an area known as Sunk Island and referred to throughout this document as the 'Compensation Site'.

1.3 The 'Compensation Site' is located on the north bank opposite the AMEP site and some 4 km to the south-west of Keyingham. The site, known as Cherry Cobb Sands, is roughly triangular in shape and currently comprises arable fields defined at their boundaries by drainage ditches and a flood defence embankment.

1.4 At present the area of the 'Compensation Site' consists largely of agricultural land (mainly arable) with associated soak dykes, hedges and occasional trees. There are a few small patches of improved grassland within the compensation site. The 'Compensation Site' is fronted by the Cherry Cobb Sands mudflat and sandflats, this habitat has been included within the Humber Flats, Marshes and Coast Special Protection Area (SPA), Ramsar and Special Area of Conservation (SAC) European Marine Site. The waterbirds of the Humber Estuary are regularly monitored as part of the Wetland Bird Surveys (WeBS) Core Counts (Calbrade *et al.*, 2010). Numbers of all waterbirds species are recorded during monthly co-ordinated counts along the Humber Estuary, including the Paul to Stone Creek Section which covers the foreshore of the Cherry Cobb Sands.

1.5 Numerically, the most important species recorded along the Paul to Stone Creek Section has been the Golden Plover (*Pluvialis apricaria*), based on the latest WeBS core counts from 2004/05 to 2008/09 (ERM, 2011). This species is regularly recorded in numbers over the international important qualifying level of 9,000 birds and the flocks recorded at high water represent 35% of the Humber population. In addition to Golden Plover, other species of wader and wildfowl have also occurred at high water in sufficient numbers for it to be considered of regional importance i.e. > 1% of the Humber Estuary SPA. At low water, the intertidal habitat at Cherry Cobbs Sands is also known to support important populations (>1% percent of the Humber Estuary SPA population) of SPA qualifying bird species including, Redshank (*Tringa totanus*), Dunlin (*Calidris alpina*), and Shelduck (*Tadorna tadorna*) as well as the overall SPA assemblage (Mander & Cutts, 2005).

1.6 An ornithological survey programme has therefore been initiated at the 'Compensation Site' and on the intertidal area fronting the site by Able UK Ltd, in order to evaluate the bird importance of the site, in particular for SPA species, or components of, the waterbird assemblage that form the qualifying interest of the Humber Estuary SPA and Humber Estuary Ramsar site.

1.7 To date, weekly surveys have been conducted at the 'Compensation Site' from August 2010 and will continue until August 2011. This report details the findings of surveys conducted between August 2010 and March 2011 with the following aims:

- To assess the spatial and temporal bird usage at the 'Compensation Site' and on the intertidal area fronting the site.

- To discuss the findings into the context of the Humber, national and international population.

2. METHODOLOY AND DATA INTERPRETATION

2.1 Bird Survey Methodology

2.1.1 Weekly counts of waterbirds were conducted between August 2010 and March 20011 in the 'Compensation Site' i.e. the landward site of the flood embankment at the Cherry Cobb Sands and on the intertidal area fronting the site. A high water and a low water count were undertaken once a week on different days. The counts were undertaken within +/- 2 hour of high water or low water. The foreshore and the 'Compensation Site' were divided into several zones. Species and number of birds within each zone were systematically recorded whilst bird activity was recorded as anecdotal observations i.e. feeding, roosting, loafing or preening.

2.1.2 The intertidal area was counted from the same five vantage points along the flood embankment. A single observer equipped with a scope and a pair of binoculars carried out the observations.

2.1.3 The 'Compensation Site' was surveyed from Cherry Cobb Sands Road. The zones within the 'Compensation Site' were counted twice a day during each weekly visit by a single observer using a scope and a pair of binoculars.

2.2 Data Interpretation

2.2.1 Spatial and temporal variation in usage was examined for waterbirds, raptors and passerines recorded on the intertidal area and within the 'Compensation Site'. The results of the weekly counts were mapped at both low and high water. Different symbols for different weeks of the month were used to display the numbers of birds recorded in each weekly. Low and high peak monthly counts were then calculated for the intertidal area and the 'Compensation Site' and the figures tabulated in each species map. Species findings are presented in taxonomic order.

3. RESULTS

3.1 Pink-footed Goose (*Anser brachyrhynchus*)

3.1.1 PROTECTION & CONSERVATION STATUS

3.1.1.1 The Pink-footed Goose is listed on Schedule II of the UK Wildlife and Countryside Act, Annex II of the Wild Birds Directive and Appendix II of the Bonn convention. It is also listed in the African-Eurasian Waterbird Agreement. This species is an Amber List Species of Conservation Concern (UK).

3.1.2 BACKGROUND INFORMATION

3.1.2.1 This species does not breed in the UK, but large numbers of birds spend the winter here, arriving from their breeding grounds in Spitsbergen, Iceland and Greenland. The long term population trend in the UK has been one of continued increase since the mid-1980s (Calbrade *et al*., 2010). Pink-footed Geese on the Humber are generally found on the upper estuary, with an important roosting area located on Read's Island. The low tide counts 1998/99 and 2003/04 identified Read's Island as the preferred roosting site on the Humber Estuary (Catley 2000; Mander & Cutts, 2005). Pink-footed Geese generally gather on Read's Island to roost at night and move off again at dawn. Whilst the Pink-footed Goose takes advantages of the upper Humber to roost, the wintering population forages almost exclusively on the farmland habitats surrounding the estuary.

3.1.3 FINDINGS

3.1.3.1 The August 2010 to March 2011 Survey shows the species to be a very occasional visitor to the 'Compensation Site' and the foreshore of the Cherry Cobb Sands. The largest flock of 400 Pink-footed Geese was observed in January on the intertidal area in Zone A whilst an additional 160 birds were recorded in the Buffer Zone in March (Figure 1).

3.1.3.2 The high tide counts in the landward site of the flood embankment at the Cherry Cobb Sands site produced two flocks of 58 and 61 birds in January (Figure 2).

3.1.3.3 The peak count in January on the intertidal area represented 8% of the Humber Estuary 5 year mean (Calbrade *et al*., 2010).

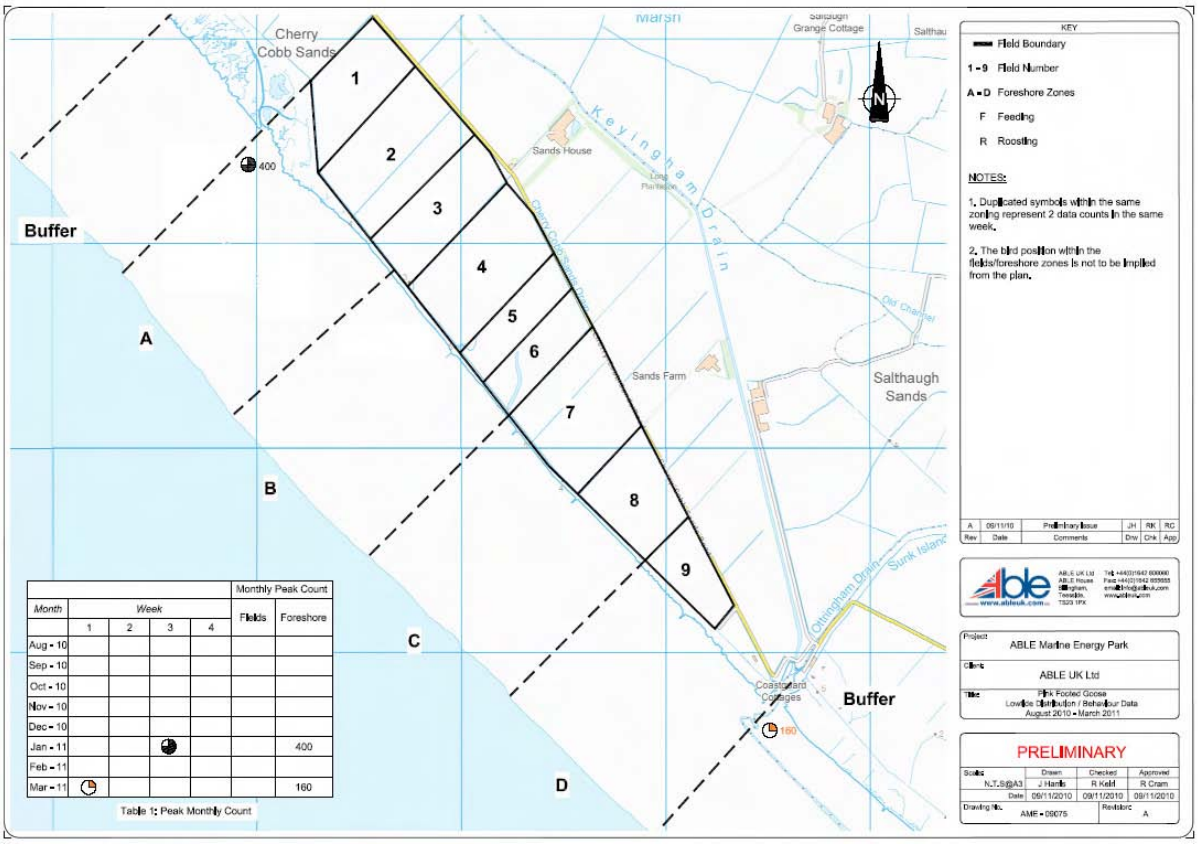


Figure 1: Pink-footed Goose Low Tide Counts

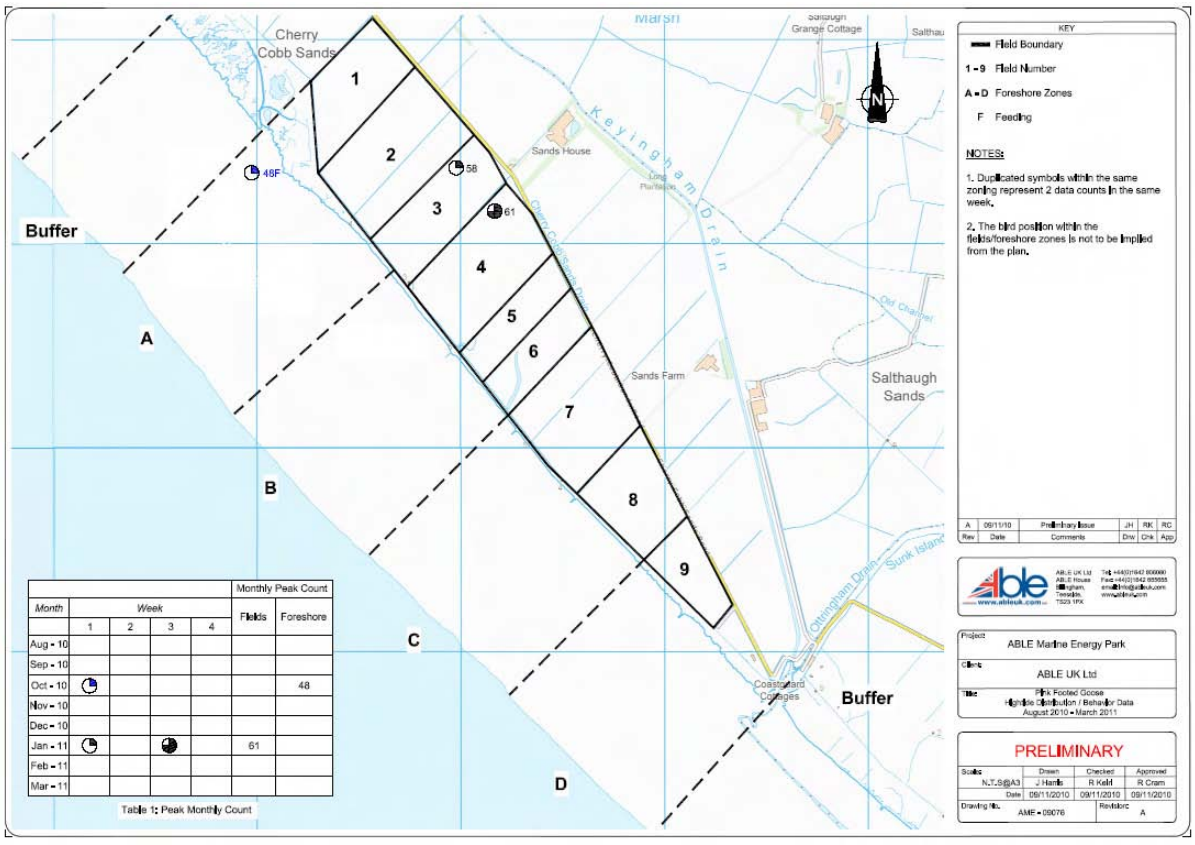


Figure 2: Pink-footed Goose High Tide Counts

3.2 Greylag Goose (*Anser anser*)

3.2.1 PROTECTION & CONSERVATION STATUS

3.2.1.1 The Greylag Goose is listed on Schedules I and II of the UK Wildlife and Countryside Act, Annexes I and III of the Wild Birds Directive and the Appendices of the Bern (III) and Bonn (II) Conventions. It is also listed in the African-Eurasian Waterbird Agreement. This species is an Amber List Species of Conservation Concern (UK).

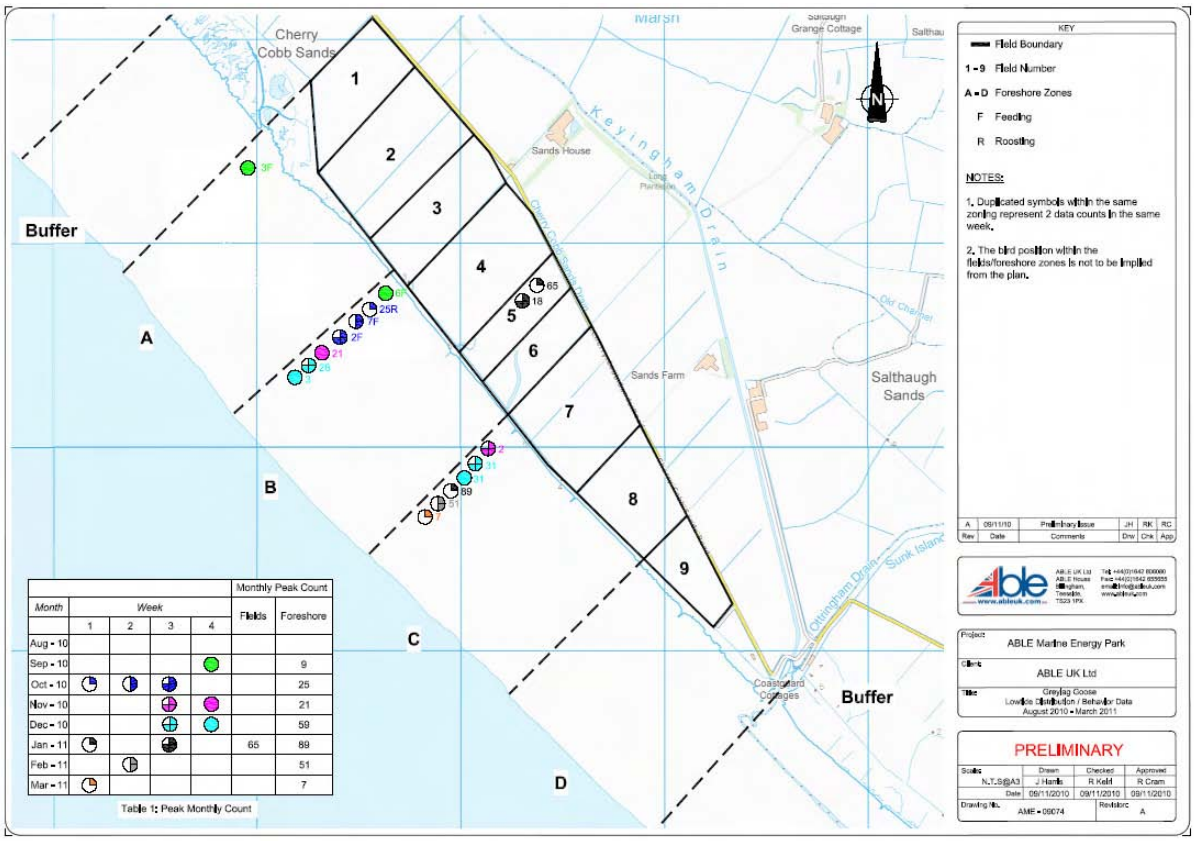
3.2.2 BACKGROUND INFORMATION

3.2.2.1 In many parts of the UK Greylag Geese has been re-established by releasing birds in suitable areas. These re-established populations are associated particularly with lochs, reservoirs and gravel pits surrounded by parkland or agricultural land, which provide ideal year-round feeding opportunities. The re-established population of Greylag Geese appears to be very sedentary in the UK (Wernham *et al*., 2002). On the Humber, the bulk of the breeding population is found on Read's Island and Whitton Sand (Mander & Cutts, 2005). The Humber population appears to be resident.

3.2.3 FINDINGS

3.2.3.1 The species was a regular visitor to the area. Greylag Geese were recorded at low tide on the intertidal area in relatively small numbers in all months (Figure 3). The peak count of 89 birds in January spread across Zones B and C on the intertidal area.

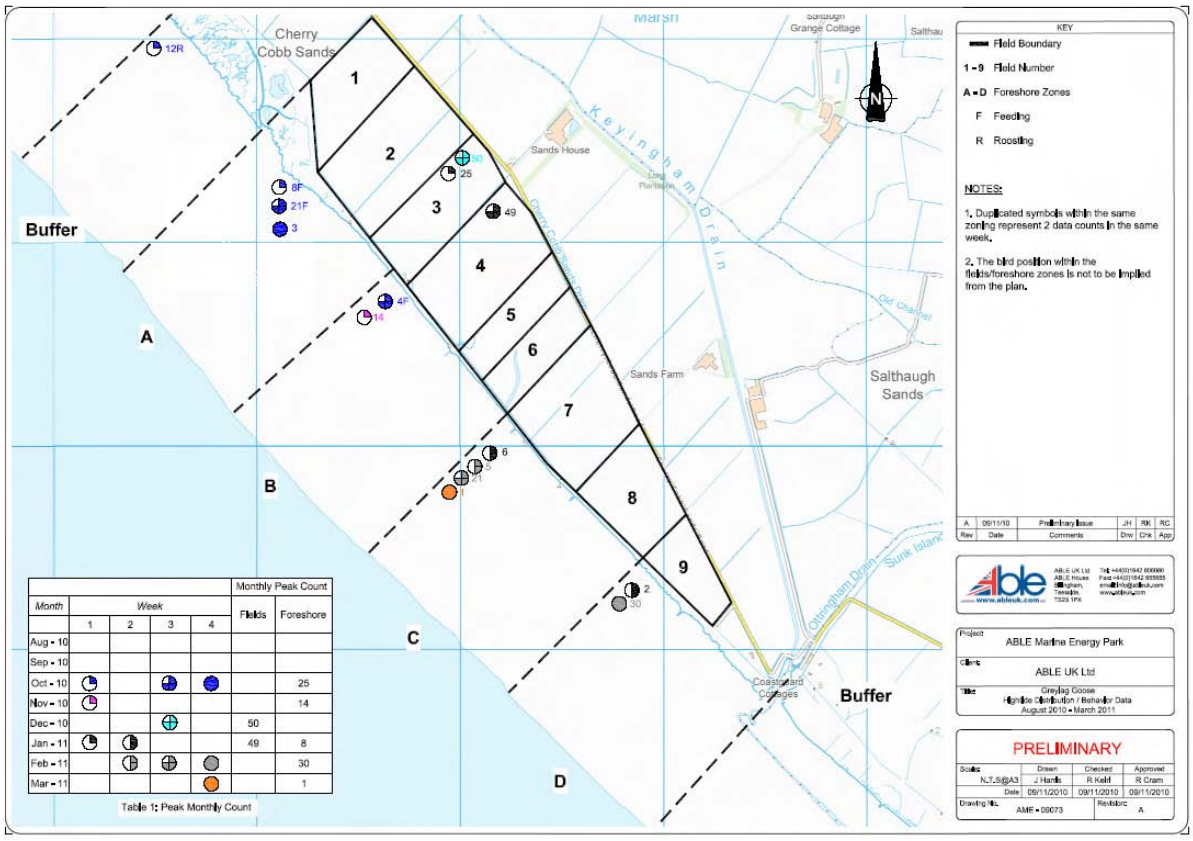
3.2.3.2 By contrast, sightings of Greylag Goose on the landward site of the flood embankment were more occasional at low water. The high water counts featured lower numbers of birds.



Month	Week 1	2	3	4	Monthly Peak Count Fields	Foreshore
Aug - 10						
Sep - 10						9
Oct - 10						25
Nov - 10						21
Dec - 10						59
Jan - 11					65	89
Feb - 11						51
Mar - 11						7

Table 1: Peak Monthly Count

Figure 3: Greylag Goose Low Tide Counts



Month	Week 1	2	3	4	Monthly Peak Count Fields	Foreshore
Aug - 10						
Sep - 10						
Oct - 10						25
Nov - 10						14
Dec - 10					50	
Jan - 11					49	8
Feb - 11						30
Mar - 11						1

Table 1: Peak Monthly Count

Figure 4: Greylag Goose High Tide Counts

3.3 Shelduck (*Tadorna tadorna*)

3.3.1 PROTECTION & CONSERVATION STATUS

3.3.1.1 The Shelduck is listed on the Appendices of the Bern Convention (III) and the Bonn Convention (II) and is listed in the African-Eurasian Waterbird Agreement. This species is an Amber List Species of Conservation Concern (UK).

3.3.2 BACKGROUND INFORMATION

3.3.2.1 The Shelduck has the most widespread distribution of any species of duck on the Humber Estuary. The Humber acts both as an important wintering site and a stop-over site during the migration period in the late summer. Nine sites are of International importance for Shelduck in the United Kingdom. This includes the Humber Estuary where the latest 5 year-mean exceeds the international threshold level of 3,000 birds (Calbrade *et al*., 2010).

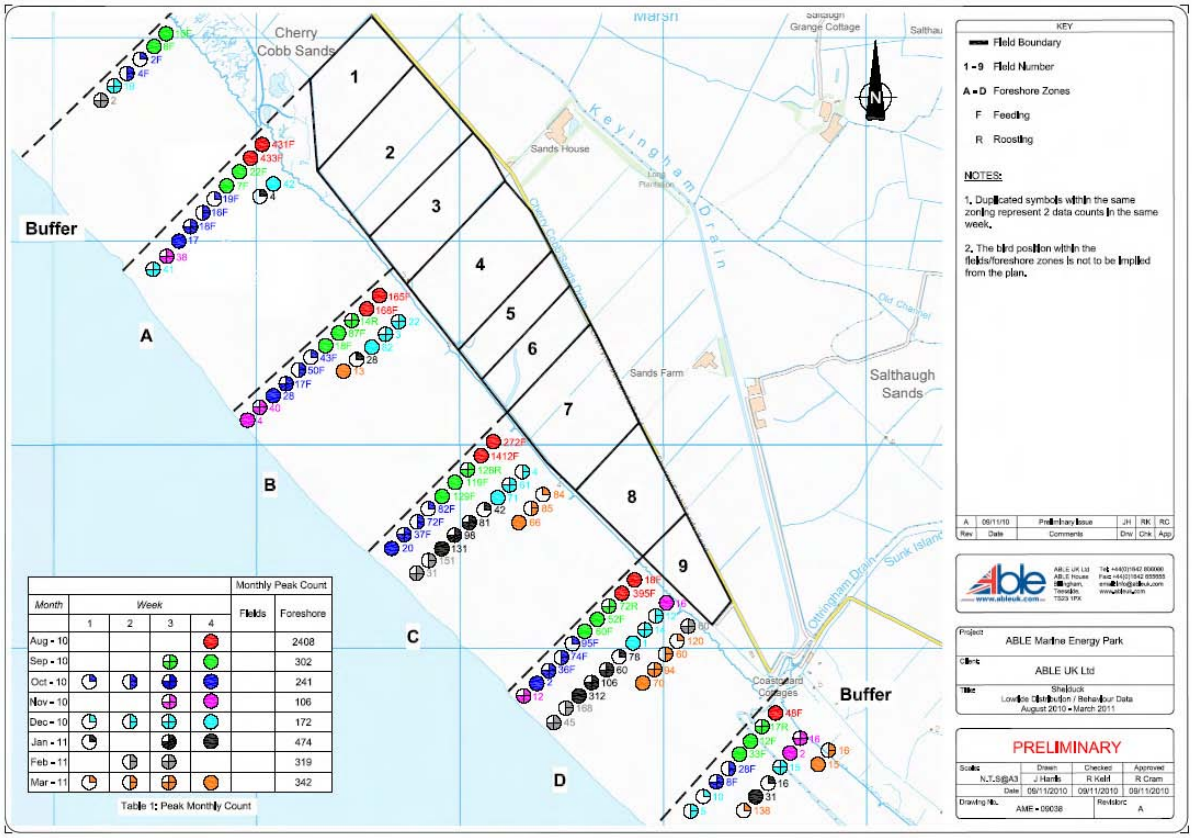
3.3.3 FINDINGS

3.3.3.1 The surveys highlighted the importance of the site for Shelduck during the autumn migration.

3.3.3.2 At low tide, Shelduck were present on the intertidal area in all recorded months but the numbers fluctuated markedly between months (Figure 5). The peak count of five birds in December followed by 869 birds in January illustrated the variation in numbers over the winter months. The cold weather experienced in December probably had an impact on the number of birds using the intertidal area at low water, with the icy conditions affecting prey availability.

3.3.3.3 The species was present in greater numbers at high water and the numbers were steadier over the winter months (**Figure 6**).

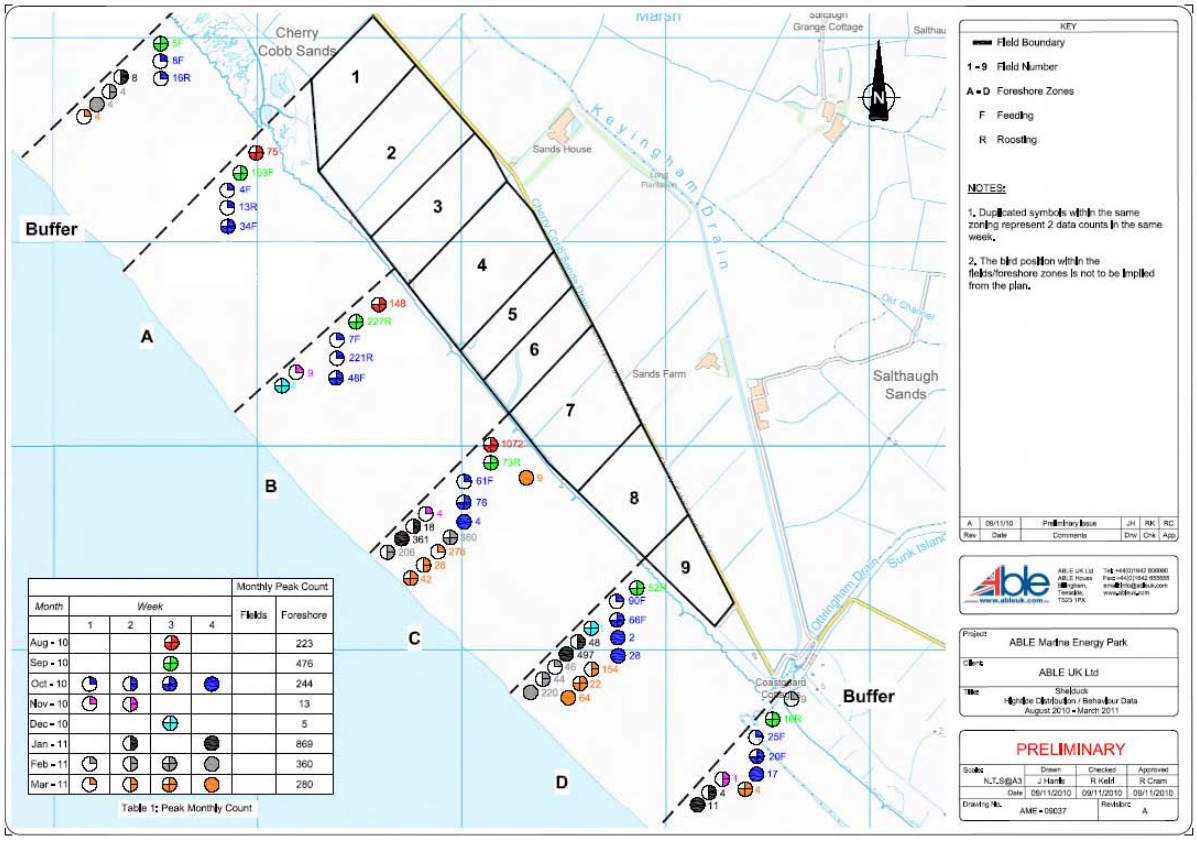
3.3.3.4 The peak count of 2,408 birds occurring on the intertidal area in February was remarkable when put into the context of the Humber population. This figure, which included birds within the buffer zone, represents 45% of the latest 5 year-mean for the Humber Estuary (5,314 birds).



Month	Week 1	2	3	4	Monthly Peak Count Fields	Foreshore
Aug - 10						2408
Sep - 10						302
Oct - 10						241
Nov - 10						106
Dec - 10						172
Jan - 11						474
Feb - 11						319
Mar - 11						342

Table 1: Peak Monthly Count

Figure 5: Shelduck Low Tide Counts



Month	Week 1	2	3	4	Monthly Peak Count Fields	Foreshore
Aug - 10						223
Sep - 10						476
Oct - 10						244
Nov - 10						13
Dec - 10						5
Jan - 11						869
Feb - 11						360
Mar - 11						280

Table 1: Peak Monthly Count

Figure 6: Shelduck High Tide Counts

3.4 Wigeon (*Anas penelope*)

3.4.1 PROTECTION & CONSERVATION STATUS

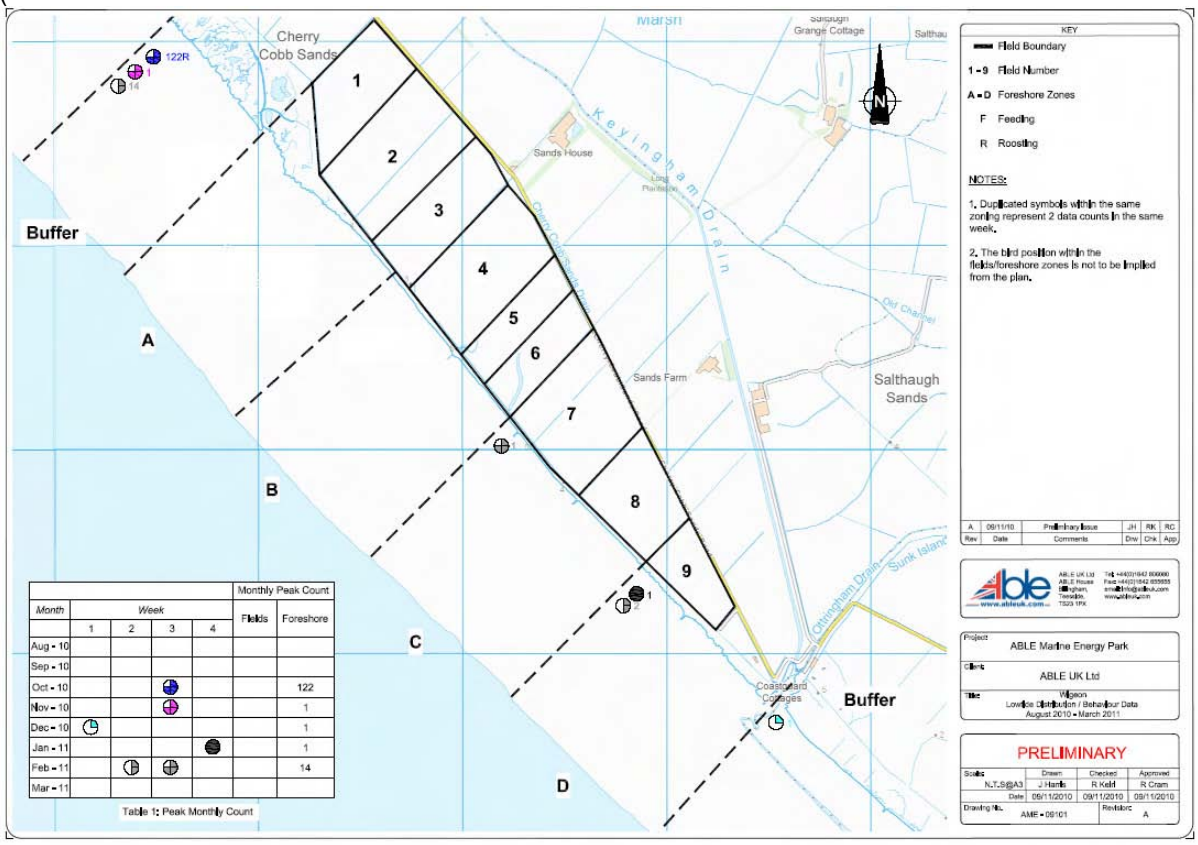
3.4.1.1 The Wigeon is listed on Schedules II and III of the UK Wildlife and Countryside Act, Annexes II and III of the EC wild Birds Directive, Appendices of the Bern (III) and Bonn (II) Conventions and the African-Eurasian Waterbird Agreement. This species is an Amber List Species of Conservation Concern (UK).

3.4.2 BACKGROUND INFORMATION

3.4.2.1 The upper Humber is a stronghold for this species over the winter period. Outside the upper Humber, the species is found in low numbers around the Welwick saltmarsh and Cherry Cobb saltmarsh. The species tends to graze vegetation in a similar manner to that of many geese species, and feeding activity tends to be restricted to areas of 'short turf' of largely Red Fescue (*Festuca rubra*). The Humber is no longer of national importance (Calbrade *et al.*, 2010).

3.4.3 FINDINGS

3.4.3.1 The Buffer Zone fronting the Cherry Cobb saltmarsh produced the majority of sightings during the August 2010 to March 2011 period (



Month	Week 1	2	3	4	Monthly Peak Count: Fields	Foreshore
Aug - 10						
Sep - 10						
Oct - 10						122
Nov - 10						1
Dec - 10						1
Jan - 11						1
Feb - 11						14
Mar - 11						

Table 1: Peak Monthly Count

3.4.3.2 Figure **7** and Figure 8)**.** The birds are thought to favour this area because of the extent of the saltmarsh cover.

3.4.3.3 The October counts at both low and high water produced the highest count of birds with 122 and 65 birds, respectively. In a Humber context, this represented less than 1% of the Humber population.

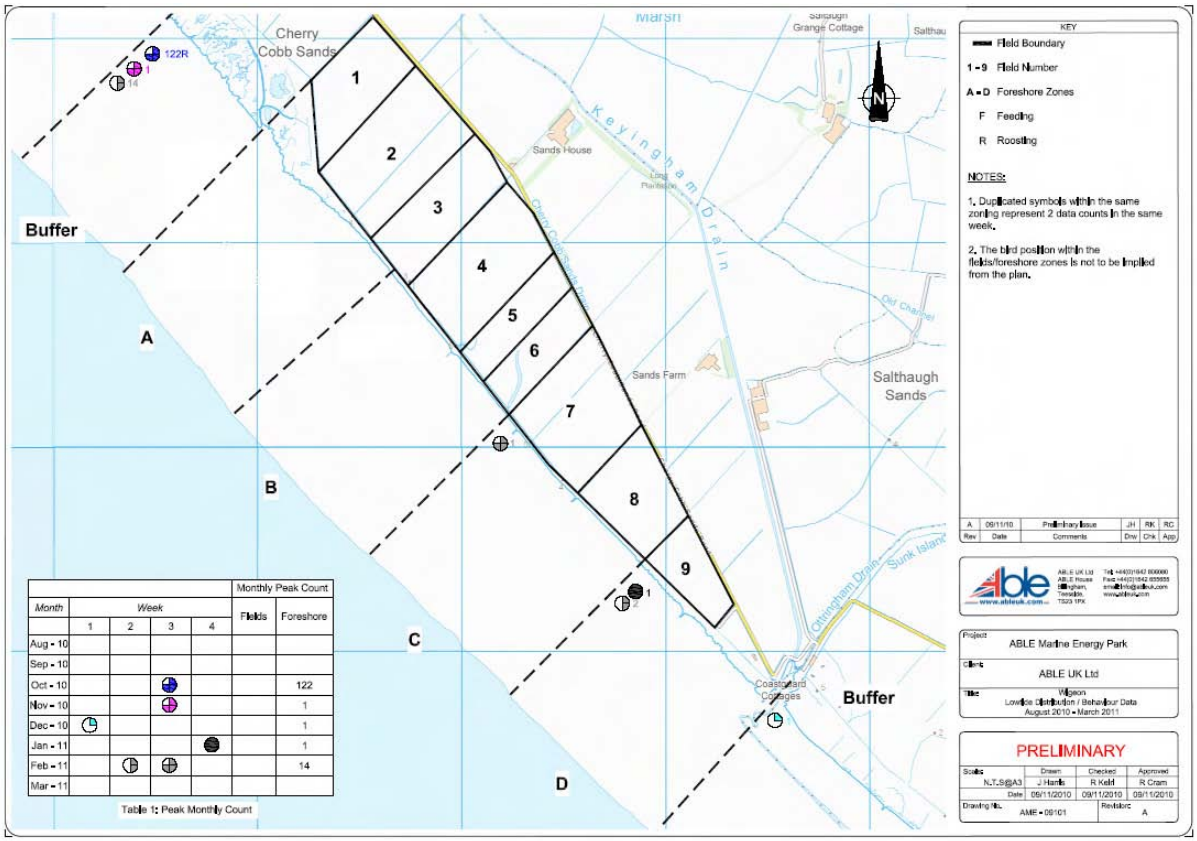


Figure 7: Wigeon Low Tide Counts

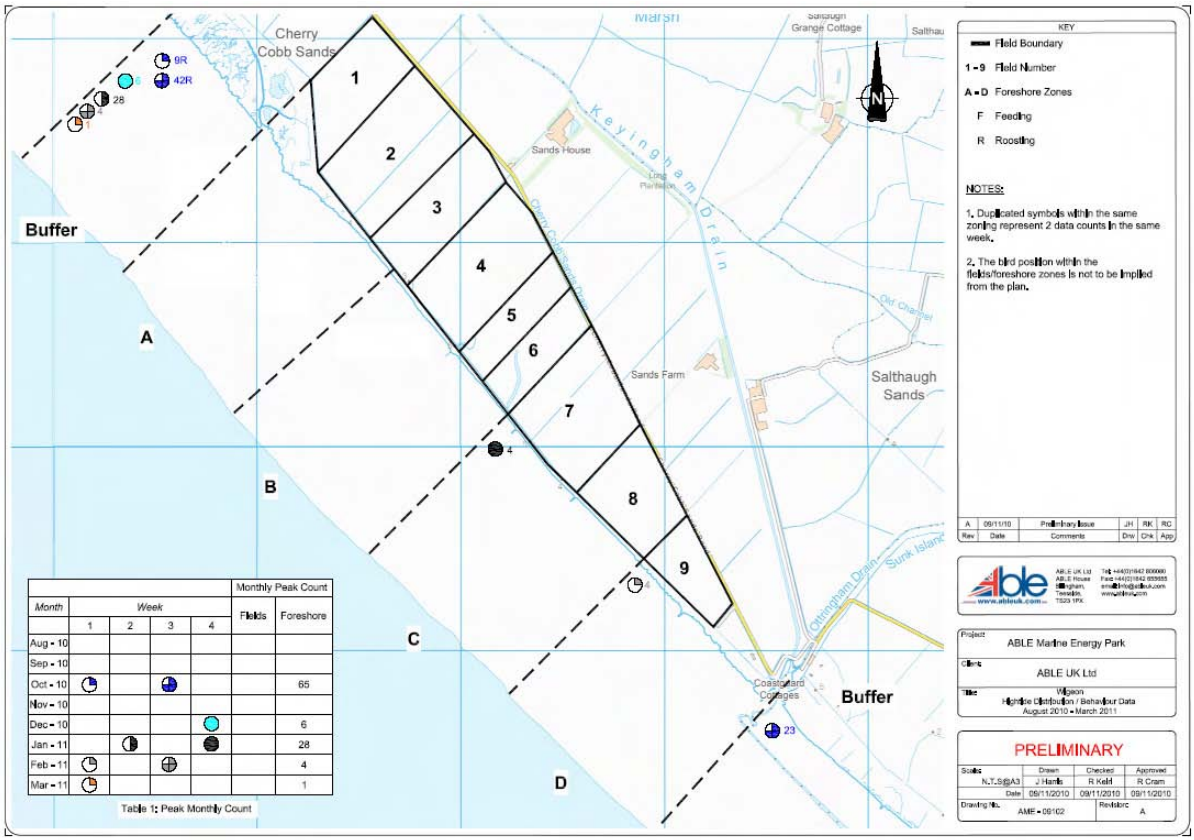


Figure 8: Wigeon High Tide Counts

3.5 Mallard (*Anas platyrhynchos*)

3.5.1 PROTECTION & CONSERVATION STATUS

3.5.1.1. The Mallard is listed on Schedules II and III of the UK Wildlife and Countryside Act, Annexes II and III of the EC Wild Birds Directive and Appendices of the Bern (III) and Bonn (II) Conventions and the African-Eurasian Waterbird Agreement. This species is an Amber List Species of Conservation Concern (UK).

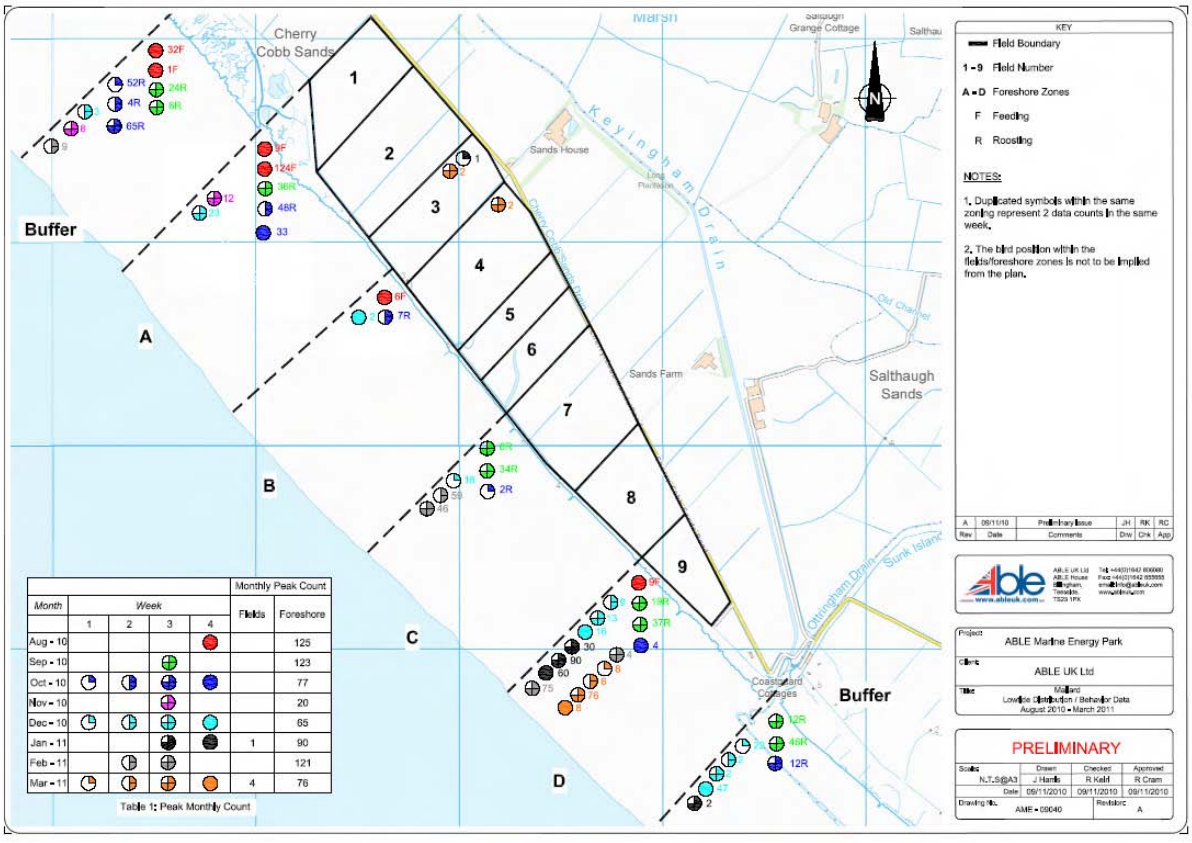
3.5.2 BACKGROUND INFORMATION

3.5.2.1. Mallard is the most familiar and widespread duck on the Humber. The species is present on the Humber Estuary all year round, with peak maxima achieved during the mid winter period. The falls in the Humber population has been ongoing since the late 1980s and has mirrored falls in the British population considered to be linked to a decrease in continental immigration (Calbrade *et al.*, 2010).

3.5.3 FINDINGS

3.5.3.1. The species was the only duck species found in the fields. March produced the bulk of the sightings and this was coincident with the start of the breeding season. Breeding Mallard are associated with areas of open waters, vegetated soke dykes and drainage channel on the landward side of the flood defence on the Humber Estuary.

3.5.3.2. At low tide, Mallard (



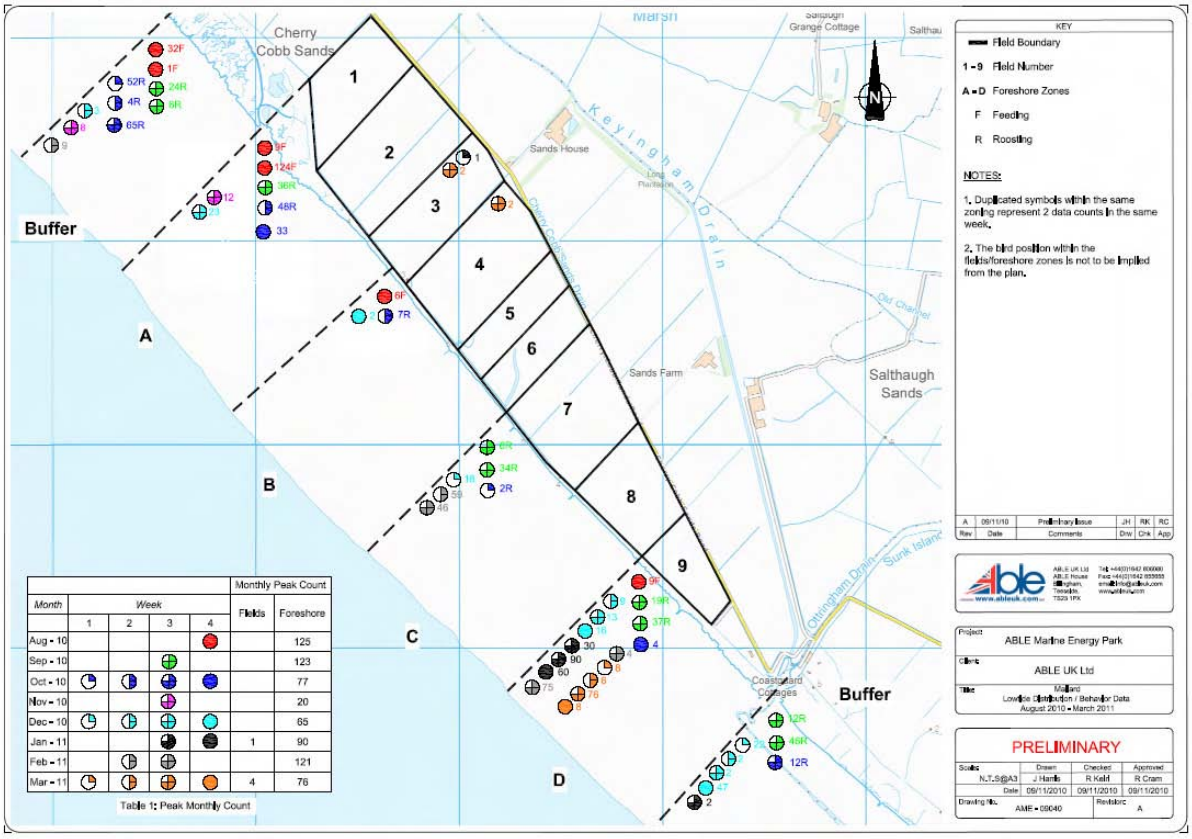
Month	Week 1	2	3	4	Monthly Peak Count Fields	Foreshore
Aug - 10						125
Sep - 10						123
Oct - 10						77
Nov - 10						20
Dec - 10						65
Jan - 11					1	90
Feb - 11						121
Mar - 11					4	76

Table 1: Peak Monthly Count

3.5.3.3. Figure **9**) were found in all months of the survey in lower numbers. Low tide numbers peaked at 125 birds in August.

3.5.3.4. On the foreshore, the peak count was recorded at high water with 240 birds in October (Figure 10). Zones C and D appear to be the favoured sections as well as the Buffer Zone to the north.

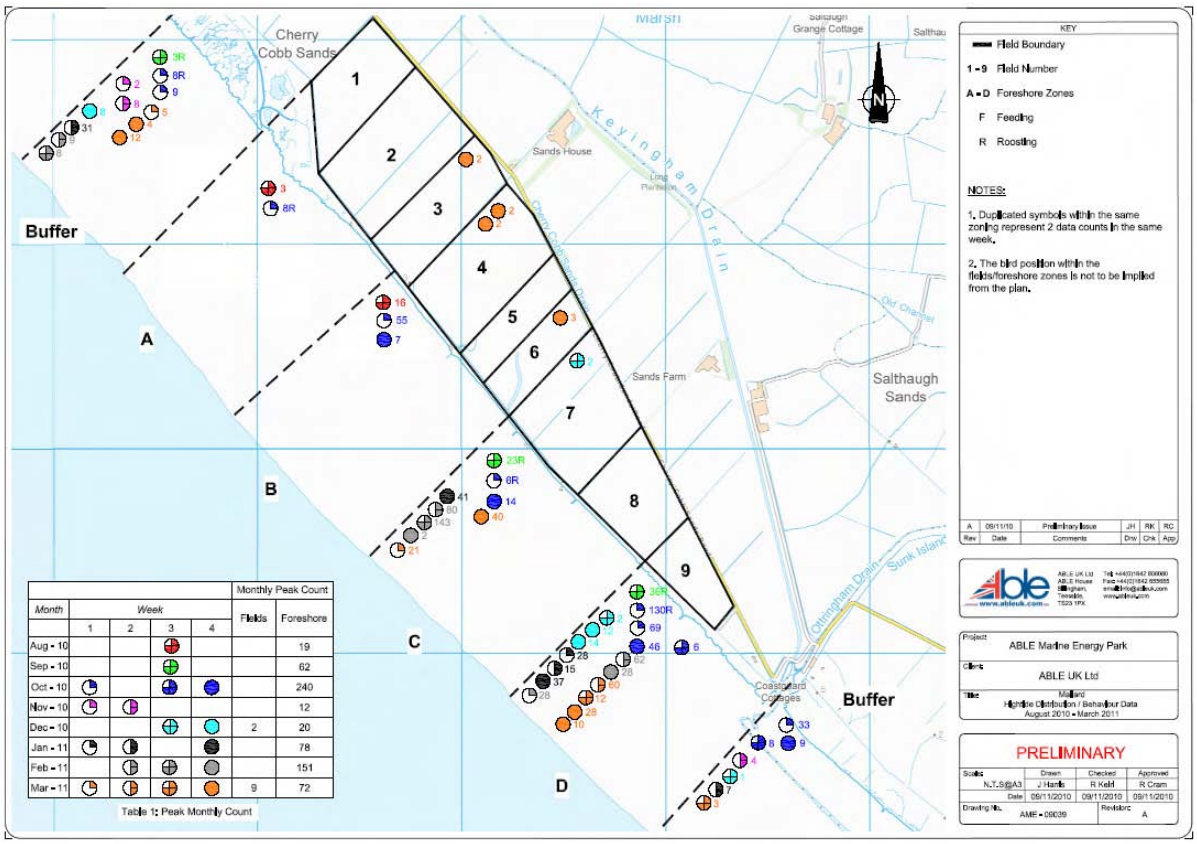
3.5.3.5. The peak count of 240 birds represented over 1% of the Humber population.



Month	Week 1	Week 2	Week 3	Week 4	Monthly Peak Count: Fields	Monthly Peak Count: Foreshore
Aug - 10						125
Sep - 10						123
Oct - 10						77
Nov - 10						20
Dec - 10						65
Jan - 11					1	90
Feb - 11						121
Mar - 11					4	76

Table 1: Peak Monthly Count

Figure 9: Mallard Low Tide Counts



Month	Week 1	2	3	4	Monthly Peak Count Fields	Foreshore
Aug - 10						19
Sep - 10						62
Oct - 10						240
Nov - 10						12
Dec - 10					2	20
Jan - 11						78
Feb - 11						151
Mar - 11					9	72

Table 1: Peak Monthly Count

Figure 10: Mallard High Tide Counts

3.6 Gadwall (*Anas strepera*)

3.6.1 PROTECTION & CONSERVATION STATUS

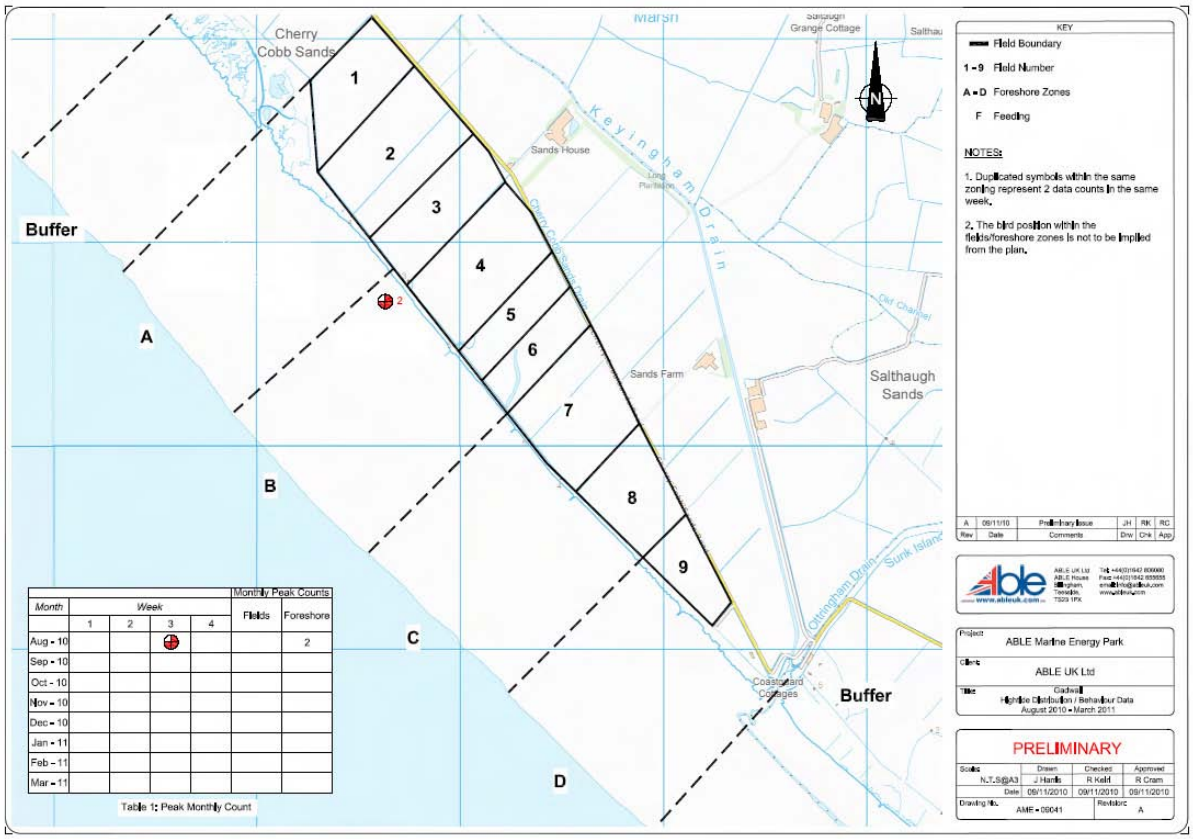
3.6.1.1. The Gadwall is listed on Schedule II of the UK Wildlife and Countryside Act, Annex II of the EC Wild Birds Directive, the Appendices of the Bern (III) and Bonn (II) Conventions and the African-Eurasian Waterbird Agreement. This species is an Amber List Species of Conservation Concern (UK).

3.6.2 BACKGROUND INFORMATION

3.6.2.1. The Gadwall is a migrant/resident breeder and winter visitor to the UK. In the Humber small numbers of Gadwall breed in the upper estuary and a small wintering population is also found, again mainly restricted to the upper estuary. The Humber Estuary supports a five-year average of 179 birds (Calbrade *et al.*, 2010).

3.6.3 FINDINGS

3.6.3.1. Gadwalls were only present at high tide during the survey period (



Month	Week				Monthly Peak Counts	
	1	2	3	4	Fields	Foreshore
Aug - 10						2
Sep - 10						
Oct - 10						
Nov - 10						
Dec - 10						
Jan - 11						
Feb - 11						
Mar - 11						

Table 1: Peak Monthly Count

3.6.3.2. Figure **11**). Two birds were recorded in Zone B of the intertidal area in August. The paucity of records was expected given the species' preference for inland water bodies around the Humber Estuary.

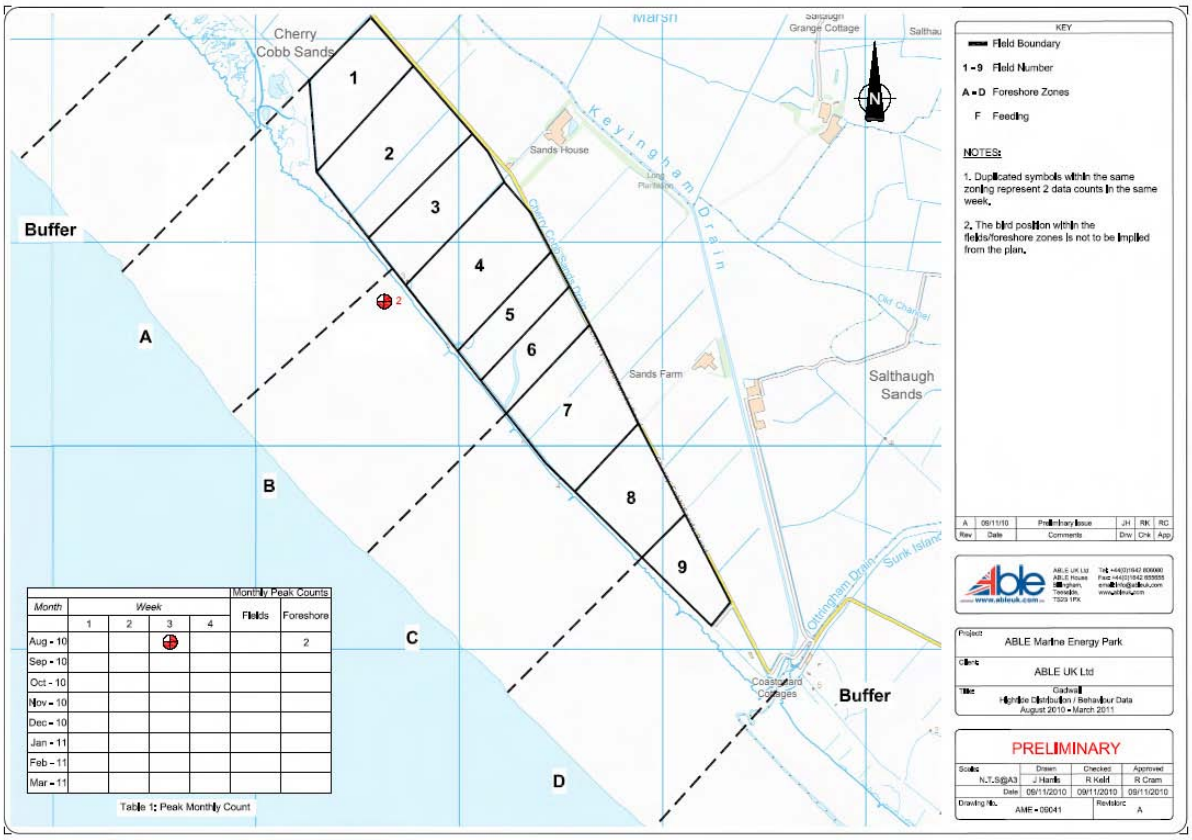


Figure 11: Gadwall High Tide Counts

3.7 Shoveler (*Anas clypeata*)

3.7.1 PROTECTION & CONSERVATION STATUS

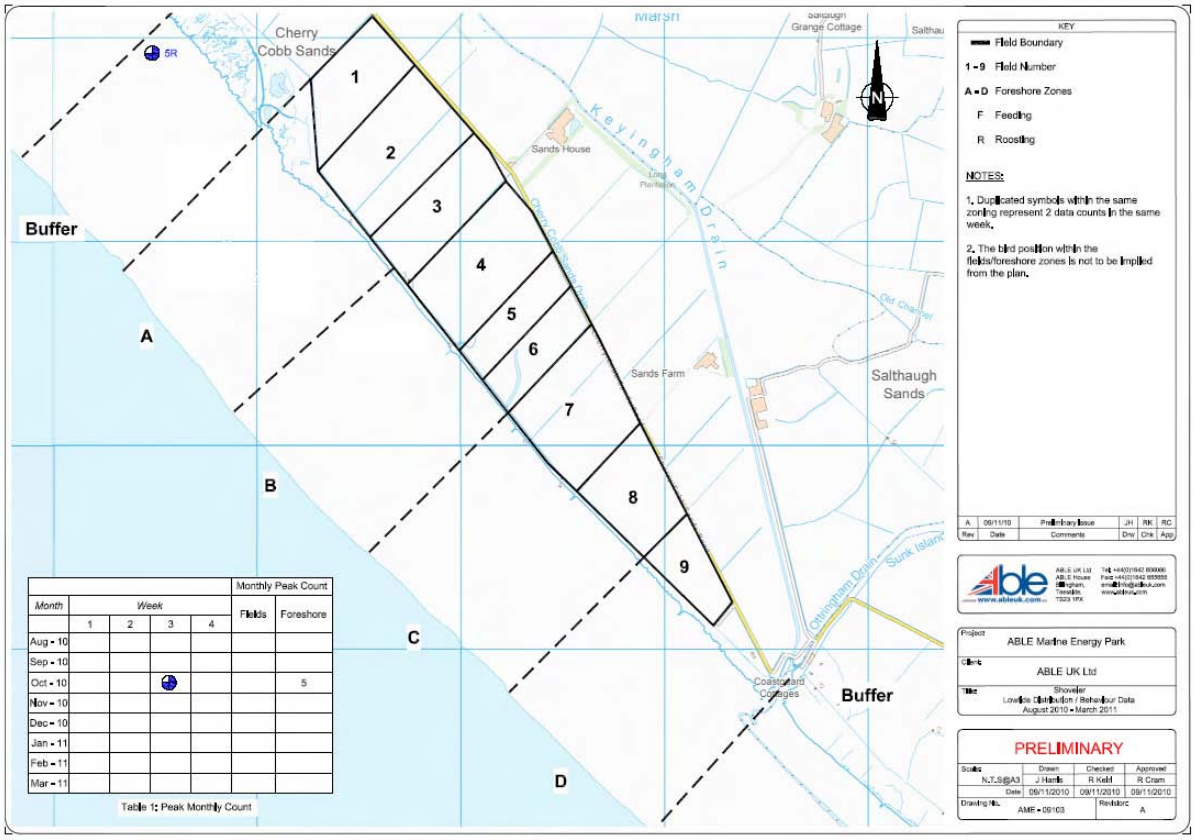
3.7.1.1. The Shoveler is listed on Schedules II and III of the UK Wildlife and Countryside Act, Annexes II and III of the EC Wild Birds Directive, the Appendices of the Bern (III) and Bonn (II) Conventions and the African-Eurasian Waterbird Agreement. This species is an Amber List Species of Conservation Concern (UK).

3.7.2 BACKGROUND INFORMATION

3.7.2.1. Shallow freshwater sites which are favoured by Shoveler are scarce around the Humber Estuary. Hence, the species is found in very low numbers around the Humber and its breeding and wintering distribution is confined to inland water bodies.

3.7.3 FINDINGS

3.7.3.1. Shovelers were only present on one occasion during the August 2010 to March 2011 survey and this was during low tide (Figure 12) in October when five birds were recorded in the Buffer Zone near the Cherry Cobb saltmarsh. Similarly to Gadwall, the paucity of sightings is a result of a preference for inland freshwater bodies (especially shallow water).



Month	Week 1	2	3	4	Monthly Peak Count: Fields	Foreshore
Aug - 10						
Sep - 10						
Oct - 10						5
Nov - 10						
Dec - 10						
Jan - 11						
Feb - 11						
Mar - 11						

Table 1: Peak Monthly Count

Figure 12: Shoveler Low Tide Counts

3.8 Pintail (*Anas acuta*)

3.8.1 PROTECTION & CONSERVATION STATUS

3.8.1.1. The Pintail is listed on Schedules I, II and III of the UK Wildlife and Countryside Act, Annexes II and III of the EC Wild Birds Directive, Appendixes of the Bern (III) and Bonn (II) Conventions and in the African-Eurasian Waterbird Agreement. This species is an Amber List Species of Conservation Concern (UK).

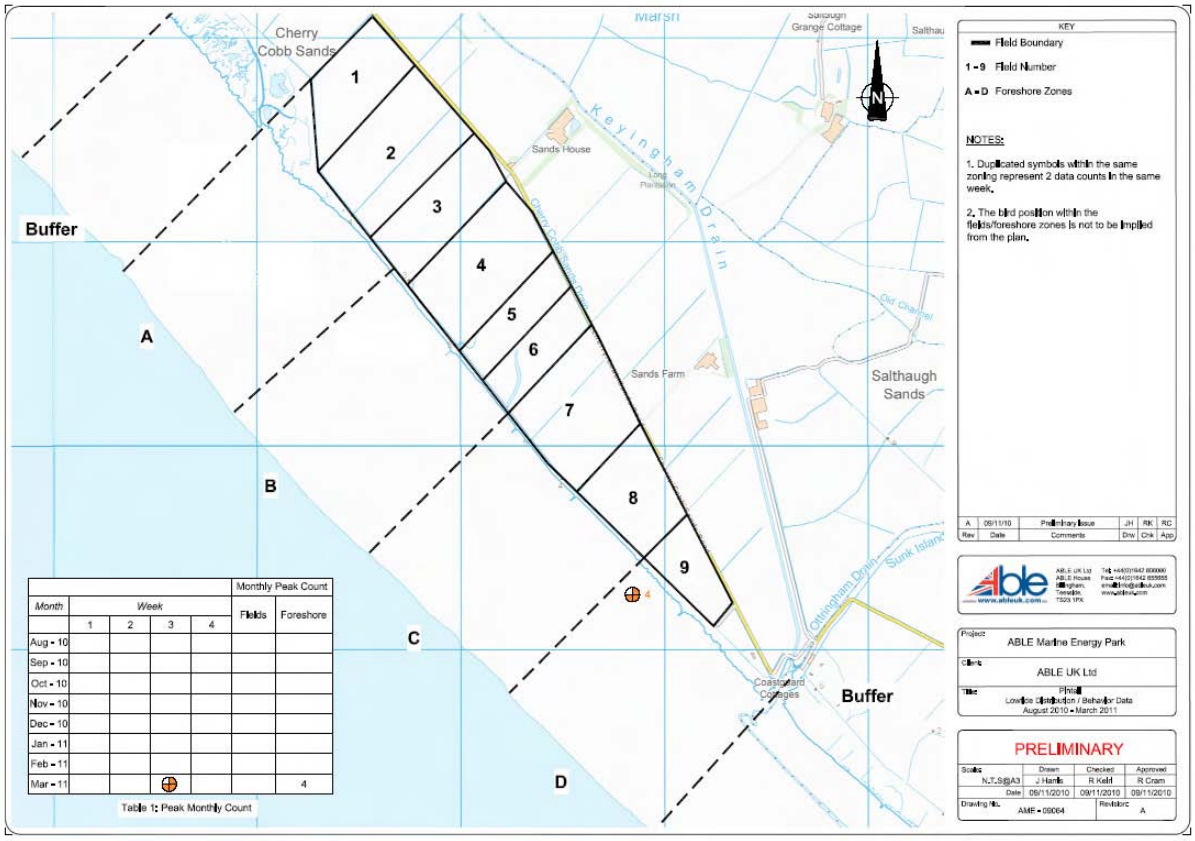
3.8.2 BACKGROUND INFORMATION

3.8.2.1. The Humber estuary supports a very small wintering population. Numbers of Pintail have declined on the Humber since the 1990s, when the estuary was briefly able to achieve the status on national importance. The 2003/04 low tide counts found the intertidal areas adjacent to the Welwick Saltmarsh to be the key area for this species on the north bank (Mander & Cutts, 2005).

3.8.3 FINDINGS

3.8.3.1. The species was absent during the winter period but featured during the passage period**.** The count of four birds at low water in March

(



3.8.3.2. Figure **13**) and 11 birds at high water in September (Figure 14) on the intertidal area reflected the passage of birds through the area**.**

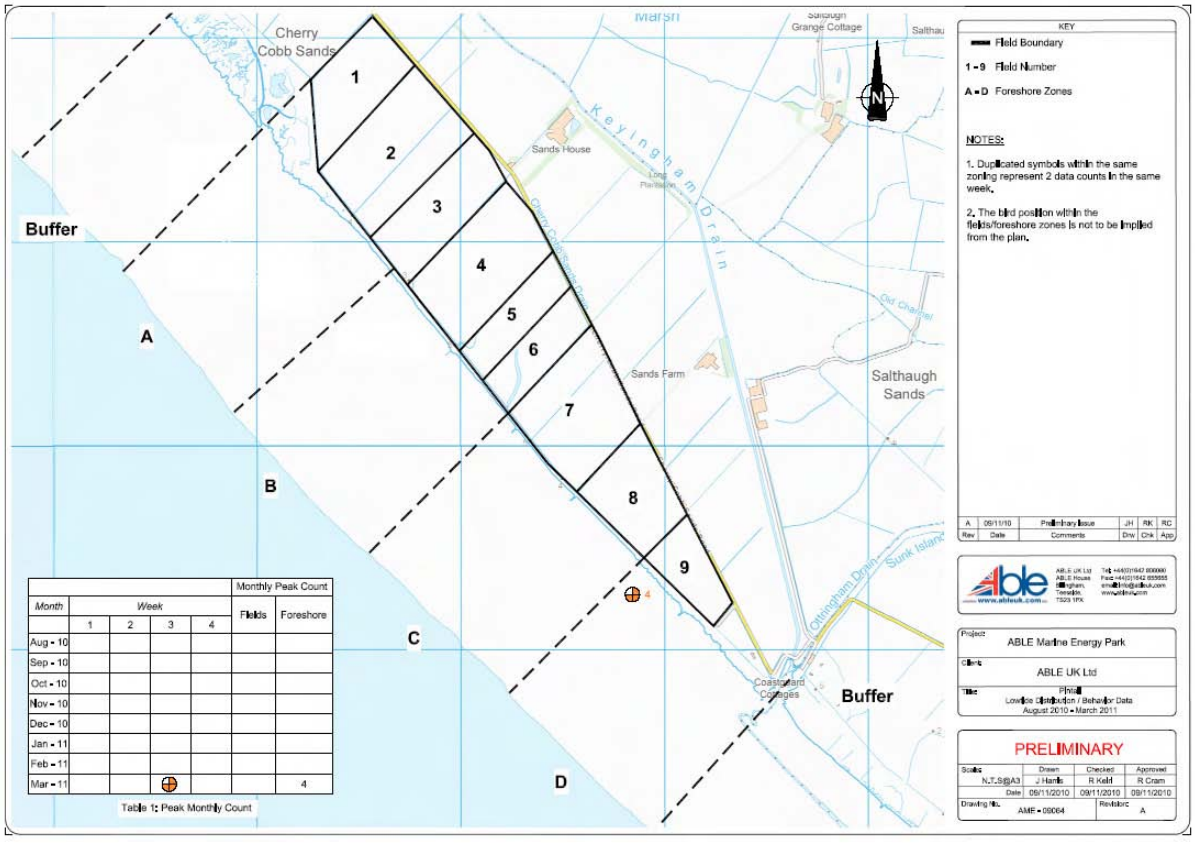


Figure 13: Pintail Low Tide Counts

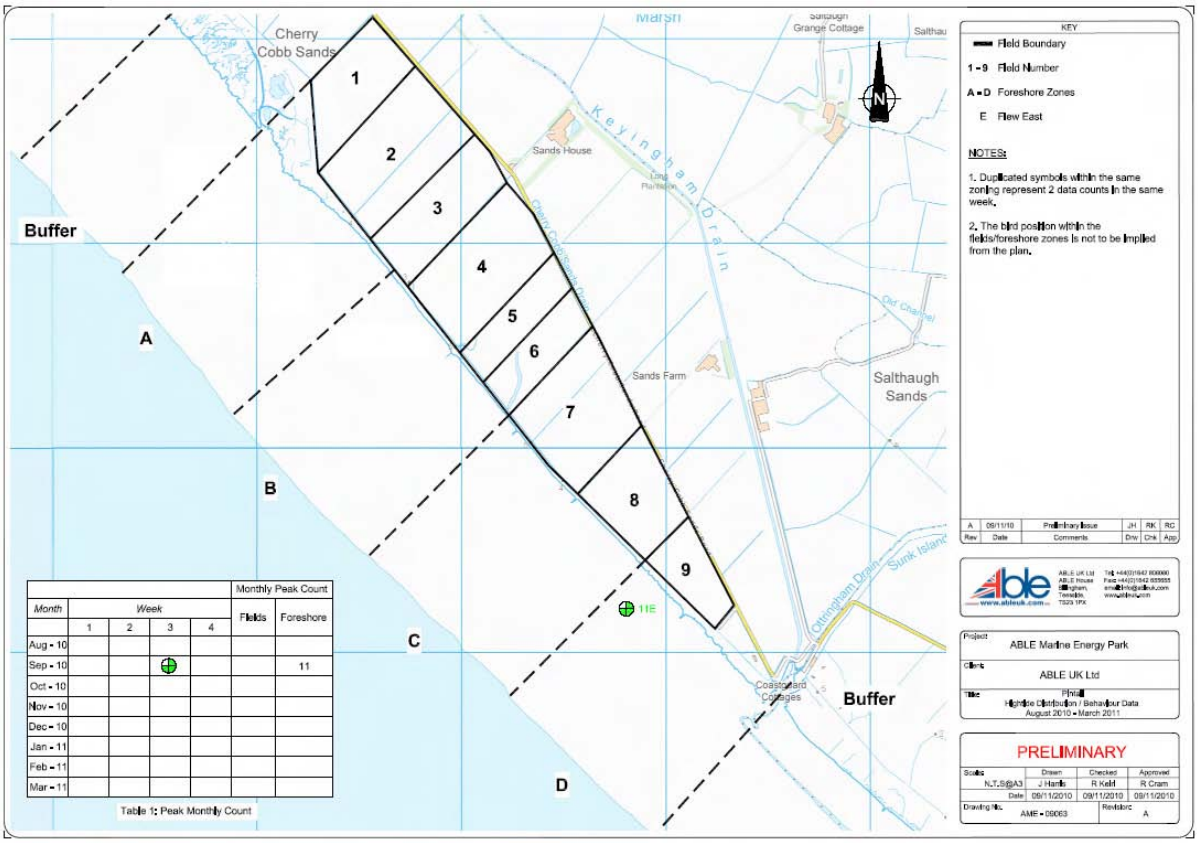


Figure 14: Pintail High Tide Counts

3.9 Teal (*Anas crecca*)

3.9.1 PROTECTION & CONSERVATION STATUS

3.9.1.1. The Teal is listed on Schedules II and III of the UK Wildlife and Countryside Act, Annexes II and III of the EC Wild Birds Directive, Appendixes of the Bern (III) and Bonn (II) Convention and in the African-Eurasian Waterbird Agreement. This species is an Amber List Species of Conservation Concern (UK).

3.9.2 BACKGROUND INFORMATION

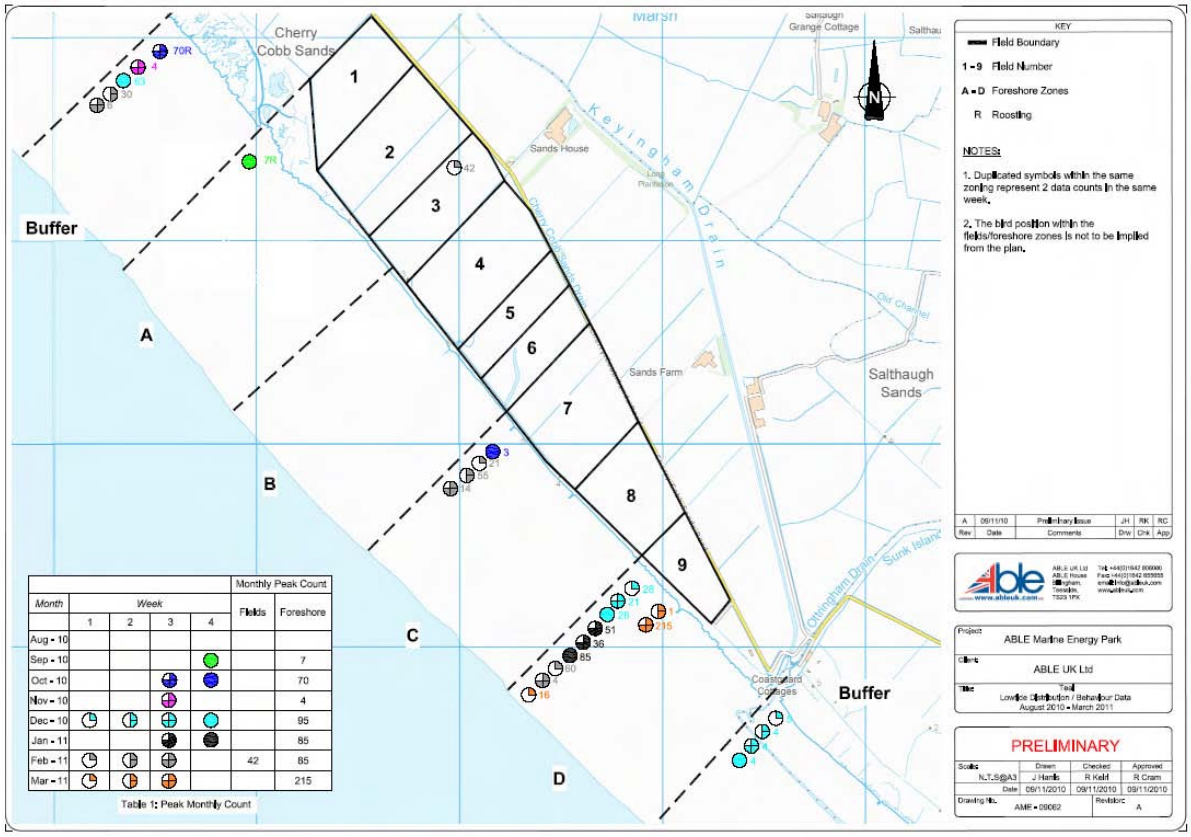
3.9.2.1. Teal is the smallest of the dabbling duck. This species has a clustered distribution within the Humber, often concentrated around creeks and saltmarsh. Read's island is a stronghold for passage and overwintering Teal on the Humber Estuary at high water (Allen *et al.*, 2003) and low water (Catley, 2000; Mander and Cutts, 2005). Outside Read's Island, the intertidal habitat between Paull and Stone Creek can support significant numbers of wintering Teal.

3.9.3 FINDINGS

3.9.3.1. Zone D on the intertidal area supported the highest numbers of Teal at low tide (**Figure 15**). The species appeared to favour Zone D and the Buffer zone fronting the Cherry Cobb Saltmarsh to a lesser extent. The numbers were slow to build up in winter but the numbers appear to be sustained from mid winter onwards. A population of less around 100 birds was recorded from December to March, with the exception of the January count which yielded a high total of 529 birds at high water

(**Figure 16**). This figure represents 19% of the Humber population, based on the latest five-year average (Calbrade *et al.*, 2010).

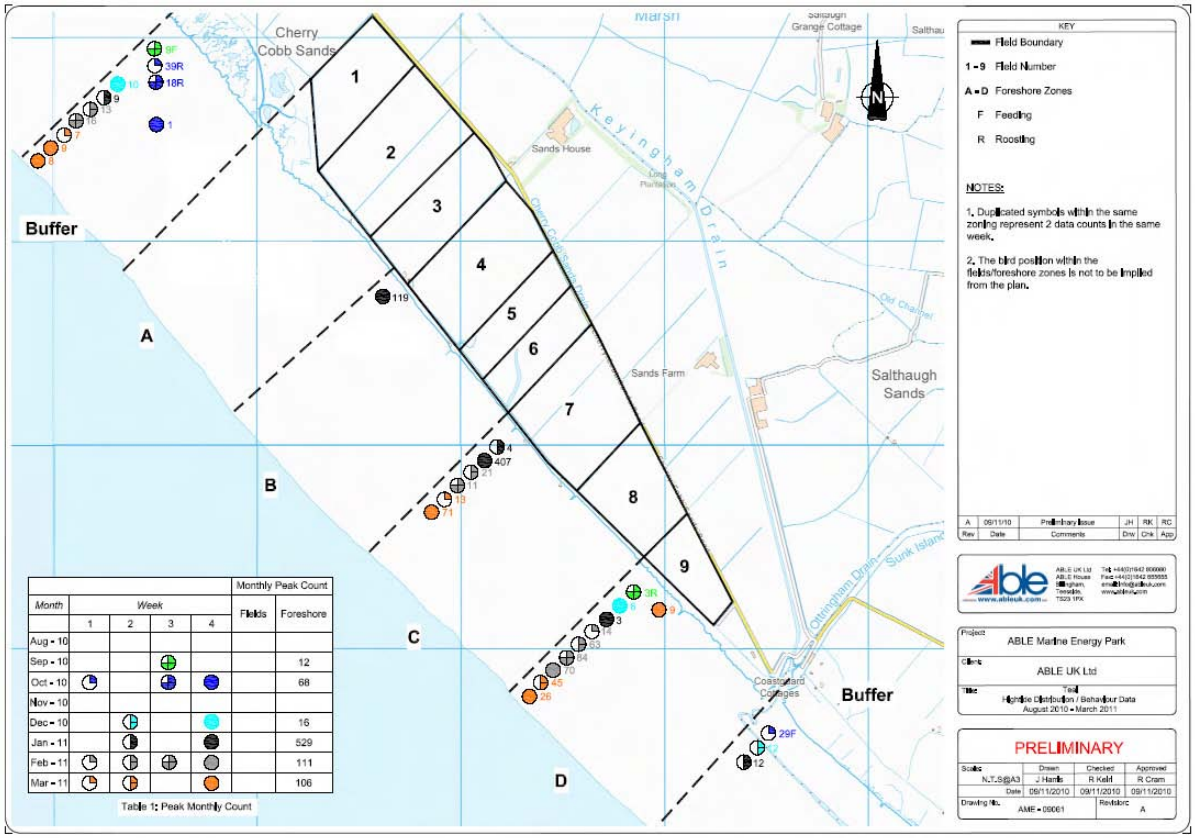
3.9.3.2. No Teal were recorded in the 'Compensation Site' at high tide. However, the species was recorded on one occasion at low tide in the 'Compensation Site', where 42 birds were recorded in February.



Month	Week 1	Week 2	Week 3	Week 4	Monthly Peak Count: Fields	Monthly Peak Count: Foreshore
Aug - 10						
Sep - 10						7
Oct - 10						70
Nov - 10						4
Dec - 10						95
Jan - 11						85
Feb - 11					42	85
Mar - 11						215

Table 1: Peak Monthly Count

Figure 15: Teal Low Tide Counts



Month	Week 1	Week 2	Week 3	Week 4	Monthly Peak Count: Fields	Monthly Peak Count: Foreshore
Aug - 10						
Sep - 10						12
Oct - 10						68
Nov - 10						
Dec - 10						16
Jan - 11						529
Feb - 11						111
Mar - 11						106

Table 1: Peak Monthly Count

Figure 16: Teal High Tide Counts.

3.10 Little Egret (*Egretta garzetta*)

3.10.1 PROTECTION & CONSERVATION STATUS

3.10.1.1. The Little Egret is listed on Annex I of the EC Wild Birds Directive and Appendix III of The Bern convention. This species is an Amber List Species of Conservation Concern (UK).

3.10.2 BACKGROUND INFORMATION

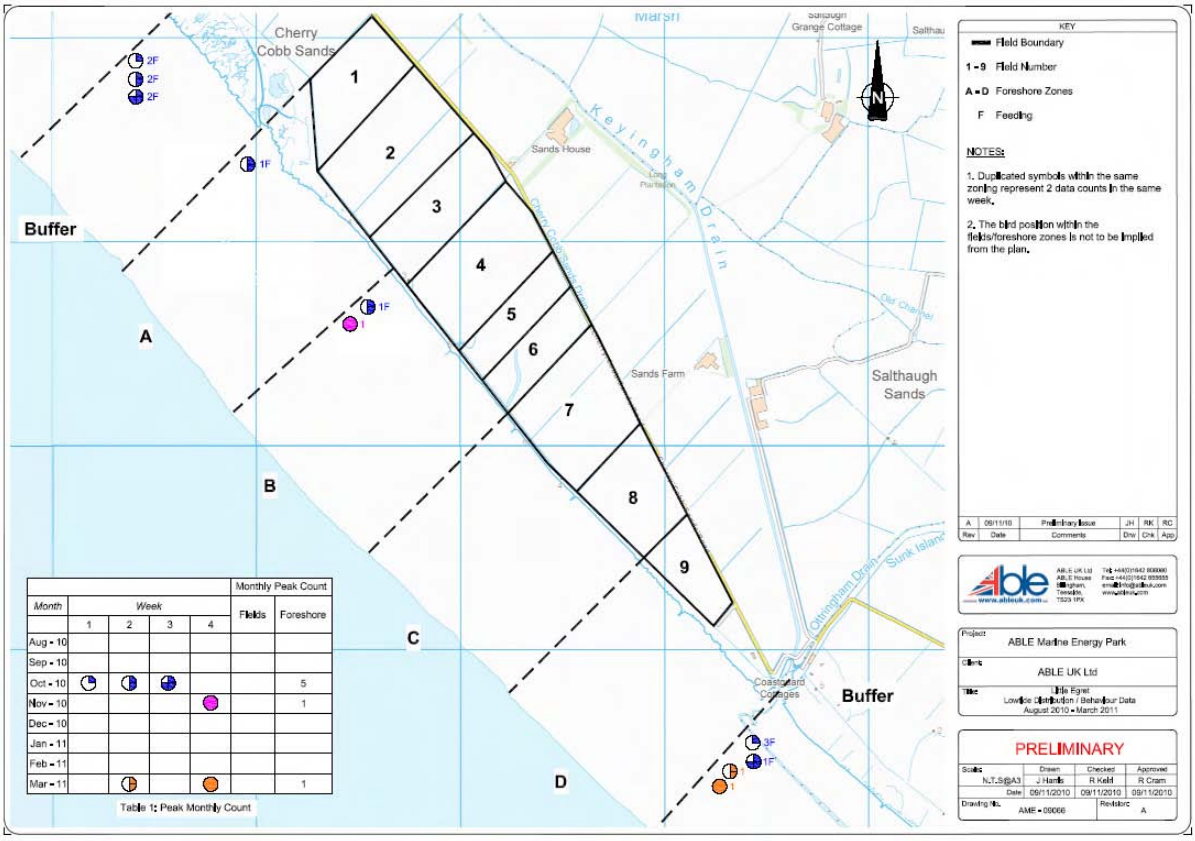
The Little Egret first appeared in the UK in significant numbers in 1989 and first bred in Dorset in 1996. Its colonization followed naturally from a range expansion into western and northern France in previous decades. Little Egrets have become a familiar sight on the Humber Estuary, both as a summer and as a winter visitor. The latest five-year mean from the WeBS core counts provided an estimate of 38 birds on the Humber estuary (Calbrade *et al.*, 2010).

3.10.3 FINDINGS

3.10.3.1. Figure 17 and **Figure 18Error! Reference source not found.** illustrates the species' preference for areas of saltmarsh within the intertidal area. The species was the most frequently recorded in the Buffer Zone fronting the Cherry Cobb saltmarsh. The highest counts were made at high water in this prime habitat. A peak of 13 birds was recorded on the intertidal area in October at high water with birds also being observed in September and February (**Figure 18Error! Reference source not found.**). The species was absent during the core winter months.

3.10.3.2. The peak monthly count of 13 birds accounted for 34% of the WeBS five-year average on the Humber Estuary.

3.10.3.3. The species was logged in the 'Compensation Site'. Soak drains and drainage channels across the site were favoured by this species.



Month	Week 1	Week 2	Week 3	Week 4	Monthly Peak Count: Fields	Monthly Peak Count: Foreshore
Aug - 10						
Sep - 10						
Oct - 10						5
Nov - 10						1
Dec - 10						
Jan - 11						
Feb - 11						
Mar - 11						1

Table 1: Peak Monthly Count

Figure 17: Little Egret Low Tide counts

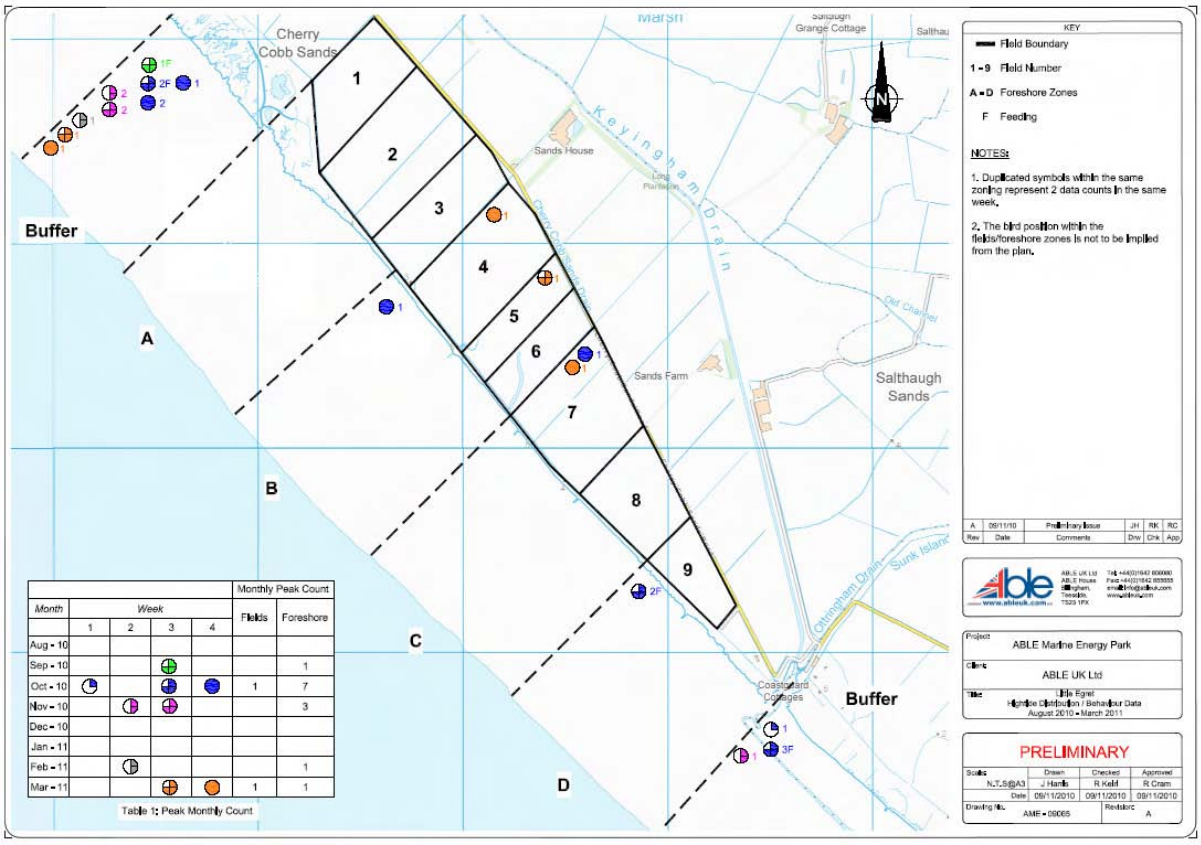


Figure 18: Little Egret High Tide Counts

3.11 Grey Heron (*Ardea cinerea*)

3.11.1 PROTECTION & CONSERVATION STATUS

3.11.1.1. The Grey Heron is protected in the UK by the Wildlife and Countryside Act 1981. The Grey Heron is listed on Appendix III of the Bern Convention, is included in the African-Eurasian Waterbird Agreement and is a Green List Species of Conservation Concern (UK).

3.11.2 BACKGROUND INFORMATION

3.11.2.1. The latest Wetland Bird Survey (WeBS) estimates that a total of 76 individuals wintered over the last five years in the Humber Estuary (Calbrade *et al.*, 2010). General observations suggest that this species is more prevalent in the upper estuary and more often present on associated waterway than the mudflats themselves.

3.11.3 FINDINGS

3.11.3.1. Birds were recorded in every month in low numbers between August and November, mainly at low tide. A low tide peak count of two birds occurred in both September and October (**Figure 19**). Birds were largely distributed in the Buffer Zone at the north-west of the site and less so in the south-east.

3.11.3.2. A single bird roosted inland of the 'Compensation Site' at high tide and two birds roosted on the foreshore at high tide in the Buffer Zone to the north-west (**Figure 20**). No birds were recorded in Zones A-C.

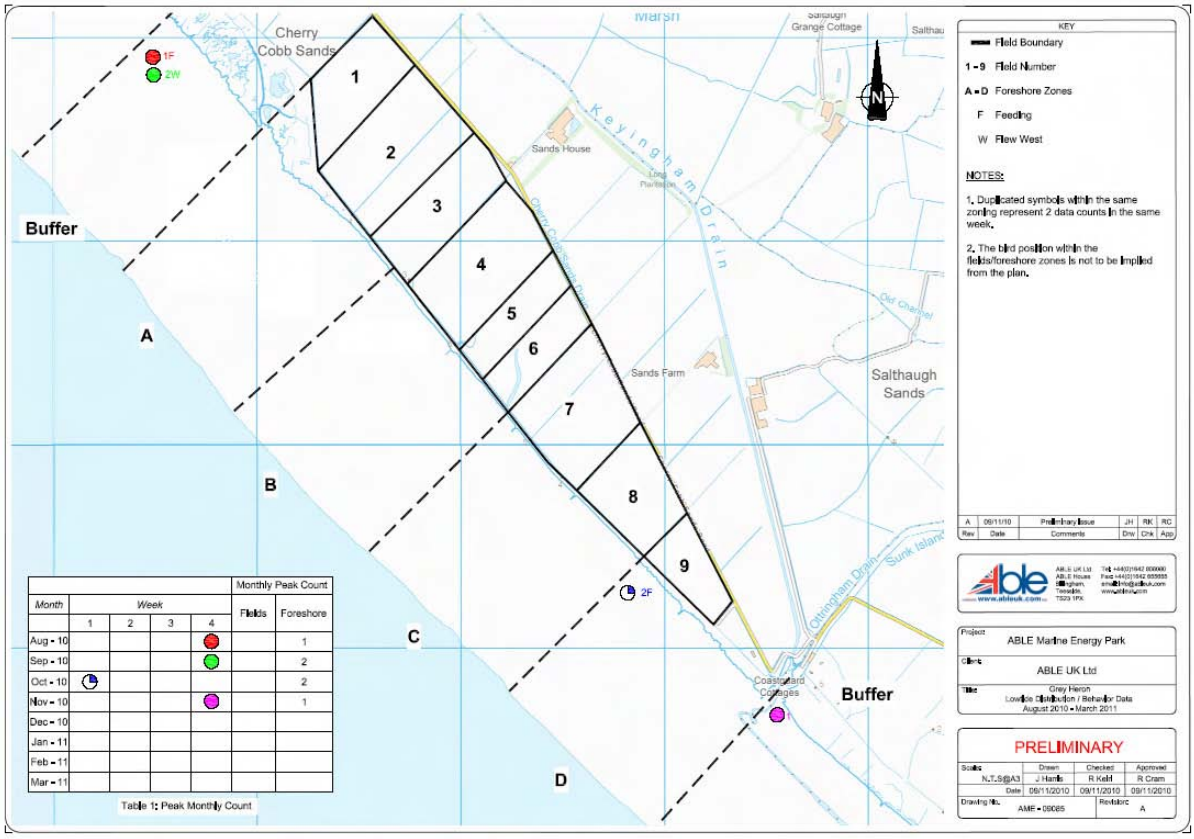


Figure 19: Grey Heron Low Tide Counts

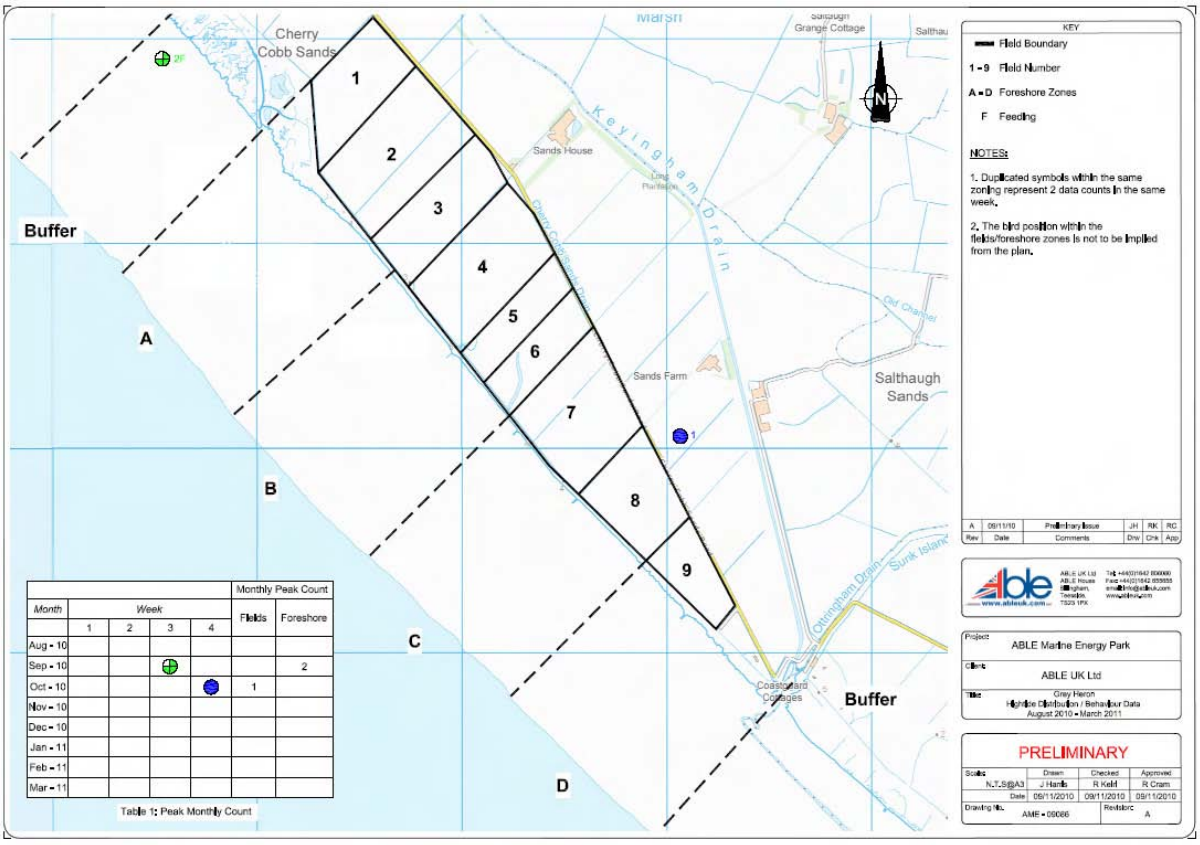


Figure 20: Grey Heron High Tide Counts

3.12 Cormorant (*Phalacrocorax carbo*)

3.12.1 PROTECTION & CONSERVATION STATUS

3.12.1.1. The Cormorant is protected in the UK by the Wildlife and Countryside Act 1981. This species is included in Annex III of the Bern Convention, is included in the African-Eurasian Waterbird Agreement and is included as an Amber List Species of Conservation Concern (UK).

3.12.2 BACKGROUND INFORMATION

3.12.2.1. The Humber Estuary is not a nationally important area for Cormorants (Calbrade *et al.,* 2010). General observations suggest birds are widely and thinly distributed across the estuary.

3.12.3 FINDINGS

3.12.3.1. Cormorants were found in low numbers on the foreshore in all months with the exception of November when none were present (**Figure 21** and **Figure 22**). The south of the intertidal area, around Stone Creek, is the favoured area with a peak of six birds recorded in zone D and three in the Buffer Zone. No birds were recorded in Zone B.

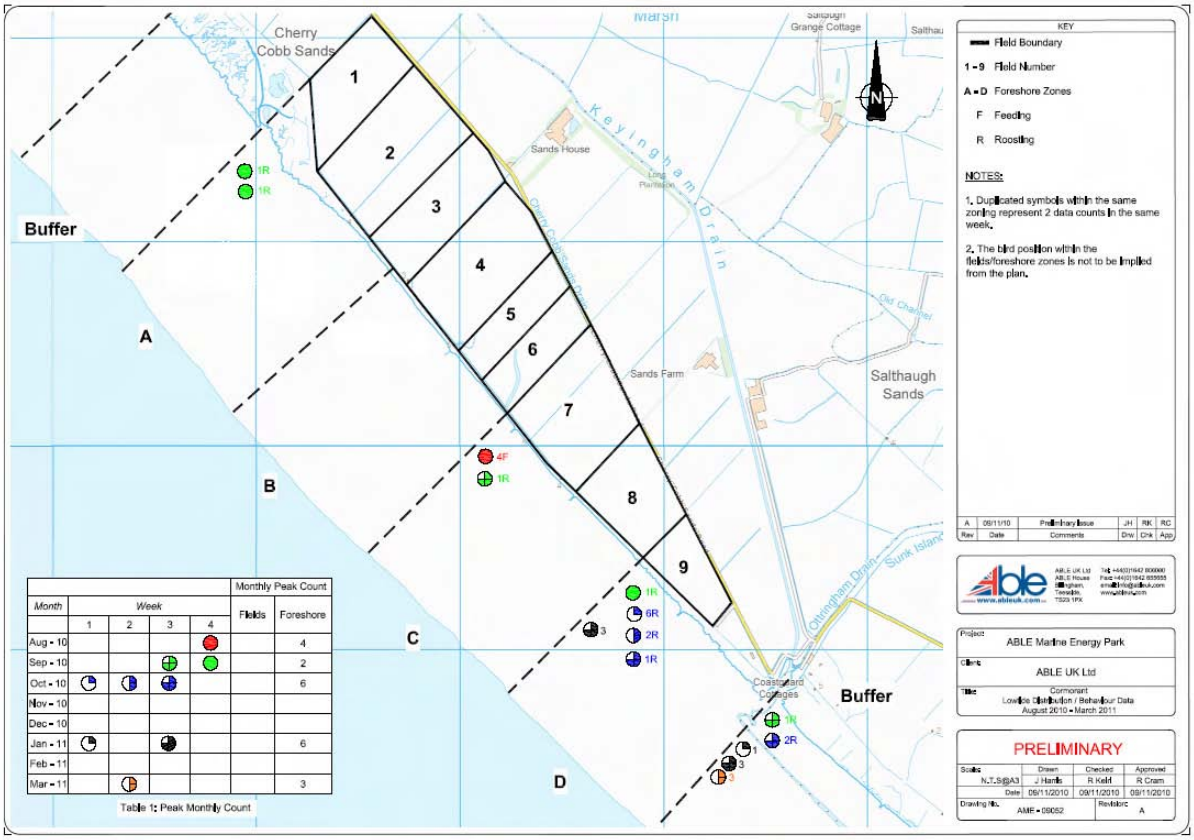


Figure 21: Cormorant Low Tide Counts

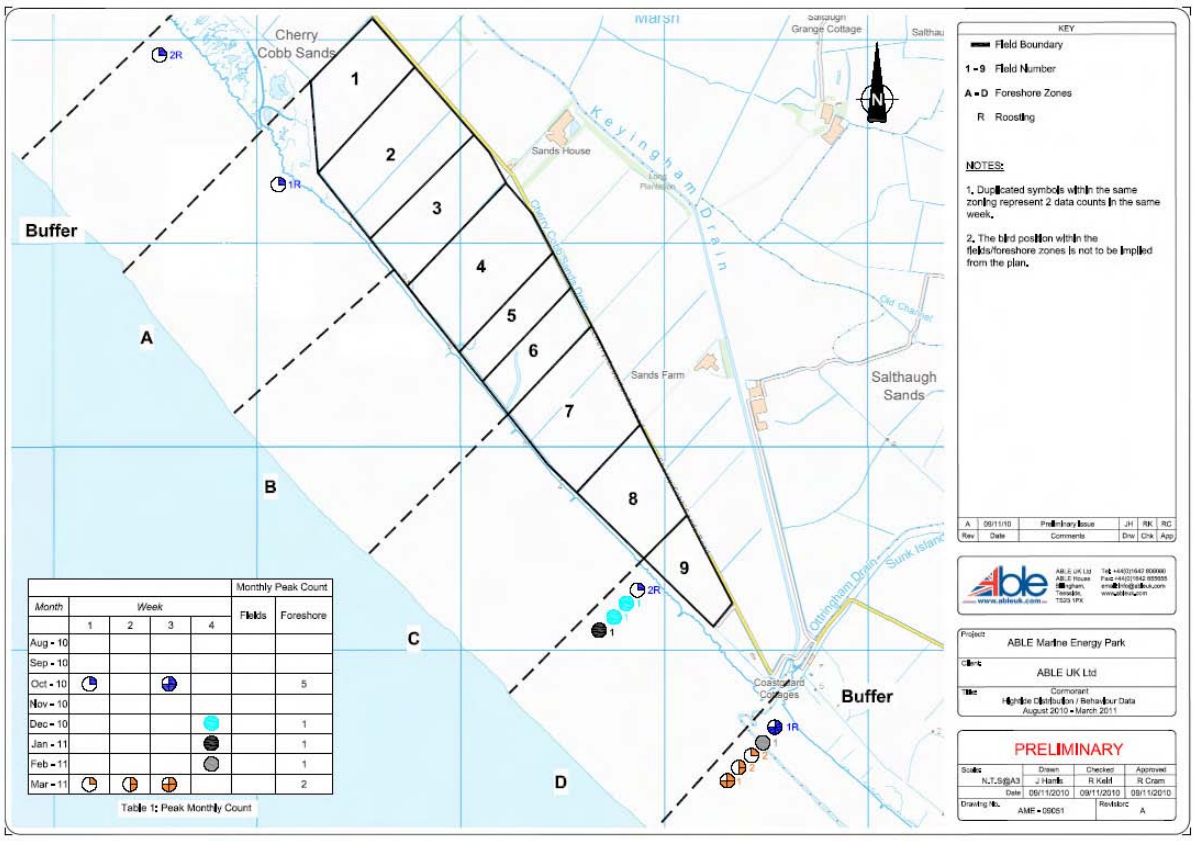


Figure 22: Cormorant High Tide Counts

3.13 Marsh Harrier (*Circus aeruginosus*)

3.13.1 PROTECTION & CONSERVATION STATUS:

3.13.1.1. The Marsh Harrier is protected in the UK by the Wildlife and Countryside Act 1981 and is further included in Schedule 1 of the same act. It is also listed in Appendix II of the Bern convention and Appendix II of the Bonn Convention as well as the Annex 1 of the European Birds Bird Directive. This species is also an Amber List Species of Conservation Concern (UK).

3.13.2 BACKGROUND INFORMATION

3.13.2.1. Marsh Harrier is a nationally scarce breeding bird which is increasing. The Humber Estuary has a 5-year mean of 10 nesting females with a peak of 12 breeding females in 2002 which constitutes 6.3% of the national breeding population (Allen *et al*., 2003). This is likely to be a gross underestimate of the current situation as nesting females are present in many of the smaller reedbeds that were not occupied when Allen *et al.* (2003) was published especially in the middle and outer estuary and the population could feasibly be double the quoted number. Formerly a complete migrant, Marsh Harrier is now a partial migrant with some females remaining on or close to the breeding areas.

3.13.3 FINDINGS

3.13.3.1. Birds were present in all months with a peak count of three birds in December, at low tide (**Figure 23**), with birds in the south-east of the site (Zone D and Buffer Zone).

3.13.3.2. At high tides, birds were more frequently recorded in the buffer zone to the north-west with the exception of December, when no birds were recorded (**Figure 24**). The proximity of these zones to the saltmarsh in Cherry Cobb and Stone Creek may explain the regular occurrence of Marsh Harrier, with the species hunting for passerines and even small roosting waders along the upper shore at high water.

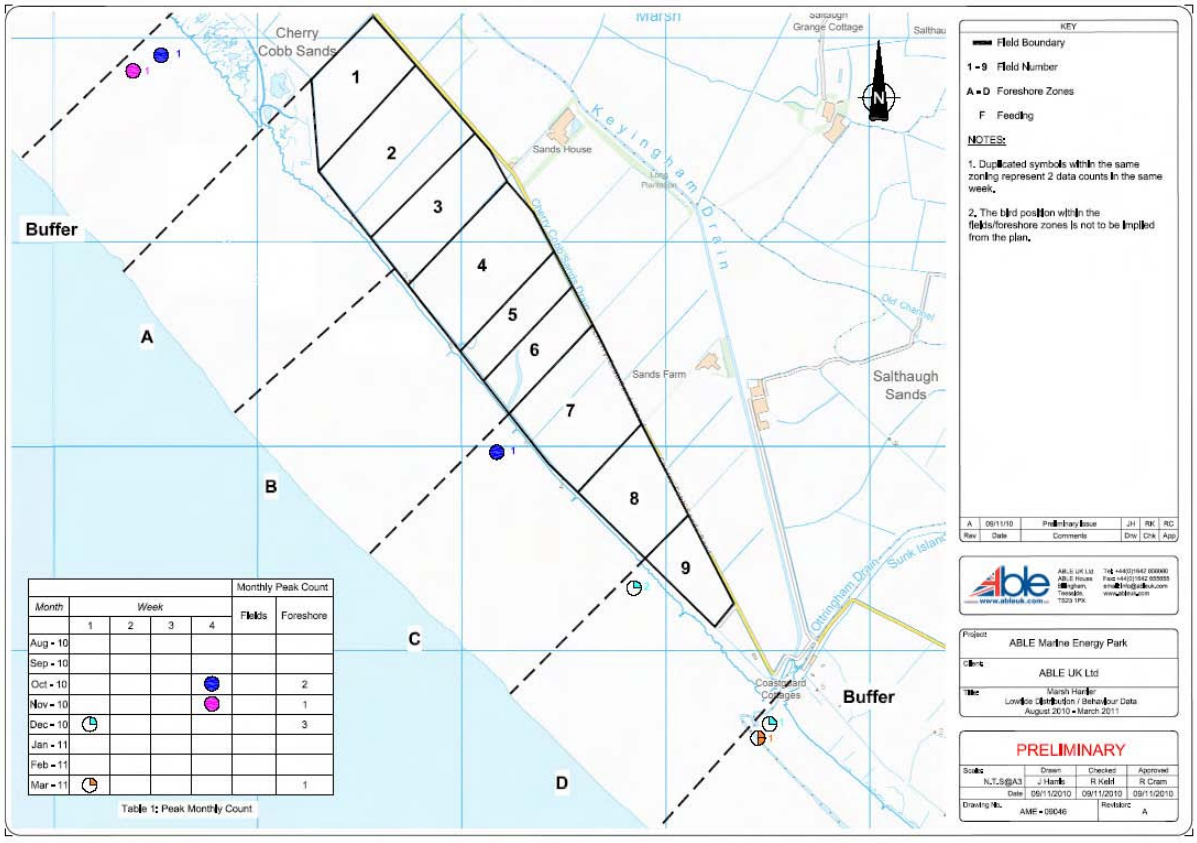


Figure 23: Marsh Harrier Low Tide Counts

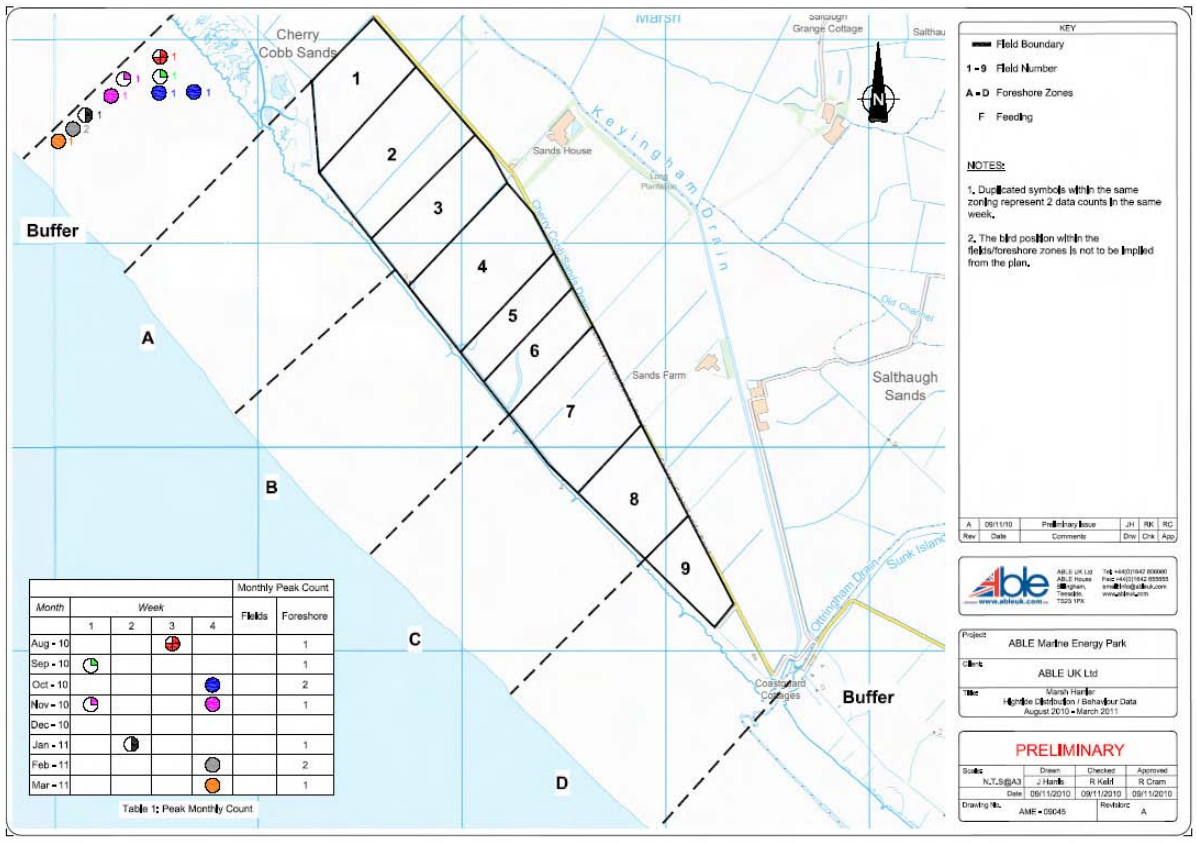


Figure 24: Marsh Harrier High Tide Counts

3.14 Peregrine (*Falco peregrinus*)

3.14.1 PROTECTION & CONSERVATION STATUS:

3.14.1.1. The Peregrine is protected in the UK by the Wildlife and Countryside Act 1981 and is further included in Schedule 1 of the same act. It is also listed in Appendix II of the Bern Convention and Appendix II of the Bonn Convention as well as the Annex 1 of the European Birds Bird Directive. This species is also a Green List Species of Conservation Concern (UK).

3.14.2 BACKGROUND INFORMATION:

3.14.2.1. The Peregrine is a regular wintering bird around the Humber in small numbers, especially on the middle and outer estuary, hunting over mudflats. A very small breeding population is thought to be present around the Humber Estuary.

3.14.3 FINDINGS

3.14.3.1. Peregrines were recorded on two occasions during the survey period and observations were restricted to high tide counts. A single Peregrine was recorded in the buffer area to the north of the site in August and a further bird was recorded in Field Two during the December survey (**Figure 25**).

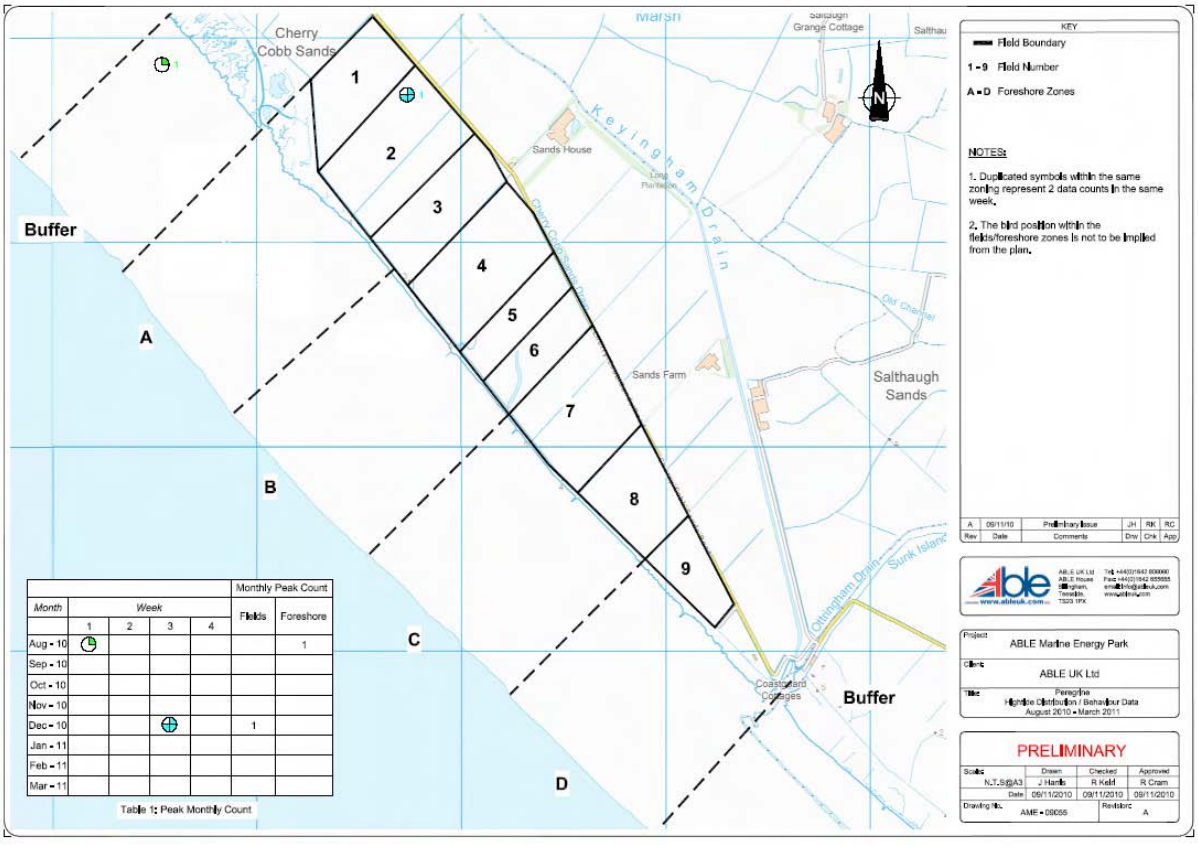


Figure 25: Peregrine Falcon High Tide Counts

3.15 Merlin (*Falco columbarius*)

3.15.1 PROTECTION & CONSERVATION STATUS

3.15.1.1. The Merlin is protected in the UK by the Wildlife and Countryside Act 1981 and is further included in Schedule 1 of the same act. It is also listed in Appendix II of the Bern Convention and Appendix II of the Bonn Convention as well as the Annex 1 of the European Birds Bird Directive. This species is also an Amber List Species of Conservation Concern (UK).

3.15.2 BACKGROUND INFORMATION

3.15.2.1. Merlin is a regular wintering bird on the Humber Estuary in low numbers. Birds are generally distributed in the middle and outer estuary, hunting over the mudflats.

3.15.3 FINDINGS

3.15.3.1. Merlin were only seen at high tide counts during the survey period. This species was recorded in late November and also late February, perhaps indicating passage birds rather than true wintering birds.

3.15.3.2. As with the other raptor species, birds favoured the buffer zones at the north-west and south-east with a peak count of two birds in the late February surveys (**Figure 26**).

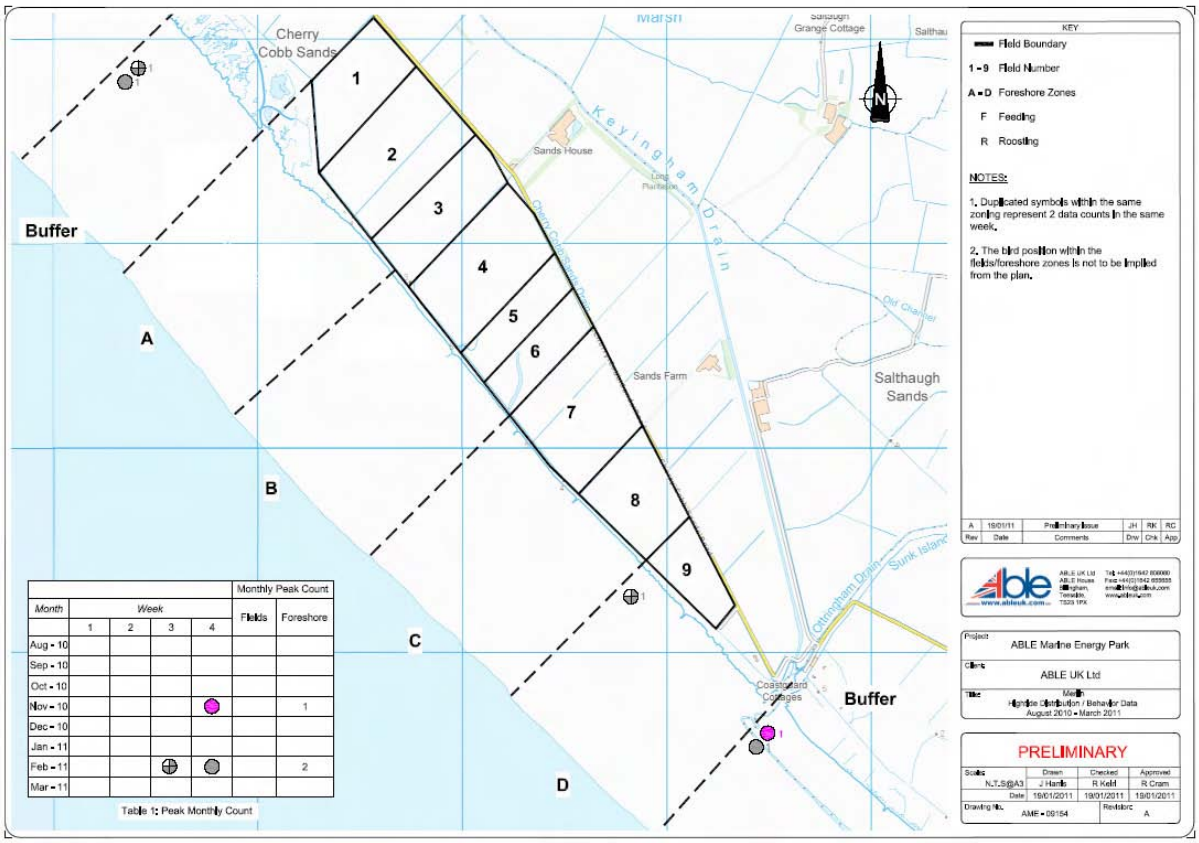


Figure 26: Merlin High Tide Counts

3.16 Moorhen (*Gallinula chloropus*)

3.16.1 PROTECTION & CONSERVATION STATUS

3.16.1.1 Moorhen is listed on Schedule II Part I of the UK Wildlife and Countryside Act, Annexe III of the Wild Birds Directive and the Appendices of the Bern (III) Conventions.

3.16.2 BACKGROUND INFORMATION

3.16.2.1 Moorhen have a widespread distribution throughout the UK and occur in a wide variety of wetlands Habitats. Because of its distribution, the species tends to be relatively poorly monitored by the WeBS core counts (Calbrade *et al.,* 2010). The latest WeBS survey provides a five-year mean estimate of 146 birds on the Humber Estuary (Calbrade *et al*., 2010), of which the majority is thought to be distributed in freshwater or brackish standing open waters adjacent to the Humber Estuary.

3.16.3 FINDINGS

3.16.3.1 The low tide count in September produced one sighting in the 'Compensation Site' (Field 8) and as expected the species was absent from the intertidal zone.

3.17 Oystercatcher (*Haematopus ostralegus*)

3.17.1 PROTECTION & CONSERVATION STATUS

3.17.1.1. The Oystercatcher is listed on Annex II of the Wild Birds Directive, Appendix III of the Bern Convention and Appendix II of the Bonn Convention. It is also listed in the African-Eurasian Waterbird Agreement.

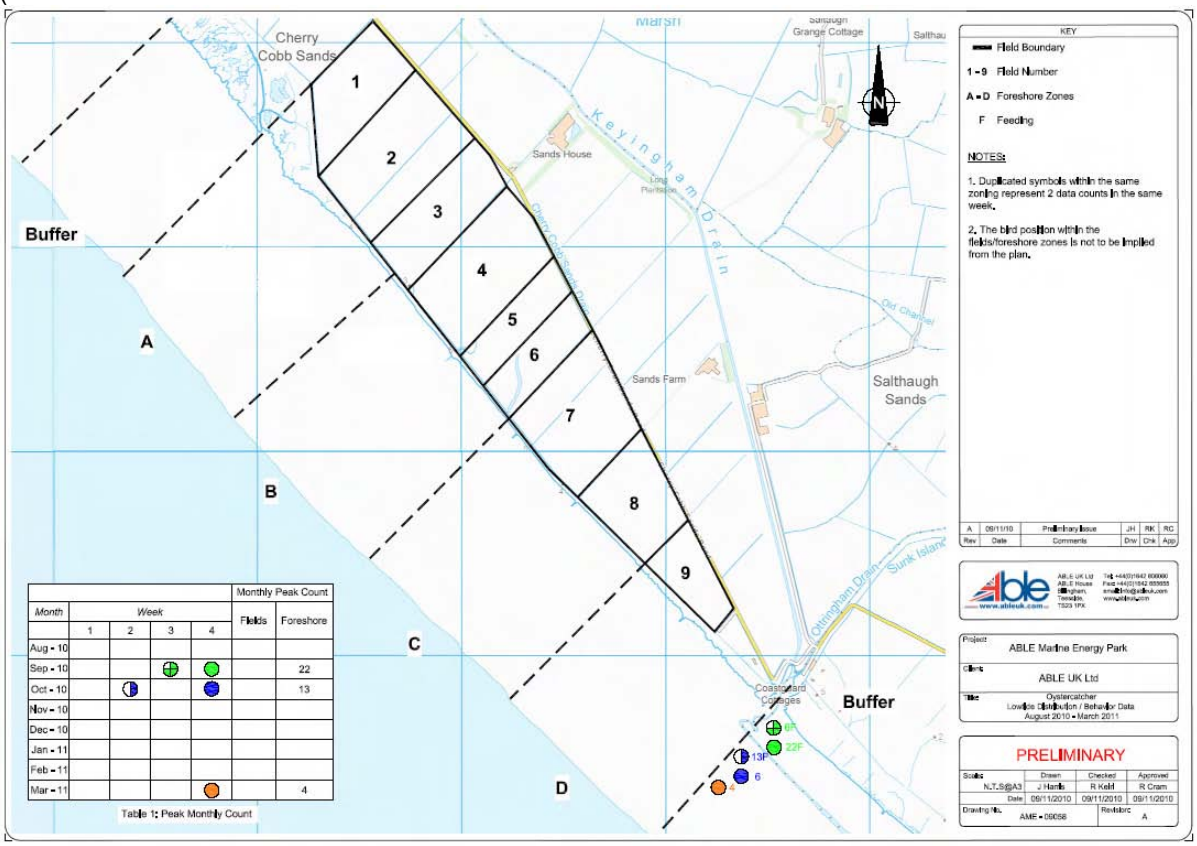
3.17.2 BACKGROUND INFORMATION

3.17.2.1. On the Humber Estuary, the Oystercatcher is predominantly found in the outer estuary with the majority of the population during all seasons being found downstream of a line drawn from Cherry Cobb to Immingham (Mander & Cutts, 2005; Catley, 2000; Allen *et al.,* 2003). The pattern of distribution of Oystercatcher across the Estuary broadly matches the distribution of Cockle beds, although Oystercatcher will take other bivalves, including the Baltic tellin (*Macoma balthica*).

3.17.3 FINDINGS

3.17.3.1. Very low numbers were recorded during the survey programme. The species was restricted to Zone D and to the Buffer Zone to the east of Stone Creek

(



Month	Week				Monthly Peak Count	
	1	2	3	4	Fields	Foreshore
Aug - 10						
Sep - 10						22
Oct - 10						13
Nov - 10						
Dec - 10						
Jan - 11						
Feb - 11						
Mar - 11						4

Table 1: Peak Monthly Count

3.17.3.2. Figure 27 and Figure 28). The overall peak count of 22 birds on the intertidal area only accounted for less than 1% of the Humber population.

3.17.3.3. Outside the breeding season, the species distribution is confined to the intertidal habitats, hence the absence of sightings in the ‘Compensation Site’ during the current reporting period.

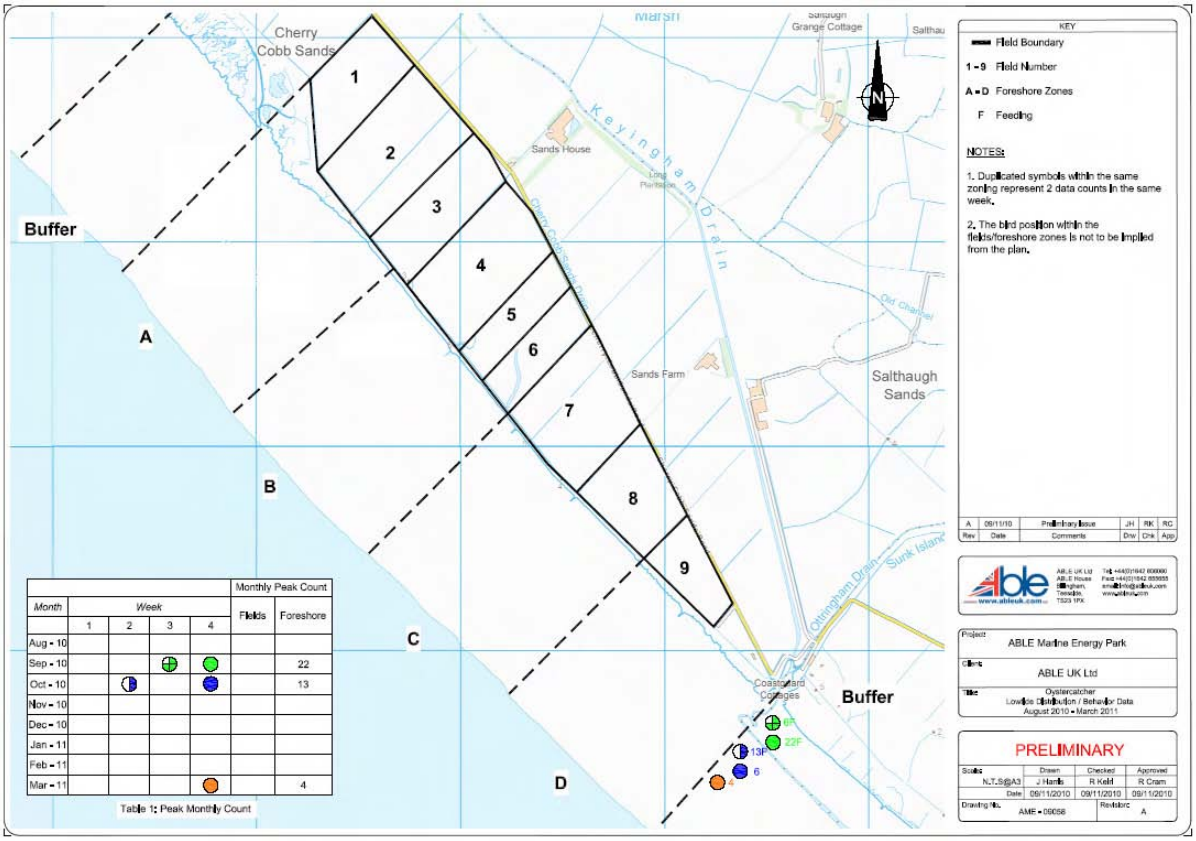


Figure 27: Oystercatcher Low Tide Counts

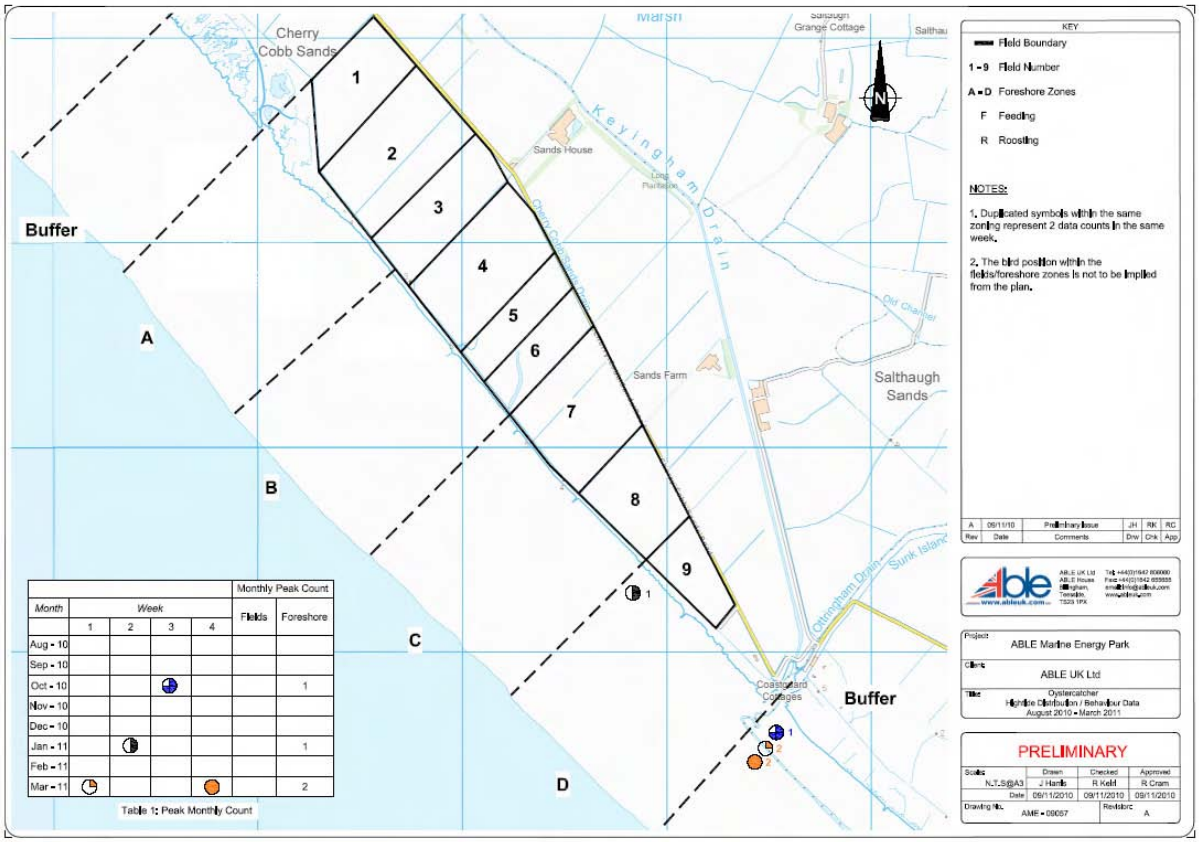


Figure 28: Oystercatcher High Tide Counts

3.18 Lapwing (*Vanellus vanellus*)

3.18.1 PROTECTION & CONSERVATION STATUS

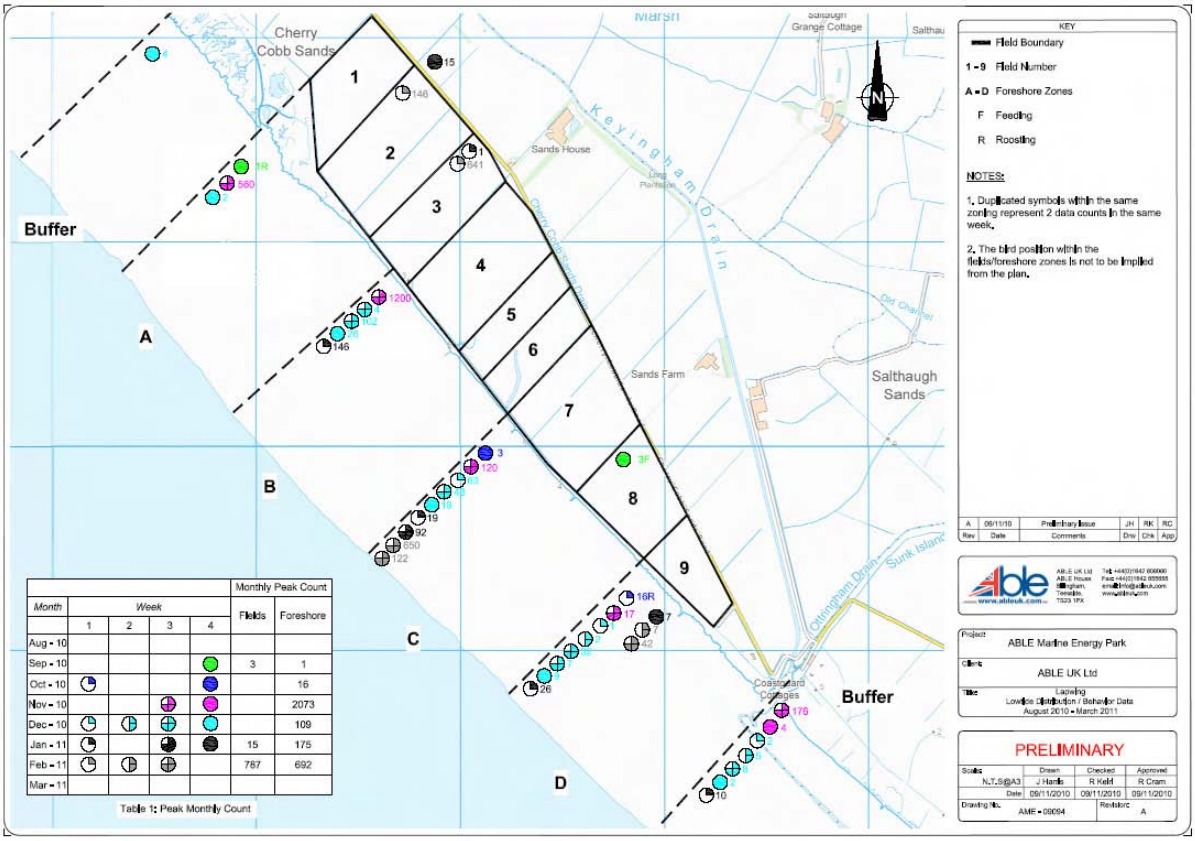
3.18.1.1. The Lapwing is listed on Annex II of the Wild Birds Directive, Appendix III of the Bern Convention and Appendix II of the Bonn Convention. It is also listed in the African-Eurasian Waterbird Agreement. This species is a Red List Species of Conservation Concern (UK).

3.18.2 BACKGROUND INFORMATION

3.18.2.1. Wintering Lapwings utilise the intertidal mudflat habitats as a feeding resource less extensively than most other wader species on the Humber, with the majority of foraging activity undertaken inland. In the breeding season, the species prefers spring sown cereals, root crops, permanent unimproved pasture, meadows and fallow fields. The Lapwing has recently seen large declines in breeding population hence its Red List Status in the UK (Eaton *et al.,* 2009). The Humber is of national importance for wintering Lapwings. The latest WeBS survey provides a five-year mean estimate of 18,756 birds on the Humber Estuary (Calbrade *et al.*, 2010).

3.18.3 FINDINGS

3.18.3.1. The low water counts feature the highest numbers of Lapwings. At low water, the exposed foreshore supported an overall peak of 2,073 birds which accounted for 11% of the Humber population (



Month	Week 1	2	3	4	Monthly Peak Count Fields	Foreshore
Aug - 10						
Sep - 10					3	1
Oct - 10						16
Nov - 10						2073
Dec - 10						109
Jan - 11					15	175
Feb - 11					787	692
Mar - 11						

3.18.3.2. Figure 29). Non-foraging birds were widespread across the site. There were no records of foraging birds at low water on the intertidal area.

3.18.3.3. The bulk of Lapwing population vacated the foreshore at high water (albeit low numbers continued to use the upper shore near Stone Creek).

3.18.3.4. The utilisation of the 'Compensation Site' did not appear to be influenced by tidal conditions. Sightings were as uncommon at low water as they were during the high water count in the 'Compensation Site' and surprisingly the single largest flock was recorded at low water with 787 birds in February (Figure 30).

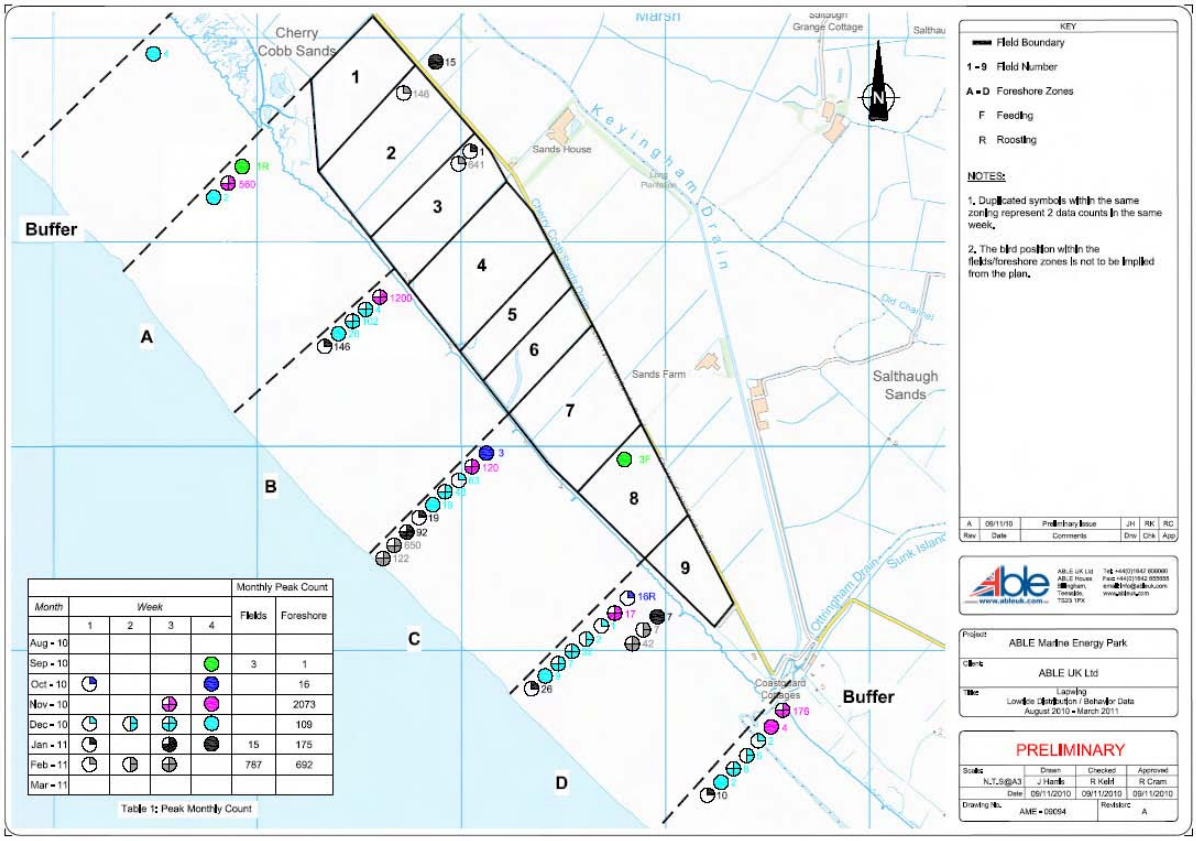


Figure 29: Lapwing Low Tide count

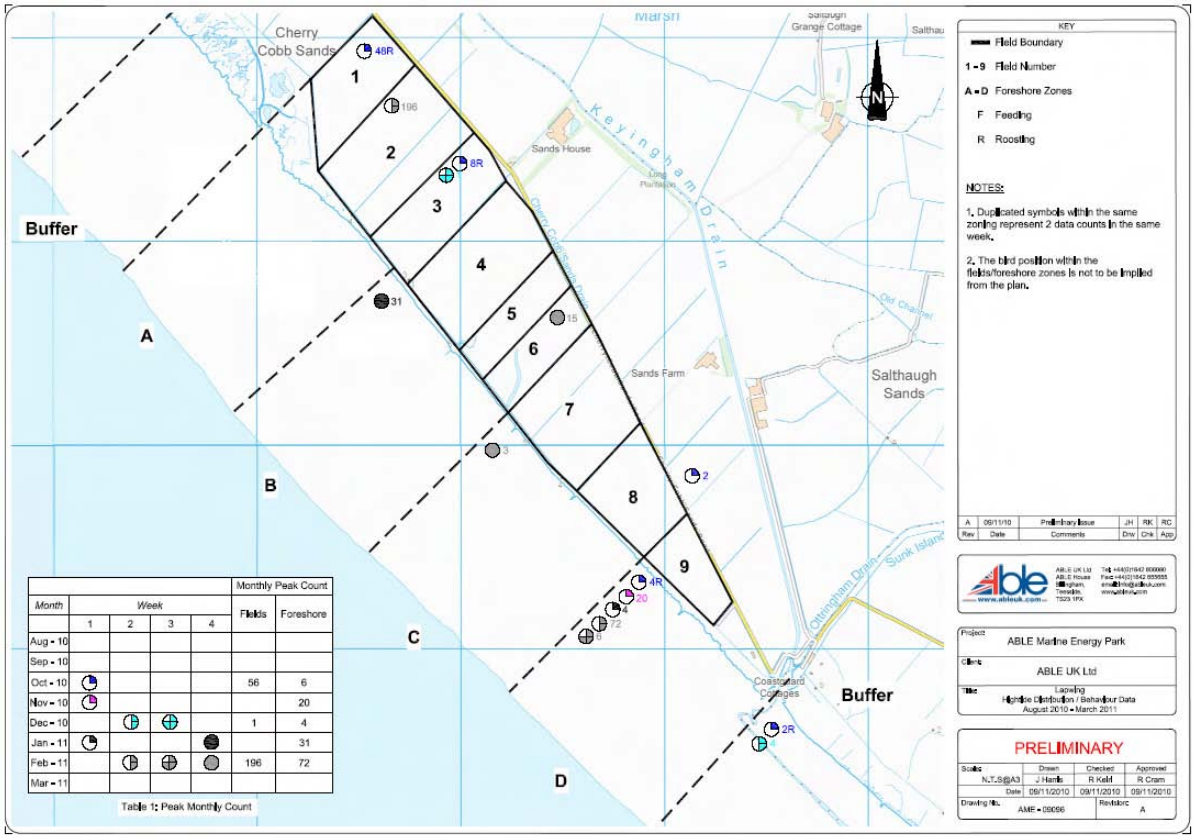


Figure 30: Lapwing High Tide count

3.19 Golden Plover (*Pluvialis apricaria*)

3.19.1 PROTECTION & CONSERVATION STATUS:

3.19.1.1. The Golden Plover is protected in the UK under Schedule Part 1 and Schedule Part 3 of the Wildlife and Countryside Act 1981. It is also listed in Annex I, II and III of the Birds Directive, Appendix III of the Bern Convention and Appendix IV of the Bonn Convention. This species is also an Amber List Species of Conservation Concern (UK).

3.19.2 BACKGROUND INFORMATION

3.19.1.1. The Humber Estuary is currently of international importance for Golden Plover, and is the most important wintering site for the species in the UK. The latest Wetland Bird Survey (WeBS) estimates that on average a total of 46,926 individuals wintered in the Humber (2004/05 to 2008/09). Golden Plover predominantly forage in inland pasture and other grassland, with the intertidal areas of the estuary used primarily for non-foraging i.e. roosting and loafing activities.

3.19.3 FINDINGS

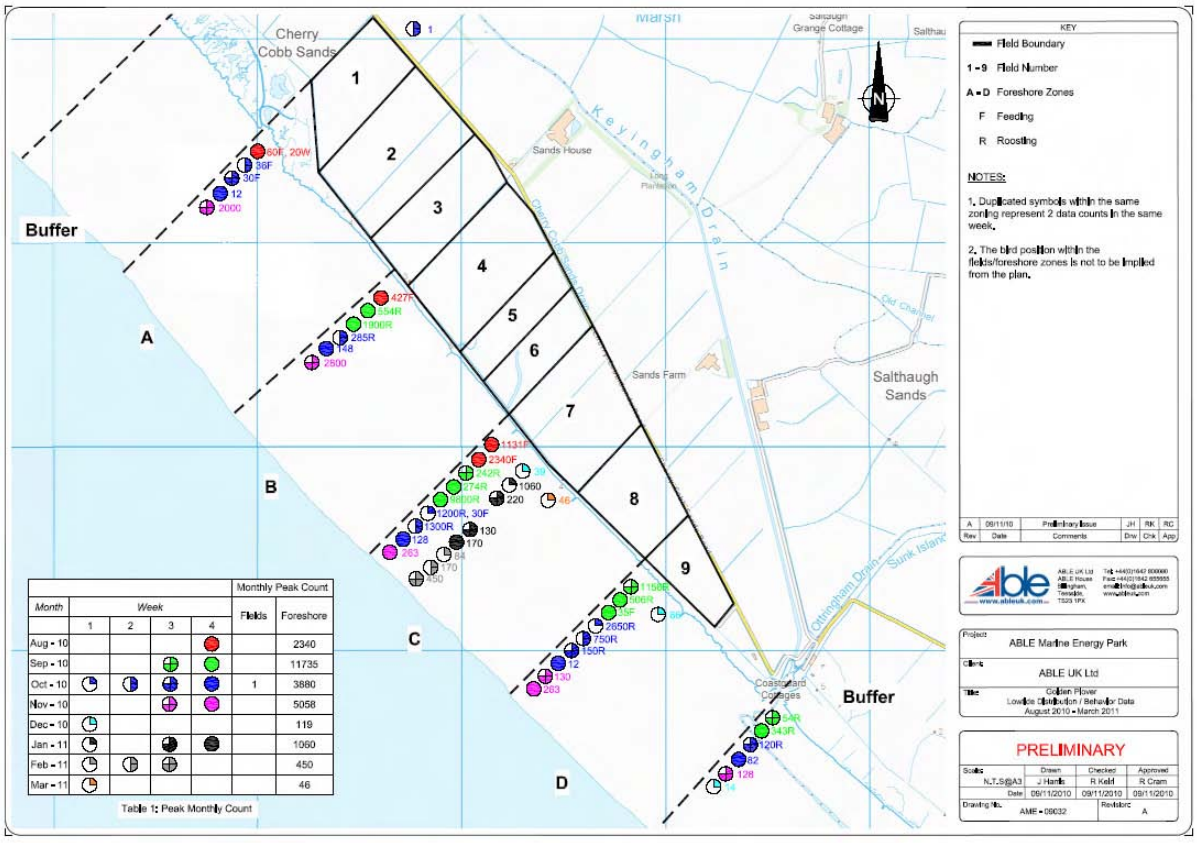
3.19.2.1. The surveys between August 2010 and March 2011 highlighted the importance of the Cherry Cobb Sands foreshore for this species. Golden Plover was the only species to exceed both the level of national and international importance at the Cherry Cobb Sands. The count of 11,735 birds on the foreshore in September 2010 peaked above the threshold of national (4,000 birds) and international importance (9,300 birds). Golden Plover predominantly use the area to loaf/roost,

although a small fraction of the flock was observed foraging in autumn, as observed in August 2010, September 2010 and October 2010.

3.19.2.2. At high water, occurrence of non-foraging birds has been observed to be variable and greatly dependent on a number of factors such as tidal range, disturbance and time of day. Tidal height has the greatest effect on usage at high water, with high spring tides reducing the availability of suitable roosting and loafing areas on the foreshore. As a result, the greatest utilisation of the intertidal area occurred on smaller tides.

3.19.2.3. The relative importance of the foreshore during the early autumn period compared to mid winter and late winter is evident from the maps.

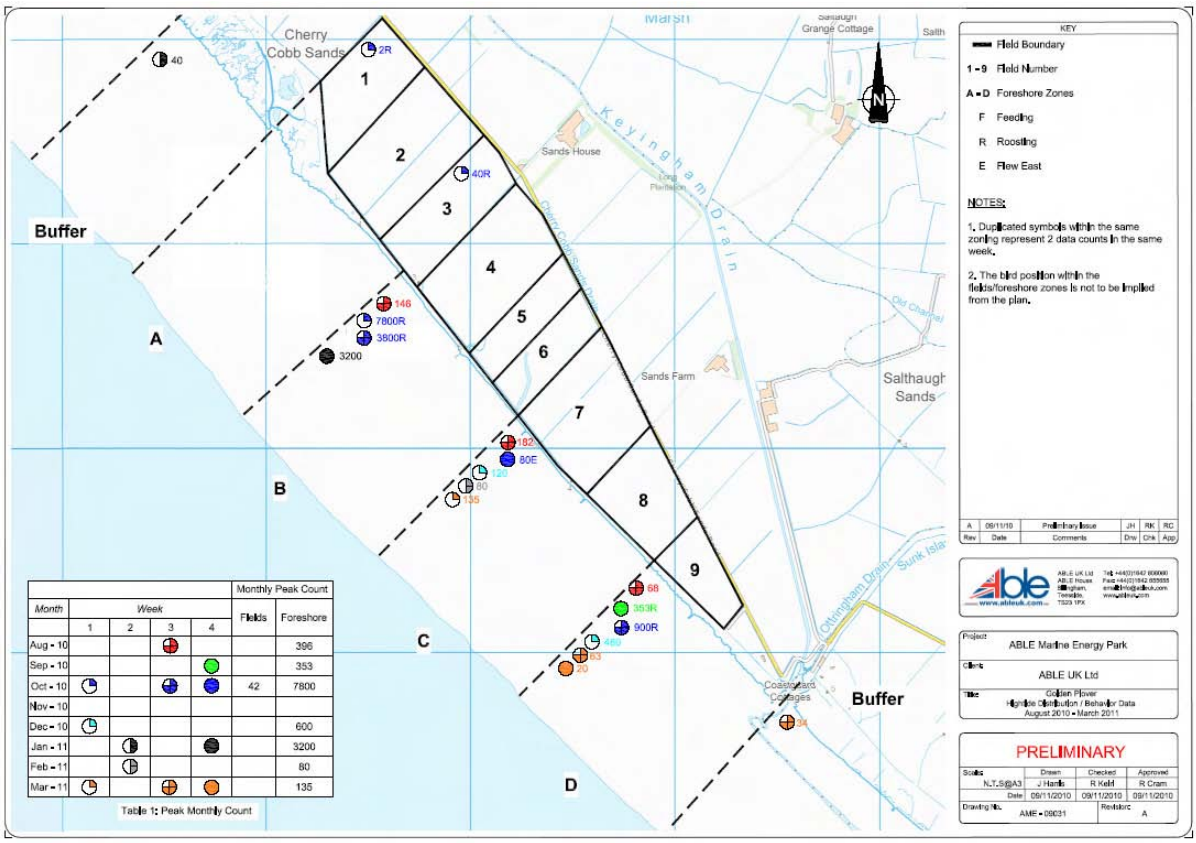
3.19.2.4. Despite a high level of usage recorded on the intertidal area, the 'Compensation Site' featured very low number of birds, even around the high water period. The low and high tide counts produced only two sightings (**Figure 31** and **Figure 32**).



Month	Week 1	2	3	4	Monthly Peak Count Fields	Foreshore
Aug - 10						2340
Sep - 10						11735
Oct - 10					1	3880
Nov - 10						5058
Dec - 10						119
Jan - 11						1060
Feb - 11						450
Mar - 11						46

Table 1: Peak Monthly Count

Figure 31: Golden Plover Low Tide Counts



Month	Week 1	2	3	4	Monthly Peak Count Fields	Foreshore
Aug - 10						396
Sep - 10						353
Oct - 10					42	7800
Nov - 10						
Dec - 10						600
Jan - 11						3200
Feb - 11						80
Mar - 11						135

Table 1: Peak Monthly Count

Figure 32: Golden Plover High Tide Counts

3.20 Grey Plover (*Pluvialis squatarola*)

3.20.1 PROTECTION & CONSERVATION STATUS

3.20.1.1. The Grey Plover is listed on Annex II of the Wild Birds Directive, Appendix III of the Bern Convention and Appendix II of the Bonn Convention. It is also listed in the African-Eurasian Waterbird Agreement. This species is also an Amber List Species of Conservation Concern (UK).

3.20.2 BACKGROUND INFORMATION

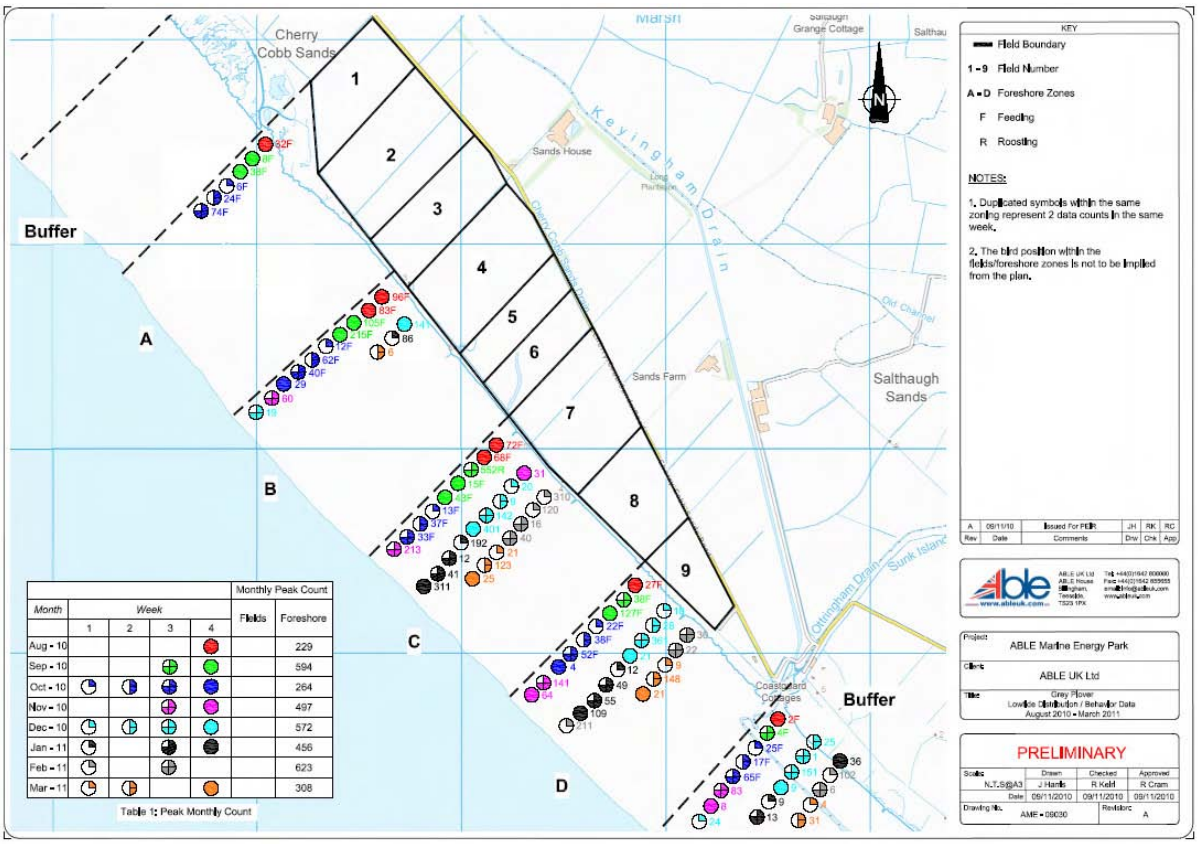
3.20.2.1. On the Humber, Grey Plover is primarily a species of the outer estuary, often found in well dispersed loose flocks feeding across a mudflat, with feeding activity largely undertaken from the upper to mid shore. The intertidal areas adjacent to saltmarsh habitats of Welwick and Cherry Cobb Sands were seen to support large numbers of Grey Plover during the 2003/04 low tide count programme (Mander and Cutts, 2005).

3.20.3 FINDINGS

3.20.3.1. The species was evenly distributed across the intertidal area but with notable concentrations recorded in Zones C and D at low water (**Figure 33**). The overall monthly count of 623 in February reflected the importance of the site with the whole section of the intertidal area supporting 21% of the Humber population (based on the latest WeBS five-year) in February. The numbers at low water fluctuated between months but remain in excess of the level of national importance in September, December and February (530 birds).

3.20.3.2. Fewer Grey Plover were recorded at high water with an overall peak count of 248 in August (**Figure 34**). As with other wading birds, the foreshore utilisation by Grey Plover is at its lowest around high water on spring tides, as the inundation of the mudflat forces the birds to move to their high water spring roosting grounds; these are located on the Cherry Cobb Sands saltmarsh and the Welwick saltmarsh.

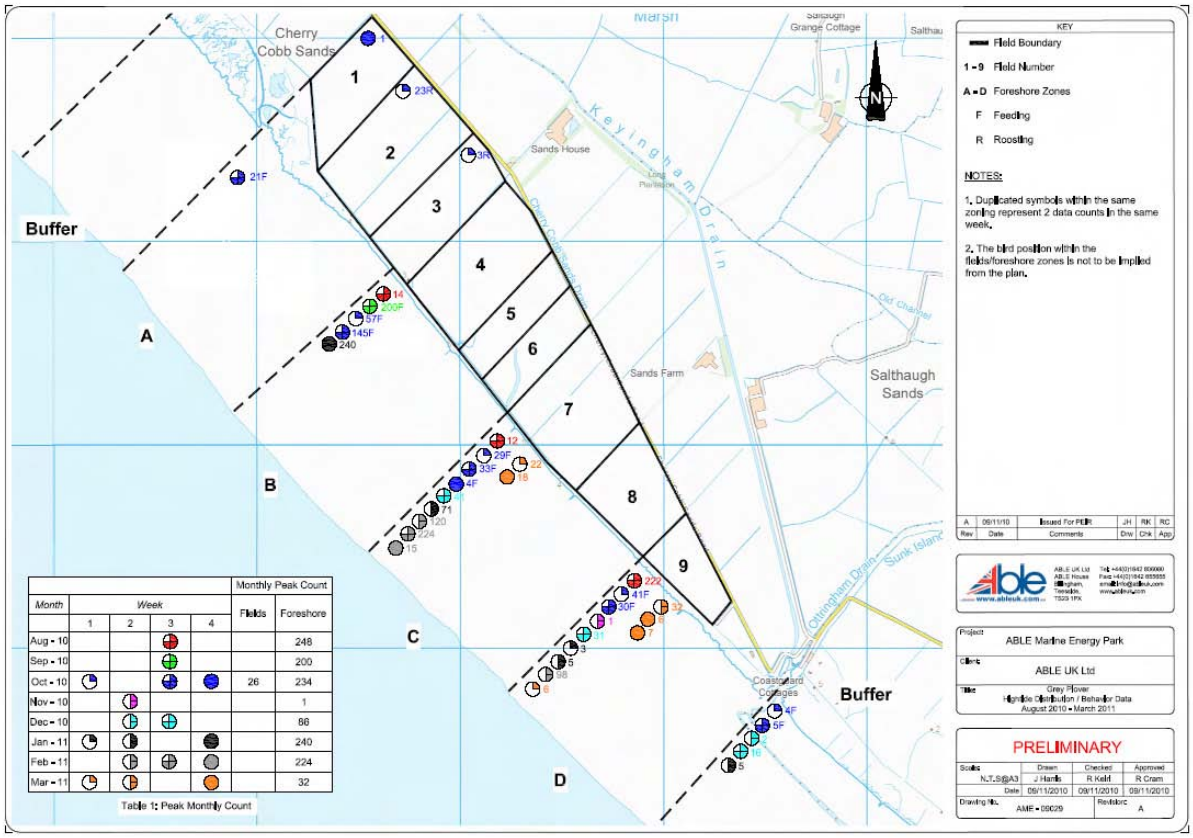
3.20.3.3. There was a small influx of roosting birds onto the fields in October with a peak count of 26 birds. Occasionally the species can establish roosts in non-tidal habitats such as costal fields. This often occurs during high spring tides when the birds are pushed off the intertidal habitats and forced to roost in sub-optimal habitats such as arable fields.



Month	Week 1	2	3	4	Monthly Peak Count Fields	Foreshore
Aug - 10						229
Sep - 10						594
Oct - 10						264
Nov - 10						497
Dec - 10						572
Jan - 11						456
Feb - 11						623
Mar - 11						308

Table 1: Peak Monthly Count

Figure 33: Grey Plover Low Tide counts



Month	Week 1	2	3	4	Monthly Peak Count Fields	Foreshore
Aug - 10						248
Sep - 10						200
Oct - 10					26	234
Nov - 10						1
Dec - 10						88
Jan - 11						240
Feb - 11						224
Mar - 11						32

Table 1: Peak Monthly Count

Figure 34: Grey Plover High Tide Counts

3.21 Ringed Plover (*Charadrius hiaticula*)

3.21.1 PROTECTION & CONSERVATION STATUS

3.21.1.1. The Ringed Plover is listed on Appendix III of the Bern Convention and Appendix II of the Bonn Convention. It is also listed in the African-Eurasian Waterbird Agreement. This species is also an Amber List Species of Conservation Concern (UK).

3.21.2 BACKGROUND INFORMATION

3.21.2.1. The species is very mobile within the estuary and has been recorded on the Humber in internationally important numbers during migration periods, with a smaller, nationally important wintering population.

3.21.3 FINDINGS

3.21.3.1. With the exception of a notable passage of migratory birds in August 2009 (**Figure 35** and **Figure 36**), very low numbers were seen foraging or roosting on the intertidal area fronting the 'Compensation Site' and the species was absent from the 'Compensation Site' itself. The overall peak count of 351 birds on the intertidal area in August was noteworthy for the area, representing 16% of the Humber population.

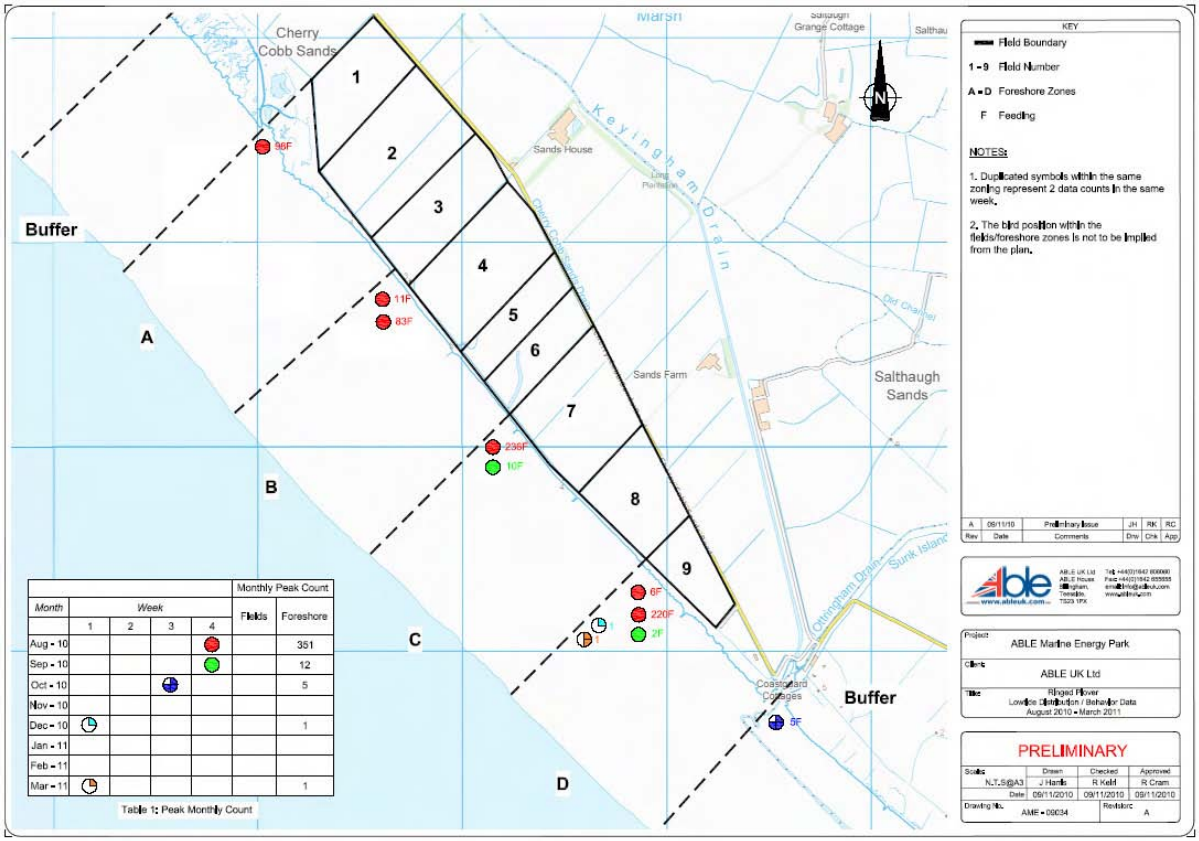


Figure 35: Ringed Plover Low Tide Counts

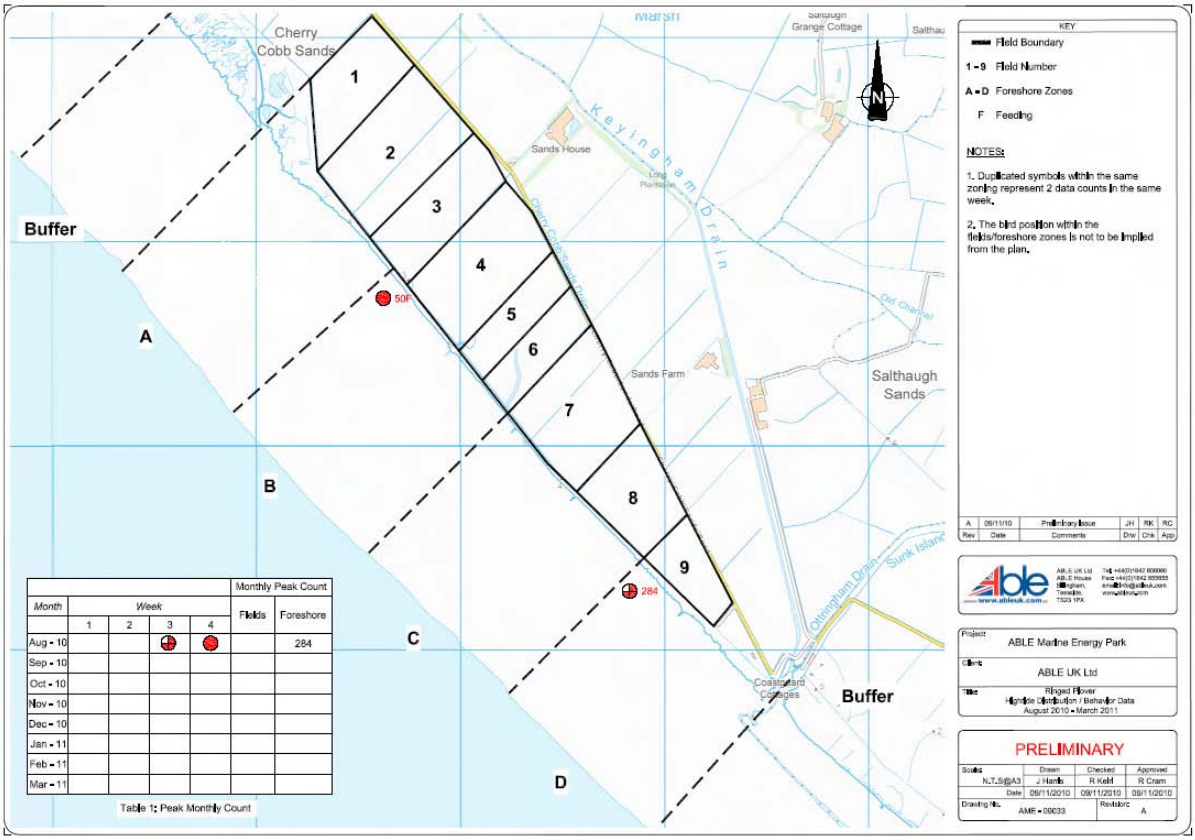


Figure 36: Ringed Plover High Tide Counts

3.22 Ruff (*Philomachus pugnax*)

3.22.1 PROTECTION & CONSERVATION STATUS

3.22.1.1 The Ruff is protected under Schedule I Part I of the Wildlife and Countryside Act 1981, Annexes I and II of the Wild Birds Directive and the Appendices of the Bern (III) and Bonn (II) Conventions. It is also listed in the African-Eurasian Waterbird Agreement. This species is a Red List Species of Conservation Concern (UK).

3.22.2 BACKGROUND INFORMATION

3.22.2.1 The Humber estuary is a nationally important site for Ruff with a 5-year mean of 64 birds, with the counts peaking in October during the passage period (Calbrade *et al.,* 2010).

3.22.2.2 Birds are thinly distributed around the estuary on passage with the largest concentrations at Blacktoft Sands, were flocks of 100 plus are not uncommon (Allen *et al.,* 2003). Occasional birds overwinter.

3.22.3 FINDINGS

3.22.3.1 Ruff was a scarce passage migrant at the site. Six birds were recorded in the 'Compensation Site' during the high tide count in early September.

3.22.3.2 No birds were recorded on the intertidal zone.

3.23 Snipe (*Gallinago gallinago*)

3.23.1 PROTECTION & CONSERVATION STATUS

3.23.1.1 The Snipe is protected under Schedule II Part I and Schedule III Part III of the Wildlife and Countryside Act 1981, Annexes I and II of the Wild Birds Directive and the Appendices of the Bern (III) and Bonn (II) Conventions. It is also listed in the African-Eurasian Waterbird Agreement. This species is an Amber List Species of Conservation Concern (UK).

3.23.2 BACKGROUND INFORMATION

3.23.2.1 Snipe are widely distributed on wet meadows and saltmarsh throughout the estuary during passage periods and may winter in small numbers but there has been little effective surveying for this species in the recent past.

3.23.3 FINDINGS

3.23.3.1 Snipe was a scarce passage migrant, with two birds recorded at low tide on the intertidal buffer zone in February (Figure 37).

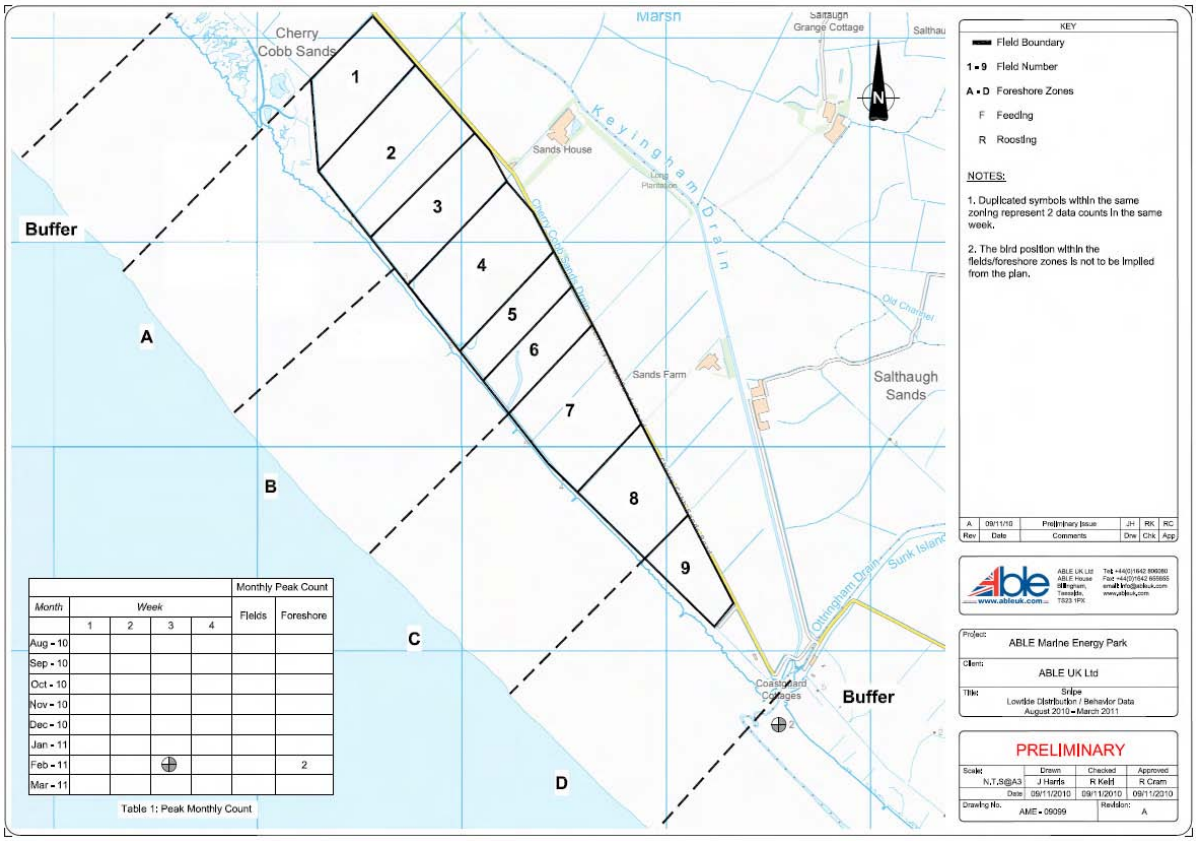


Figure 37: Snipe Low Tide Counts.

3.24 Black-tailed Godwit (*Limosa limosa*)

3.24.1 PROTECTION & CONSERVATION STATUS

3.24.1.1. The Black-tailed Godwit is protected under Schedule 1 Part 1 of the Wildlife Countryside Act (1981). It is listed in Annex II of the Wild Birds Directive, Appendix II of the Bonn Convention, Appendix III of the Bern Convention. This species is also a Red List Species of Conservation Concern (UK).

3.24.2 BACKGROUND INFORMATION

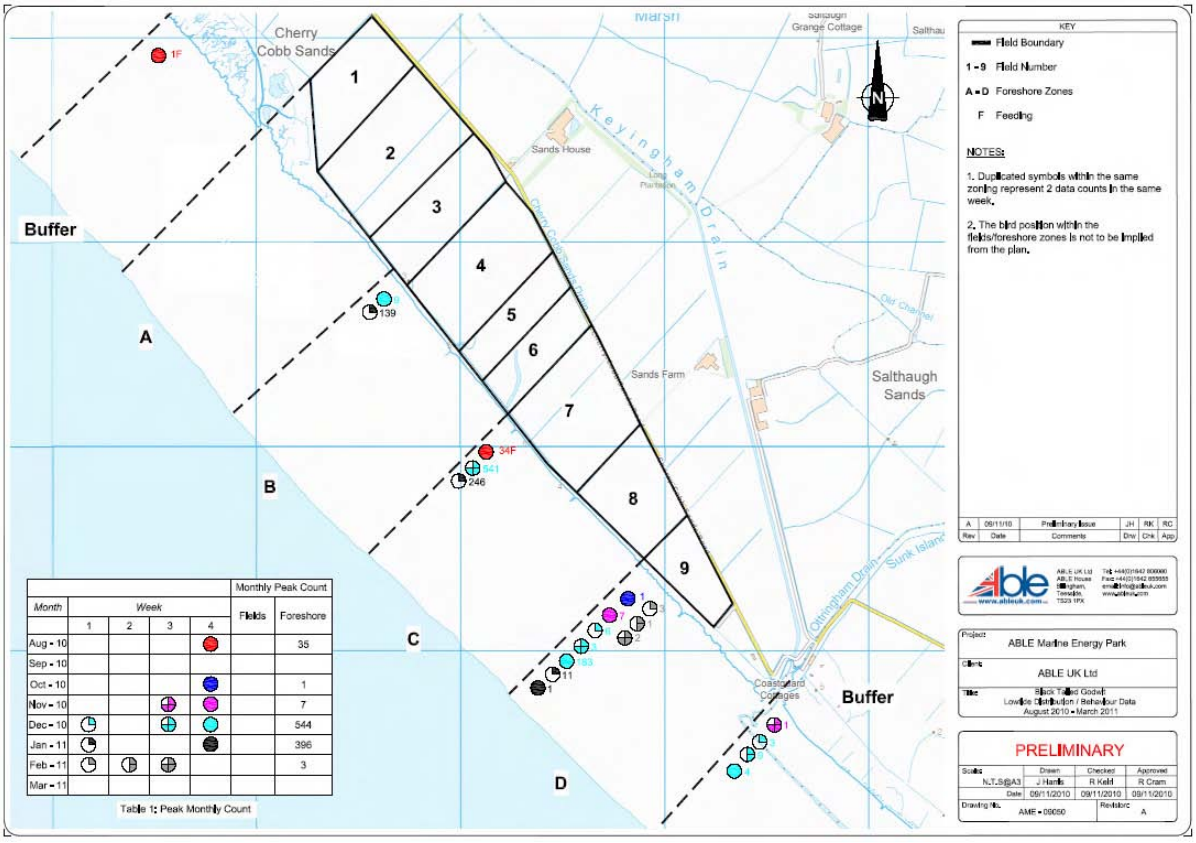
3.24.2.1. Since the mid-1990s and up to 2004/05, wintering numbers had been increasing in line with those of the flyaway population, a rise considered partly attributable to higher productivity achieved on the Icelandic breeding grounds, combined with the high quality of stopover sites in Portugal where Godwits feed primarily on buried rice kernels in flooded ploughed fields (Lourenco and Piersma, 2008). The Humber population has mirrored the national increase over the last 10 years.

3.24.2.2. The population on the Humber Estuary is reliant on a few sites, especially during the winter months. In autumn, large flocks can occur between Paull and Spurn and the realignment site at Paull Holme Strays has become a stronghold for roosting and loafing Black-tailed Godwits in early autumn i.e. August and September.

3.24.3 FINDINGS

3.24.3.1. The results of the surveys show the utilisation of the intertidal area to be variable at low water (**Figure 38** and Figure 39). Despite being less frequently recorded than other wading birds, the influx of birds in December and January was significant when put in to context of the Humber population. In fact, the foreshore supported 13% of the Humber population in December with a peak of 544 birds.

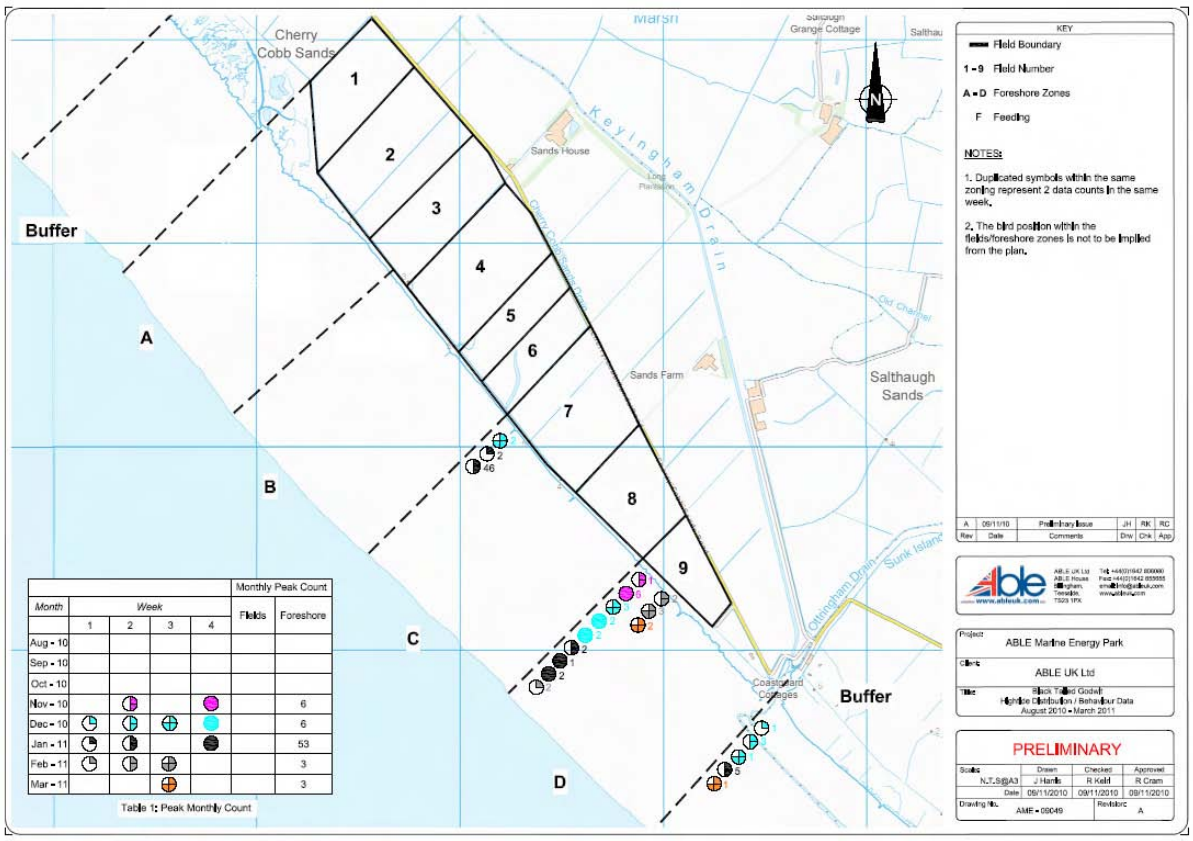
3.24.3.2. Traditionally, wintering Black-tailed Godwits roost at the North Killinghome Haven Pits in winter, hence the very low numbers recorded at high water during the present surveys. No Black-tailed Godwits were recorded in the 'Compensation Site'.



Month	Week 1	2	3	4	Monthly Peak Count: Fields	Foreshore
Aug - 10						35
Sep - 10						
Oct - 10						1
Nov - 10						7
Dec - 10						544
Jan - 11						396
Feb - 11						3
Mar - 11						

Table 1: Peak Monthly Count

Figure 38: Black-tailed Godwit Low Tide Counts



Month	Week 1	2	3	4	Monthly Peak Count: Fields	Foreshore
Aug - 10						
Sep - 10						
Oct - 10						
Nov - 10						6
Dec - 10						6
Jan - 11						53
Feb - 11						3
Mar - 11						3

Table 1: Peak Monthly Count

Figure 39: Black-tailed Godwit High Tide Counts

3.25 Bar-tailed Godwit (*Limosa lapponica*)

3.25.1 PROTECTION & CONSERVATION STATUS

3.25.1.1. The species is listed in Annex I and II of the Wild Birds Directive, Appendix II of the Bonn Convention and Appendix III of the Bern Convention. This species is an Amber List Species of Conservation Concern (UK).

3.25.2 BACKGROUND INFORMATION

3.25.2.1. Paull Holme Strays / Saltend on the north bank and Immingham docks on the south bank generally mark the upstream boundary of key usage by the species as, on the Humber, the majority of records are concentrated around the extensive muddy sand flats of the outer estuary. Peak usage on the Humber Estuary occurs in the mid winter period (Mander & Cutts, 2005; Catley, 2000).

3.25.3 FINDINGS

3.25.3.1. The greatest usage on the intertidal area fronting the 'Compensation Site' was recorded during the early to mid winter period. At low water, there appeared to be a preference for Zones C and D which supported the highest and the most consistent counts during the survey programme (**Figure 40**). As with other wading birds, the usage at high water is tidal dependent, hence the discrepancy in numbers between counts at high water (**Figure 41**). However, the peak of 358 birds in December at high water was noteworthy representing 6% of the Humber population (based on latest five-year mean from the WeBS counts).

3.25.3.2. As expected, Bar-tailed Godwits were scare in the 'Compensation Site'. This species is rarely seen roosting in arable fields beyond the flood defence.

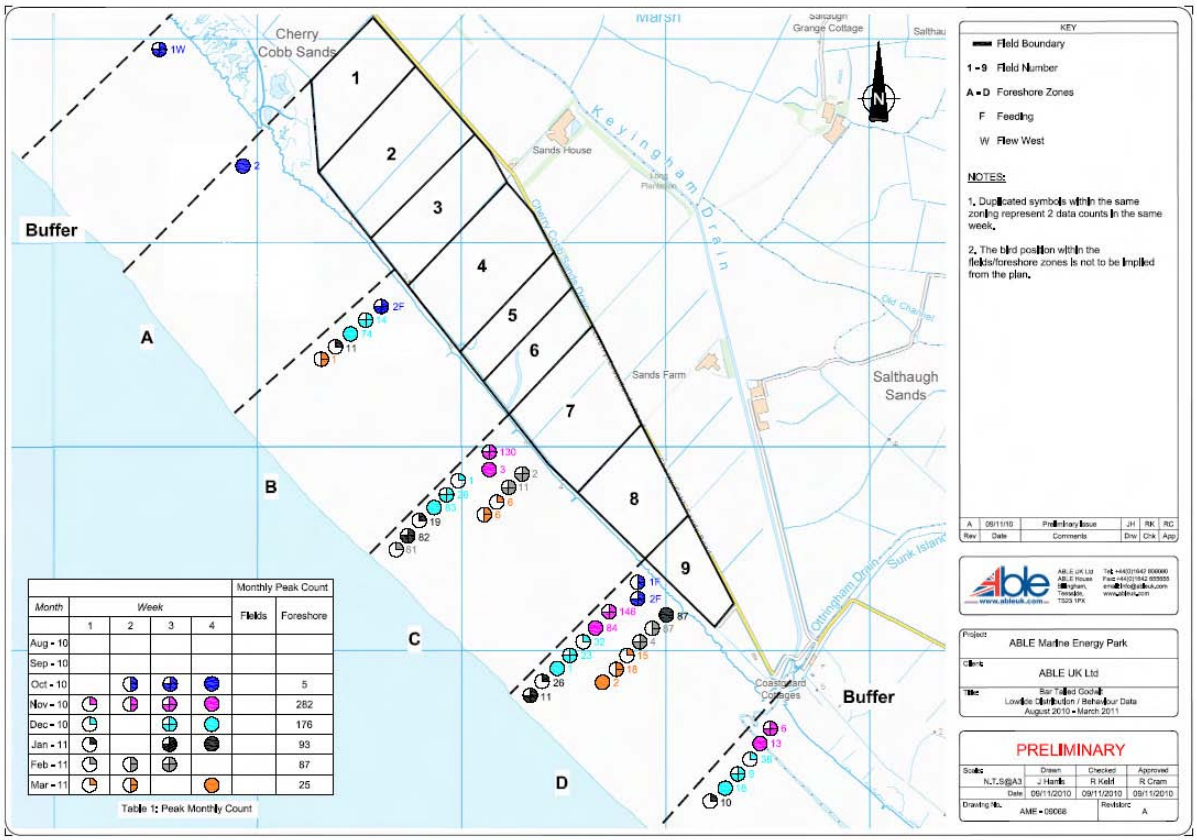


Figure 40: Bar-tailed Godwit Low Tide Counts

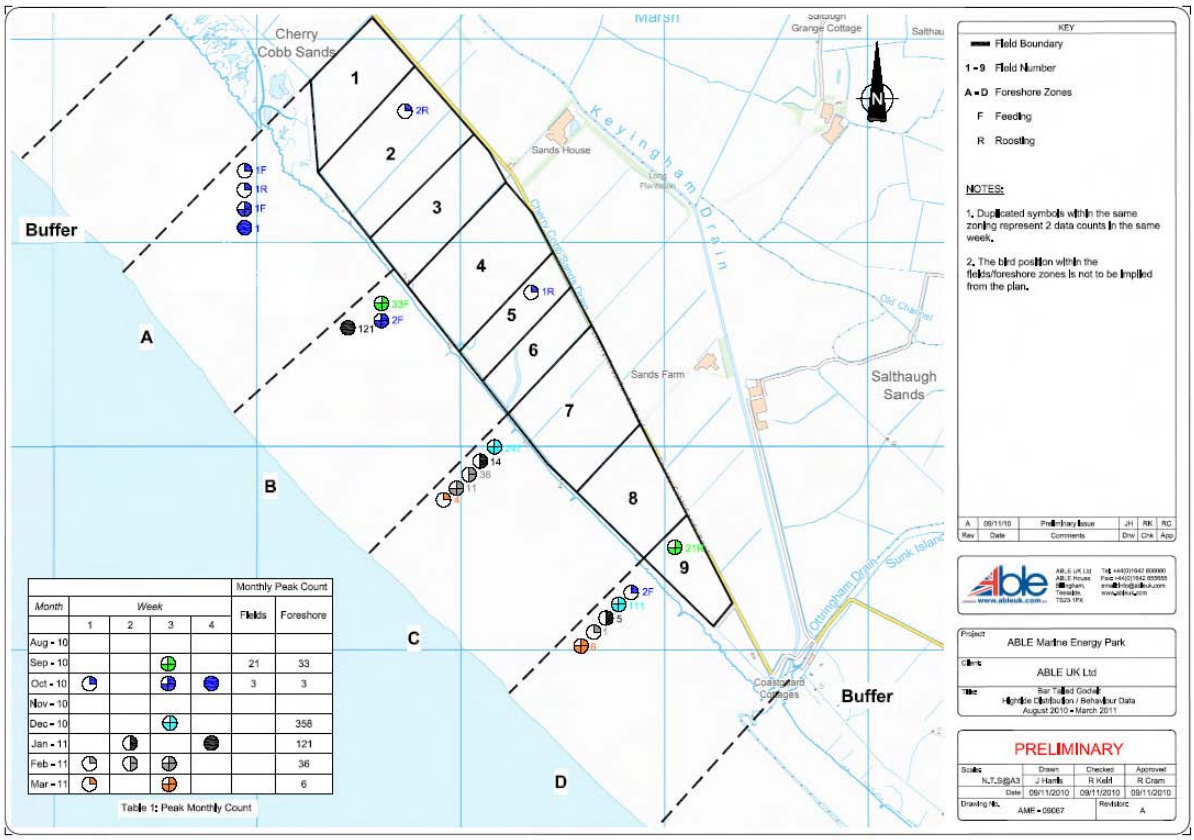


Figure 41: Bar-tailed Godwit High Tide Counts

3.26 Whimbrel (*Numenius phaeopus*)

3.26.1 PROTECTION & CONSERVATION STATUS

3.26.1.1. The Whimbrel is protected under Schedule 1 Part 1 of the Wildlife Countryside Act (1981). It is listed in Annex II of the Wild Birds Directive, Appendix II of the Bonn Convention, Appendix III of the Bern Convention. This species is also a Red List Species of Conservation Concern (UK).

3.26.2 BACKGROUND INFORMATION

3.26.2.1. In the UK, the Whimbrel only breeds in north Scotland. It is a passage migrant to other areas in spring and autumn on its way from and to its wintering areas south of the Mediterranean, chiefly along the coasts of Africa. The species only occurs in passage on the Humber Estuary. The autumn passage period is very prominent with the peak migration occurring in late July (Allen *et al.*, 2003).

3.26.3 FINDINGS

3.26.3.1. A peak count of six birds in August reflected a small passage of migratory birds through the site (Figure 42). As expected, the species was absent for the rest of the autumn and winter period.

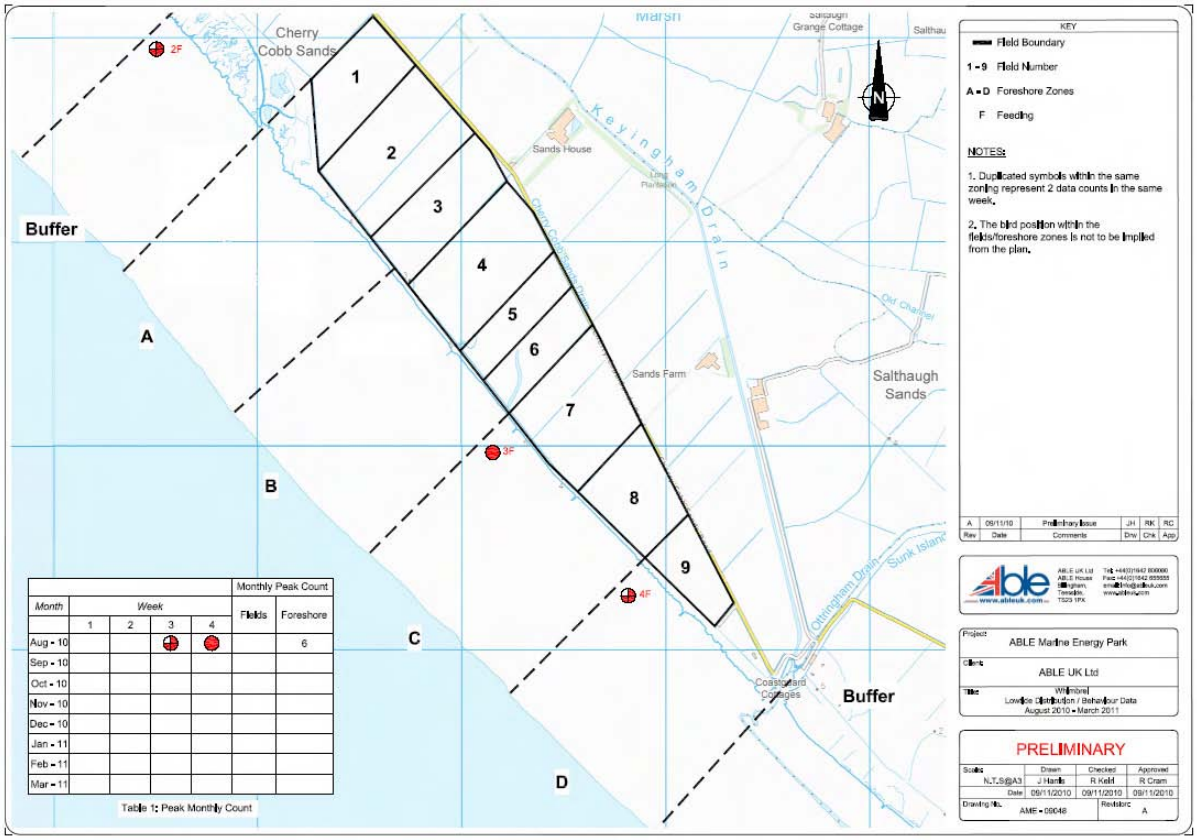


Figure 42: Whimbrel Low Tide Counts

3.27 Curlew (*Numenius arquata*)

3.27.1 PROTECTION & CONSERVATION STATUS

3.27.1.1. The Curlew is listed on Annex II of the Wild Birds Directive, Appendix III of the Bern Convention and Appendix II of the Bonn Convention. It is also listed in the African-Eurasian Waterbird Agreement. This species is also an Amber List Species of Conservation Concern (UK).

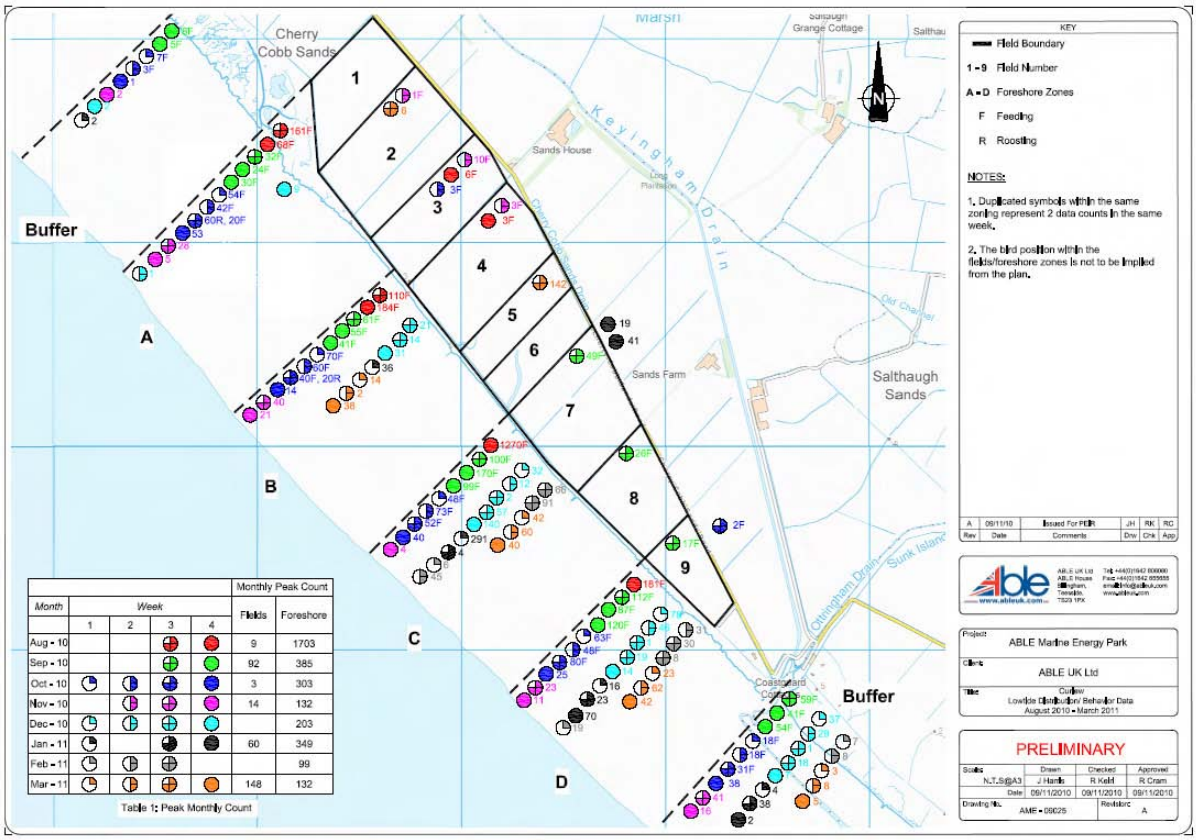
3.27.2 BACKGROUND INFORMATION

3.27.2.1. Curlew features a widespread distribution over the Humber area during the autumn and winter period, with large flocks feeding on the intertidal habitats. However, they are also widely found in inland fields, feeding on adjacent arable and pasture land around the estuary, as well as further inland in some areas.

3.27.3 FINDINGS

3.27.3.1. The Curlew was the most frequently recorded wading bird in the 'Compensation Site'. The greatest utilisation of the fields occurred around the high water period (**Figure 43** and **Figure 44**). At this state of the tide, the level of usage in the 'Compensation Site' was comparable or even higher in some instances to that of the fronting intertidal area e.g. September, October and November counts. This is thought to reflect the tidal height with the birds being push on the fields on the highest tides (intermediate to spring tides) whilst on lower tide (neap to intermediate tides) Curlew tend to roost or loaf on the intertidal area fronting the 'Compensation Site', hence the disparity in numbers between counts at high water on both the intertidal area and the 'Compensation Site'.

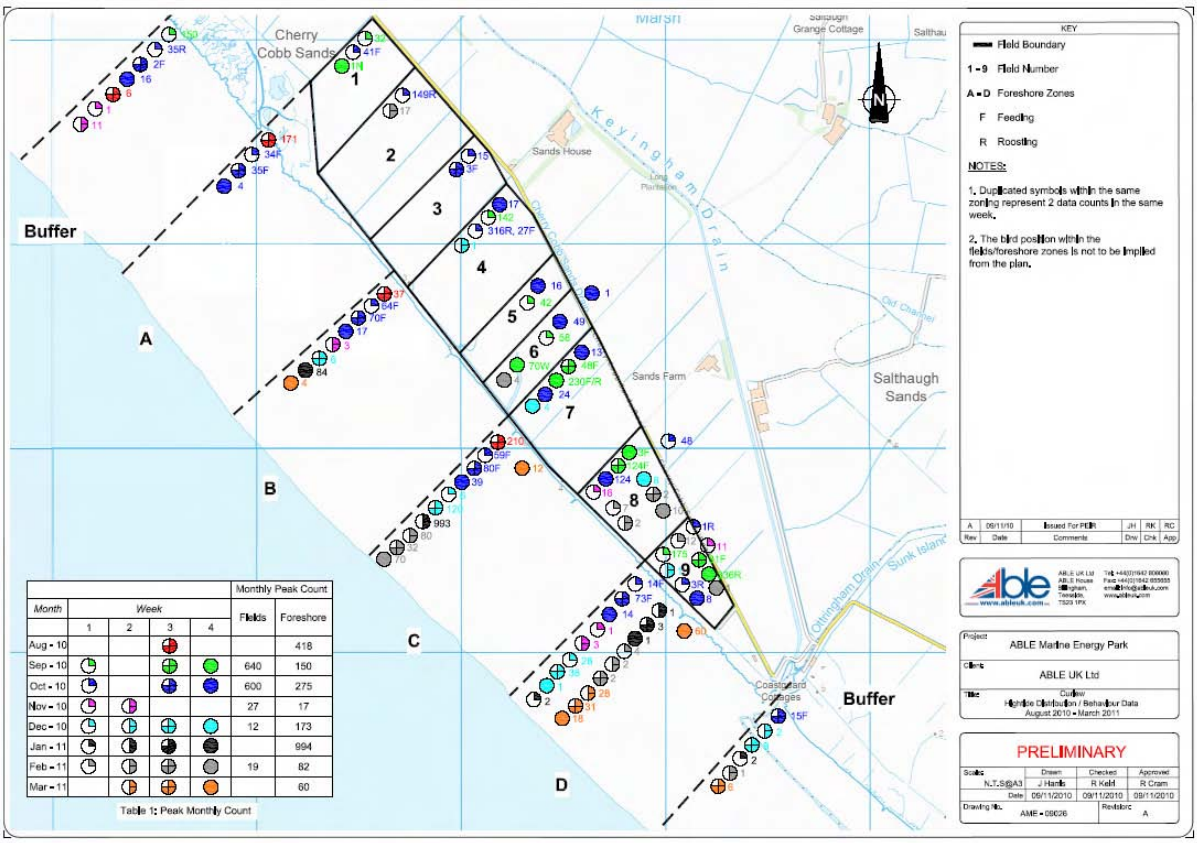
3.27.3.2. At low tide, the intertidal area supported a large population when put into context of the Humber population. In fact, the peak count of 1,703 birds in August represented 40% of the Humber population (based on latest five-year mean from the WeBS counts) and exceeded the level of national importance (1,500 birds). Small flocks were also seen regularly feeding in the 'Compensation Site' but usage appeared to be variable between low water counts.



Month	Week 1	2	3	4	Monthly Peak Count Fields	Foreshore
Aug - 10					9	1703
Sep - 10					92	385
Oct - 10					3	303
Nov - 10					14	132
Dec - 10						203
Jan - 11					60	349
Feb - 11						99
Mar - 11					148	132

Table 1: Peak Monthly Count

Figure 43: Curlew Low Tide Counts



Month	Week 1	2	3	4	Monthly Peak Count Fields	Foreshore
Aug - 10						418
Sep - 10					640	150
Oct - 10					600	275
Nov - 10					27	17
Dec - 10					12	173
Jan - 11						994
Feb - 11					19	82
Mar - 11						60

Table 1: Peak Monthly Count

Figure 44: Curlew High Tide Counts

3.28 Spotted Redshank (*Tringa erythropus*)

3.28.1 PROTECTION & CONSERVATION STATUS

3.28.1.1. The Spotted Redshank is listed on Annex II of the Wild Birds Directive, Appendix III of the Bern Convention and Appendix II of the Bonn Convention. It is also listed in the African-Eurasian Waterbird Agreement. This species is also an Amber List Species of Conservation Concern (UK).

3.28.2 BACKGROUND INFORMATION

3.28.2.1. Spotted Redshank migrate from northern European and northern Siberian breeding areas, to winter in Europe, Africa, China and South-east Asia. They are a relatively scarce wintering species in the UK, with over half the population found at fewer than ten sites. Most birds pass through the UK in September and wintering birds may remain until April and May. The Blacktoft Sands Nature Reserve is a prime site for Spotted Redshank on the Humber.

3.28.3 FINDINGS

3.28.3.1. Unsurprisingly, the species was scare on the intertidal habitats with a peak count of only two birds (

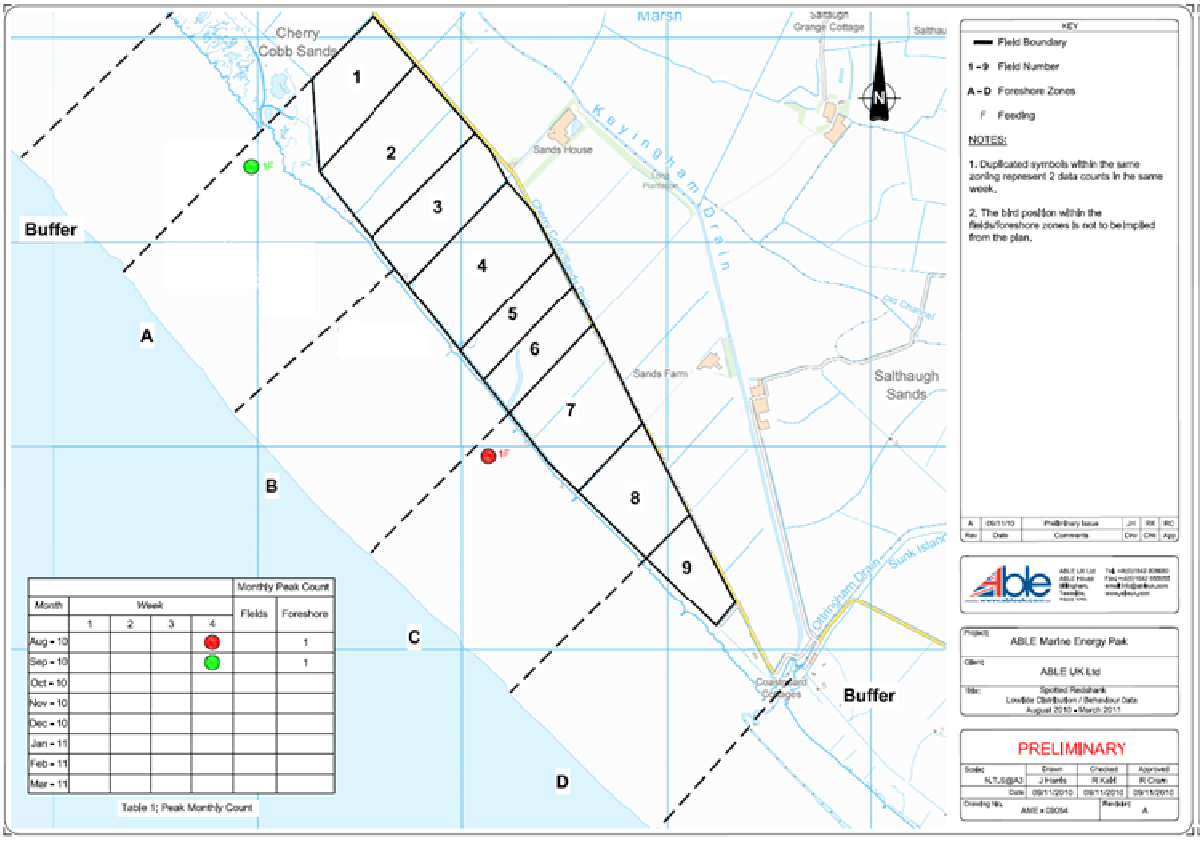
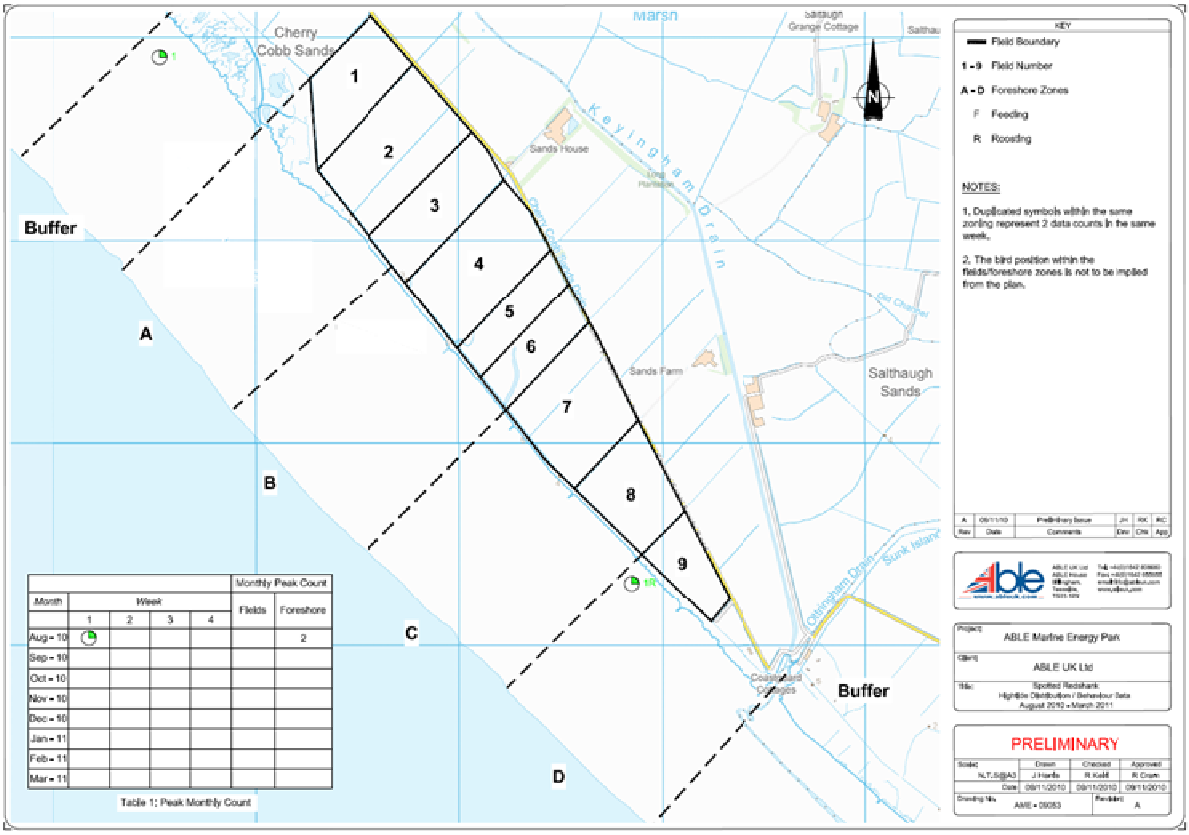


Figure 45 and



Month	Week				Monthly Peak Count	
	1	2	3	4	Fields	Foreshore
Aug - 10						2
Sep - 10						
Oct - 10						
Nov - 10						
Dec - 10						
Jan - 11						
Feb - 11						
Mar - 11						

Table 1: Peak Monthly Count

Figure 46). The sightings were restricted to the August and September counts when the bulk of the migratory birds are expected to pass through the estuary.

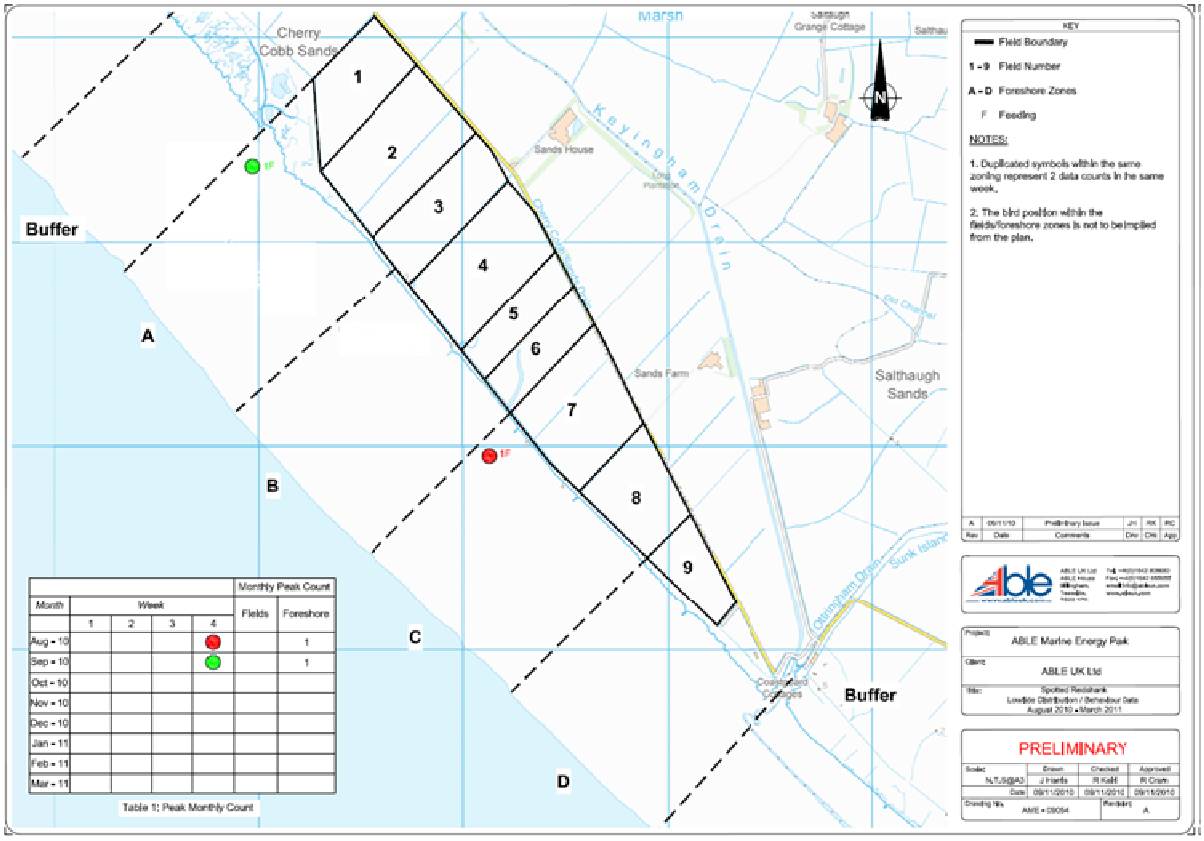


Figure 45: Spotted Redshank Low Tide Counts

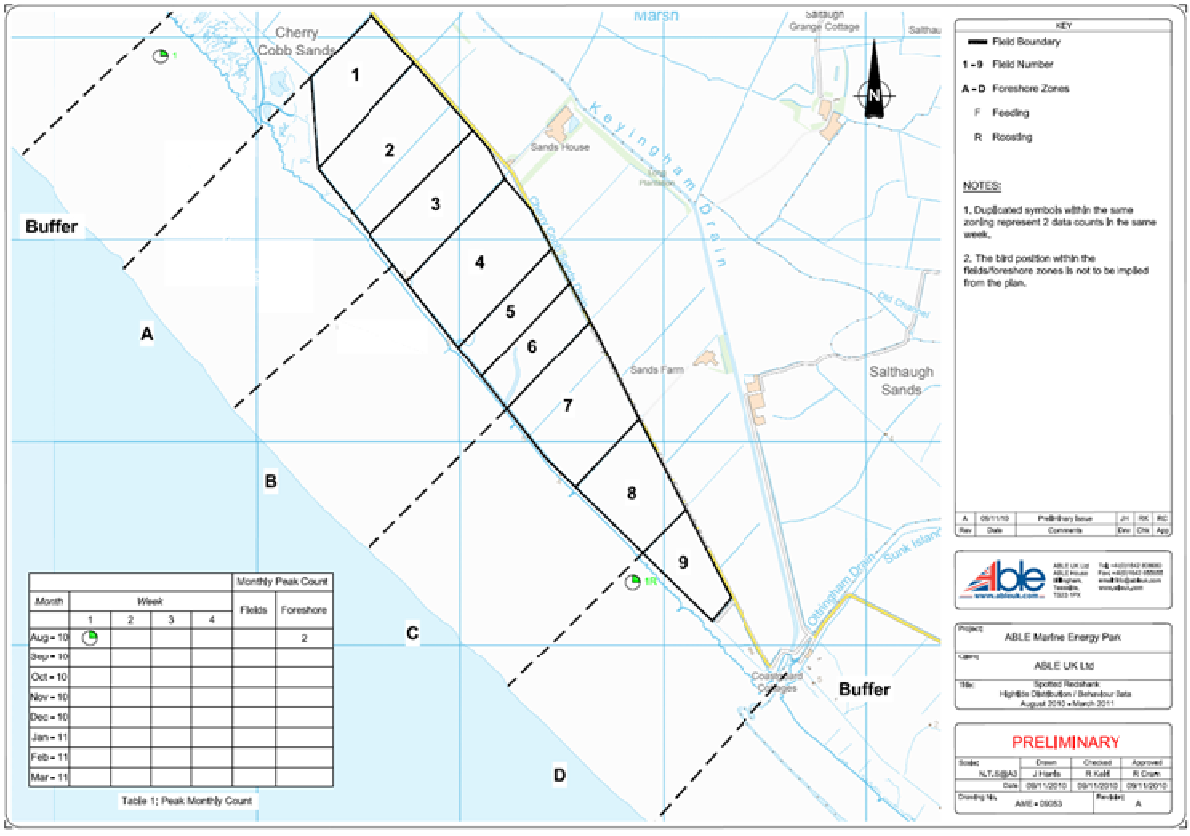


Figure 46: Spotted Redshank High Tide Counts

3.29 Redshank (*Tringa totanus*)

3.29.1 PROTECTION & CONSERVATION STATUS

3.29.1.1. The Redshank is listed in Annex II of the Wild Birds Directive and Appendix III and II of the Bern and Bonn Conventions respectively. The Redshank is also listed in the African-Eurasian Waterbird Agreement. This species is also an Amber List Species of Conservation Concern (UK).

3.29.2 BACKGROUND INFORMATION

3.29.2.1. The Redshank is one of the most widespread species in the Humber Estuary. The species shows a preference for the upper shore of the intertidal habitat, in particularly the creeks network and saltmarsh fringes.

3.29.2.2. The 2003/04 low tide counts found the intertidal areas between Saltend and Spurn to support over 70% of the Redshank present on the Humber in autumn and winter. Most of these birds were found to be foraging on the periphery of the Welwick and Cherry Cobb saltmarsh, where the highest densities of birds were found (Mander & Cutts, 2005).

3.29.2.3. Redshank are very site faithful to their wintering site and relatively sedentary within the estuary, feeding close to their roosting habitats i.e. saltmarsh.

3.29.3 FINDINGS

3.29.3.1. Populations using the intertidal area at both low and high water peaked in early autumn (

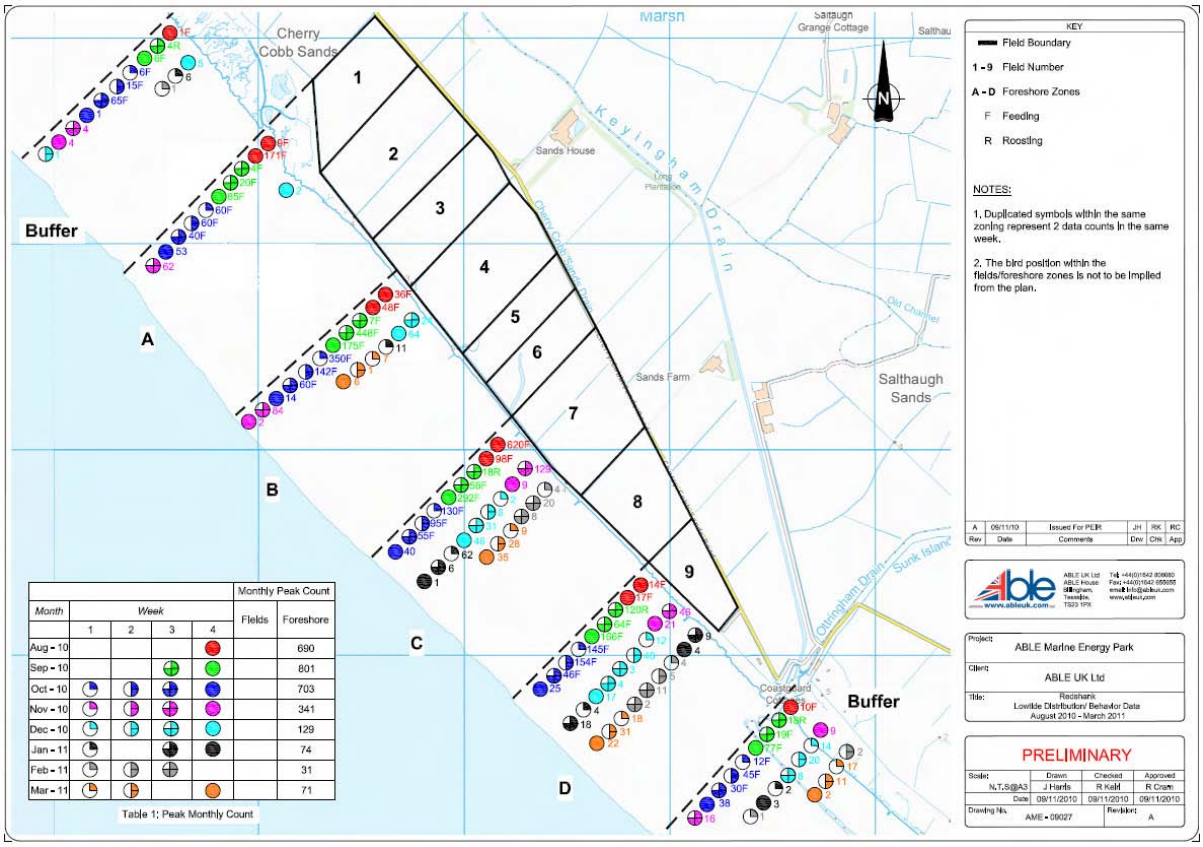


Figure **47** and

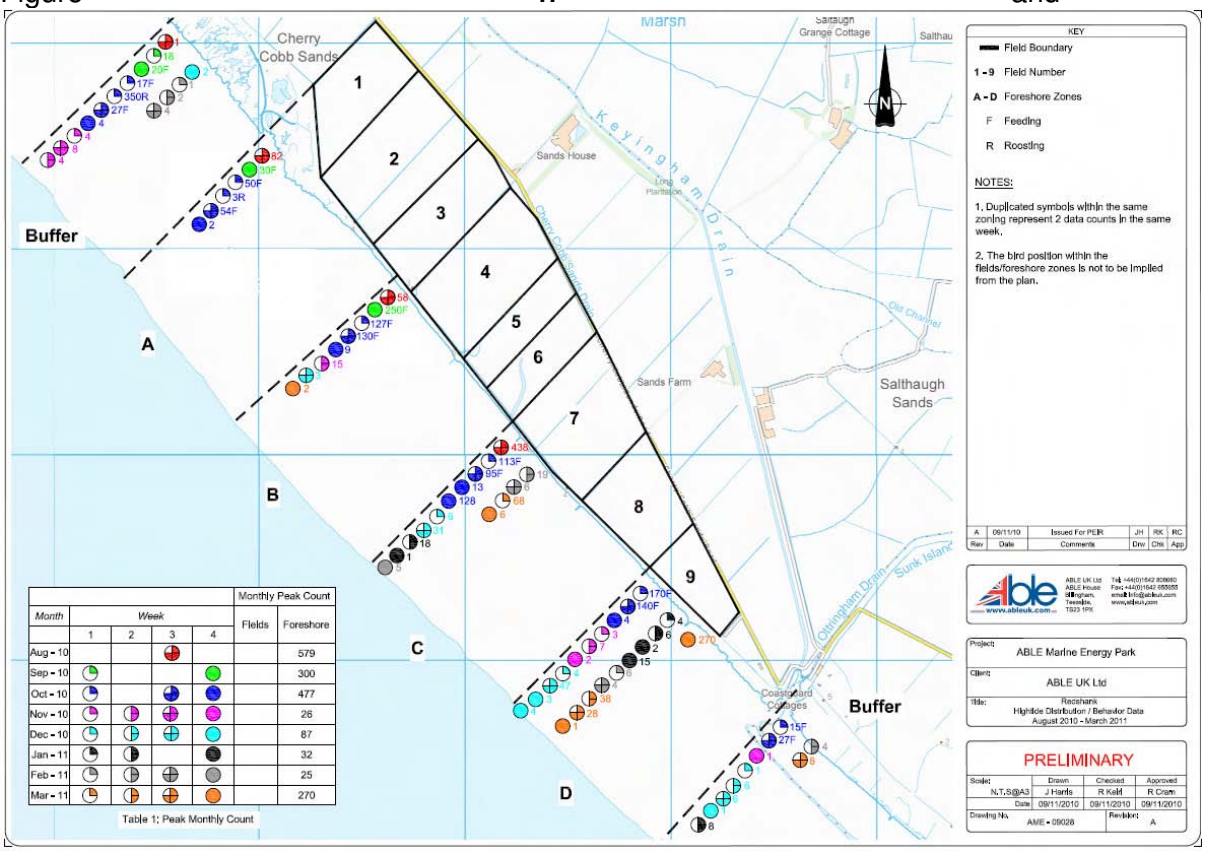


Figure 48). The September survey produced a count of 801 at low water. Thereafter, there was sharp decline into winter possibly caused by the spell of cold weather in November and December**.** Indeed, the species is particularly

susceptible to increased mortality rates during prolonged cold weather periods, with the upper shore tending to more readily freeze than lower shore areas as it is often not covered by tides during neap phases, causing the prey items to move deeper into the sediment out of reach of the species when temperatures are close to freezing (Cramp, 1998).

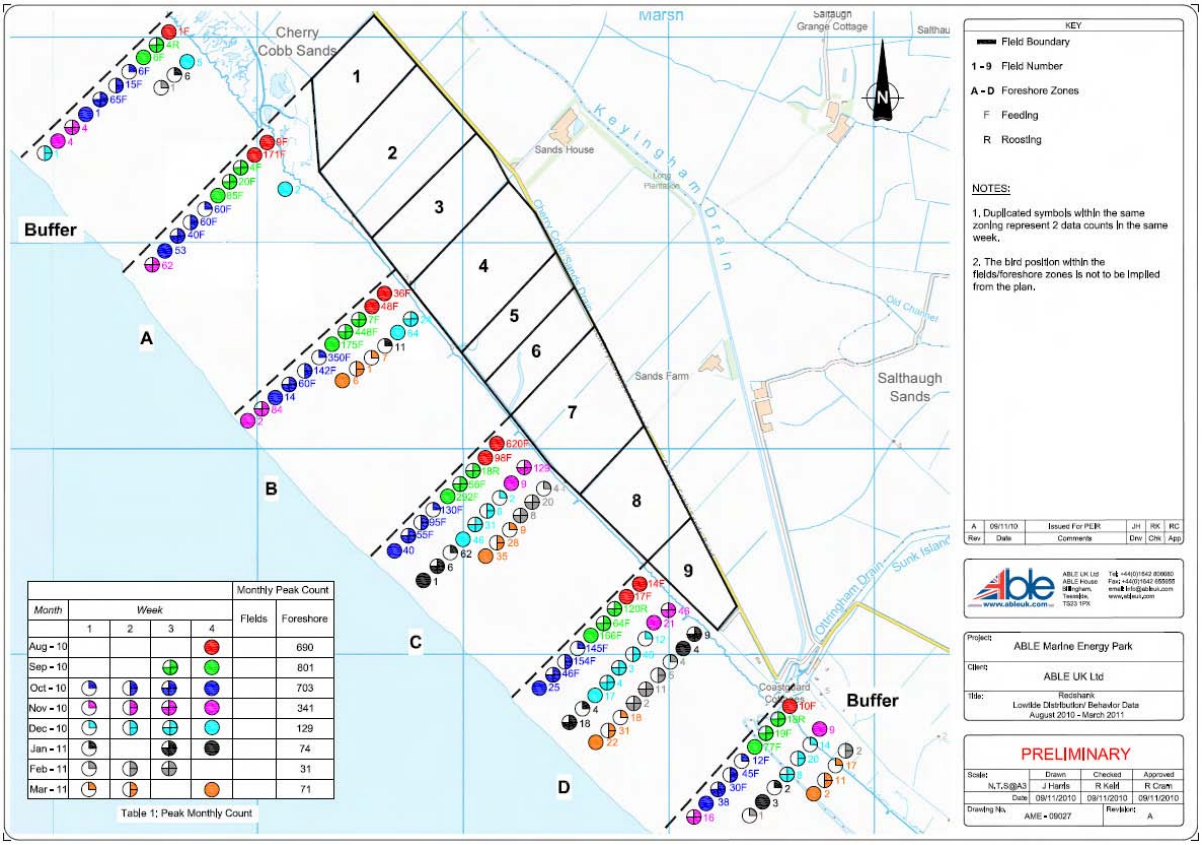
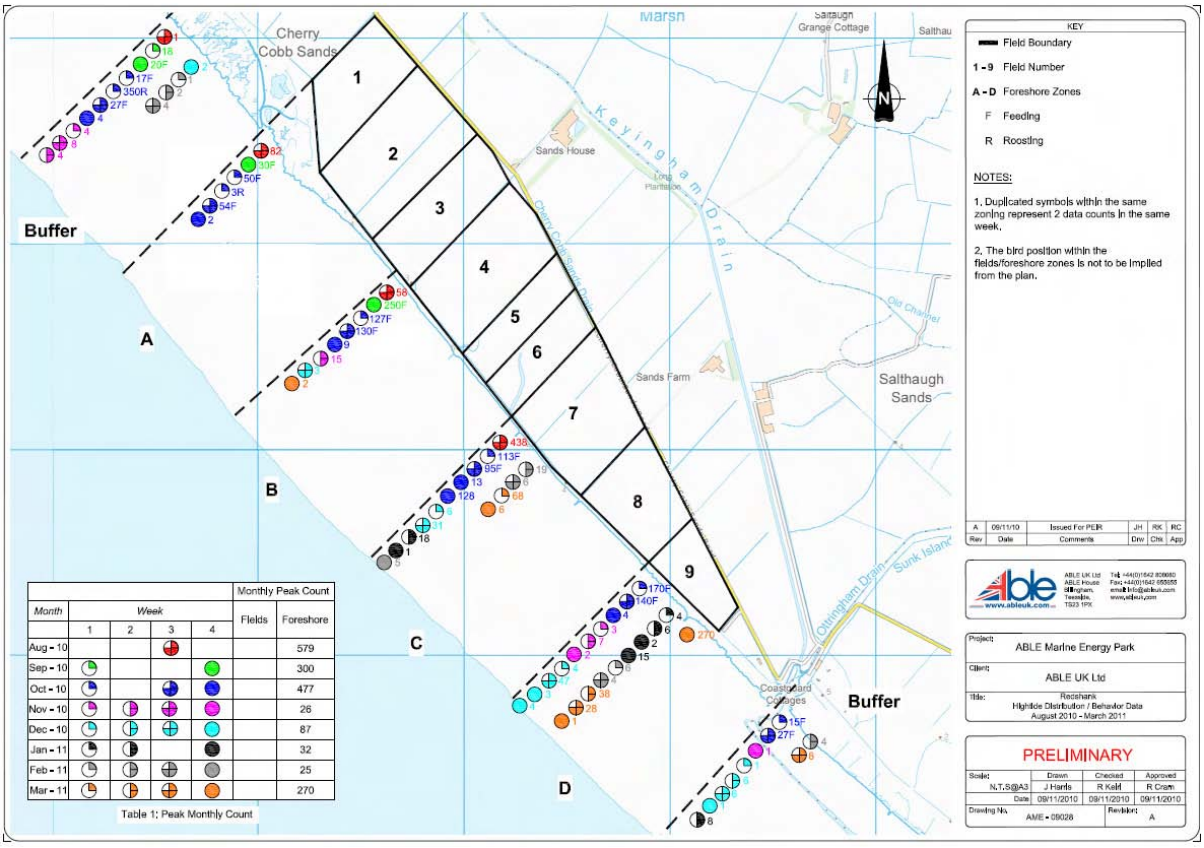


Figure 47: Redshank Low Tide Counts



Month	Week 1	2	3	4	Monthly Peak Count Fields	Foreshore
Aug - 10						579
Sep - 10						300
Oct - 10						477
Nov - 10						26
Dec - 10						87
Jan - 11						32
Feb - 11						25
Mar - 11						270

Table 1: Peak Monthly Count

Figure 48: Redshank High Tide Counts

3.30 Greenshank (*Tringa nebularia*)

3.30.1 PROTECTION & CONSERVATION STATUS

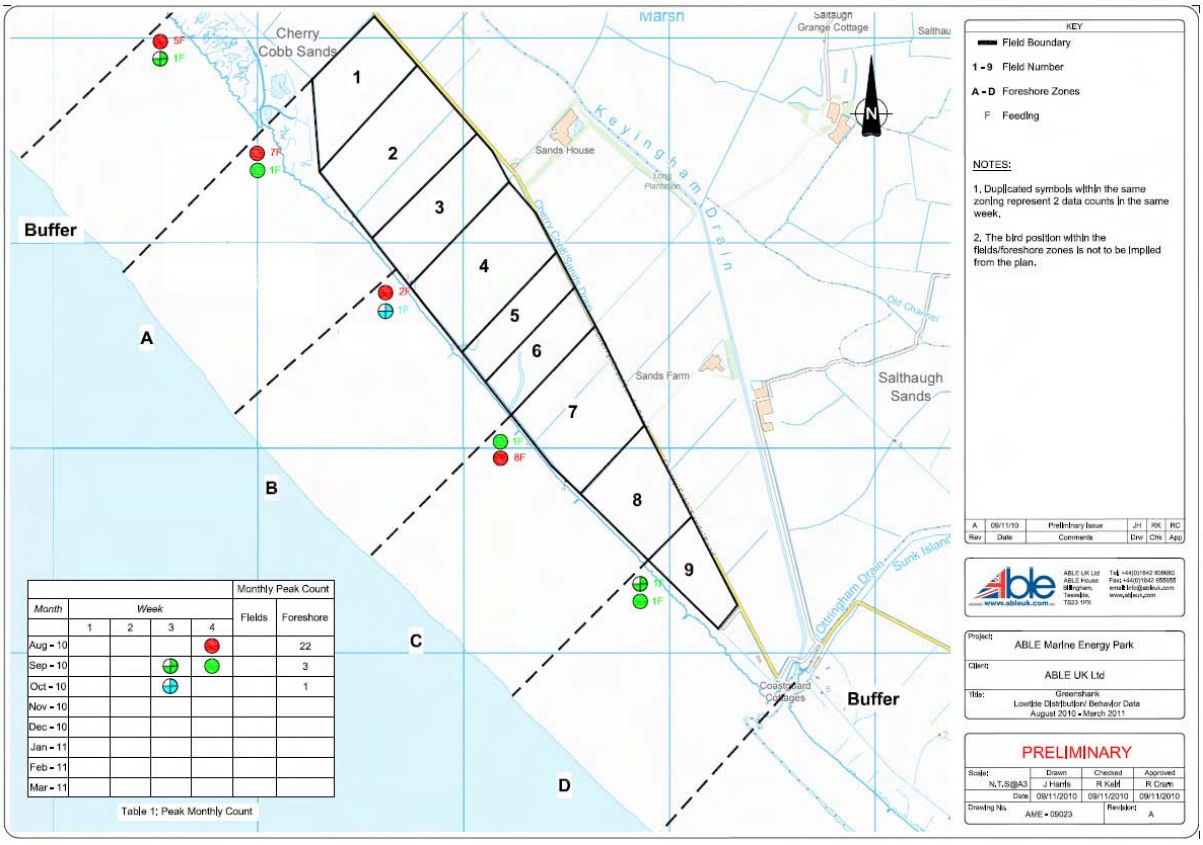
3.30.1.1. The Greenshank is protected under Schedule 1 of the Wildlife and Countryside Act 1981 and included in Annex II of the Wild Birds Directive, Appendix II of the Bonn Convention, and Appendix III of the Bern Convention and is listed in the African-Eurasian Waterbird Agreement.

3.30.2 BACKGROUND INFORMATION

3.30.2.1. In winter it is found on the estuaries of SW England, Wales, W Scotland and N Ireland and in summer it is limited to the north and west of Scotland around boggy moorland and peatland pools. During spring and autumn passage (birds travelling to and from wintering grounds in Africa), the Greenshank can be found across the UK, inland around lakes and freshwater marshes, as well as at coastal wetlands and estuaries, with the largest numbers close to the coast. The species on the Humber Estuary is distributed on the outer estuary with the autumn passage more prominent that spring passage (Mander & Cutts, 2005).

3.30.3 FINDINGS

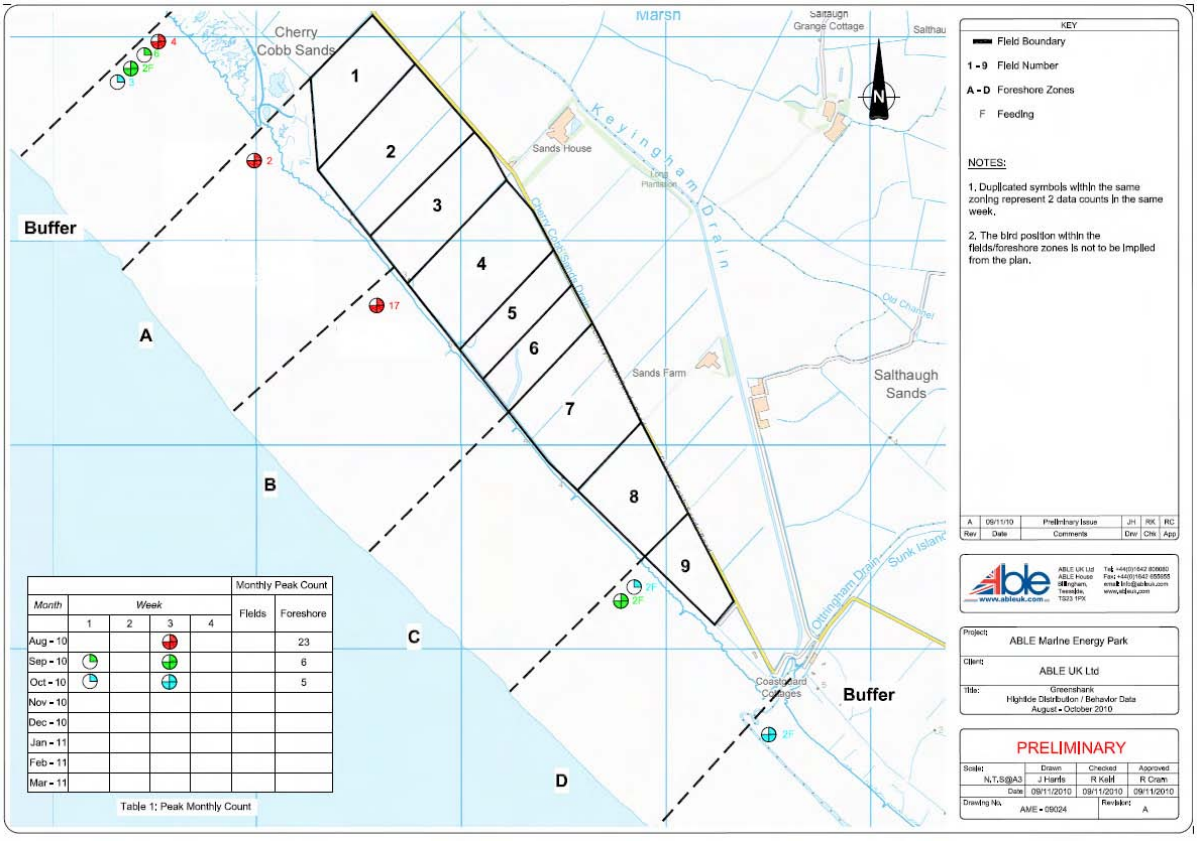
3.30.3.1. The species was present in double figure at low water and high water with respectively 22 and 23 birds in August (



Month	Week 1	2	3	4	Monthly Peak Count Fields	Foreshore
Aug - 10						22
Sep - 10						3
Oct - 10						1
Nov - 10						
Dec - 10						
Jan - 11						
Feb - 11						
Mar - 11						

Table 1: Peak Monthly Count

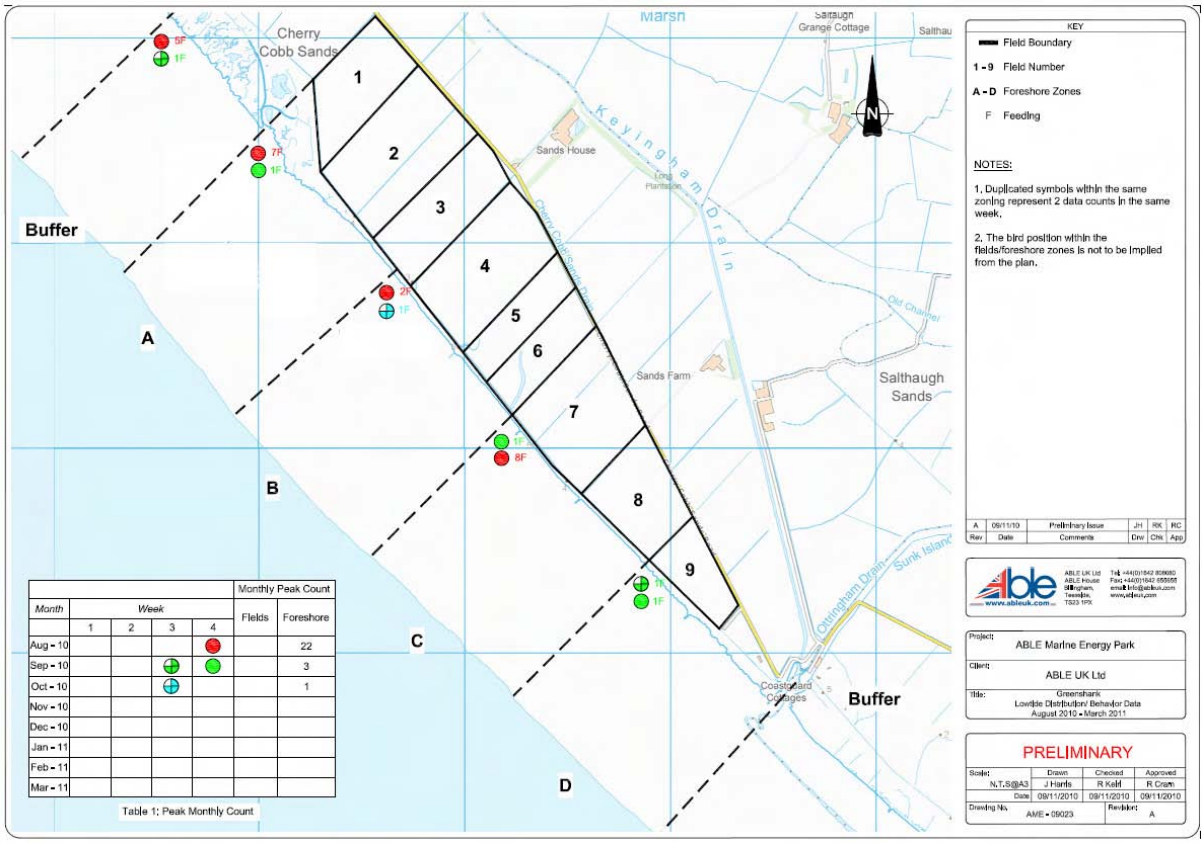
Figure 49



Month	Week 1	2	3	4	Monthly Peak Count Fields	Foreshore
Aug - 10						23
Sep - 10						6
Oct - 10						5
Nov - 10						
Dec - 10						
Jan - 11						
Feb - 11						
Mar - 11						

Table 1: Peak Monthly Count

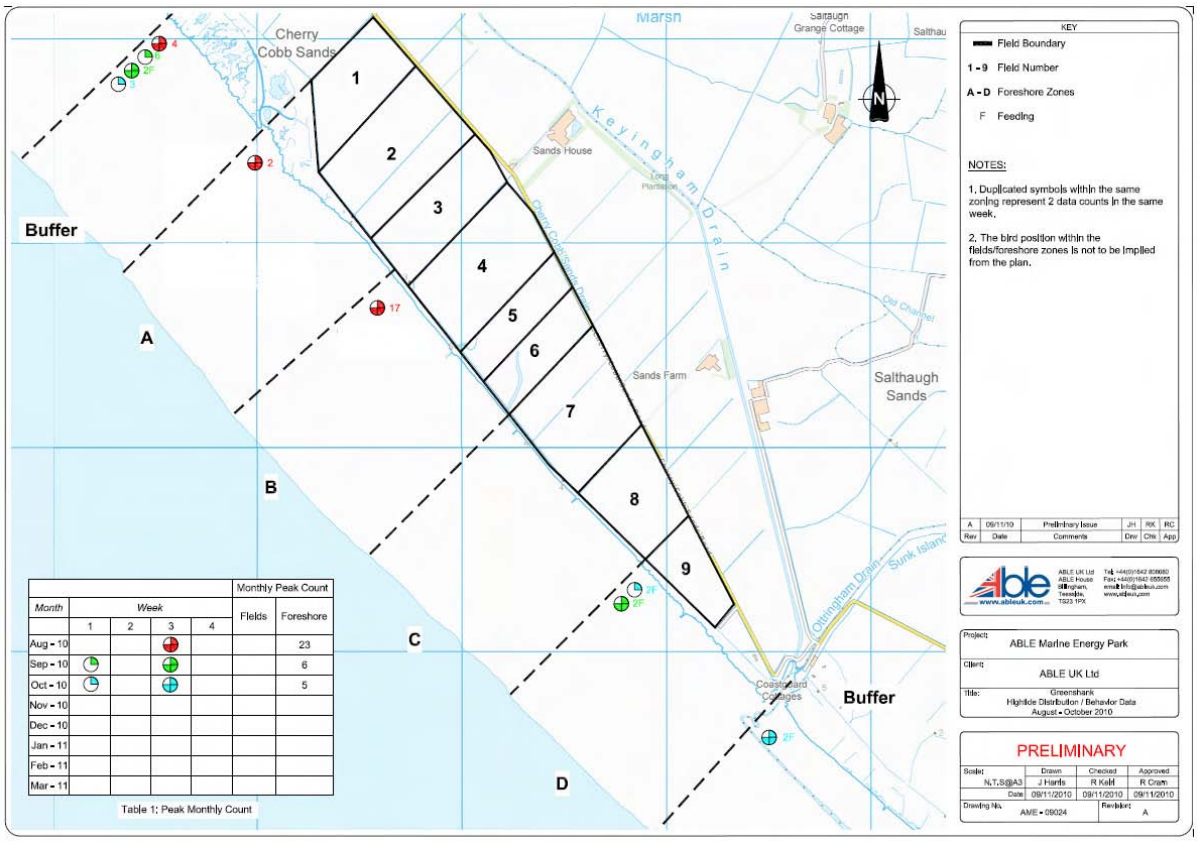
Figure 50). The species was absent from the winter counts.



Month	Week				Monthly Peak Count	
	1	2	3	4	Fields	Foreshore
Aug - 10						22
Sep - 10						3
Oct - 10						1
Nov - 10						
Dec - 10						
Jan - 11						
Feb - 11						
Mar - 11						

Table 1: Peak Monthly Count

Figure 49: Greenshank Low Tide Counts



Month	Week				Monthly Peak Count	
	1	2	3	4	Fields	Foreshore
Aug - 10						23
Sep - 10						6
Oct - 10						5
Nov - 10						
Dec - 10						
Jan - 11						
Feb - 11						
Mar - 11						

Table 1: Peak Monthly Count

Figure 50: Greenshank High Tide Counts

3.31 Green Sandpiper (*Tringa ochropus*)

3.31.1 PROTECTION & CONSERVATION STATUS

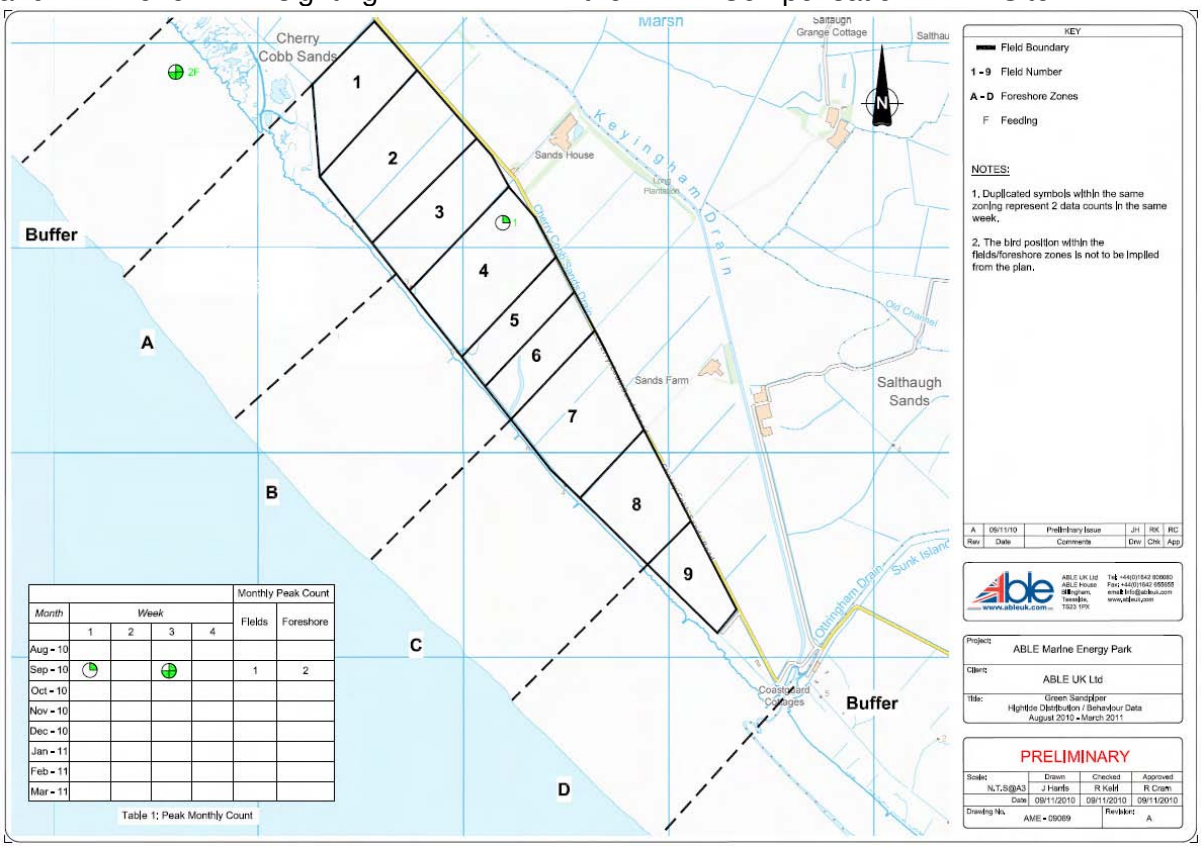
3.31.1.1. The Green Sandpiper is protected under Schedule 1 of the Wildlife and Countryside Act 1981 and included Appendix II of the Bonn Convention, and Appendix III of the Bern Convention and is listed in the African-Eurasian Waterbird Agreement.

3.31.2 BACKGROUND INFORMATION

3.31.2.1. The Green Sandpiper is largely confined to England and Wales. Green Sandpiper tends to shun intertidal habitats but may be occasionally noted in the tidal channels, as well as ditches and lagoons behind the flood embankments.

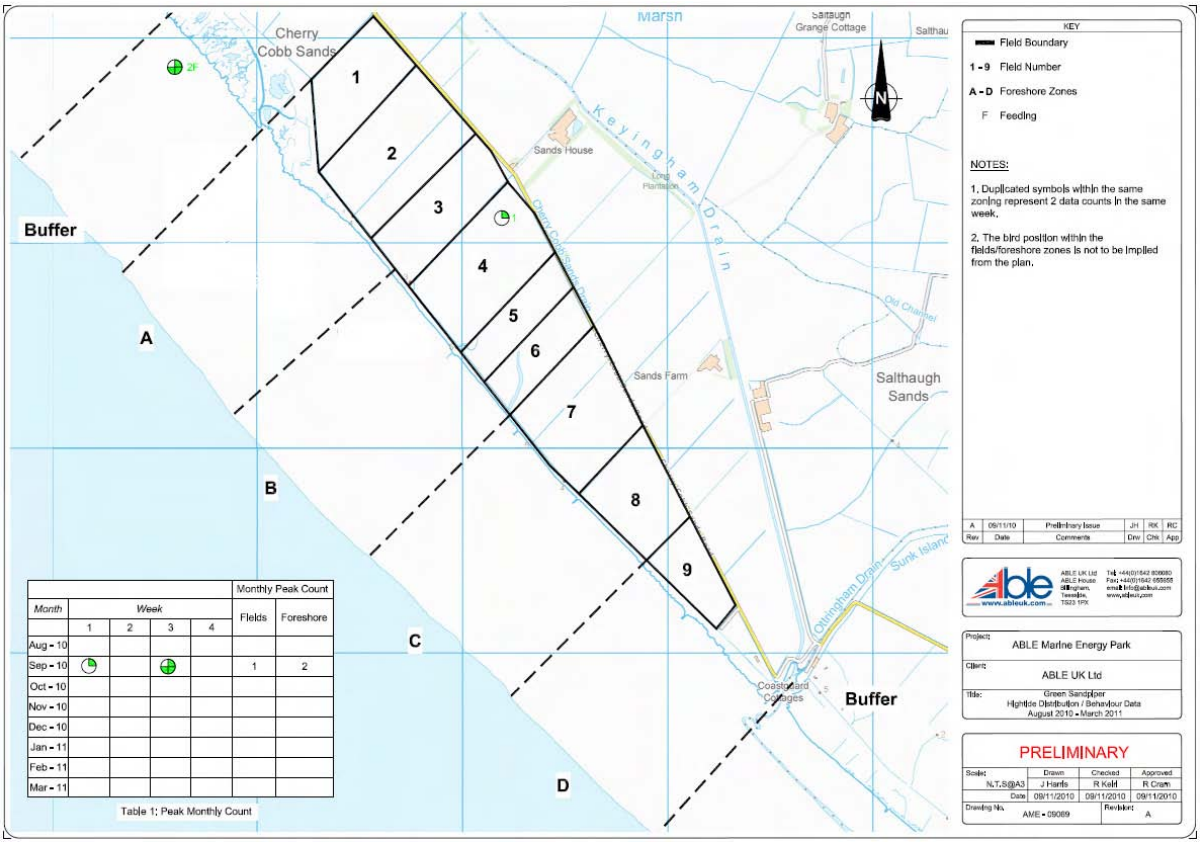
3.31.3 FINDINGS

3.31.3.1. The count in September produced two sightings on the intertidal area and one sighting in the 'Compensation Site' (**Figure 51**).



Month	Week 1	2	3	4	Monthly Peak Count Fields	Foreshore
Aug - 10						
Sep - 10					1	2
Oct - 10						
Nov - 10						
Dec - 10						
Jan - 11						
Feb - 11						
Mar - 11						

Table 1: Peak Monthly Count



Month	Week 1	2	3	4	Monthly Peak Count: Fields	Foreshore
Aug - 10						
Sep - 10					1	2
Oct - 10						
Nov - 10						
Dec - 10						
Jan - 11						
Feb - 11						
Mar - 11						

Table 1: Peak Monthly Count

Figure 51: Green Sandpiper High Tide Counts

3.32 Turnstone (*Arenaria interpres*)

3.32.1 PROTECTION & CONSERVATION STATUS

3.32.1.1. Turnstone is included in Appendix II of the Bonn Convention and Appendix III of the Bern Convention. The species is listed in the African-Eurasian Waterbird Agreement.

3.32.2 BACKGROUND INFORMATION

3.32.2.1. Turnstone distribution on the Humber is characterised by large concentrations at a small number of sites, reflecting the species's habitat requirements for fucoid covered coble and coarse sandy beaches. The autumn and wintering populations are restricted to the middle estuary, many using the Barton to Goxhill Haven section on the south bank and the Hessle to Hull on the north bank to feed, and with smaller numbers occurring between Pyewipe and Northcoates on the outer estuary (Catley, 2000; Allen *et al* 2003, Mander & Cutts, 2005).

3.32.3 FINDINGS

3.32.3.1. A single bird was recorded on the foreshore in October (**Figure 52**).

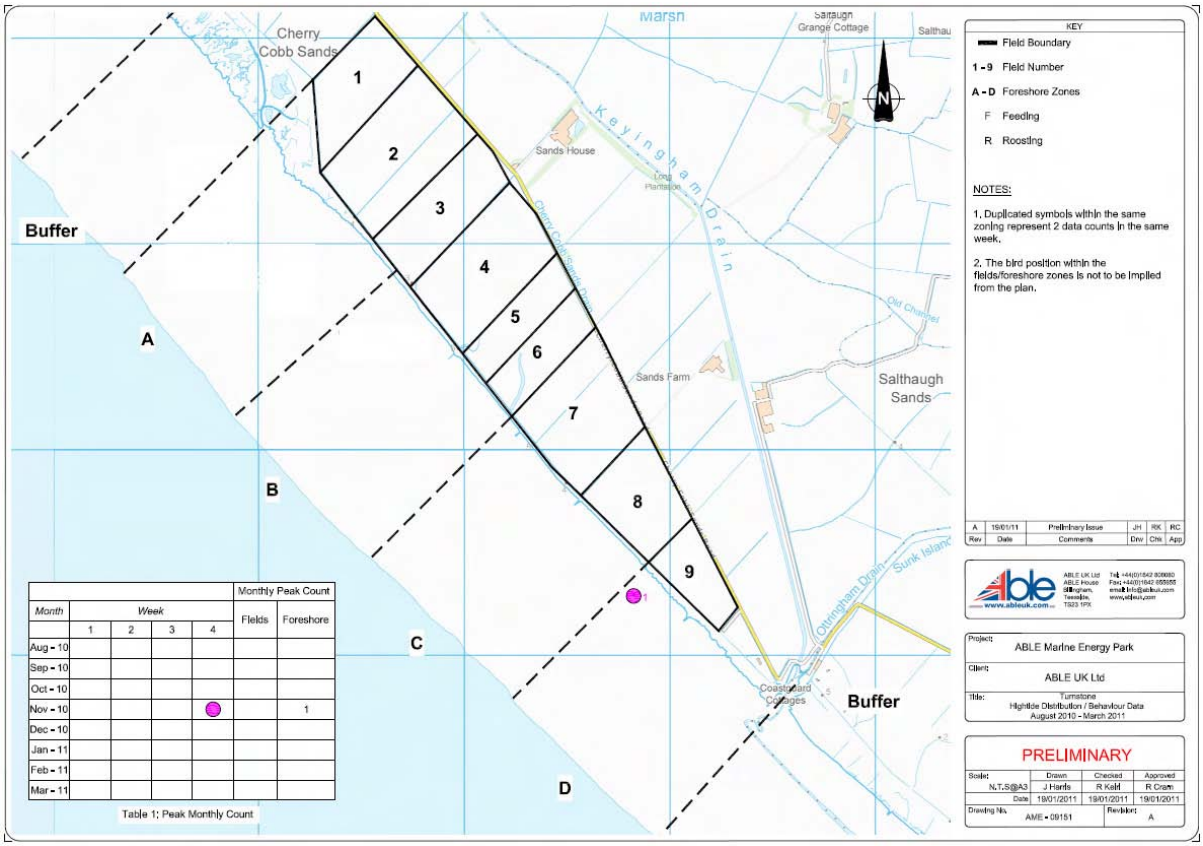


Figure 52: Turnstone Low Tide Counts

3.33 Knot (*Calidris canuta*)

3.33.1 PROTECTION & CONSERVATION STATUS

3.33.1.1. Knot is included in Annex II of the Wild Birds Directive, Appendix II of the Bonn Convention, and Appendix III of the Bern Convention and is listed in the African-Eurasian Waterbird Agreement. This species is also an Amber List Species of Conservation Concern (UK).

3.33.2 BACKGROUND INFORMATION

3.33.2.1. Knot distribution tends to be concentrated in the outer estuary, although small flocks can move further into the estuary, generally as far as Saltend.

3.33.3 FINDINGS

3.33.3.1. The count between August 2010 and March 2001 provided evidence of the importance of the intertidal area at low water for foraging Knot. The peak count of 5,180 birds in November around the low water period was in excess of level of national and international importance (

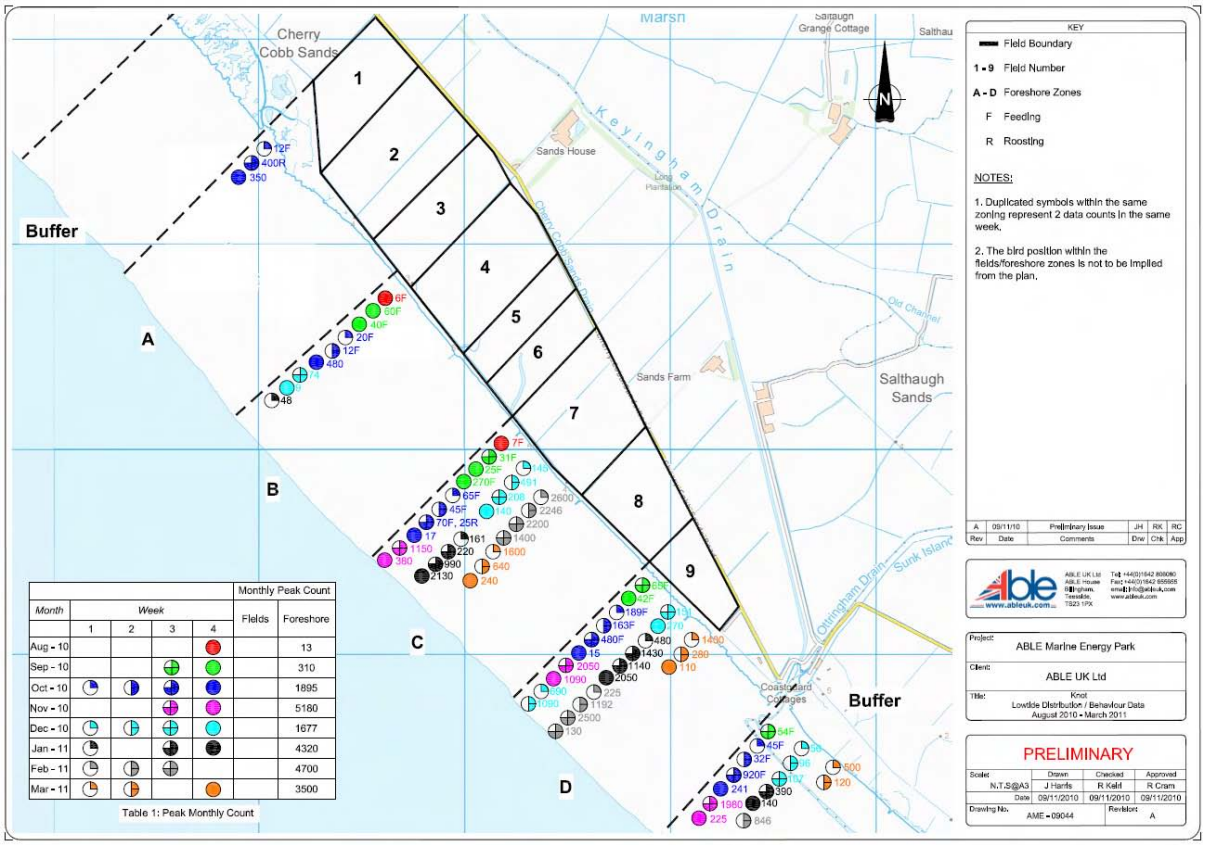
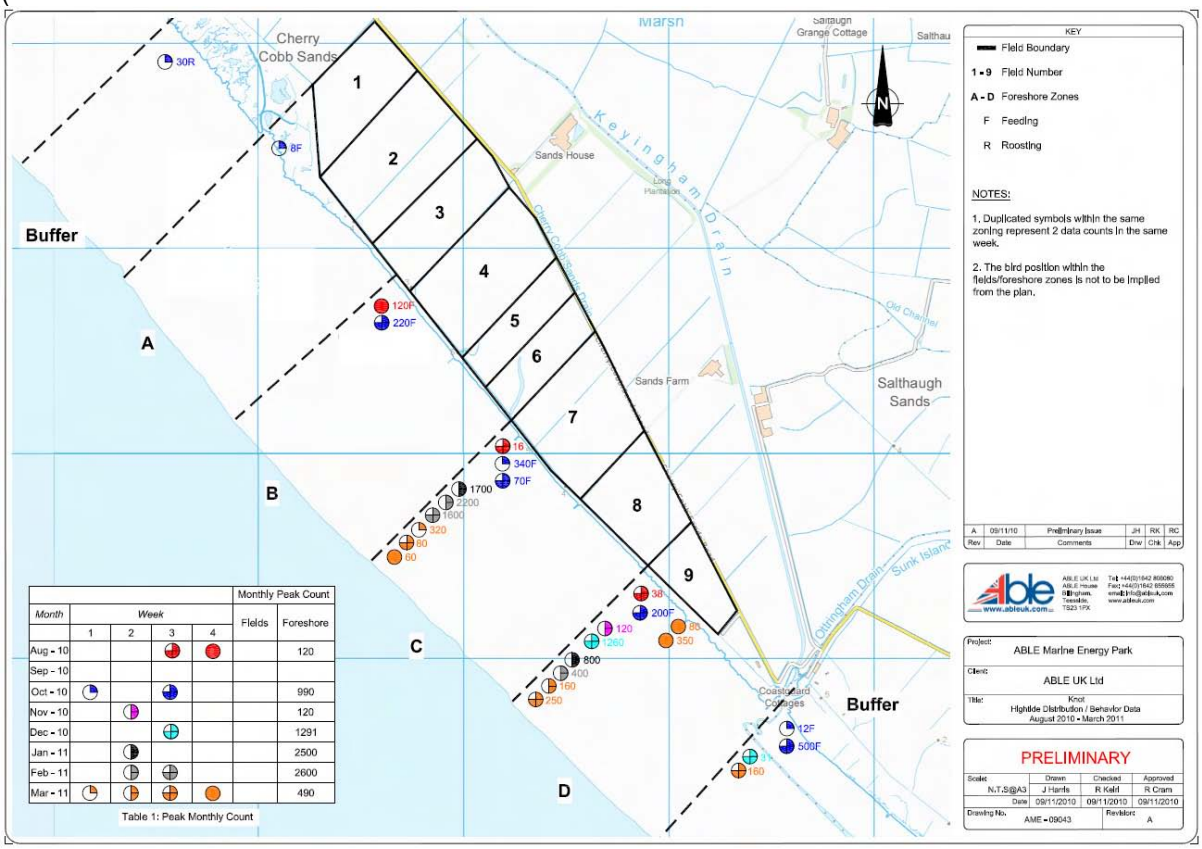


Figure 53). The low water distribution map illustrated the preference for Zones C and D. The colonising saltmarsh which is dominant in Zones A and B might explain the lower numbers of birds in these two zones, Knot preferring areas of mudflats to feed on.

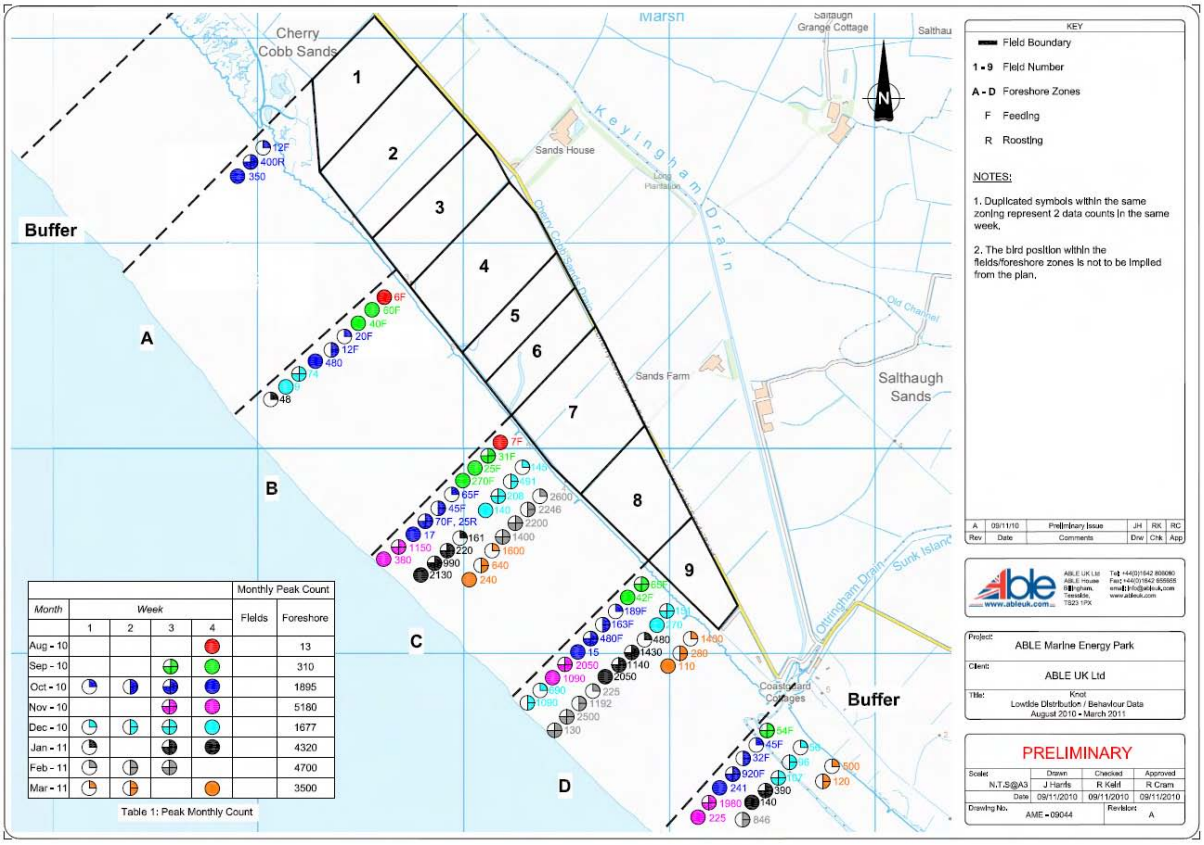
3.33.3.2. The intertidal fronting the Cherry Cobb Saltmarsh (Buffer Zone) and Zone A did not support roosting birds at high water (



Month	Week 1	2	3	4	Monthly Peak Count: Fields	Foreshore
Aug - 10						120
Sep - 10						
Oct - 10						990
Nov - 10						120
Dec - 10						1291
Jan - 11						2500
Feb - 11						2600
Mar - 11						490

Table 1: Peak Monthly Count

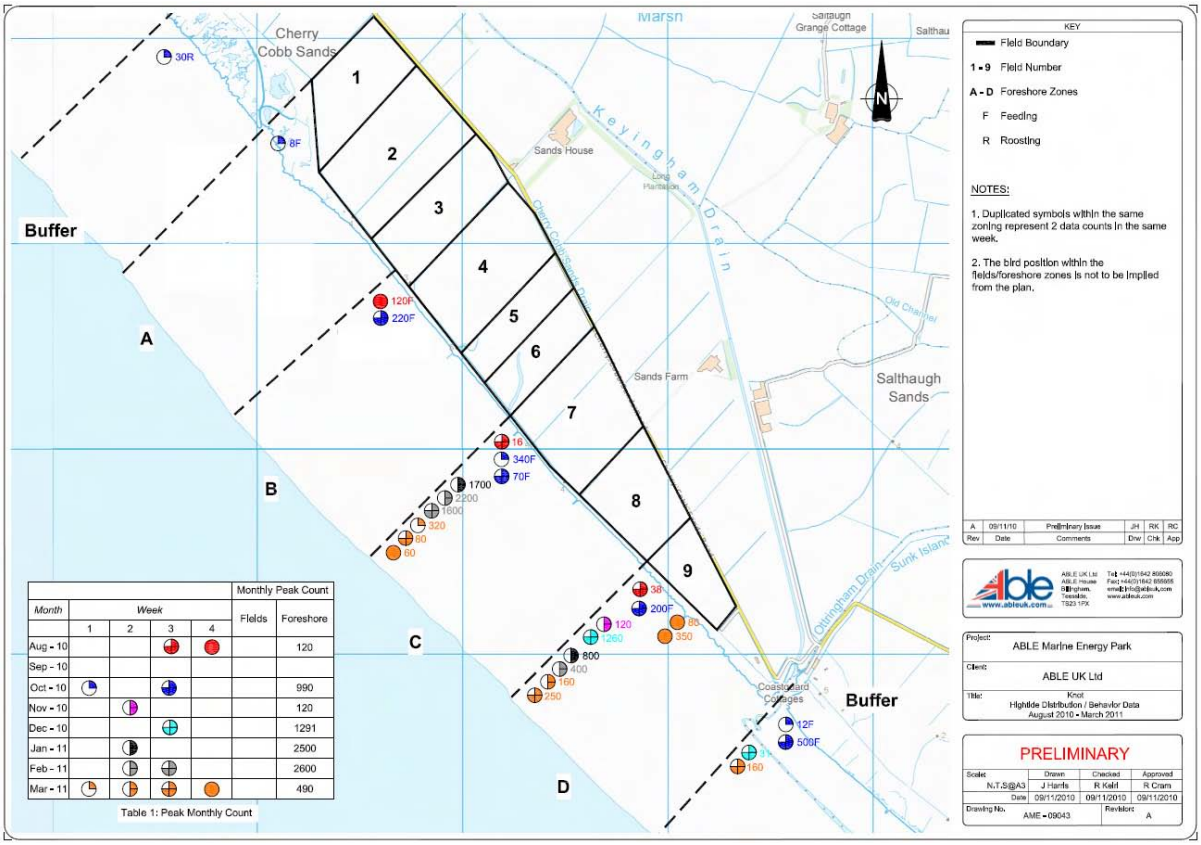
Figure 54). Instead, Zones C and D featured the highest usage at high water, although the numbers were not consistent between weeks possibly because of the influence of the tidal height.



Month	Week 1	2	3	4	Monthly Peak Count Fields	Foreshore
Aug - 10						13
Sep - 10						310
Oct - 10						1895
Nov - 10						5180
Dec - 10						1677
Jan - 11						4320
Feb - 11						4700
Mar - 11						3500

Table 1: Peak Monthly Count

Figure 53: Knot Low Tide Counts



Month	Week 1	2	3	4	Monthly Peak Count Fields	Foreshore
Aug - 10						120
Sep - 10						
Oct - 10						990
Nov - 10						120
Dec - 10						1291
Jan - 11						2500
Feb - 11						2600
Mar - 11						490

Table 1: Peak Monthly Count

Figure 54: Knot High Tide Counts

3.34 Dunlin (*Calidris alpina*)

3.34.1 PROTECTION & CONSERVATION STATUS

3.34.1.1. The Dunlin is listed on Annex I of the Wild Birds Directive, Appendix III of the Bern Convention and Appendix II of the Bonn Convention. It is also listed in the African-Eurasian Waterbird Agreement. This species is also a Red List Species of Conservation Concern (UK).

3.34.2 BACKGROUND INFORMATION

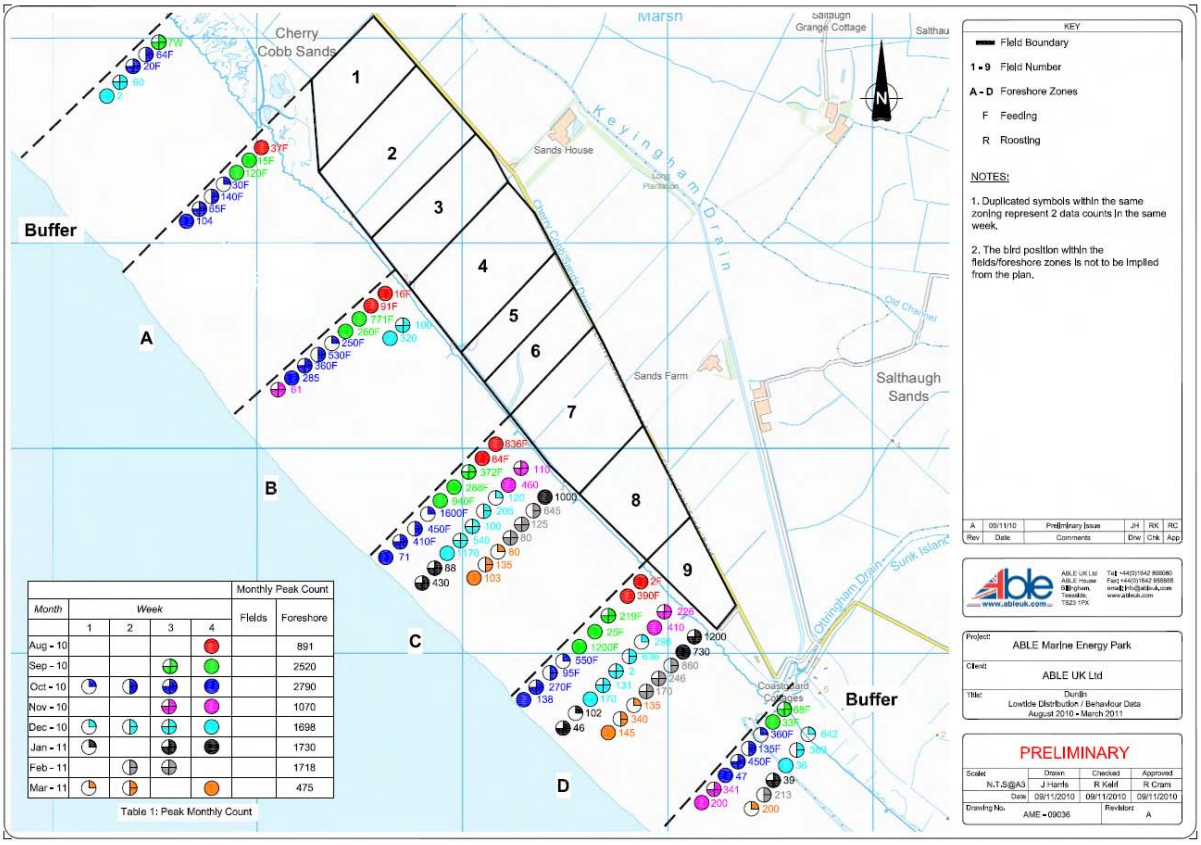
3.34.2.1. The Dunlin is a widespread wader recorded around most intertidal reaches of the Humber at low water. Dunlin are highly site-faithful to their winter roost sites, both within and between years (Wernahm *et al.,* 2002). The 2003/4 programme identified two main concentrations of Dunlin on the estuary during the autumn period; the inner estuary south bank around Read's island, and the middle to outer estuary north bank between Saltend and Spurn Point. The Paull to Stone Creek Section is part of the extensive Saltend to Spurn reach, which supported 90% of the Humber population over the autumn, with the Saltend mudflat, Paull Holme Sands, Foulholme Sands and Spurn Bight of particular importance during the autumn and indeed into the winter (Mander & Cutts, 2005).

3.34.3 FINDINGS

3.34.3.1. The species had a similar distribution to Knot, with both species favouring Zones C and D of the intertidal area. Both species have a very similar feeding behaviour and ecology, and their preference for the more extensive areas of mud featured in Zones C and D is expected (**Figure 55** and **Figure 56**).

3.34.3.2. The highest counts were made in September and October when large number of birds moved through the estuary. The counts of 2,940 birds on the intertidal area at high water represented 14% of the Humber Estuary population (Calbrade *et al.,* 2010).

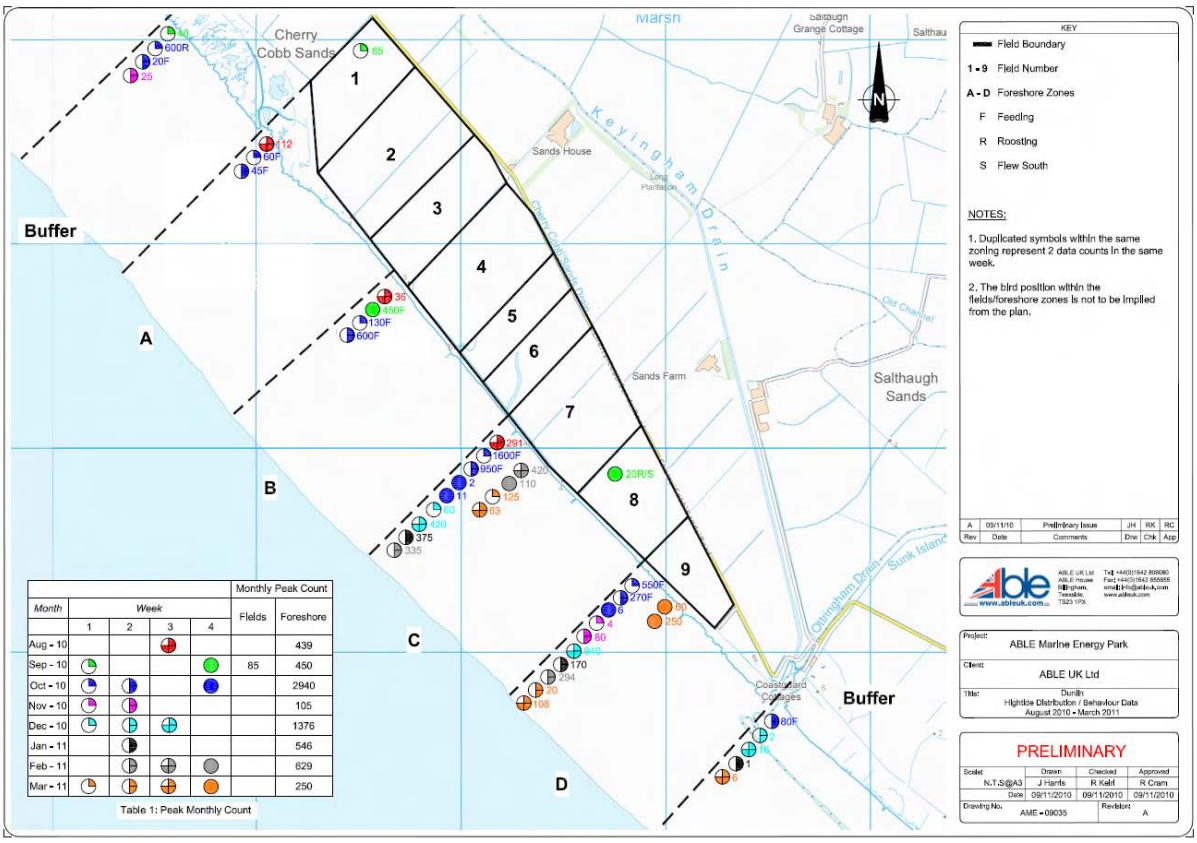
3.34.3.3. The low water counts during the core winter months were stable and indicative of the importance of the intertidal area at low water. Counts at low water oscillated between a minimum of 1,070 birds and a maximum of 1,730 birds. The counts at high water show greater fluctuations probably in response to the tidal height.



Month	Week 1	2	3	4	Monthly Peak Count Fields	Foreshore
Aug - 10						891
Sep - 10						2520
Oct - 10						2790
Nov - 10						1070
Dec - 10						1698
Jan - 11						1730
Feb - 11						1718
Mar - 11						475

Table 1: Peak Monthly Count

Figure 55: Dunlin Low Tide Count



Month	Week 1	2	3	4	Monthly Peak Count Fields	Foreshore
Aug - 10						439
Sep - 10					85	450
Oct - 10						2940
Nov - 10						105
Dec - 10						1376
Jan - 11						546
Feb - 11						629
Mar - 11						250

Table 1: Peak Monthly Count

Figure 56: Dunlin High Tide Count

3.35 Black-headed Gull (*Chroicocephalus ridibundus*)

3.35.1 PROTECTION & CONSERVATION STATUS

3.35.1.1. The Black-headed Gull is protected in the UK by the Wildlife and Countryside Act. Black-headed Gull is listed on Annex II of the Wild Birds. This species is on the UK Amber List of Species of Conservation Concern.

3.35.2 BACKGROUND INFORMATION

3.35.2.1. The Black-headed Gull remains the most abundant species of gull on the Humber. The species is found to occur in highest numbers during the autumn passage whilst the spring period featured the least numbers of birds (Mander and Cutts, 2005). The Humber Estuary no longer meets the nationally important threshold for this species but this is likely due to poor reporting as no full counts have been submitted for 5+ years. Despite this 7,865 were recorded in 2008/9 (Calbrade *et al.*, 2010).

3.35.3 FINDINGS

3.35.3.1. Birds were recorded from August to October but with only a single bird recorded in October (**Figure 57** and **Figure 58**). Numbers peaked in September with 2,350 birds recorded across the fronting intertidal area at low tide.

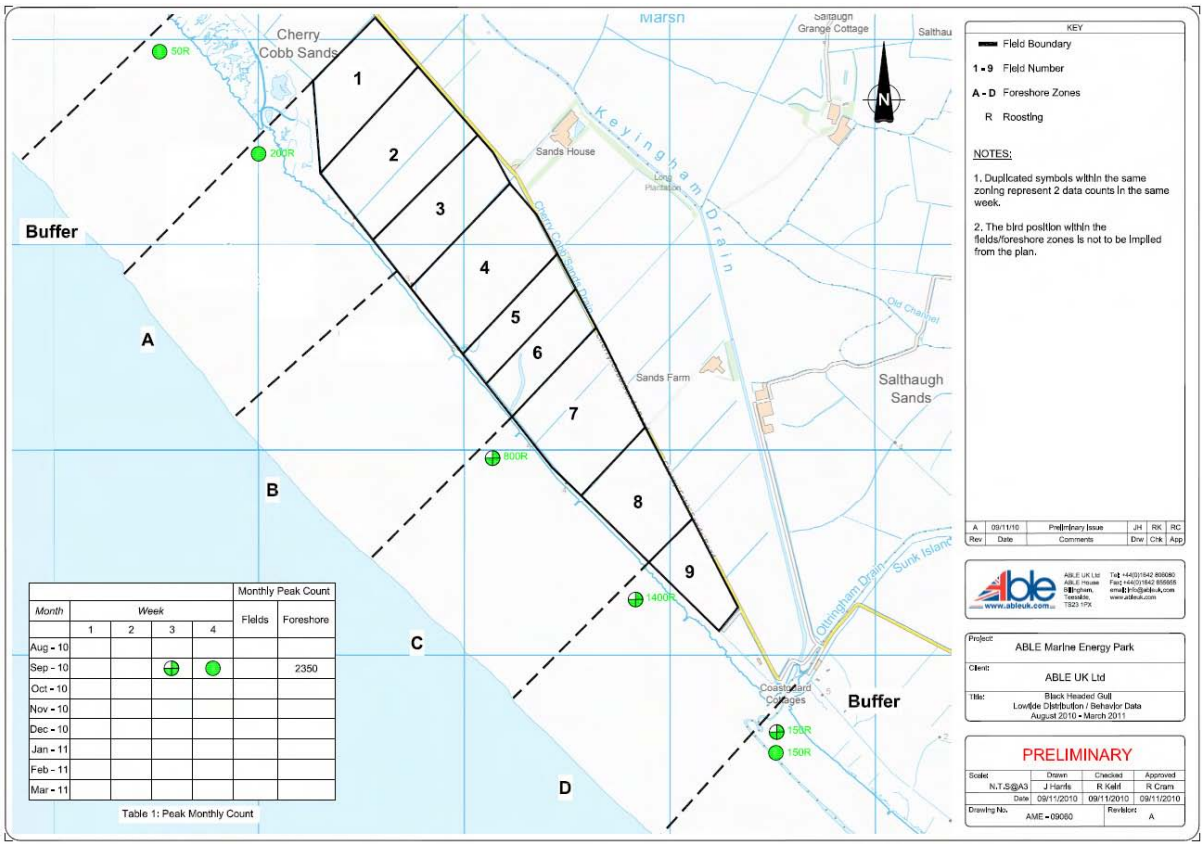
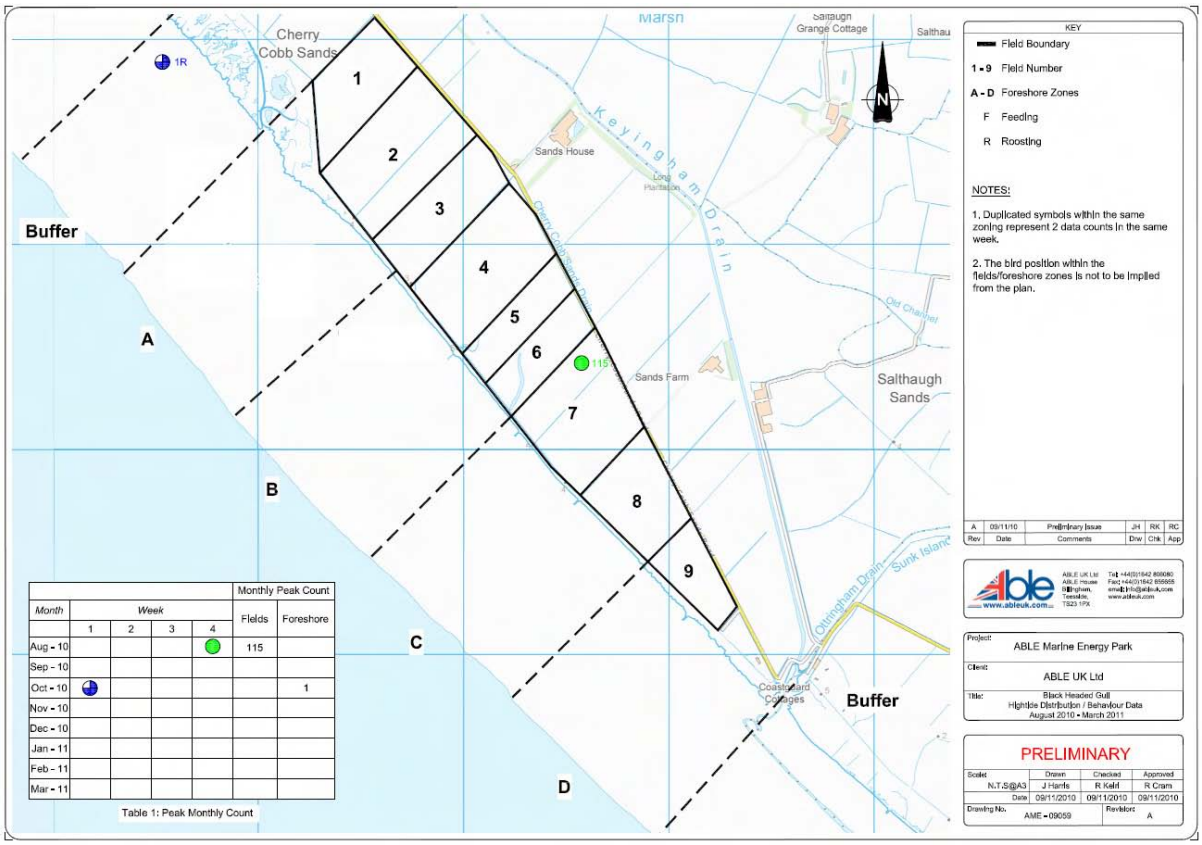


Figure 57: Black-headed Gull Low Tide Counts



Month	Week 1	2	3	4	Monthly Peak Count: Fields	Foreshore
Aug - 10					115	
Sep - 10						
Oct - 10						1
Nov - 10						
Dec - 10						
Jan - 11						
Feb - 11						
Mar - 11						

Figure 58: Black-headed Gull High Tide Counts

3.36 Great Black-backed Gull (*Larus marinus*)

3.36.1 PROTECTION & CONSERVATION STATUS

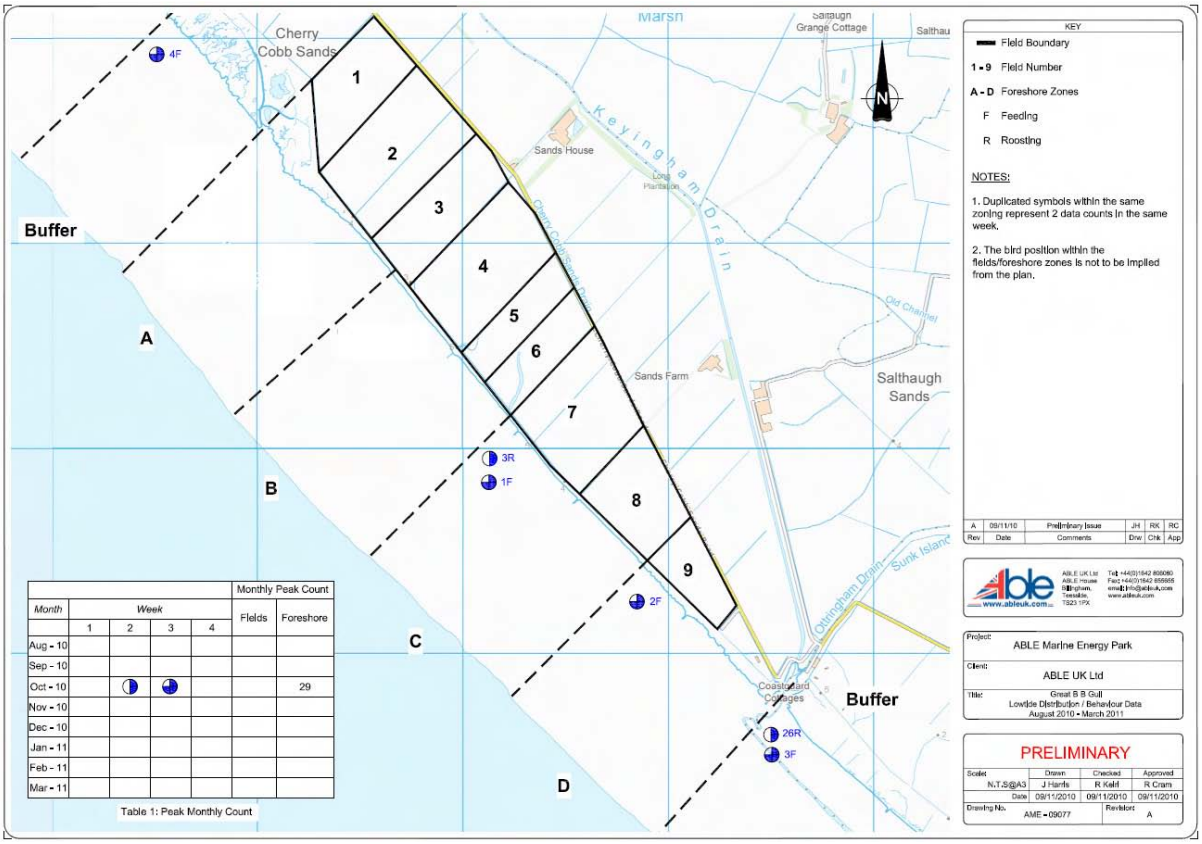
3.36.1.1. The Great Black-backed Gull is protected in the UK by the Wildlife and Countryside Act. Great Black-backed Gull is listed on Annex II of the Wild Birds Directive. This species is on the UK Amber List of Species of Conservation Concern.

3.36.2 BACKGROUND INFORMATION

3.36.2.1. The species is present throughout the year, although over the spring and summer Great Black-backed Gull sightings are less numerous. The latest WeBS report provides a five-year mean of 226 birds on the Humber Estuary (Calbrade *et al.*, 2010).

3.36.3 FINDINGS

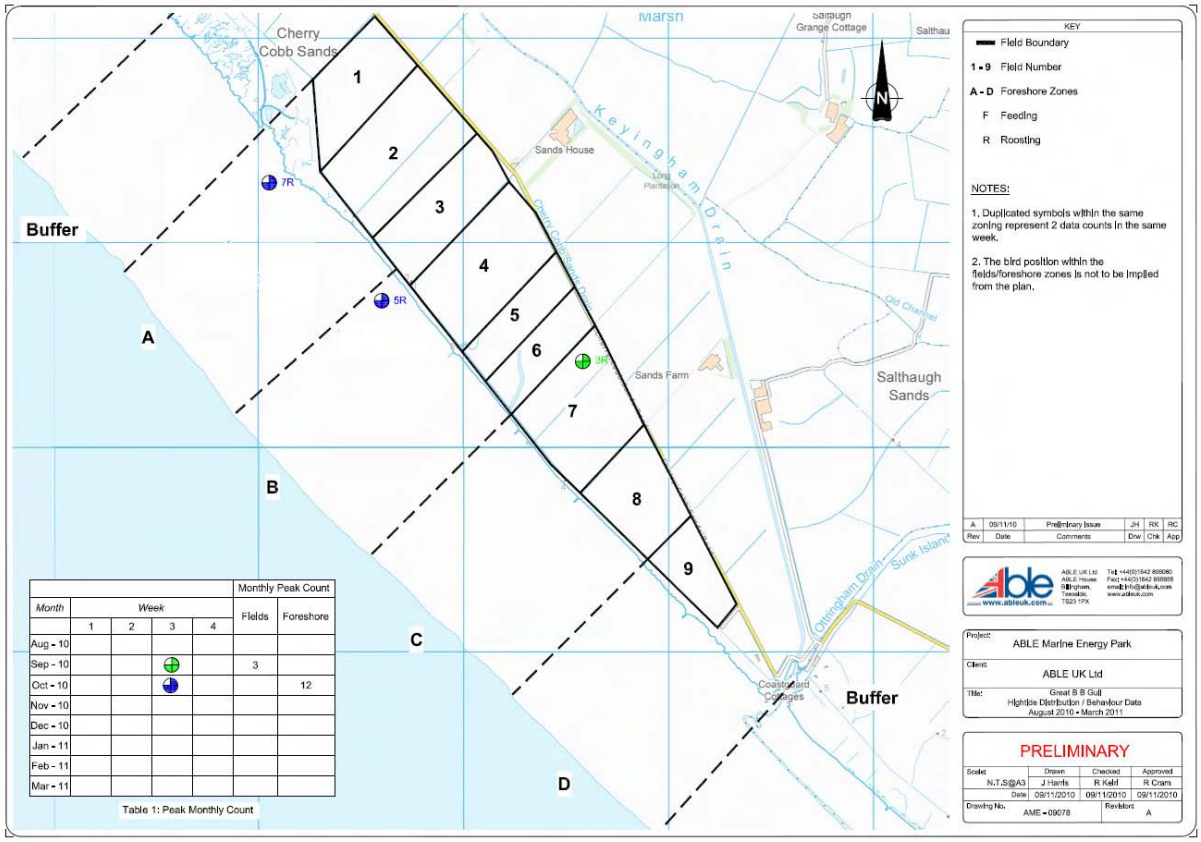
3.36.3.1. Great Black-backed Gulls were recorded in small numbers in mid-September until mid-October (**Figure 59** and **Figure 60**). The majority of sightings related to roosting birds on the intertidal area where a peak count of 29 birds was recorded at low water.



Month	Week 1	2	3	4	Monthly Peak Count Fields	Foreshore
Aug - 10						
Sep - 10						
Oct - 10		◑	◕			29
Nov - 10						
Dec - 10						
Jan - 11						
Feb - 11						
Mar - 11						

Table 1: Peak Monthly Count

Figure 59: Great Black-backed Gull Low Tide Counts



Month	Week 1	2	3	4	Monthly Peak Count Fields	Foreshore
Aug - 10						
Sep - 10			◔		3	
Oct - 10			◕			12
Nov - 10						
Dec - 10						
Jan - 11						
Feb - 11						
Mar - 11						

Table 1: Peak Monthly Count

Figure 60: Great Black-backed Gull High Tide Counts

3.37 Herring Gull (*Larus argentatus*)

3.37.1 PROTECTION & CONSERVATION STATUS

3.37.1.1. The Herring Gull is protected in the UK by the Wildlife and Countryside Act. Herring Gull is listed on Annex II of the Wild Birds Directive. This species is on the UK Red List of Species of Conservation Concern.

3.37.2 BACKGROUND INFORMATION

3.37.2.1. The majority of Herring Gulls breed at close or close to the coast and breeding habitats includes cliffs, beaches, moorland and urban roof tops. When not breeding, Herring Gulls can be found anywhere around and off the coast. While the Herring Gull has catholic tastes in food, its speciality if any, is for feeding in the intertidal zone. There is no WeBS population estimate for the Humber Estuary. The 2003/04 low tide count programme recorded a peak of 535 birds in October 2003. The general data indicated a dip in usage during the mid winter months with less than 30 birds reported in December, January and February on the Humber Estuary (Mander and Cutts, 2005)

3.37.3 FINDINGS

3.37.3.1. Herring Gulls were only recorded once, during a high tide count. The single observation of 16 Herring Gulls roosting in the 'Compensation site' was recorded in September (**Figure 61**). Herring Gulls were absent from the intertidal area during this survey period.

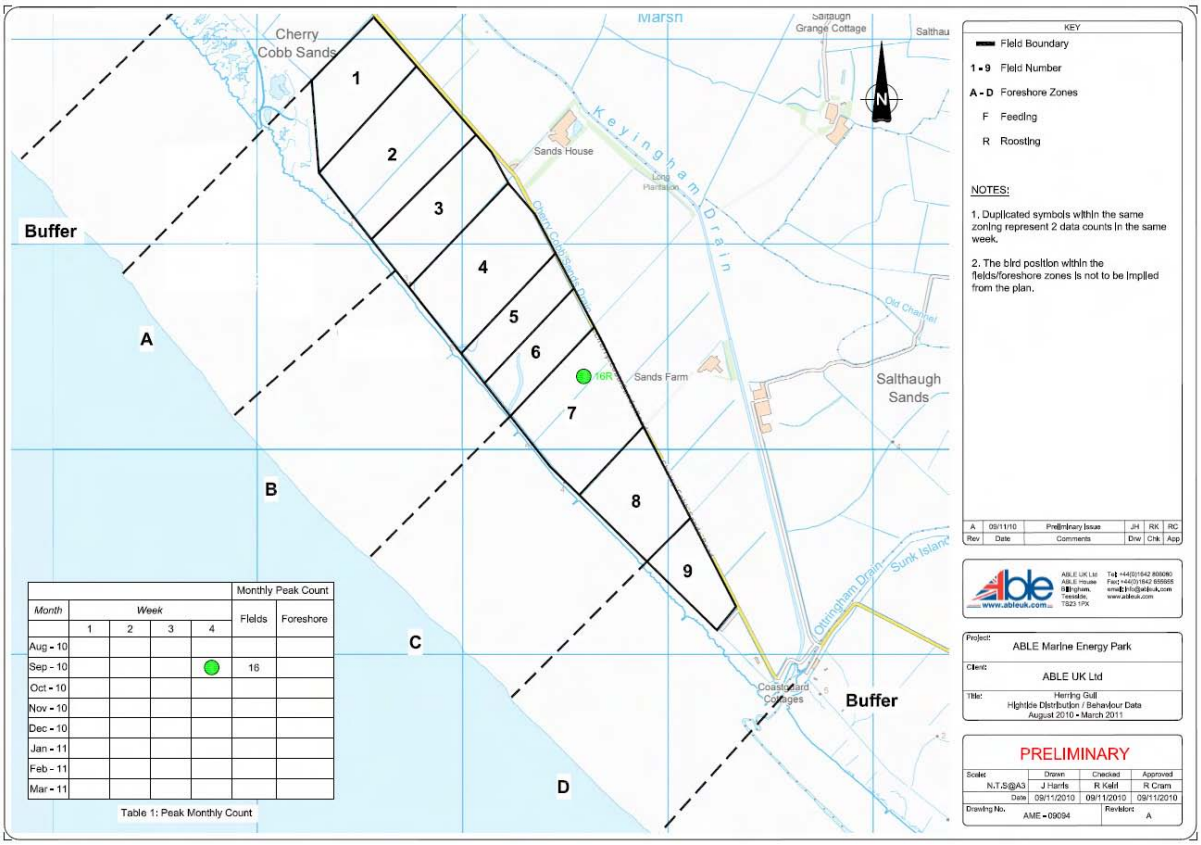


Figure 61: Herring Gull High Tide Counts

3.38 Lesser Black-backed Gull (*Larus fuscus*)

3.38.1 PROTECTION & CONSERVATION STATUS

3.38.1.1. The Lesser Black-backed Gull is protected in the UK by the Wildlife and Countryside Act. Lesser Black-backed Gull is listed on Annex II of the Wild Birds Directive. This species is on the UK Amber List of Species of Conservation Concern.

3.38.2 BACKGROUND INFORMATION

3.38.2.1. Lesser Black-headed are only recently breeding around the Humber Estuary. There is passage of birds in autumn and very few birds winter on the Humber estuary (Mander & Cutts, 2005). Birds which breed around the estuary generally winter in western Britain and Iberia. The species is most commonly recorded in the inner estuary in summer.

3.38.3 FINDINGS

3.38.3.1. A single observation of two Lesser Black-backed Gulls roosting in the 'Compensation Site' was recorded in September. Lesser Black-backed Gulls were not recorded on the foreshore.

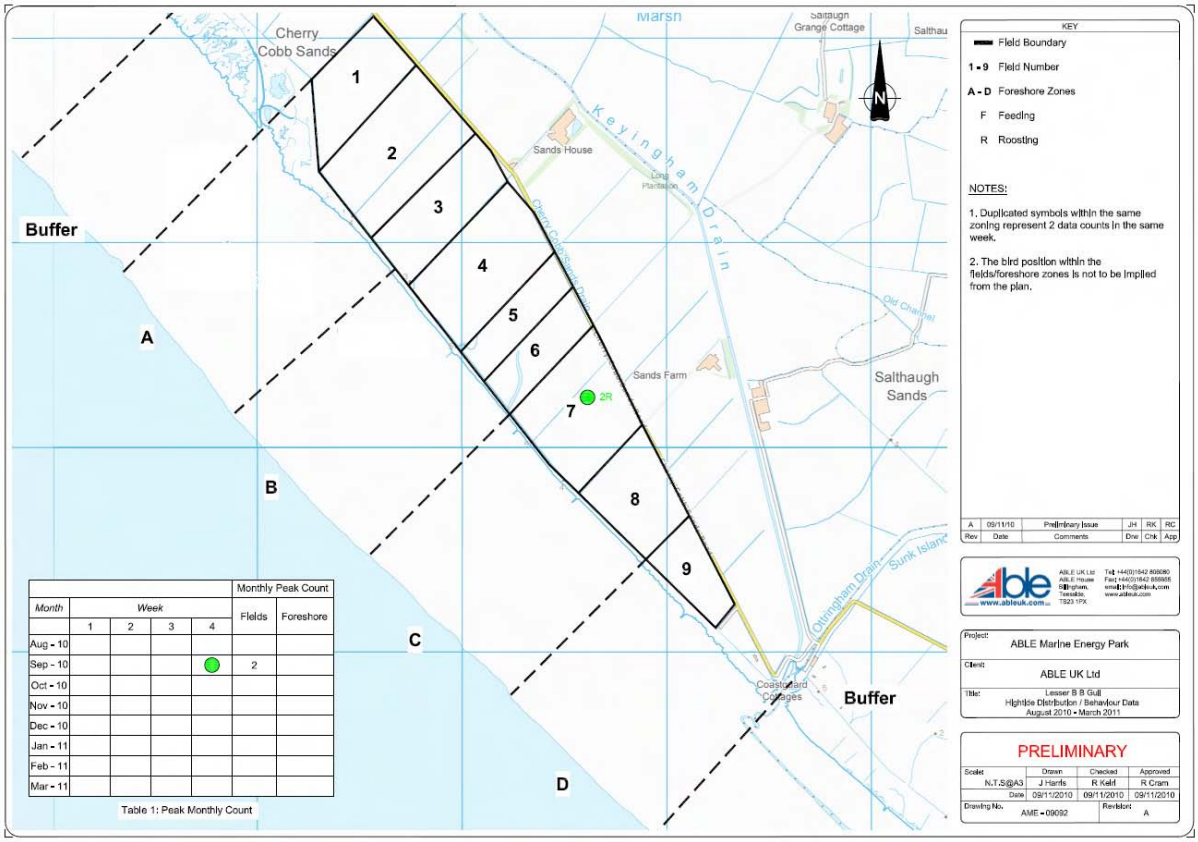


Figure 62: Lesser Black-backed Gull High Tide Counts

3.39 Kingfisher (*Alcedo atthis*)

3.39.1 PROTECTION & CONSERVATION STATUS

3.39.1.1. The Kingfisher is protected in the UK by the Wildlife and Countryside Act 1981 and is further included in Schedule 1 of the same act. It is also listed in Appendix II of the Bern convention as well as the Annex 1 of the European Birds Bird Directive. This species is also an Amber List Species of Conservation Concern (UK).

3.39.2 BACKGROUND INFORMATION

3.39.2.1. Kingfishers are not thought to be present in nationally important numbers according to WeBS data (Calbrade *et al.,* 2010) but this method of survey is not considered efficient for this species. Kingfishers are historically scarce on the Humber but small numbers breed and winter around the upper estuary, usually associated with adjacent water bodies particularly at Barton, Blacktoft & Welton (Allen *et al.,* 2003).

3.39.3 FINDINGS

3.39.3.1. Kingfisher was recorded on a single occasion at high tide in October, in Zone D of the intertidal area.

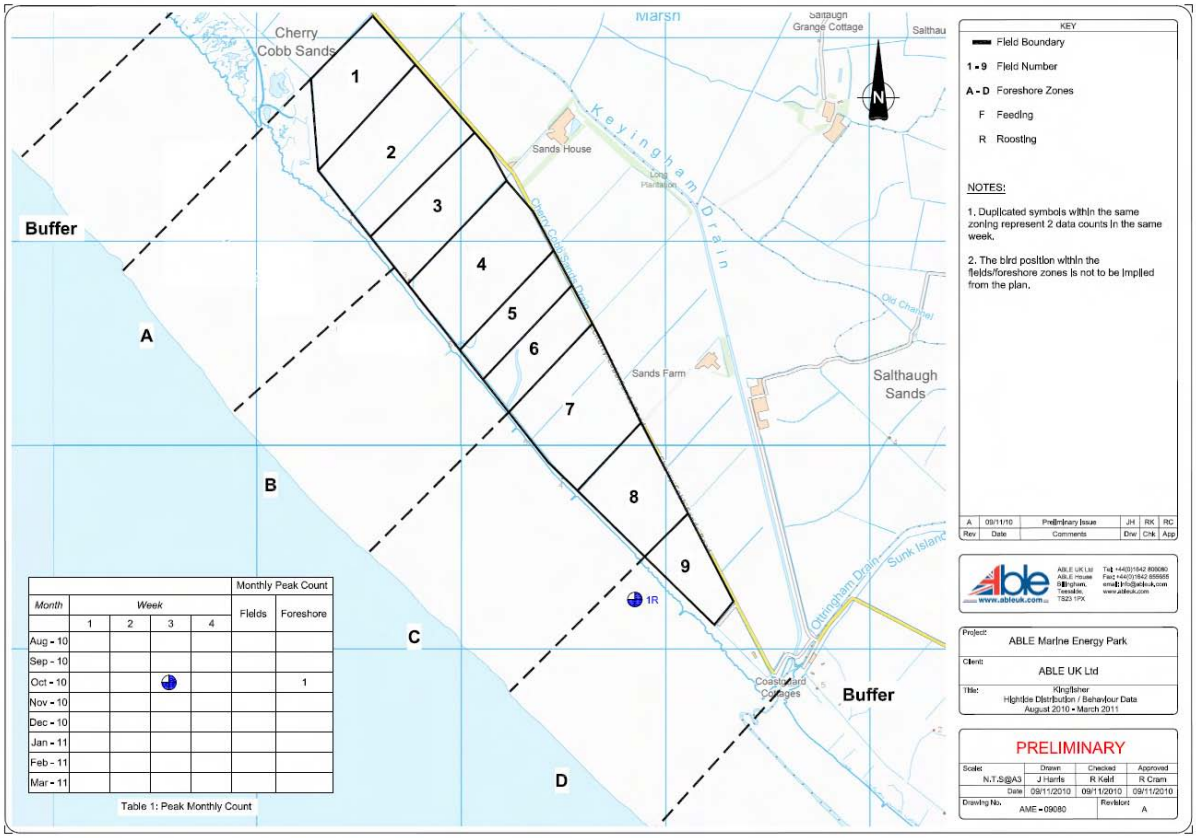


Figure 63: Kingfisher High Tide Counts

3.40 Passerines sp

3.40.1. The counts in the 'Compensation Site' produced some interesting sightings of passerines. 40 Long-tailed Tits (*Aegithalos caudatus*) were recorded in Field 1 during November (Figure 64), immediately preceding some exceptionally cold weather so the possibility this large assembly being caused by cold weather movement to the relatively warm estuary should be considered.

3.40.2. 250 Fieldfare were present in Field 9 during November and 267 birds were spread between Fields 1, 3 and 4 during October (Figure 65 and Figure 66).

3.40.3. There were two records of Siskin during the survey period, in October and November (Figure 67 and Figure 68). The October record refers to a flock of 20 birds in Field 4 whilst the November record was 45 birds in Field 6. It is likely that these birds were on passage to wintering areas.

3.40.4. 19 Yellowhammer were recorded in Field 9 in November (Figure 69). It is likely that these birds were subject to cold weather movements – moving to the relatively mild climate of the estuary before being forced away by snow cover in late December.

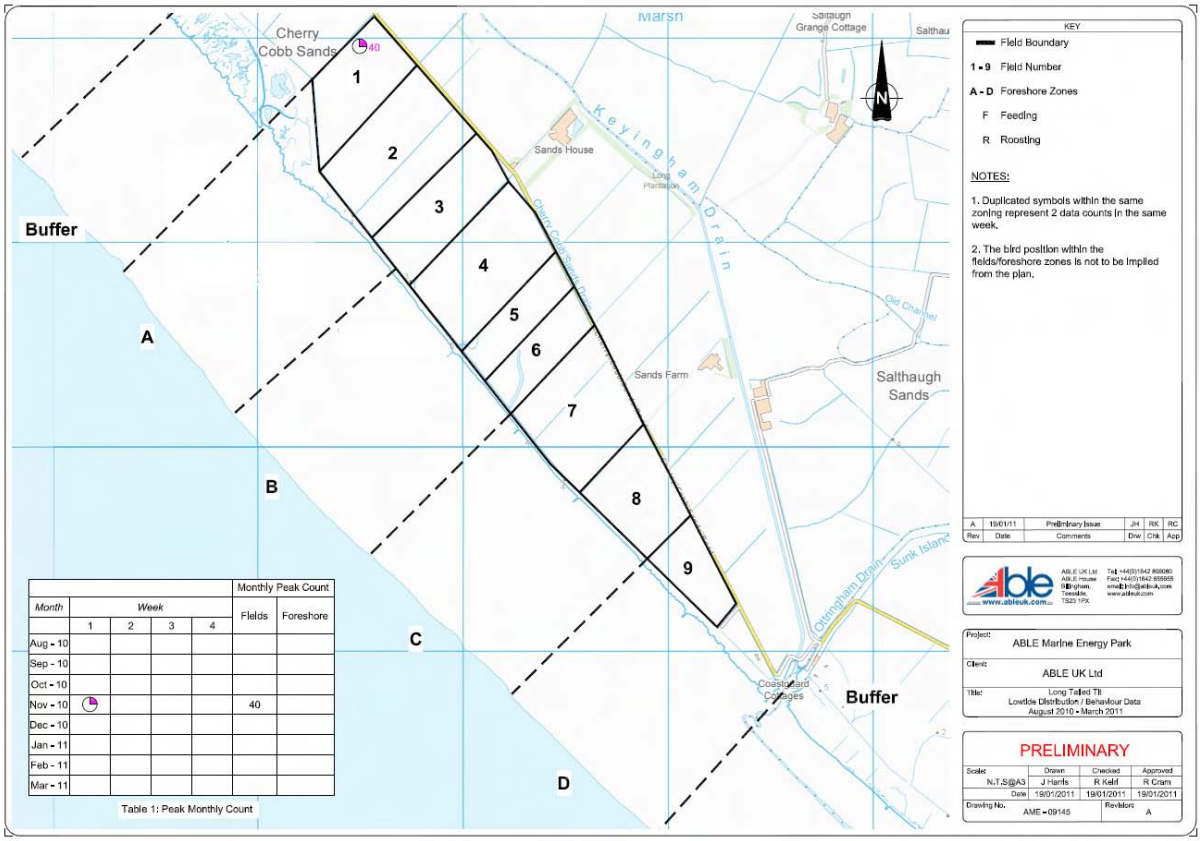
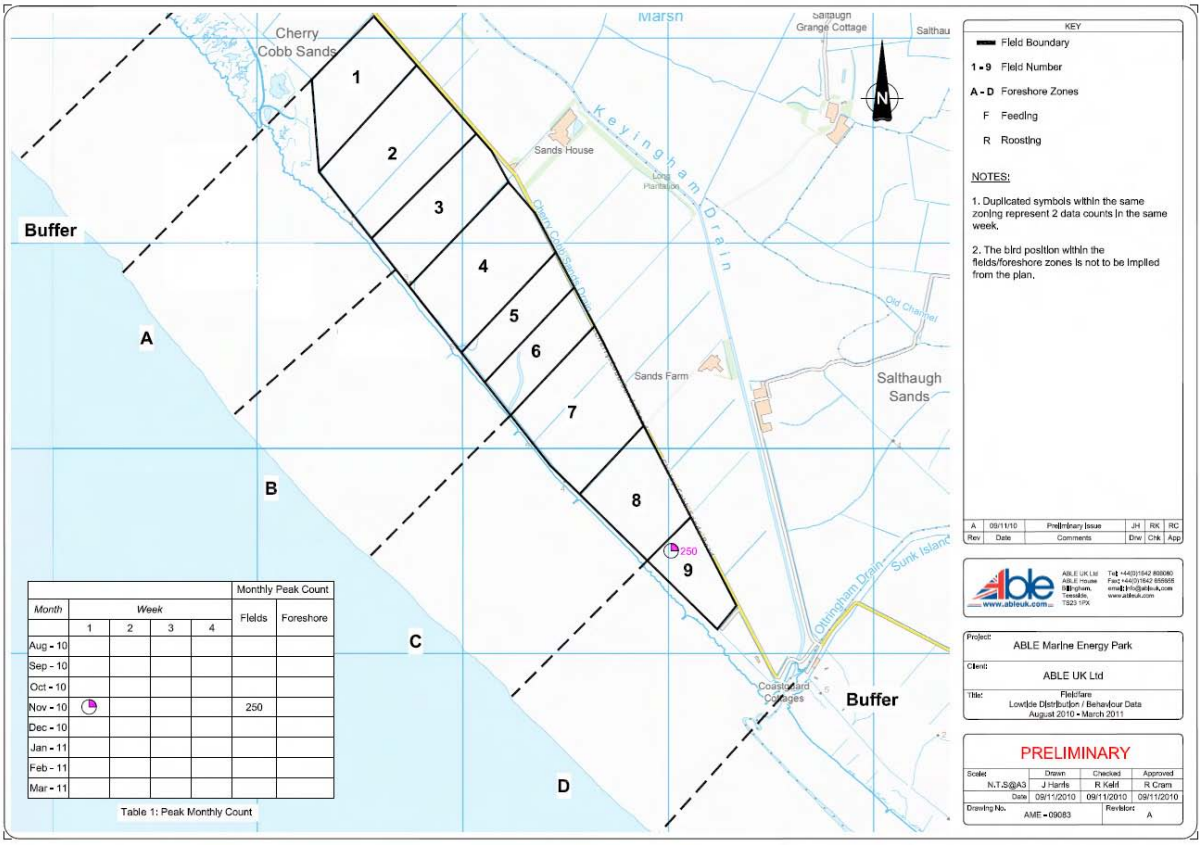


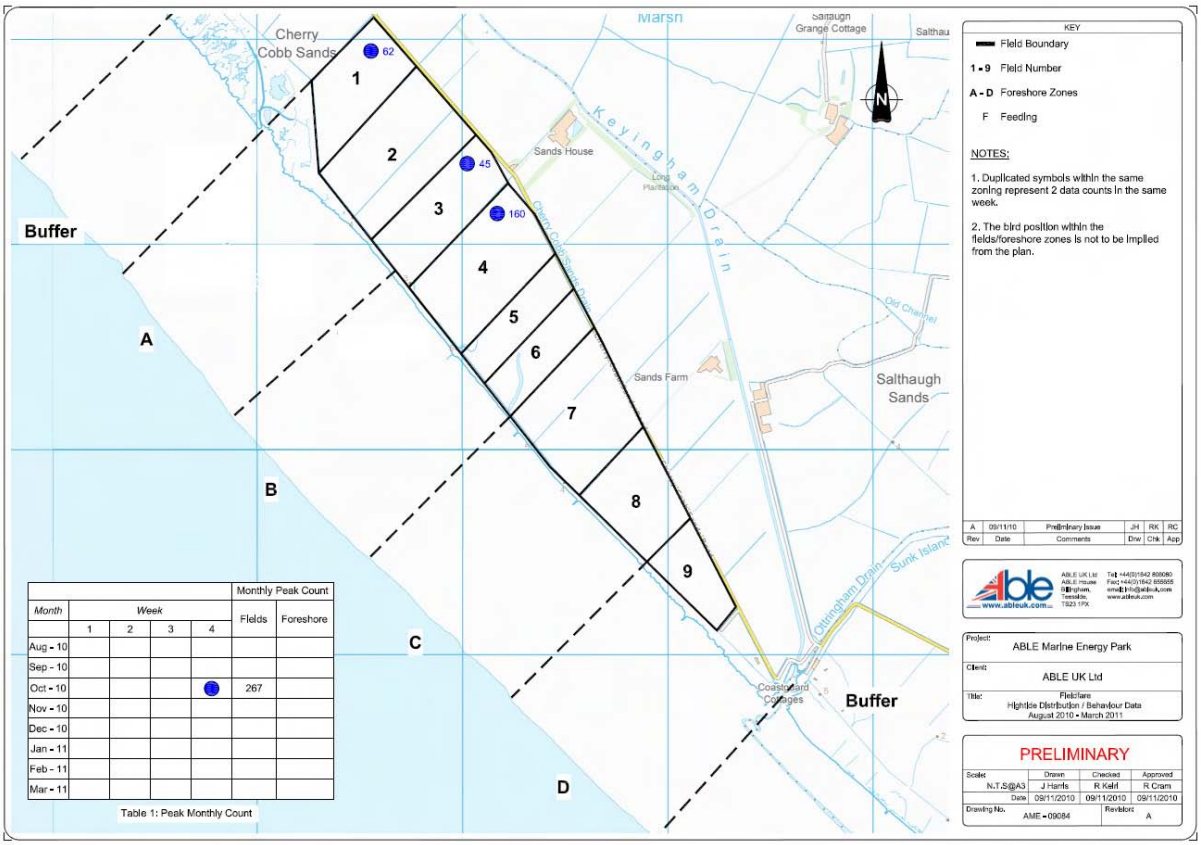
Figure 64: Long-tailed Tit Low Tide Counts



Month	Week 1	2	3	4	Monthly Peak Count Fields	Foreshore
Aug - 10						
Sep - 10						
Oct - 10						
Nov - 10					250	
Dec - 10						
Jan - 11						
Feb - 11						
Mar - 11						

Table 1: Peak Monthly Count

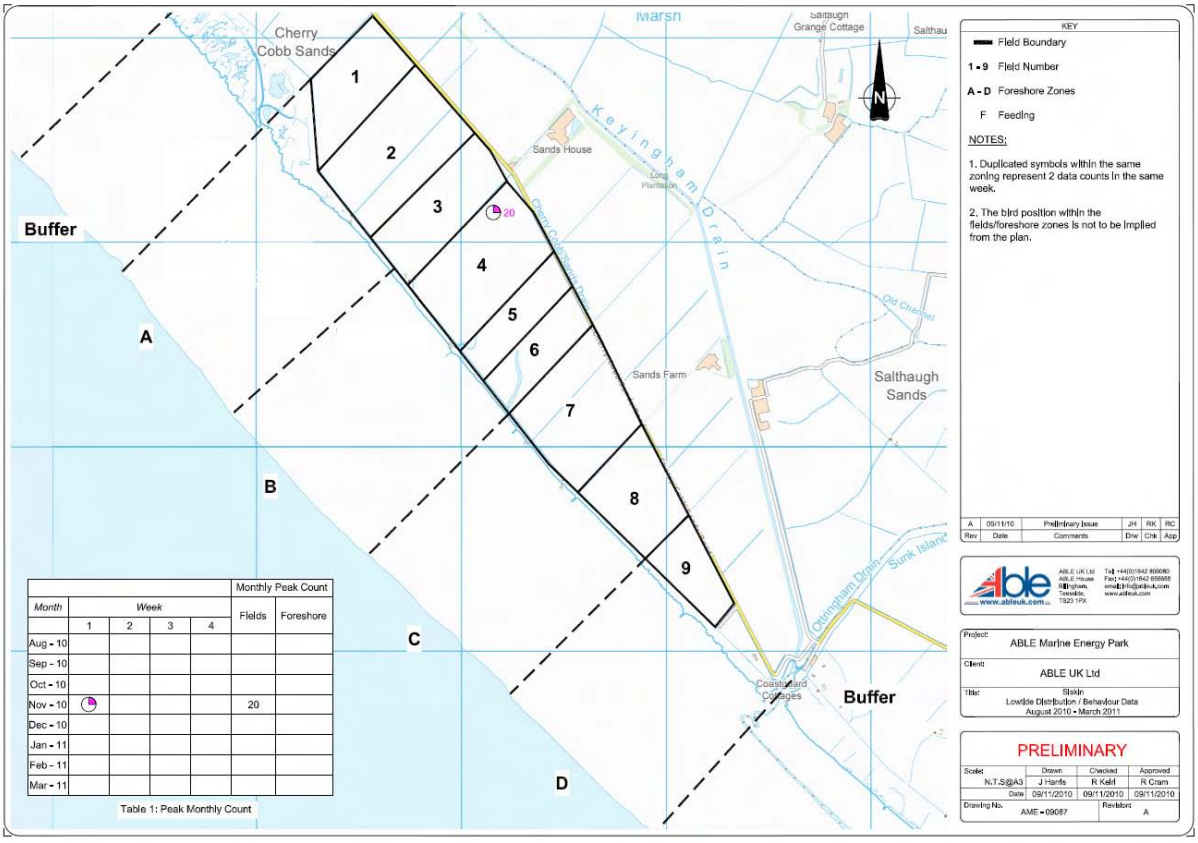
Figure 65: Fieldfare Low Tide Counts



Month	Week 1	2	3	4	Monthly Peak Count Fields	Foreshore
Aug - 10						
Sep - 10						
Oct - 10					267	
Nov - 10						
Dec - 10						
Jan - 11						
Feb - 11						
Mar - 11						

Table 1: Peak Monthly Count

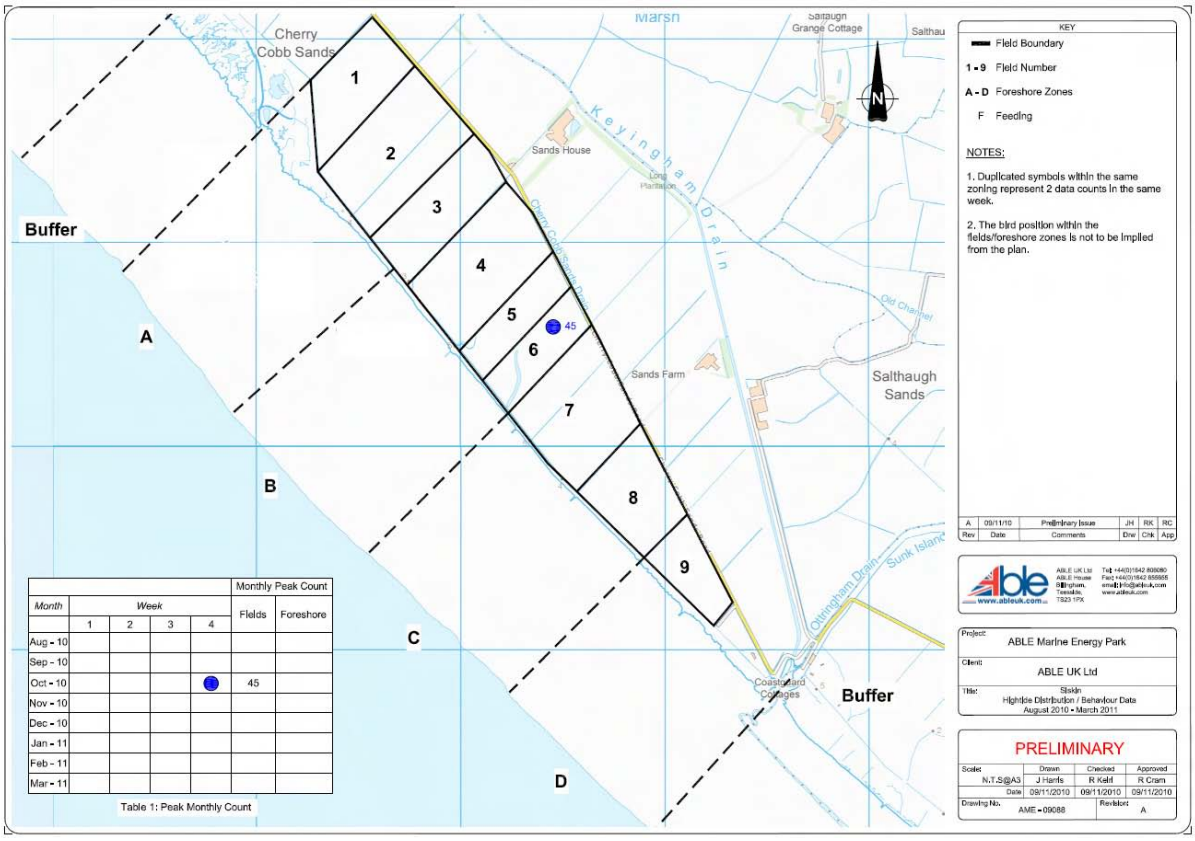
Figure 66: Fieldfare High Tide Counts



Month	Week 1	2	3	4	Monthly Peak Count Fields	Foreshore
Aug - 10						
Sep - 10						
Oct - 10						
Nov - 10					20	
Dec - 10						
Jan - 11						
Feb - 11						
Mar - 11						

Table 1: Peak Monthly Count

Figure 67 Siskin Low Tide Counts



Month	Week 1	2	3	4	Monthly Peak Count Fields	Foreshore
Aug - 10						
Sep - 10						
Oct - 10					45	
Nov - 10						
Dec - 10						
Jan - 11						
Feb - 11						
Mar - 11						

Table 1: Peak Monthly Count

Figure 68: Siskin High Tide Counts

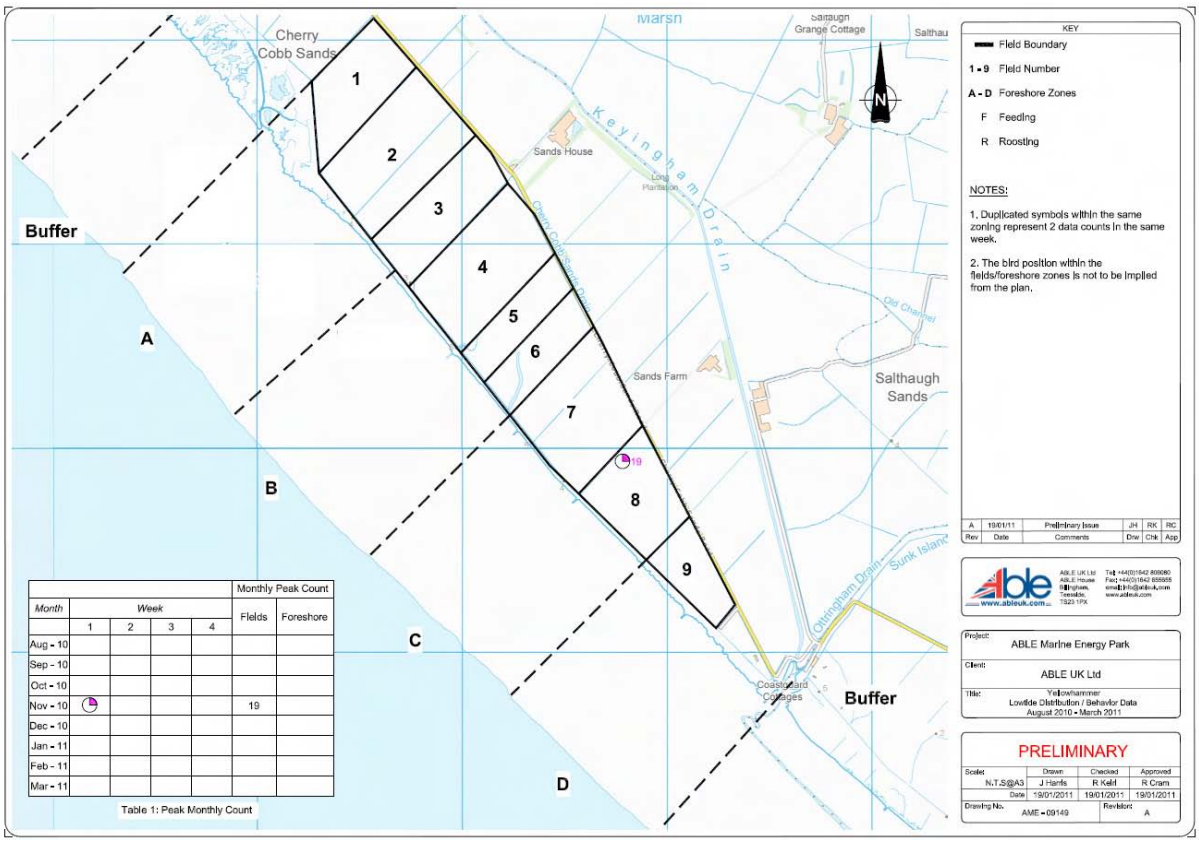


Figure 69: Yellowhammer Low Tide Counts

4. DISCUSSION & CONCLUSIONS

4.1. The results of the August 2010 to March 2011 surveys corroborated the findings from the 2003/04 Low Tide Count programme (Mander & Cutts, 2005) and the review of the Humber bird interest based on the 1996/97 to 2000/01 WeBS core counts (Allen *et al.,* 2003). These studies found the Paull to Stone Creek section to support foraging and roosting flocks of Golden Plover, Dunlin, Curlew and Shelduck in numbers exceeding the level of national importance. The surveys found a significant proportion of the Humber Golden Plover population using the intertidal area fronting the 'Compensation Site'. Numbers of Golden Plover were recorded in excess of the level of international importance during the August 2010 to March 2011 surveys.

4.2. The numbers of waterbirds appeared to be the highest in winter on the intertidal area fronting the 'Compensation Site', even though there were large fluctuations between counts at both low and high water. The fluctuations at low water during the winter period were thought to be in response to the cold weather, with the low temperature experienced in the early winter period possibly impacting on the feeding numbers and feeding behaviour of waders on the intertidal area. The greater variations in numbers at high water were more predictable. The number of birds recorded on the intertidal area at high water is linked to the amount of exposed intertidal habitats available for the birds roost or feed. Whilst the intermediate to spring tides generally pushed the birds off from the intertidal area around high water, the birds continued to use the exposed intertidal habitats on neap and intermediate tides. The fluctuations at high water were reflective of the different tidal conditions on the day of the survey i.e. neap, intermediate or spring tides.

4.3. The Cherry Cobb saltmarsh is known as a key regular high tide roost for Dunlin, Curlew, Redshank, Bar-tailed Godwit, Grey Plover and occasional numbers of Knot. However, it is understood that the continuing growth of the saltmarsh vegetation at Cherry Cobb Sands combined with an expansion further down shore have recently impacted on the numbers of birds using this habitat to roost or loaf at high water. The August 2010 to March 2011, surveys which covered the eastern edge of the Cherry Cobb Saltmarsh (included in the Buffer Zone and Zone A), did not record a regular use of the area by roosting waders.

4.4. Whilst Zones B, C and D, regularly supported large flocks of waders, Zone A and the Buffer Zone fronting the Cherry Cobb saltmarsh were less frequently used, probably due the saltmarsh cover in Zone A and in the Buffer Zone. Conversely, Zone A and the adjacent Buffer Zone, were seen to attract the bulk of the wildfowl population, in particular dabbling ducks such as Wigeon and Teal. These species favoured the pioneer saltmarsh and the network of creeks associated with the Cherry Cobb saltmarsh. Raptors also favoured the eastern edge of the Cherry Cobb saltmarsh (Buffer Zone fronting and Zone A) and the Marsh Harrier was a regular sighting over saltmarsh which provided a suitable hunting ground. Merlin and Peregrine were more occasionally sighted around the area.

4.5. Based on the August 2010 to 2011 surveys, the 'Compensation Site' itself was of modest bird importance at high water for the SPA birds, probably due to the lack of suitable roosting habitats within the site (i.e. wet marshes). The bird assemblage and utilisation of the 'Compensation Site' was typical of arable fields situated immediately beyond the flood defence. This habitat around the estuary can attract a number of SPA

field feeding species at high water such as Golden Plover, Lapwing and Curlew which have dispersed from the intertidal area but the influx strongly linked to climatic conditions. Prolonged periods of wet weather will drive invertebrates to the surface and attract field feeding species in arable land. In the 'Compensation Site', except for Curlew which was seen around high water in very large flocks (up to 600 birds), Golden Plover and Lapwing were more occasionally recorded. The proximity of the fields to the Humber Estuary means that the area could potentially support Golden Plover and Lapwing on more regular occasions. This survey coincided with exceptionally cold weather and it remains possible that the 'Compensation Site' could provide roosting, and to a lesser extent foraging opportunity, to SPA field feeding species during wetter and milder winter.

4.6. As expected, intertidal specialists such as Knot, Dunlin, Grey Plover, Bar-tailed Godwit and Black-tailed Godwit avoided the area at high water preferring the intertidal zone to forage or roost. The value of the 'Compensation Site' for wintering passerines appeared to be relatively poor in a landscape dominated by arable fields.

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