

**RSPB**  
**PAGHAM HARBOUR LOCAL NATURE**  
**RESERVE**  
**Management Plan**



**2013 – 2018**

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**v. P1**

# Contents of the plan

## 1. SITE INFORMATION

- 1.1. Location and statutory information
  - 1.1.1. Site location and relevant authorities
  - 1.1.2. Aerial photographic coverage
  - 1.1.3. Statutory, planning and other designations
  - 1.1.4. Statutory site condition assessment
  - 1.1.5. Tenure
  - 1.1.6. Public access
- 1.2. Environmental information
  - 1.2.1. Geology and soils
  - 1.2.2. Hydrology
- 1.3. Biological information
  - 1.3.1. Recording areas
  - 1.3.2. Data sources and under-recorded groups
  - 1.3.3. Habitats
  - 1.3.4. Vegetation communities
  - 1.3.5. Important plant and animal species
  - 1.3.6. Population trends of important plant and animal species
- 1.4. Archaeology
- 1.5. Visitors and public affairs
  - 1.5.1. Where are we now?
  - 1.5.2. What is the profile of your visitors?
  - 1.5.3. Visitor capacity, facilities and services.
- 1.6. History of recent management

## 2. EVALUATION and RATIONALE FOR MANAGEMENT

- 2a. Conservation
  - 2a.1. Current issues and constraints
  - 2a.2. Identification of the Features Influencing Management of the site
  - 2a.3. Condition of the Features Influencing Management and the Main Factors affecting them
  - 2a.4. Habitat management to enhance the visitor experience
  - 2a.5. Predicted impacts of climate change on existing and potential important Features
  - 2a.6. Rationale for any changes to conservation objectives and targets
- 2b. Visitors and public affairs
- 2c. Demonstration use

## 3. VISION AND MANAGEMENT OBJECTIVES

- 3.1. Vision for the site in 25 years
- 3.2. Objectives and management

## 4. FIVE-YEAR WORK PROGRAMME

## 5. MAPS

*The RSPB is seeking to ensure the maps best reflect the layout of the shingle at Pagham/Church Norton Spit, although recognising that changes here can be very swift.*

# 1. SITE INFORMATION

## 1.1. Location and statutory information

### 1.1.1. Site location and relevant authorities

The location of the reserve is shown in Map 1 and details of relevant authorities given in the table below.

<b>Site name</b>	Pagham Harbour Local Nature Reserve (LNR)
<b>Area (ha)</b>	The total area of the LNR is c600ha. The area under the management of the RSPB is less than this and will vary over time due to the number of different land ownerships and occupations within the LNR. The RSPB's management authority also varies according to the nature of different agreements. AN UNDERSTANDING OF THESE IS VITAL TO AN UNDERSTANDING OF THE RSPB'S MANAGEMENT ROLE. Throughout this Plan, the LNR is taken to mean the extant boundary of the Local Nature Reserve; 'the Harbour' is taken to mean the intertidal area, a much smaller area
<b>Grid ref (centre of reserve)</b>	SZ875970
<b>District</b>	Chichester, Arun
<b>County Council *</b>	West Sussex County Council (WSCC)
<b>District Councils**</b>	Chichester District (CDC) and Arun District (ADC)
<b>Parish Councils</b>	Sidlesham, Selsey, North Mundham and Pagham
<b>Parliamentary Constituencies</b>	Chichester, Bognor
<b>Local Environment Agency (EA) Office</b>	Solent and South Downs Area Office Guildbourne House, Chatsworth Road Worthing, West Sussex. BN11 1LD
<b>Drainage Authority</b>	Environment Agency
<b>Airport Safeguarding Zone</b>	
<b>Natural England</b>	Contacts based at Guildbourne House, Worthing, as for EA.

\* mineral planning authority

\*\* general planning authority

### 1.1.2. Aerial photographic coverage

Details of aerial photographic coverage are given below.

Date	Cover	Details	Location of copies
1956	All Reserve	The EA has black and white aerial photographs of the coast dating back to 1956.	At Visitor Centre
2008	All Reserve	The WSCC Environment and Development Group and the County Records Office hold a collection of aerial photographs covering the entire county. New photographs are usually taken every 10 years, with the last flight being in 2008.	WSCC County Hall
1997	All Reserve	As part of the Portsmouth University Levels Survey	CD-Rom at the Visitor Centre
To present	All reserve	Aerial photographs have been regularly commissioned for specific parts of the Reserve to monitor management activity.	At Visitor Centre
Ongoing	Coastal sections, ie the spits	The Reserve also features in a number of coastal monitoring programmes that use aerial photography to assess coastal erosion	Much of this information is held at the Channel Coast Observatory in Southampton.

### 1.1.3. Statutory, planning and other designations

Details of statutory, planning and other designations are given in the following table.

Designation	All or part of site?	Name and other details
Site of Special Scientific Interest (SSSI)	Part	Pagham Harbour
National Nature Reserve (NNR)		
Special Protection Area (SPA)	Part	Pagham Harbour
Special Area for Conservation (SAC)		
Ramsar site	Part	Pagham Harbour
Site of Interest for Nature Conservation (SINC)		
Local Nature Reserve (LNR)	Part	Pagham Harbour
Statutory Bird Sanctuary		
National Park		
Environmentally Sensitive Area (ESA)		
Habitat Scheme	Part	Higher Level Stewardship
Area of Outstanding Natural Beauty (AONB)		
Heritage Coast		
National Scenic Area (NSA)		

Conservation Area		
Common Land		
Listed Building		
Archaeological site		There are 30 heritage assets recorded in the WSCC Historic Environment Record (HER) within the reserve and 50m from boundary. A definitive list and map of assets will be produced for the RSPB management area during Year 1 of Man Plan (see Section 2.X).
Finds		
Scheduled Ancient Monument (SAM)	Part	SM 12887, Ringwork South of St Wilfred's Chapel, Church Norton (see map X and Section 2.X). Definitive description: <a href="http://list.english-heritage.org.uk/resultsingle.aspx?uid=1015982">http://list.english-heritage.org.uk/resultsingle.aspx?uid=1015982</a>
Integrated Administration and Control System (IACS) registered	N/A	
Extensification	N/A	
UK Wood Assurance Standard (UKWAS) registered	N/A	
Contaminated land	Part	Old Landfill
Other		

#### 1.1.4. Statutory site condition assessment

SSSI/ASSI name	Unit or feature	Name of area	Principle management authority	Assessment	Date	Reason	Remedy
Pagham Harbour	1	Pagham Lagoon Little Lagoon	RSPB RSPB	Unfavourable Recovering	26/10/10	An unidentified pollution incident affected the populations of lagoon invertebrates; recent investigations have shown signs of recovery.	Continued monitoring, if further incidents do occur, try to establish the cause
	3	Ferry Field	RSPB	Favourable	01/10/08	N/A	N/A
	5	Yeomans & Mill Pond Marsh	RSPB	Favourable	28/01/10	N/A	N/A
	6	Church Commissioners South	C Spiby	Favourable	01/10/08	N/A	N/A
	7	Church Commissioners North	C Spiby	Favourable	01/10/08	N/A	N/A

	8	North Fields	C Spiby	Favourable	01/10/08	N/A	N/A
	9	Halsey's Farm	RSPB	Favourable	28/01/10	N/A	N/A
	10	Church Norton wood	Mr Black	Unfavourable Recovering	29/04/09	There was very little regeneration of the native trees, with the lower storey being dominated by Sycamore and Rhododendron and dense Bracken. Under Woodlands Grant Scheme much of the Sycamore and Rhododendron has been removed and the Bracken is under successful control.	Control of Sycamore and Bracken, removal Rhododendron, and ensure the regeneration of native trees (by planting if necessary). Bramble has become an issue.
	11	Horse Fields	Mr Black	Favourable	28/01/10	N/A	N/A
	12	The Harbour: East	Bourne Leisure, RSPB, Bells	Favourable	28/01/10	N/A	N/A
	14	Tern Island and Church Norton Spit	RSPB	Favourable	12/09/08	N/A	N/A
	15	Pagham Beach Foreshore	RSPB	Favourable	10/06/10	N/A	N/A
	16	Church Norton Spit to The Severals	RSPB & Nelson-Smiths	Favourable	10/06/10	N/A	N/A
	17	Torrence spur	George Torrence	Favourable	01/10/08	N/A	N/A
	18	Sidlesham landfill	RSPB	Favourable	01/10/08	N/A	N/A
	19	West Side Copse	RSPB	Favourable	01/10/08	N/A	N/A
	20	The Harbour (North)	RSPB & Mike Bond/EA	Favourable	01/10/08	N/A	N/A
	21	The Harbour next to Pagham Spit	RSPB	Favourable	01/10/08	N/A	N/A
	24	Pagham Spit	RSPB	Favourable	10/06/10	N/A	N/A
SSSI/ASSI name	Unit or feature			Assessment	Date	Reason	Remedy

Pagham Harbour	4	The Severals	Nelson Smiths	Unfavourable Recovering	12/04/05	Reeding over of open water and encroachment of willow scrub. Under an agreement between NE and the landowner, remedial work was carried out in autumn 2005. However, no work on the area since.	Re-establish the open water; carry out regular management of the reedbed and removal of some of the scrub.
	22	Breach Pool and The Scrape	RSPB on behalf of Ashmarden, but not the Rife itself	Unfavourable Recovering	27/10/08	This area was part of the mitigation for the River Lavant relief scheme. A series of new water control devices were placed in the unit that had not achieved the desire effect and so habitat had not developed as planned.	A discussion is required with EA and NE to assess the best final management for the scrape part of the unit as a significant amount of reed has developed and is now used by bittern in the winter.
	23 (outside LNR)	Pagham Beach (part of SSSI)	PBHL	Unfavourable (no change)	10/06/10	Vegetative shingle dominated with escaped garden plants	

### 1.1.5. Tenure

See map 3.

Land ownership within the LNR is very complex, and it is important to realise that the RSPB does not own or lease large parts of the LNR. As of 1 April 2013, the RSPB:

- Has a 99 year lease over WSCC owned land
- Has a 99 year lease over EA-owned land
- Is Managing Agent for WSCC under the terms of the SLA to deliver management of the Pagham Beach Holdings Limited Land and Bourne Leisure Land that is leased by WSCC.
- Has a tripartite LNR management agreement in place with Ashmarden Ltd for the Breach Pool and The Scrape at the North Wall.

The RSPB is managing those parts of the LNR over which there are appropriate agreements in place with landowners and occupiers within the terms of a 10-year Service Level Agreement with WSCC until the 31<sup>st</sup> January 2022, and the terms of the agreements with land owners and occupiers.

The rest of the Local Nature Reserve is under numerous land ownerships, ranging from a series of private landowners to nongovernmental organisations such as the Church Commissioners and the Sussex Wildlife Trust, local authorities and statutory agencies. Some of this land is in LNR Agreements with WSCC. Some is covered by no extant LNR Agreements. The RSPB is in negotiation with landowners and occupiers to see if they would like their land to be in tripartite LNR Agreements with WSCC and RSPB. However, an LNR agreement only gives the RSPB the right to undertake wildlife surveys and manage the byelaws.

### **1.1.6. Public access**

Map 7.1 shows the public access routes around the LNR.

- There is an extensive system of public footpaths
- There is open access to the sea-facing beach fronts at Pagham Spit and Church Norton Spit
- Various aspects of access are controlled by the Pagham Harbour byelaws (1997). These are monitored by the RSPB on behalf of WSCC. WSCC remains responsible for bringing any prosecutions, supported by the RSPB. The byelaws have been due for revision by WSCC for several years.
- Under the byelaws, dogs can be walked on a lead on all public footpaths and permissive paths, plus there are designated areas where dogs can be off leads if under close control (see Map 7ii)
- There is a general right of navigation into the Harbour on tidal waters which is not restricted under the byelaws, but the Harbour is generally a poor place for boating, where users risk breaking other laws and where the reserve provides no rescue service. A voluntary Code of Conduct is being developed by WSCC with those who wish to exercise their right of navigation to help to protect them and the reserve. Launching is not allowed within the LNR boundary under the byelaws. Launching and landing is possible on a high tide at Sidlesham Quay outside the LNR boundary. Jet skiing and various other activities are prohibited under the byelaws.
- Fishing and bait digging is permitted under the general rights. WSCC has recently removed the permit system, which was technically not possible under the general rights.
- Cycling is permitted on the Route 88 Bill Way only within the LNR boundaries.
- Horse riding is restricted to a permissive bridleway between Mill Hamlet and the Selsey Road
- The LNR byelaws forbid access to Tern Island (and New Island in proposed revised byelaws) at all times of the year and to the inner half of Church Norton Spit during the nesting season, April - August inclusive.
- Wildfowling is permitted by the Crown Estate on the areas of foreshore it owns, the right held solely by Southern Wetlands And Wildfowling Management Association (now known as Chichester Wildfowlers).
- Metal detecting is forbidden under the byelaws.

## **1.2. Environmental information**

### **1.2.1. Geology and soils**

- Geology (from SSSI citation): "Pagham Harbour is a key site for coastal geomorphology. It is significant both as a classic shingle spit landform and for the links that have been demonstrated between the coastal near shore and offshore forms and sediments. The shingle spit system comprises a series of sub-parallel ridges and recurves, marking different phases of extension and frontal accretion. Shingle reaches the beach via the intertidal zone, and the so-called "Pagham delta" and the behaviour of the spits and delta are intimately linked with



water and sediment circulation around the Selsey peninsula. The area also provides an excellent example of the role of weed rafting of shingle in coastal sediment budgets.

- This site also includes, at the north-eastern end, part of a key site for plant fossils from the London Clay . It is the only locality in the Hampshire Basin to yield abundant London Clay plants. The site has yielded examples of 130 species. An outstanding palaeobotanical site of great importance to studies of Tertiary floras.
- The solid geology of the Coastal Plain comprises mainly sands and clays from the Paleocene Period, coated with layers of sand and pebbles left by the sea as it retreated from its high, interglacial shoreline. Resting directly on the beach deposit is a layer of fine brick earth.
- Pagham Harbour represents the broad eastern end of what was once a tidal channel separating the island of Selsey from the mainland. Kip's 1610 map shows that the south-western creek had completely silted up to create the floodplain of the Broad Rife.
- Another key feature of the Harbour has been the development of two spits at the harbour entrance, which have changed radically and often. Since 2005, the southern spit has accreted at a rapid rate in a north-easterly direction, causing the harbour entrance to be diverted northwards, and causing serious erosion in front of Pagham village properties.
- The visitor centre is sat on 11ha of poorly-capped 1960s/70s landfill, composed of general household waste. Extensive studies, as part of the Pagham Harbour Area Coastal Visitor Centre Feasibility Study (2010), analysed the contents and found no significant toxic materials.

## Important geology/geomorphology

Geology/geomorphology	Status	Comments
Gravels and shingles	Geological Conservation Review (GCR) Site and SSSI	See GCR Publication Vol 28 Coastal Geomorphology of GB. Chapter 6 Gravel and 'shingle beaches'

## 1.2.2. Hydrology

### Tidal

- The Harbour itself is tidal fed through a relatively narrow harbour mouth between Church Norton Spit and Pagham Spit, which are both shingle spits subject to 'natural processes'. The tidal extent of the harbour has been greatly modified by man over the centuries with clay/earth sea walls around most of the intertidal area inside the Harbour. Almost the entire harbour edge is composed of man-made defences. If these weren't present, the tidal waters would extend much further inland.
- Much work is underway, led by the coastal flood risk management authorities (Arun DC, Chichester DC and the Environment Agency) working with the local community and stakeholder groups through the Pagham Coastal Issues Group, to deal with the persistent and major issues regarding coastal flooding and erosion, and involving on-going coastal defence operations.
- Given the rapid and significant changes undergone by the shingle beaches, the EA has modelled how these might change in the future. One possible scenario, becoming increasingly likely, is that the Harbour might close under 'natural processes' (see fig. 1). This would have profound

implications on some of the fauna and flora within the Harbour, but might not impact on the integrity of the SSSI.

- The RSPB does not have the authority to adjust the alignment of the spits, Harbour mouth or sea defences, which are the responsibility of (variously) the district councils and the Environment Agency.



*Fig1: Alignment of Pagham Spit, 29/9/12 (Roger Spencer).*

### **Freshwater:**

IT IS VITAL TO UNDERSTAND THE LIMITED AUTHORITY AND LIMITED GEOGRAPHICAL AREA OVER WHICH THE RSPB HAS WATER LEVEL MANAGEMENT CONTROL.

- The Harbour serves as an important drainage basin for freshwater from 5,000 hectares (12,350 acres) of surrounding low-lying farmland. Broad Rife, , Bremere Rife and Pagham Rife are all classified as 'Main Rivers' and drain into the Harbour. **IMPORTANT: The Environment Agency (and riparian landowners of the relevant sections of rife) are responsible for Flood Risk Management activity in the Rifles (vegetation clearance, silt clearance, water level management).**
- Water from Broad Rife is pumped by the EA into the Harbour at Ferry Pumping Station when levels are high under an automatic system; RSPB has no responsibility.
- Bremere Rife, Pagham Rife, Red Barn Ditch, and a small sluice on the west side discharge by gravity at low tide through flap valves. There is a small penstock sluice at Sidlesham Mill Stream. Again, the EA has responsibility for all of these and its Operations Team monitors them and clears trash screens etc. RSPB staff sometimes liaise with the EA Team regarding rife levels, but RSPB has no authority regarding them. RSPB monitors a small sluice from Mr Bonds garden at Sidlesham Quay.
- Once in the Harbour, the fresh water mixes with the tidal waters and leaves the Reserve at low tide by the narrow Harbour mouth.
- Much of the farmland to the north of the Harbour is lower than that of the spring high tide levels. It is contained by a series of earth embankments but some of these 'sea walls' are in poor condition.
- Areas of standing water occur at Ferry Long Pool, Ferry Small Pool, Ferry Pool, Sidlesham Mill, the North Wall, Pagham Lagoon and Little Lagoon (Pagham Spit). The Severals, a coastal reedbed, is immediately to the south of the Reserve but outside the LNR boundary and outside the RSPB's control. All are brackish with salinities varying seasonally between 10 and 30 parts per thousand (ppt).

Areas where the RSPB has at least some water level management authority and ability:

- **Ferry Pool** has an inlet sluice from the Harbour that the RSPB control, allowing salt water from the harbour to be let in. There is an EA abstraction licence to pump fresh water from Broad Rife, but there are water quality issues in using fresh water from agricultural run-off . The RSPB can also drop water levels using a dropboard sluice in the SE corner. A gauge board has been installed in 2012/13.
- At **Breach Pool** the RSPB can control the culvert linking the Pool to Pagham Rife to reduce water levels. There used to be a water control flexipipe at the top end of the system allowing water coming into the system to be controlled, but it is not currently working and RSPB does not have control here. A Gauge board being installed in 2012/13.
- At **Mill Pond Marsh** there is no RSPB control of the Rife, but the reserve team has recently installed four small dropboard sluices on cross drains to control ground water levels within reedbed.
- **Halsey's Farm:** There is no RSPB control of main River. At present no water control within fields but we will investigate carrying out management work to have some water control over the lower fields.

Areas where the RSPB does not have water level management authority or ability:

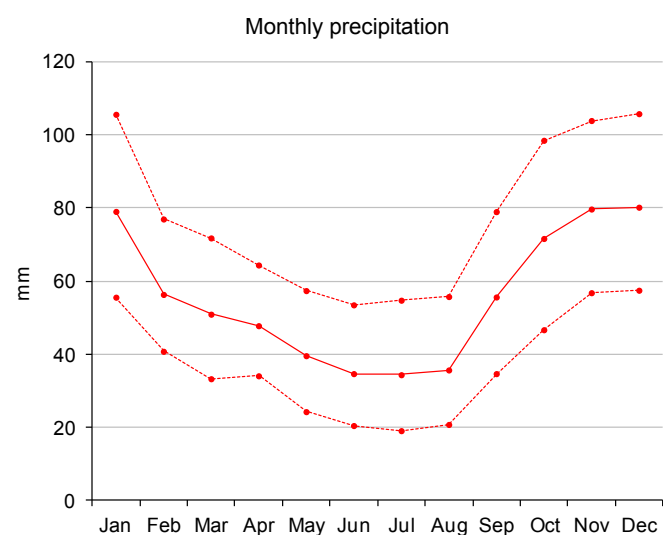
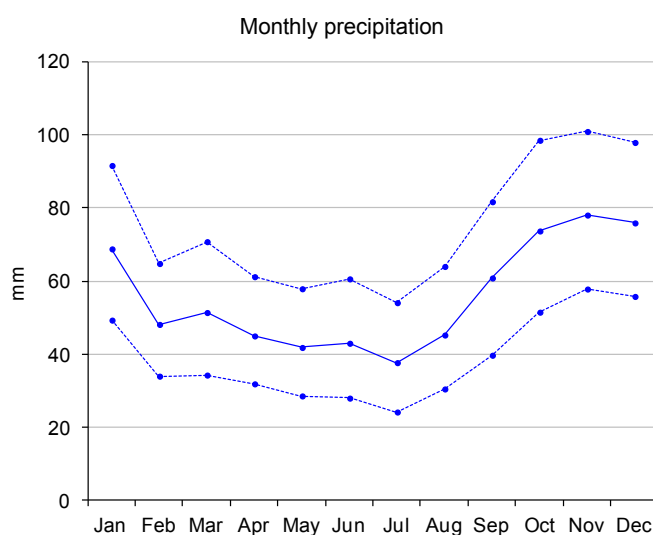
- The larger **Pagham Lagoon** (c.11 ha) is only slightly influenced by tidal changes. There is no water control structure, but there is run-off from the surrounding land and caravan site into the lagoon.
- **Little Lagoon** (on Pagham Spit) is tidal with waters rising several hours after high tide in the adjacent Harbour. There is no water control structure.

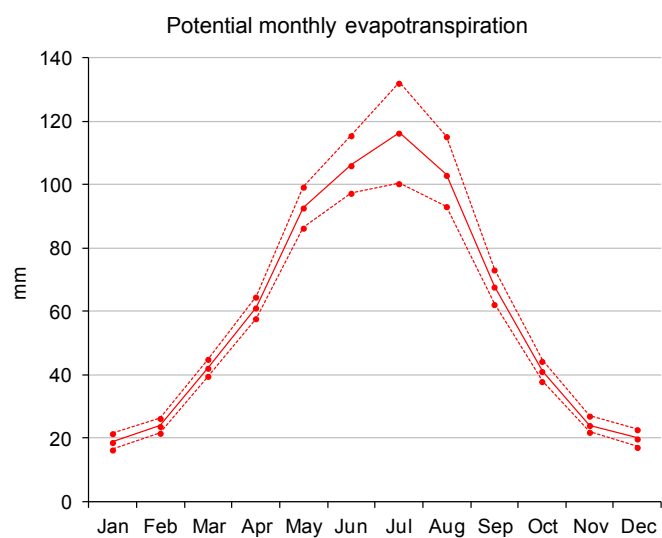
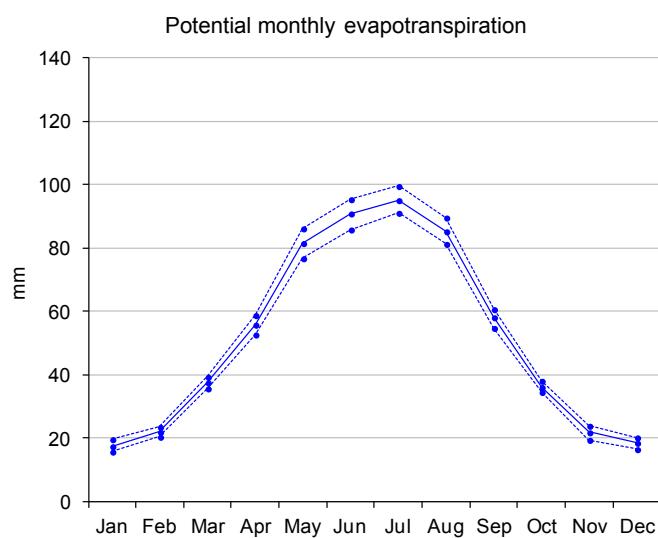
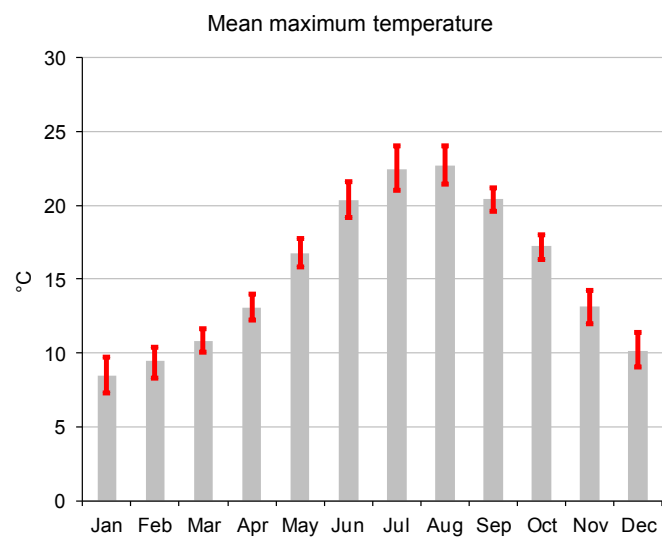
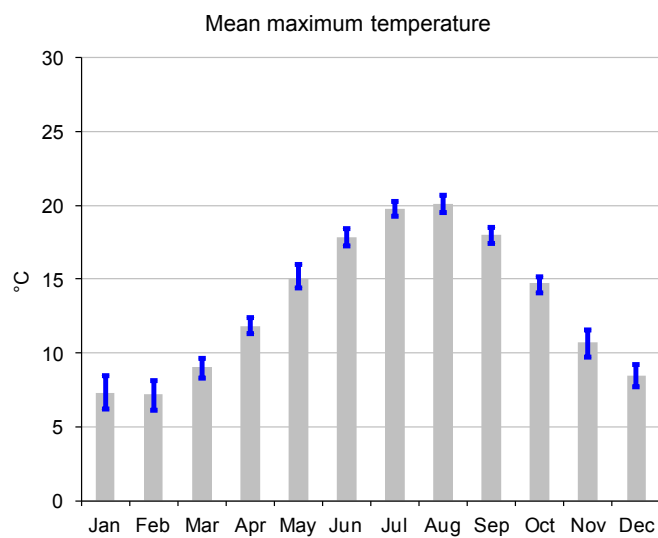
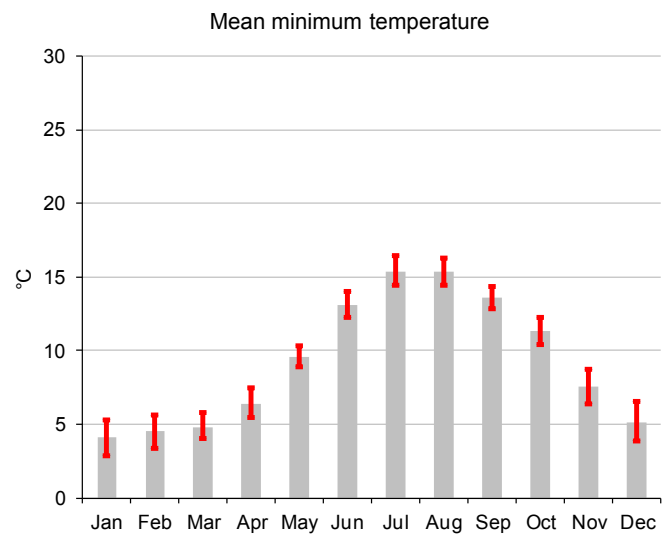
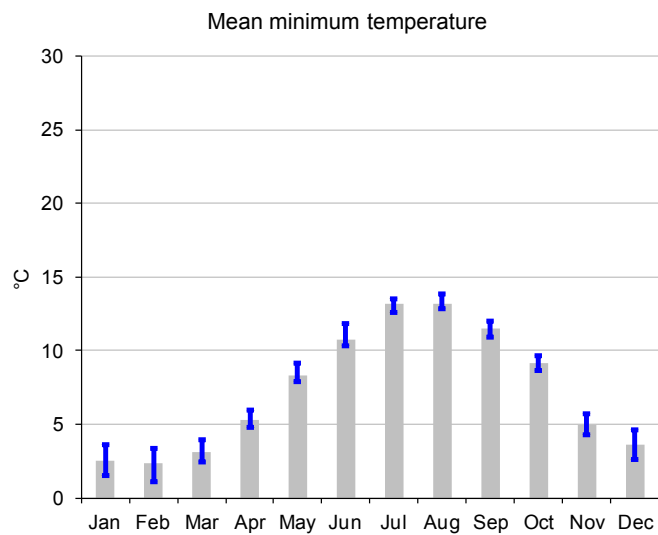
- **The freshwater scrape at North Wall** is a separate hydrological entity, but the hydrological link from Pagham Rife is not within RSPB control. EA has renewed the dropboard sluice here.
  - **Ferry Long Pool** was once managed with sluices, but these have been buried under accumulating silts. There is now no water control.
  - **Chapel Meadow** The water pipe through Chapel Meadow has been repaired **If the tidal flap at Sidlesham Quay fails**, there is the risk that saltwater on a spring tide would run into Chapel Meadow
- The hydrology of the field systems within the Reserve is poorly known. It would appear that the depth of the topsoil, which lies over the impermeable clay sub-soil, largely governs surface water levels from rainfall and seasonal flooding. Any gradient occurring within the clay/top soil interface therefore directly influences drainage. In 1994 and 2001, following extraordinary periods of heavy rain, areas on the eastern side of Chichester were seriously flooded. Much of the excess water flowed down the Pagham Rife and inundated the fields above the North Wall. These events led to the Environment Agency's implementation of the River Lavant Flood Alleviation Scheme that resulted in a new outfall structure for the Rife at North Wall, additional culverts and a reprofiling of the Rife itself.

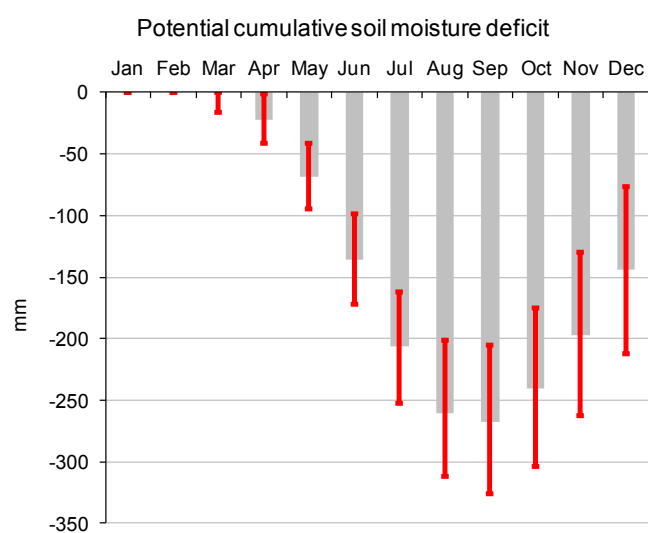
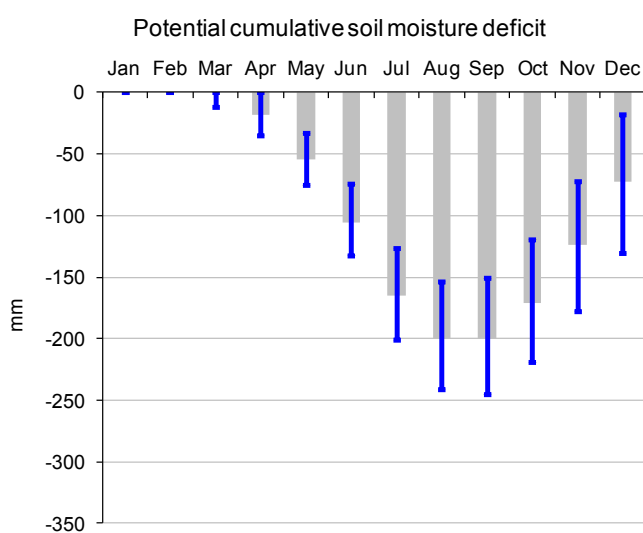
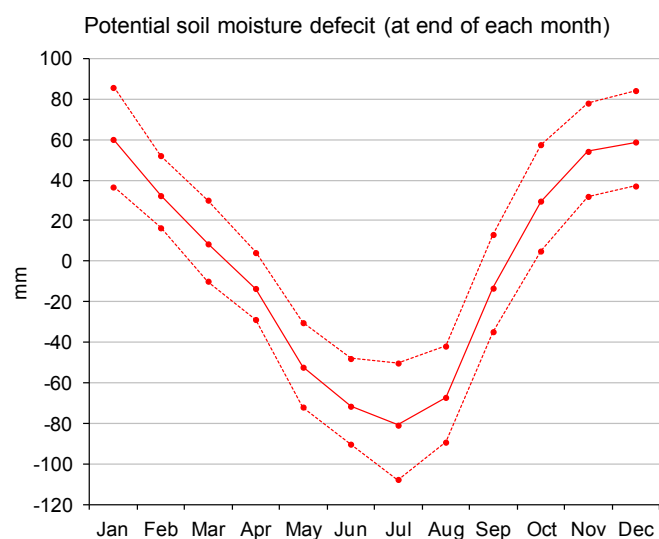
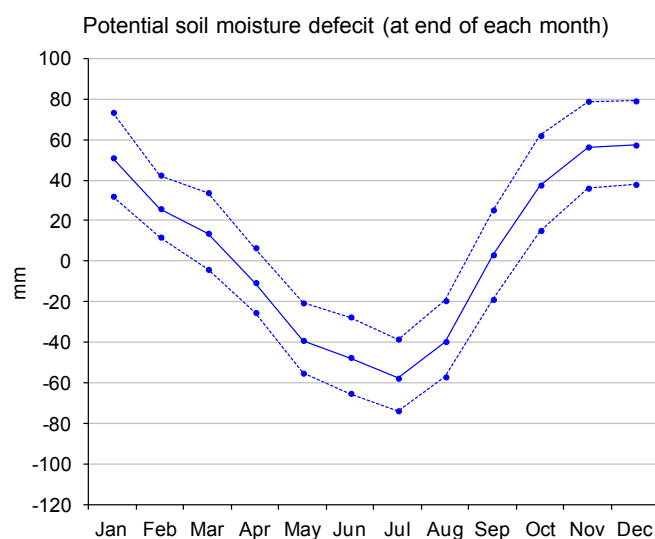
### 1.2.3. Projected changes in climate

Climate change is expected to have significant effects on weather patterns and will ultimately result in habitat changes. Changes in sea level in south east England will have a direct impact on the West Sussex coast and affect habitats and the design of future coastal defences. More volatile weather patterns are likely to include more frequent droughts, storms and other extreme weather patterns and events. In general terms the graphs below indicate that the climate will get warmer, the growing season will increase and the ground is likely to dry out more.

*Pagham Harbour. Weather generator results for 2030s. Blue based on 1960–1990 observations, red based on high carbon emissions scenario.*







## 1.3. Biological information

### 1.3.1. Recording areas

Recording areas are shown in Maps 12b (i) & (ii), 12e and 12f

### 1.3.2. Data sources and under-recorded groups

Specific data sources are listed below, and are generally for the entire LNR.

Group	Data source(s)
Lichens	Rayner R.W. 1985 and S. Davey 2001 - 2005
All Wildlife	Bognor Regis Natural Science Society 1964
Plants	Phase II Survey by Dolphin Ecology
All groups	Incidental records collected from the public
All groups	Sussex Biological Recording Centre
Birds	Sussex Ornithological Society

All groups	Staff and Volunteers
Fungi	Sussex Fungi Group (2011)
Various groups	Environment Agency
Invertebrates	Jonty Denton (2001-2005)
<i>Coleoptera</i> (beetles)	Peter Hodge (1985 – 2004)
<i>Diptera</i> (flies)	Patrick Roper (2003-2004)
Molluscs	Martin Willing (2003 and 2006)
Moths	Colin Pratt (2001-2004), Ivan Lang 2006 to 2012
Sediment flow and deposition	University of Brighton
Vegetation Community Mapping on the Shingle Flora	ELMS Conservation Ecologists October 1996

### Under-recorded groups

Group(s)	Habitat	Current level of recording	Comments
Mosses and liverworts	Throughout reserve	No recent surveys	
Algae	Intertidal areas	No recent surveys	
Marine invertebrates	Intertidal areas	Limited surveying by Environment Agency	
Molluscs	Throughout reserve	Two surveys by Martin Willing (2003 & 2006). <i>Caecum armoricum</i> discovered in 2007 (Pain c, Wilkinson S and Light J. Two further sites for C.a. de Folin, 1869, formerly known only from The Fleet, Dorset, as a member of the interstitial 'springs' community. <i>Journal of Conchology</i> 39: 779-780.)	
Beetles	Throughout site	Surveys: P. Hodge (01 & 04), J. Denton (01,03 & 04) and P. Roper (04,05 & 09)	
Bees, wasps and ants	Throughout site	Surveys: P. Hodge (01 & 04), J. Denton (01,03 & 04) and P. Roper (04,05 & 09)	
Spiders	Throughout site	Surveys: P. Hodge (01 & 04), J. Denton (01,03 & 04) and P. Roper (04,05 & 09)	
<i>Hemiptera</i> (true bugs)	Throughout site	A small number of invertebrate surveys have been carried out but more are required on specific groups or areas. Surveys carried out have been; P. Hodge (01 & 04), J. Denton (01,03 & 04) and P. Roper (04,05 & 09)	
Aquatic invertebrates	Throughout site	Surveys: P. Hodge (01 & 04), J. Denton (01,03 & 04) and P. Roper (04,05 & 09)	
<i>Orthoptera</i>	Throughout site	: P. Hodge (01 & 04), J. Denton (01,03 & 04) and P. Roper (04,05 & 09)	
Bats	Throughout site	One survey M. Love 1999	
Lichens	Shingle banks	Only survey S Davey 2004	

### 1.3.3. Habitats

#### NCC Phase 1 habitats on the LNR

Note: The following areas are for the entire LNR as the boundaries currently stand, including areas for which the RSPB does not have management control.

Habitat		Code	Status	Area (ha)	Comments
Semi-natural broadleaved woodland	Habitat type II, high forest, ancient woodland, pollard.	A.1.1.1		6.2	
Dense scrub and scattered scrub	Habitat type II	A.2.1 A.2.2		2.6	
Unimproved wet neutral grassland	Habitat type II	B.2.1		2.1	includes Sea Couch
Unimproved dry neutral grassland:	Habitat type I.	B.2.1		3.3	Includes Red Fescue, Early Hair-grass, Yellow-horned Poppy, Sea Kale and Childing Pink. Mosses include <i>Hypnum cupressiforme</i> ; lichens include <i>Cladonia rangiformis</i> , <i>C. chlorophaea</i> and <i>C. conista</i> .
Acidic marshy grassland	Habitat type II, drainage	B.5		2	Includes Saltmarsh Rush, Sea Club Rush, Common Reed, Southern Marsh Orchid, and Glasswort spp.
Ruderal tall herb: scattered	Habitat type III.	C.3.2		35.4	
Single species dominant swamp	Habitat type I, bird interest, invertebrate interest, brackish water specialists, reed cutting.	F.I.I		6.8	
Standing water	Habitat type II, bird interest, brackish water.	G.I		2.1	Includes Horned Pondweed and Beaked Tasselweed
Running water	Habitat type II, bird interest.	G.2		3	Includes Fennel Pondweed
Intertidal: mud and sand and green algal beds	Habitat type I, bird interest, bait digging.	H.I.I H.I.1.2		140.6	Includes <i>Enteromorpha</i> spp. Eelgrass spp
Coastal lagoon	Habitat type II, bird and invertebrate Lagoon specialists.	H.7		15	Includes Beaked Tasselweed
Saltmarsh	Habitat type I, bird interest.	H.26		155.8	Includes Sea Purslane and Glasswort spp.
Shingle (bare and vegetated)	Habitat type I, bird interest, rare species,	H.3		AHW 28.9	Includes Ray's Knotgrass, Yellow Vetch and Childing Pink.



	Little Tern.			BHW 48.4	
Intact hedge and hedgerow trees	Habitat type H, bird interest.	J.2.1 J.2.3		Length: 13.6 Km	
Arable/cover crop	LNR, bird interest.	<b>J.11</b>		6	
Total				406.5ha	

### 1.3.4. Vegetation communities

Areas of National Vegetation Communities (NVC) on the reserve are shown in the table below. Note that very little of the reserve has been assessed according to the NVC at present. Areas are for the entire LNR.

NVC community	Status	Area (ha)	Comments
UNIMPROVED NEUTRAL GRASSLAND	SSSI/SPA/ Ramsar site	2.3	Survey carried out 2009
SM18 – <i>Juncus maritimus</i> salt-marsh community			
MG5 – <i>Cynosurus cristatus</i> - <i>Centaurea nigra</i> grassland			
S4 – <i>Phragmites australis</i> swamp and reedbeds			
SEMI-IMPROVED NEUTRAL GRASSLAND (FERRY FIELD)	SSSI/SPA/ Ramsar site	15.7	Survey carried out 2009
MG10 – <i>Holcus lanatus</i> - <i>Juncus effusus</i> rush-pasture			
MG6 – <i>Lolium perenne</i> - <i>Cynosurus cristatus</i> grassland			
MG11 – <i>Festuca rubra</i> - <i>Agrostis stolonifera</i> - <i>Potentilla anserina</i> grassland			
SM18 – <i>Juncus maritimus</i> salt-marsh community			
S4 – <i>Phragmites australis</i> swamp and reedbeds			
SEMI-IMPROVED NEUTRAL GRASSLAND AND SALTMARSH (HALSEY'S FARM)	SSSI/SPA/ Ramsar site	16.7	Survey carried out 2009
SM6 – <i>Spartina anglica</i> salt-marsh community			
SM14 – <i>Halimione portulacoides</i> salt-marsh community			
SM24 – <i>Elymus pycnanthus</i> salt-marsh			
MG10 – <i>Holcus lanatus</i> - <i>Juncus effusus</i> rush-pasture			
MG11 – <i>Festuca rubra</i> - <i>Agrostis stolonifera</i> - <i>Potentilla anserina</i> grassland			
MG11b – <i>Festuca rubra</i> - <i>Agrostis stolonifera</i> - <i>Potentilla anserina</i> grassland ( <i>Atriplex prostrata</i> sub community)			
MG7e – <i>Lolium perenne</i> - <i>Plantago lanceolata</i> grassland			
S19a – <i>Eleocharis palustris</i> swamp ( <i>Eleocharis palustris</i> sub community)			
SEMI-IMPROVED NEUTRAL GRASSLAND (GLEBE	SSSI/SPA/	1.5	Survey carried out

MEADOW AND THE SAM)	Ramsar site / SAM		2006
MG6 – <i>Lolium perenne</i> - <i>Cynosurus cristatus</i> grassland			
SALTMARSH	SSSI/SPA/ Ramsar site	125.4	Survey carried out 2009
SM6 – <i>Spartina anglica</i> saltmarsh community			
SM14a – <i>Halimione portulacoides</i> saltmarsh community ( <i>Halimione portulacoides</i> sub-community)			
COASTAL VEGETATED SHINGLE Church Norton Spit	SSSI/SPA/ Ramsar site	13Ha	
Pagham Spit		13.5 Ha	
NVC Community SD1 <i>Rumex crispus</i> / <i>Glaucium flavum</i> to be confirmed by survey			
Total		188.1 Ha	
<b>Linear communities along ditches</b>	<b>Status</b>	<b>km</b>	<b>Comments</b>
not surveyed			
<b>Total</b>			

### 1.3.5. Important plant and animal species

Figures here are quoted for the entire LNR, and not just the land managed by the RSPB. The RSPB may not have management control, but is required to monitor throughout the LNR

The relevant statuses of each species are according their national status. For birds, the Red/Amber/Green statuses are from the Birds of Conservation Concern (2009). 'BAP' refers to the national Biodiversity Action Plan overseen by JNCC (Defra). 'RDB' refers to the Red Data Book status of species, overseen by JNCC.

#### Plants, Lichens, Mosses and Fungi

Species	Population size	Status	Comments
<i>Xanthoria candelaria</i> (Lichen)	Unknown	Nationally important	Church Norton Spit
<i>Macentina stigonemoides</i> (Lichen)	Unknown	Nationally important	Church Norton Spit
Childing Pink <i>Petrorhagia nanteuilii</i>	9 ha across Church Norton Spit also small populations on Tern Island and Pagham Spit	Nationally important	One of less than 10 sites in the country, and perhaps just one of two native sites in the country. Presently on both of the shingle spits but recently slowly declining on the Pagham Spit where high level of disturbance. Doing exceptionally well on Church Norton Spit - one of the largest colonies in the UK in an area of restricted access. There are claims locally that unauthorised planting may be taking place

			on Pagham Spit.
Bulbous Foxtail <i>Alopecurus bulbosus</i>	Unknown	Nationally rare	Ferry Field
Lesser Quaking Grass <i>Briza minor</i>	Unknown	Nationally Scarce	Originally in Compartment 9. Not recorded recently.
Black Poplar <i>Populus nigra betulifolia</i>	90+ trees around site	Very rare.	One master tree at Church Norton, a large number has been planted around the site.
Divided Sedge <i>Carex divisa</i>	Abundant in Chapel Meadow; also present in Ferry Field	Nationally rare	
Southern Marsh Orchid <i>Dactylorhiza praetermissa</i>	5000-12000	Locally common	Present in large numbers in Chapel Meadow and in small numbers in other wet places
Eelgrass spp <i>Zostera</i> spp.	Two small colonies in the harbour	Scarce	Rediscovered in 1992 and mapped by the EA in 2007 (surveyed by EA annually)

### Breeding birds

Species	Popn. Size (5yr average, 2008-12)	Status	Comments
<b>WET GRASSLAND</b>			
Redshank	3.8prs	Amber/SSS I	Relatively stable after slump at start of 2000s – see graph of Ferry Field population – poor productivity.
Lapwing	12.6 pairs	Red/SSSI	Have slowly increased on Ferry Field – see graph
<b>SHINGLE SPITS &amp; ISLANDS</b>			
Ringed Plover	11.8prs	Amber/SSS I	Relatively stable but productivity often low
Little Tern	11prs	Amber/SP A	Recently recolonised; although it is a small colony, productivity can be high (2011: 6prs produced 6-10 fledged young)
Common Tern	8.4prs	Amber/SP A	A small colony has attempted to establish on Tern Island but then deserted due to probable fox predation.
Oystercatcher	13.6prs	Amber/SSS I	Reasonably stable although more pairs are now attempting to breed in the fields. Productivity low
Skylark	6.6prs	Red/BAP	Relatively stable; the two spits support c.45% of the reserve's population
Linnet	10.4prs	Red/BAP	Has slowly increased. Pagham Spit is particularly important with up to 10prs breeding in the Gorse

<b>REEDBEDS AND RIFES</b>			
Cuckoo	Up to 9 calling males	Red	Increased slightly since 2006
Reed Bunting	19.2prs	Amber/BAP	Small increases in recent years but could be stabilising
<b>SEMI-IMPROVED GRASSLANDS, HEDGEROWS AND SCRUB</b>			
Grey Partridge	0.8prs	Red/BAP	
Linnet	9prs	Red/BAP	Increasing
Skylark	13prs	Red/BAP	Stable
Song Thrush	16prs	Red/BAP	Significant increases in 2011 but fluctuates depending on winter weather.
Whitethroat	60prs	Amber	Increasing recently
Stock Dove	2.5prs	Amber	Stable but low breeding population
Turtle Dove	0.8prs	Red/BAP	declining until there were no pairs recorded in 2011, but 1 pair in 2012
Yellowhammer	6prs	Red/BAP	Recently returned as a breeding species in the North Fields
Corn Bunting	0.2prs	Red	Occasionally breeds on the reserve. In 2011, there was a singing male sporadically in Slipe Field but no evidence of breeding
<b>WOODLAND</b>			
Little Egret	12prs	Amber	First bred in 2004 after an initial period of growth there was a decline in 2011 after a hard winter

### Wintering/passage birds

Species	Popn. Size (5yr average, 2008/09-2012/13)	Status	Comments
Dark-bellied Brent Goose	2553	Amber/SPA/Ramsar	Stable
Pintail	372	Amber/SPA	Declining
Black-tailed Godwit	660	Red/ SPA/Ramsar	After recent increases, <100 used the reserve in winter 2011-12.
Ruff	0.8	Red/ SPA	In the 1970s, this species used the reserve in large numbers with a maximum of 540 in December 1978 and they were included in the SPA designation. Since then, numbers have significantly declined.
Slavonian Grebe	12	Amber/SSSI	Use the water offshore, not the reserve. Numbers fluctuate over the winter due to weather conditions. Can reach nationally important numbers.

Grey Plover	873	Amber	Nationally important numbers in winter
Lapwing	2104	Red	Wintering numbers fluctuate due to weather conditions, with numbers increasing significantly as continental birds are pushed west in cold weather
Wigeon	2370	Amber	Generally stable at 2200 but can increase to these levels as birds are pushed to the coast in cold weather
Teal	1165	Amber	Wintering population generally decreasing
Golden Plover	624	Amber	Generally stable at 600 but can increase to these levels as birds are pushed to the coast in cold weather
Bittern	1.6	Red	Has recently become a regular winter visitor to the North Fields/Breach Pool in cold weather
Yellowhammer	10	Red/BAP	A small wintering flock since the initiation of the Slipe Field project.
Linnet	317	Red/BAP	A wintering flock since the initiation of the Slipe Field project. This has increased to 1000+ during severe weather.
Corn Bunting	0.2	Red/BAP	First wintering individual recorded in 2011 at Slipe Field.

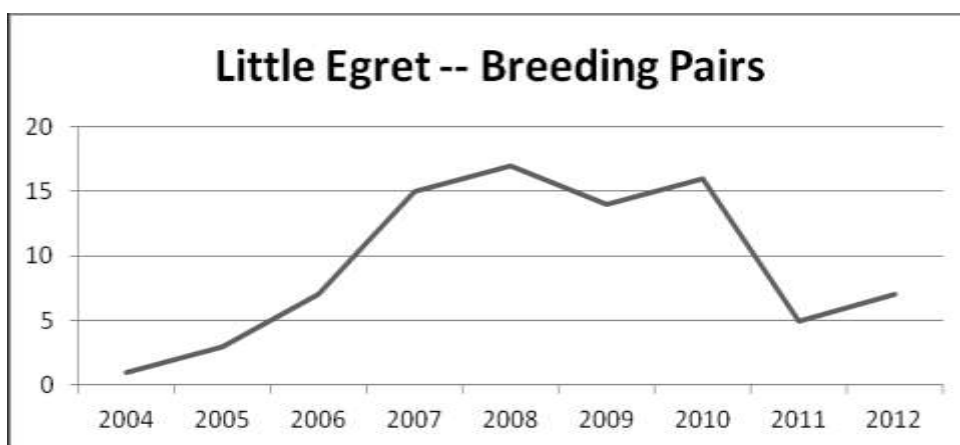
## Other Fauna

Species	Popn. size	Status	Comments
<b>Mammals</b>			
Water Vole	?	BAP	Since the control of American Mink, the population in the area is thought to have increased. Note that Water Voles are diligently monitored and conserved throughout the Manhood by MWHG.
Brown Hare	10-12		
<b>Reptiles</b>			
Common Lizard	?		
Adder	?		Population around the Visitor Centre is the most studied but is probably quite low
<b>Invertebrates</b>			
<i>Caecum armoricum</i> (a snail)	?	RDB/MCZ	Church Norton Spit
<i>Truncatella subcylindrica</i> (a snail)	?	RDB	M Willing's survey (Aug 2012) showed it was still present and extending its range east along the harbour edge of Church Norton Spit.
<i>Leucophytia bidentata</i>	?		Only recorded at one other site in VC13
Starlet Sea Anemone	?	RDB	Last recorded in 1990 in Pagham Lagoon
<i>Dromius vectensis</i> (a beetle)	?	RDB	Has been recorded on reserve but no specific location in records
<i>Epuraea silacea</i> (a beetle)	?	RDB	Recorded at Norton Priory
Hairy Rove-beetle <i>Emus hirtus</i>	?	RDB	Recorded at Owl Copse
<i>Ochthebius pusillus</i> (a beetle)	?	RDB	Has been recorded on reserve but no specific location in records

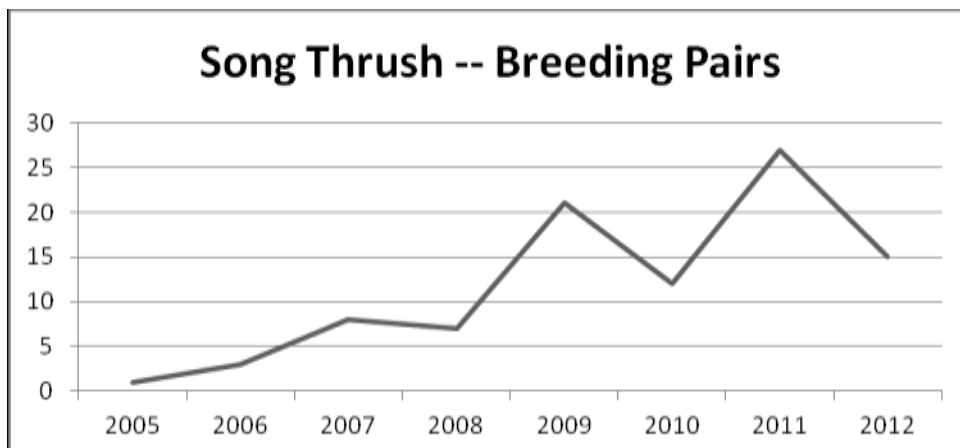
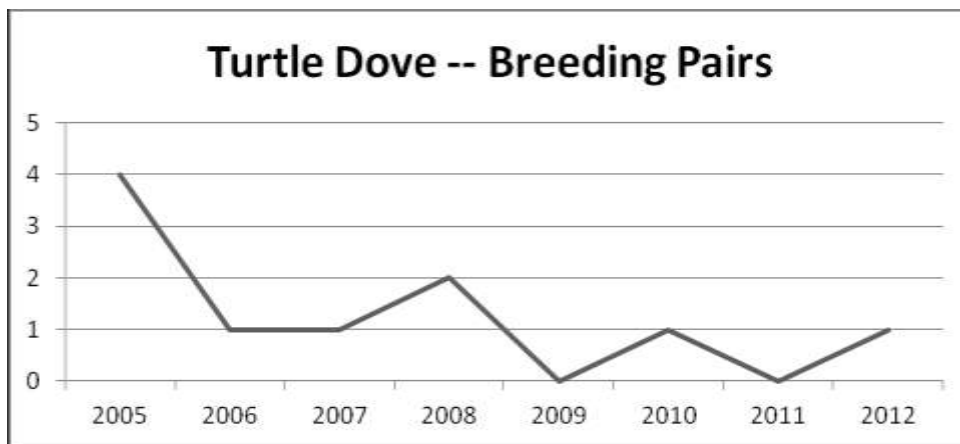
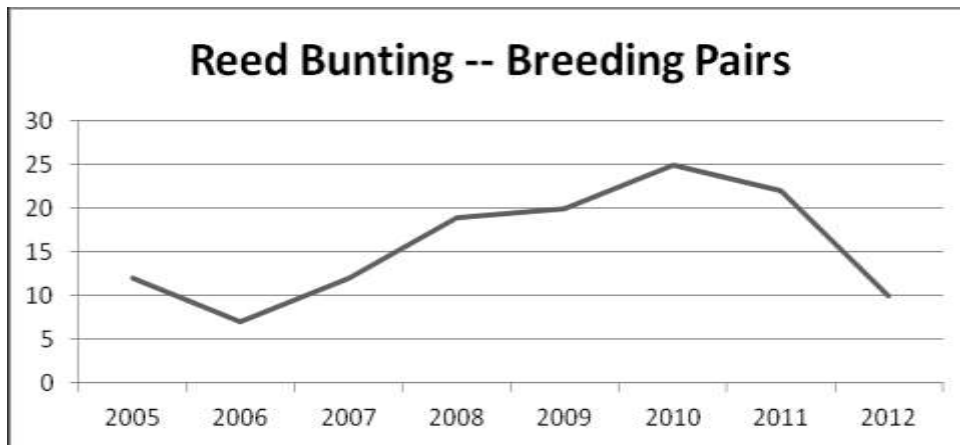
<i>Stratiomys longicornis</i> (a soldier fly)	?	RDB	Recorded at Long Pool
<i>Anasimyia interpuncta</i> (a hoverfly)	?	RDB	Has been recorded on reserve by J. Denton and J. Fry one record from Sidlesham Ferry
<i>Atylotus latistriatus</i> (a fly)	?	RDB	Recorded at Breach, Small and Long Pools
<i>Coenosia vibrissata</i> (a fly)	?	RDB	Recorded at Long Pool
<i>Haematopota grandis</i> (a horsefly)	?	RDB	Recorded at Long Pool
<i>Hybomitra expollicata</i> (a horsefly)	?	RDB	Recorded at Long Pool
<i>Limonia bezzii</i> (a crane fly)	?	RDB	Recorded at Pagham Spit
<i>Myopites inulaedyssenter</i> (a picture-winged fly)	?	RDB	Recorded at Breach Pool
<i>Meonura freta</i> (Diptera: Carnidae) (a fly)	?	RDB	Recorded in Ferry Field in 2010
Flame Wainscot (a moth)	Recorded annually	Na	Traps are placed out in Mill Pond Marsh each year to record presence
<i>Psamathocrita argentella</i> (a micromoth)	?	RDB	Recorded at Long Pool
<i>Phyllocnistis xenia</i> (a micromoth)	?	RDB	Recorded near Sidlesham
<i>Caloptilia falconipennel</i> (a micromoth)	?	RDB	Trapped at Visitor Centre
Long-winged Conehead	?		Recorded annually but no accurate population estimate; has been recorded on landfill
Grey Bush Cricket	?		Recorded occasionally on site
Mottled Grasshopper	?		Recorded occasionally on site, including on landfill
Bass <i>Dicentrarchus labrax</i>			Important nursery site

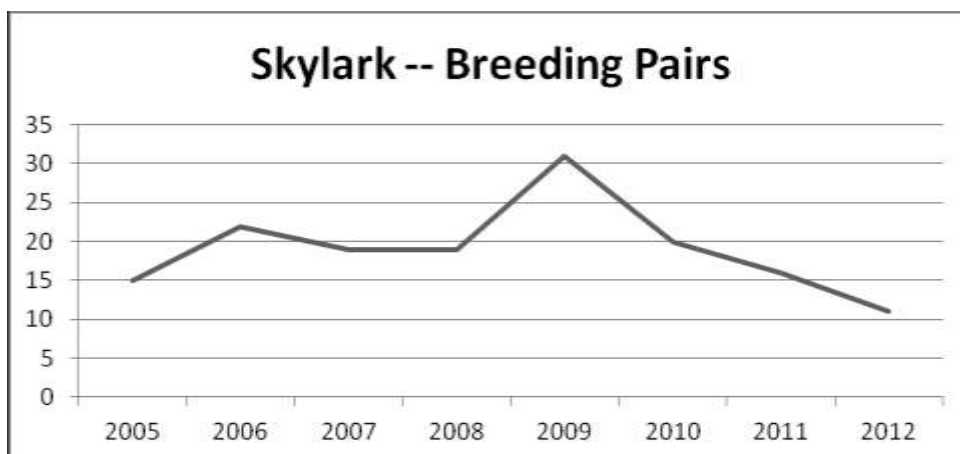
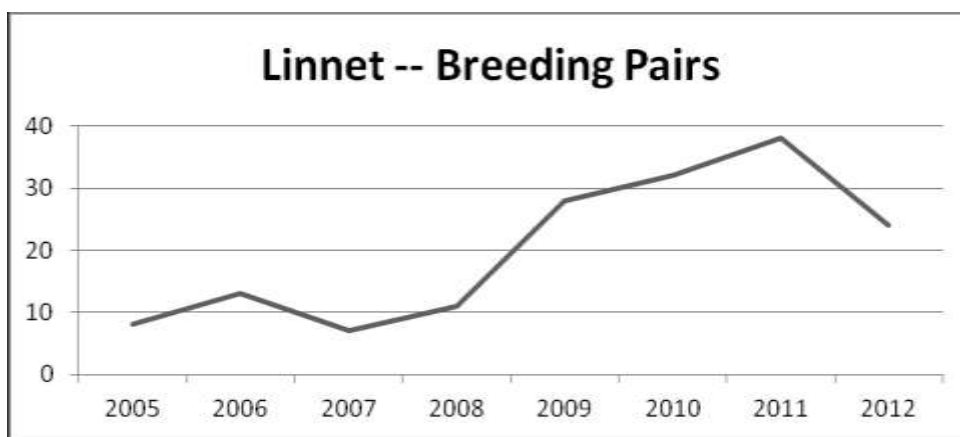
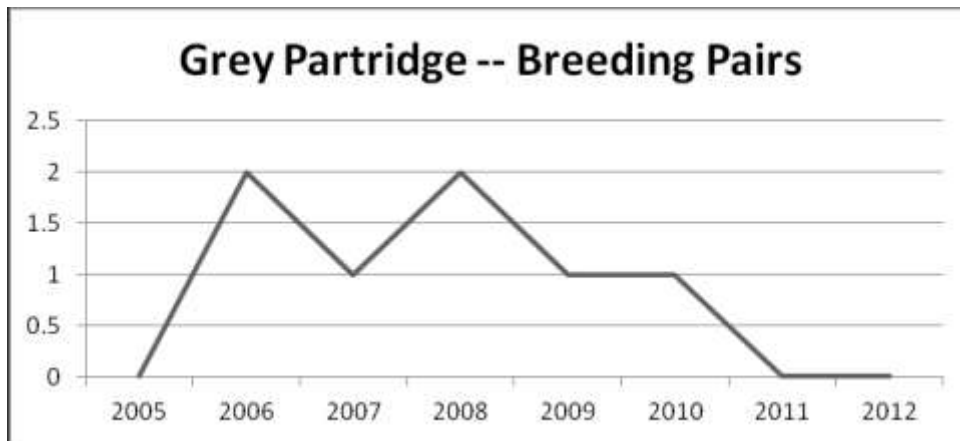
### 1.3.6. Population trends of important plant and animal species

Population trends of birds are shown below. Numbers of all the wintering wildfowl have been monitored by recording maximum monthly counts. The frequency of wildfowl counts is likely to have remained constant over the period shown.

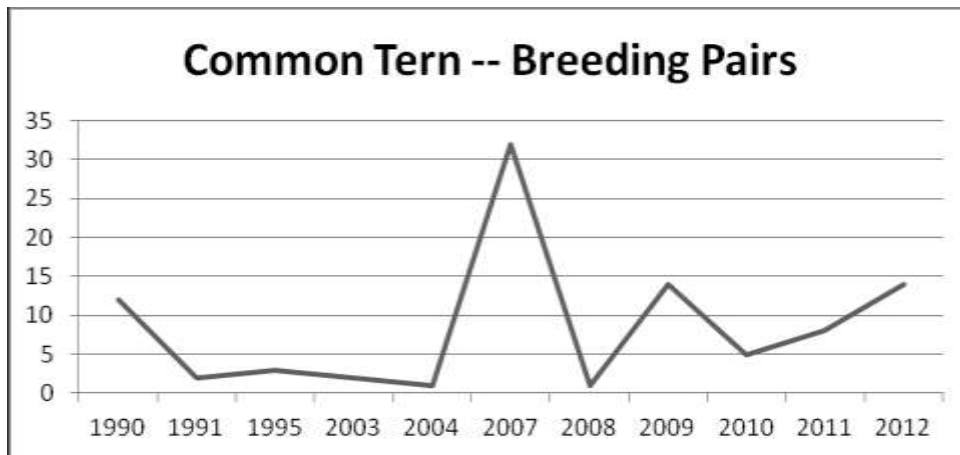


The decline came after a fierce winter in 2010-11.

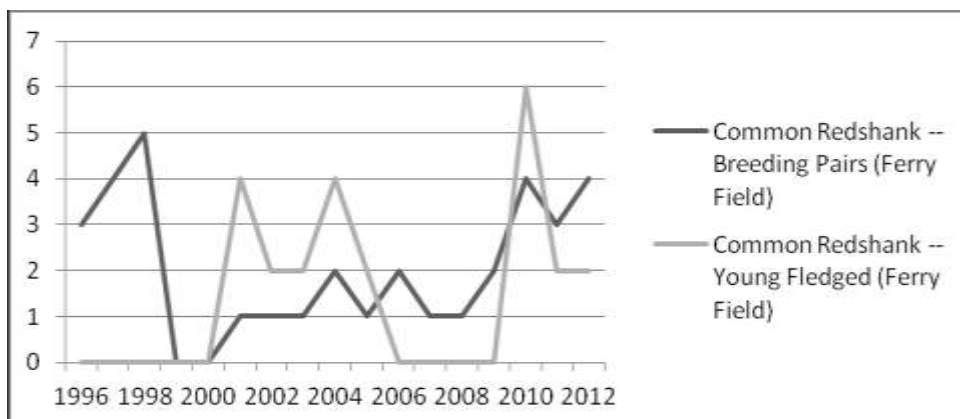
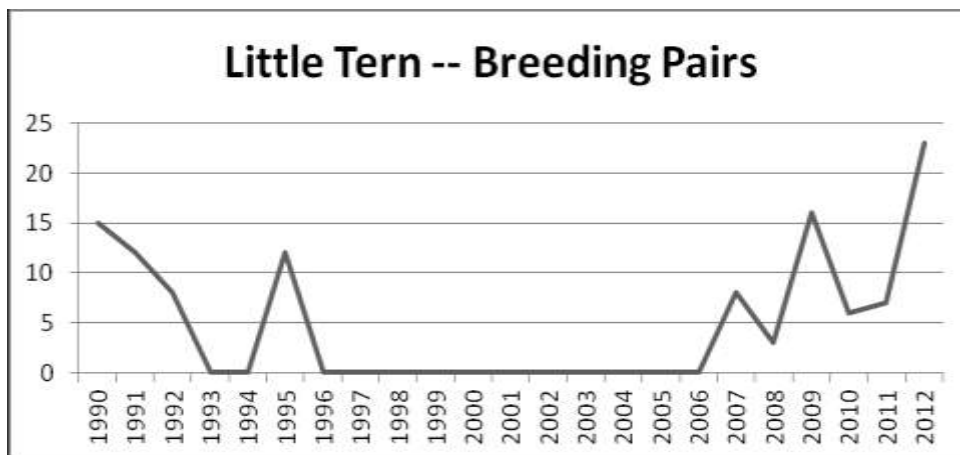


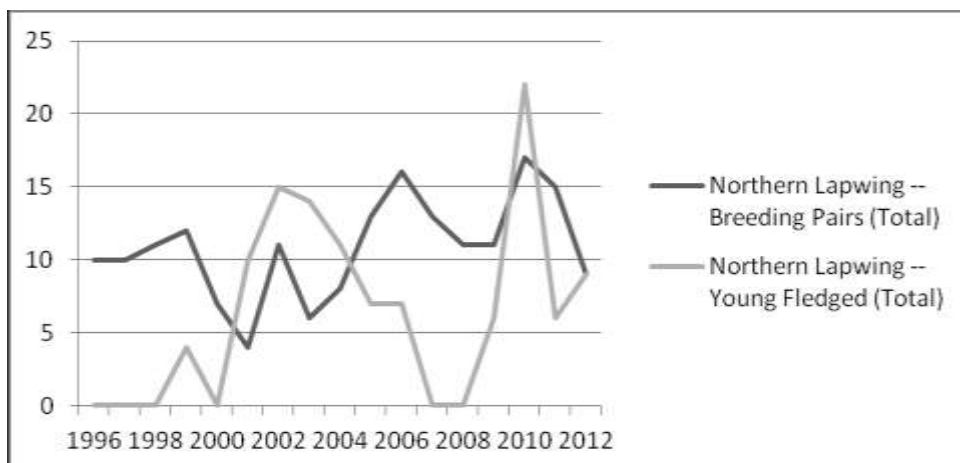
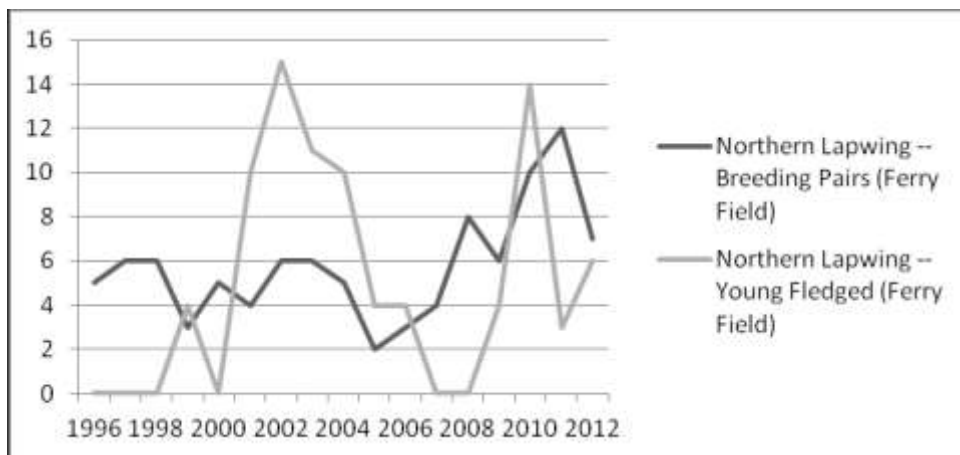
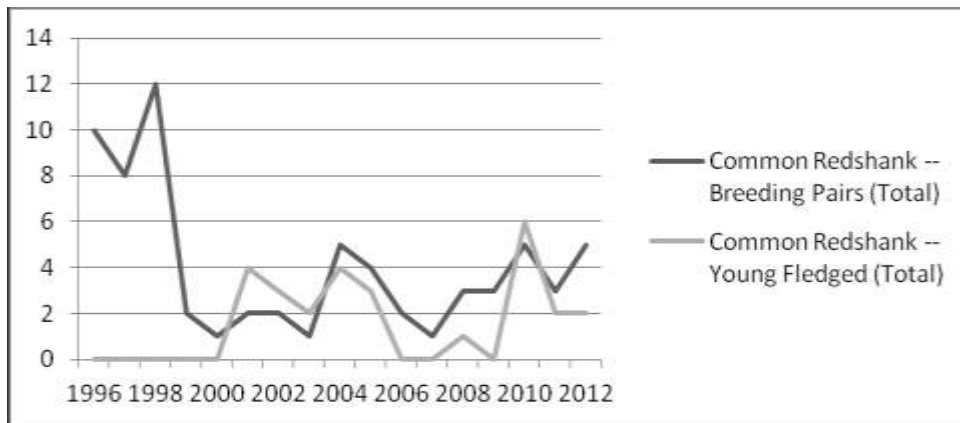


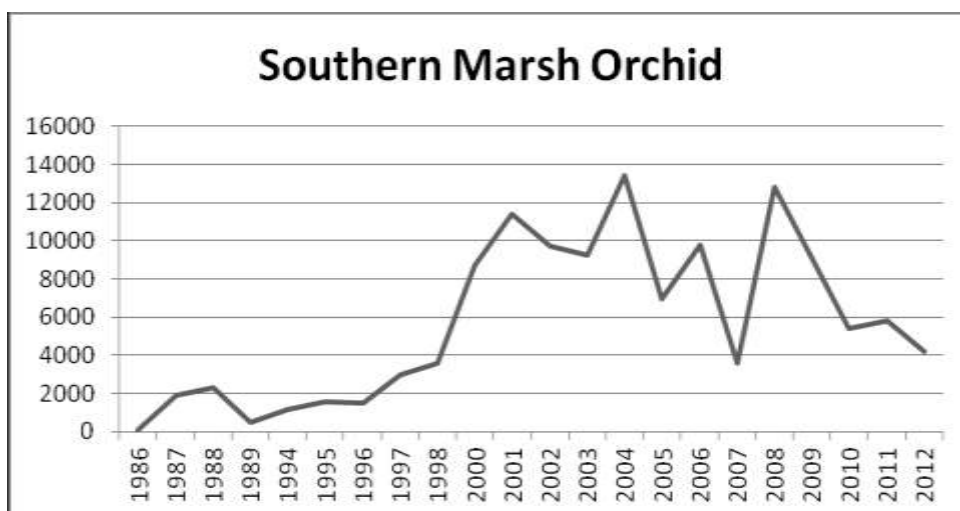
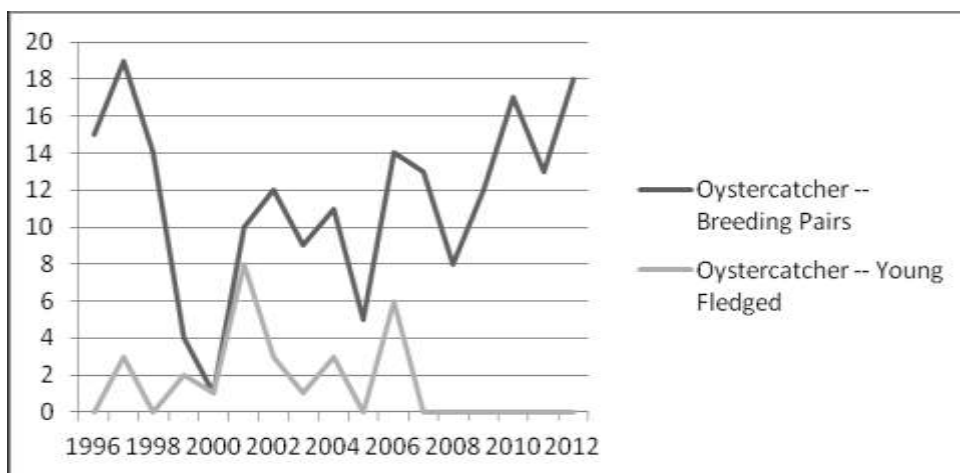
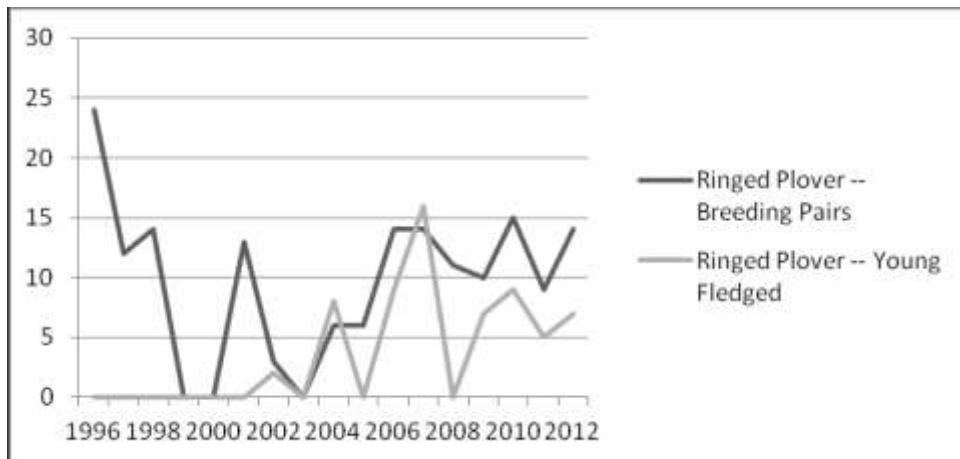


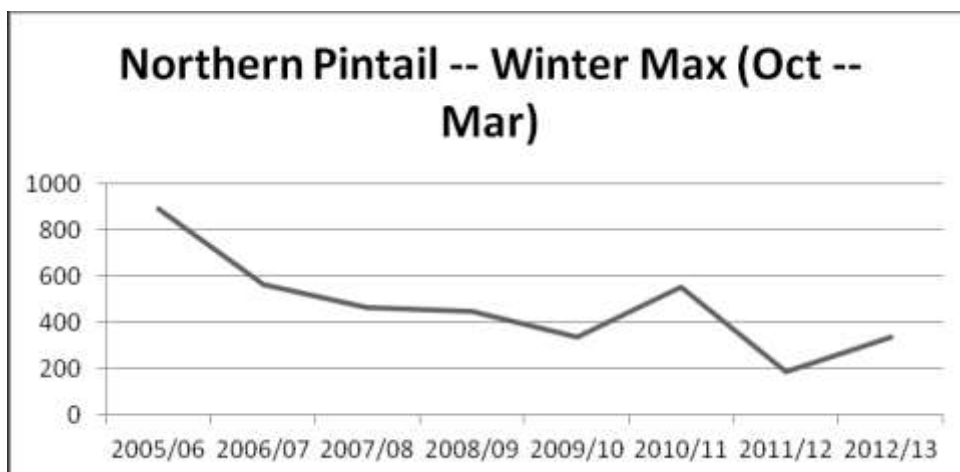
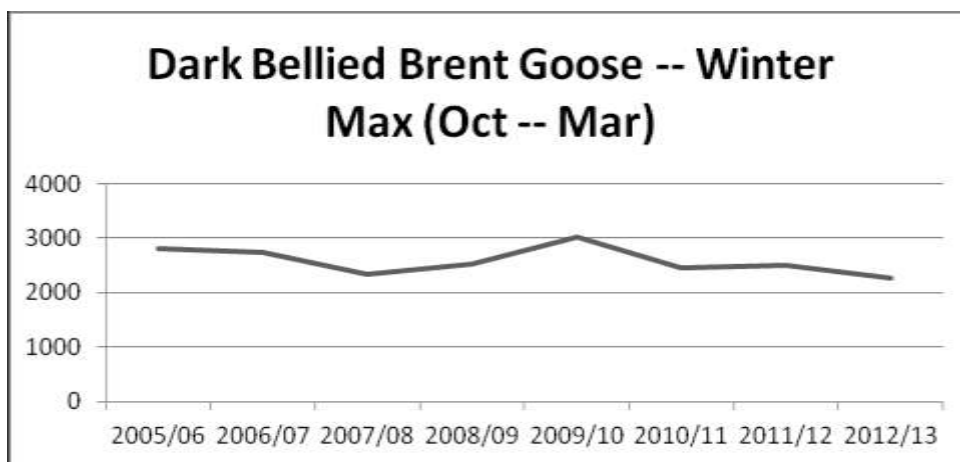
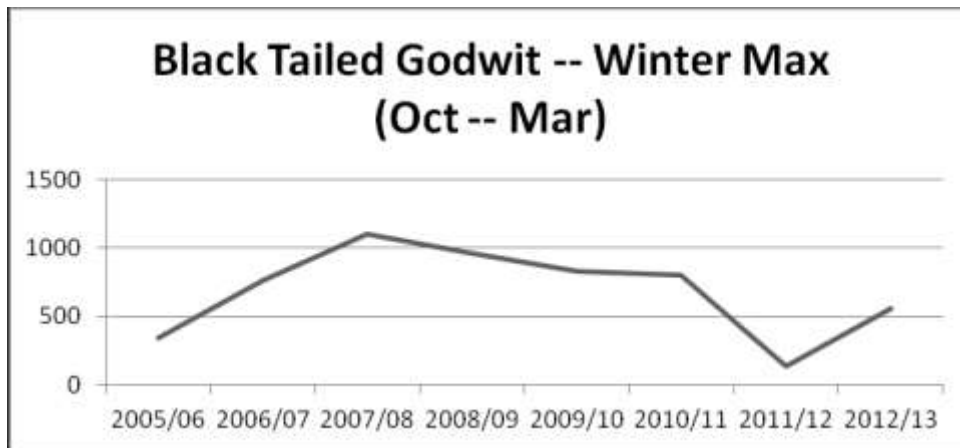


The spike in 2007 is thought to be failed breeders from elsewhere in the Solent moving in.

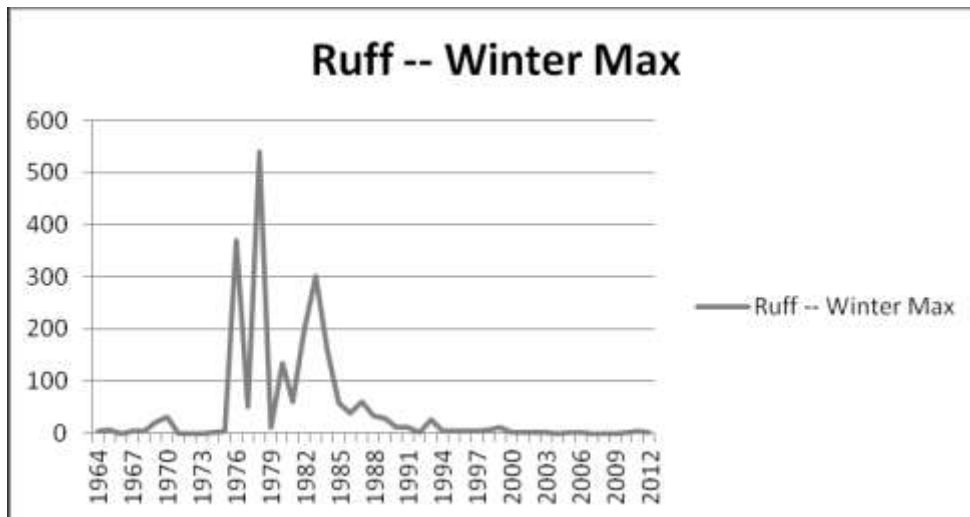








The reasons for the decline are not yet known.



## 1.4. Archaeology and history

- Pagham Harbour LNR has a varied, fascinating, and locally important history, embracing such elements as South Saxon history, trade (and piracy!), land-use change, and military use.
- **The 'Castle' at Church Norton:** a Scheduled Ancient Monument owned by West Sussex County Council and managed by the RSPB. Thought to be the remains of an early Norman ring work castle, which formerly supported a stone tower. Main period of occupation thought to be mid-11th to mid-12th centuries. Work to clear the earthworks of shrubby vegetation was undertaken in the 1970s/1980s. This work was followed up in 2001/2002 and the area fenced off from rabbits.
- **Selsey Tram:** From 1897 to 1935 the Hundred of Manhood and Selsey Tramways operated between Chichester and Selsey, passing through the Reserve. The tramway was originally a light railway that used steam engines, and petrol-engine railcars were used later. Part of the route passes through land under RSPB management.
- There are a number of other archaeological records relating to sites just outside the Reserve boundary, eg St. Wilfrid's chapel, the lost villages of Warder and Wythering. Local features of historical interest include Sidlesham Ferry and Sidlesham Mill.
- The Salt House on the North Wall is not in the LNR. It is leased by EA to WSCC and sublet to Southern Wildfowling and Wetland Management Association (now Chichester Wildfowling). In 1986, the Pagham and West Sussex Wildfowling and Conservation Association restored the dilapidated building for use as an occasional visitor centre.

## 1.5. Visitors and public affairs

### 1.5.1 Where are we now?

#### a. Why is the site special for local communities and visitors?

- Pagham Harbour is one of the few undeveloped stretches of the Sussex coast, a beautiful and peaceful landscape, with plenty of free public access - it is a great place to get away from it all
- It is close to large residential communities and is one of their few green spaces, especially at Pagham village
- There are a number of paths and trails through the LNR offering a choice of walks, both inland and around the harbour, with views of the surrounding landscape
- It is an internationally important wetland site, offering views of lots of charismatic or unusual bird species and other wildlife, often in large numbers, and some at relatively close quarters

- It is on the doorstep of large numbers of holidaymakers , staying in caravan sites nearby
- There is a rich historical heritage.
- Being an established reserve, it is well known, with a long running education service and programme of events, and with regular visitors
- There is a small Visitor Centre at Sidlesham Ferry with a free car park and toilets. At this welcome and information point visitors may buy leaflets, drinks and snacks, and make use of the picnic area.
- Note that the copse in the Discovery Area is the Douglas Taylor Memorial Copse (a former Treasurer of Sussex Ornithological Society), planted in the 1970s
- Recreational angling is popular at the E end of the LNR at Pagham Beach, recognised for Bass, Smooth-hound, Cod and rays.

#### **b. How do we work with local communities?**

- We run a Local Communities Forum, which is a solution-focused, friendly forum, chaired by a local County Councillor, where members of the community have the opportunity to raise issues that they are concerned about or would like more information about.
- We have created an e-update list to keep local people up to speed with key issues affecting the reserve, and to keep people apprised of work due to take place.
- There is an 'open-door' policy, in which we endeavour to make ourselves as available as possible for people to contact us, by phone, email or in person, to discuss any issues they may have.
- We seek to be present at key local forums for which we are not the responsible authority, such as the Coastal Issues Group, to ensure that we are well apprised of the issues and can contribute swiftly and effectively to help achieve favourable outcomes for all.
- We seek to ensure we are well informed about local issues
- We are particularly keen that key stakeholder groups such as Parish Councils feel able to contact us and 'call us in' if there are any key issues they need information on or wish to question.
- We attend committee meetings and the AGM of the Friends of Pagham Harbour.
- We hold public consultations regarding our Management Plans.
- We seek to ensure that any management work we do does not impact to the detriment of local communities.
- We try to find ways to manage visiting to the reserve that helps support the local economy

#### **c. Visitor numbers and trends**

Over 200,000 visits are made to the LNR each year, and possibly in excess of 250,000. Being a site with many access points, it is difficult to precisely count the number of people visiting the LNR, but the estimates are based on good data.

The following table contains the most accurate figures to date, collected during the Pagham Harbour Visitor Centre Feasibility Study (averages for 2007-10). All figures are of 'visits' (i.e. the number of times people access the reserve, e.g. if a person visits the reserve every day of the year, they would count as 365 visits), and not of car counts. Key access points not counted in this study include Greenlease Farm and Sidlesham Quay, and car counters at Pagham Spit made no account of visitors on foot. There is also no count for beach users at Pagham Beach.

	<b>Visitor Centre car park</b>	<b>Visitor centre (subset of those in car park)</b>	<b>Church Norton East Path</b>	<b>Church Norton Church</b>	<b>Pagham Spit (pre car park closure)</b>	<b>North Wall</b>	<b>Total</b>
Jan	3888	1358	1117	241	4573	2135	<b>11954</b>
Feb	4783	1560	1250	339	3996	2143	<b>12511</b>
Mar	6005	1724	1482	399	5006	1968	<b>14860</b>
Apr	6488	2311	2373	693	6311	2611	<b>18476</b>
May	6777	2206	2069	624	6241	3295	<b>19006</b>
Jun	6222	2418	2136	442	6737	4090	<b>19627</b>
Jul	7215	2378	2425	584	7569	4273	<b>22066</b>
Aug	7517	4355	3519	757	9041	6017	<b>26851</b>
Sep	8763	2728	2702	750	7558	3200	<b>22973</b>
Oct	6906	2272	1857	611	5941	2400	<b>17715</b>
Nov	4330	1213	877	277	4270	1992	<b>11746</b>
Dec	3535	1048	915	230	2760	1055	<b>8495</b>
	<b>72428</b>	<b>25568</b>	<b>22721</b>	<b>5946</b>	<b>70003</b>	<b>35179</b>	<b>206277</b>

The closure of Pagham Spit car park by the owners in summer 2011 will have significantly reduced the number of people accessing the reserve at that point.

<b>Year</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>	<b>2010/11</b>	<b>2011/12</b>	<b>Comment on five year trend</b>
Event attendees	TBC	TBC	TBC	TBC	1000	
Education visits (pupils)	unknown	1188	1745	887	1050	2010/11 – Education Officer in post for 6 months.
Annual income from public donations	£1.2K	£2.5K	£1.6K	£1.9k	£1.4k	2007/08 figures incomplete. Major annual event was entry by donation until 2009/10 when admission charge was brought in. 2010/11 includes £1K donation from the Visitor Payback scheme.
Annual sales income	£4.6K	£6.5K	£8.4K	£9.4K	£10.9K	2007/08 - figures incomplete. Stock has been depleted during 2011/12 as shop is phased out.
Annual income from event charges	£0.1K	£0.3K	£1K	£0.3K	£1.6K	2007/08 - figures incomplete. Marine Madness did not run in 2010/11.

#### **d. How visitors are counted**

A series of six, movable electronic counters are in place, managed by Visitor Services staff:

- 2 pressure pads to record footfall
- 2 vehicle counters
- 2 infrared beams to record passers by.

### **e. Profile of visitors**

There have been a number of small visitor surveys over the years. The survey results consistently show that a high proportion of our visitors are coming to the LNR for bird watching, walking, walking their dog and taking in the scenery. Many visitors are local, but there is a significant audience of holiday makers and day trippers, from London and the south east.

The following are headline results from the key visitor surveys:

#### **1992 WSCC survey:**

- 90% of visitors travelled less than 50 miles on the day
- 89% came by car
- 21% were holiday makers, 91% of which were staying in West Sussex
- 12% visited daily, 25% weekly, and 22% monthly
- 47% of visitors were interested in birdwatching to some extent, 21% came to get exercise and fresh air, 12% for walking the dog, 11% for walking and 11% for enjoying the view.

#### **1998 Visitor Survey by B Williams.**

- 49% came from West Sussex, 13% from Surrey, 7% from Hampshire, 5% from London.
- 75% travelled from home, 23% travelled from somewhere other than home
- 84% travelled less than 50 miles (presumably on the day, but not stated)
- 89% came by car
- 9% visited daily, 16% weekly, 19% monthly, 23% seasonally, 18% first timers
- 46% were interested in birdwatching; 33% came primarily for walking, 22% for birdwatching, 18% for exercise, 11% for dog walking
- 86% used the car parks, 40% the toilets, 31% the Visitor Centre, 30% the 'nature trails', 32% the bird hides

#### **Feasibility Study visitor survey, 2008.**

- The majority travelled to Pagham Harbour by car, even those who lived locally
- the majority are day visitors from home
- the majority fall in to the age category of 41 to 60
- the majority came to Pagham Harbour for walking and the wildlife
- and many were repeat visitors.

In addition to these results, other key public activities on the reserve include:

- Bait digging and fishing by permit holders
- Cycling on Sustrans 'Bill Way'
- Horse riding on the bridleway
- Beach use
- School trips
- Organised events.

## **1.5.2 Facilities and services**

### **a. What is the history of visitor provision?**

- The Local Nature Reserve was designated in 1964. WSCC managed the visitor provision until Feb 2012.
- The Visitor Centre was built in 1976 and the classroom added in 1998
- Events have been running since the late 1970s. Since 2007 the number of public events increased significantly to around 50 per year.
- Since 1983, there has been a dogs-on-lead byelaw. However, this was not actively enforced until 2001/2002 when three distinct routes/areas were earmarked and promoted as 'dogs off lead' if under close control. Those areas are: the lower path alongside North Wall; the path



from Pagham Spit car park to Slipe Field in Pagham; and the footpath through Yeoman's Field in Sidlesham). Dogs are also allowed off-lead but under close control onto areas of the outer beach. Fences were installed to prevent dogs and people from straying into sensitive nesting areas. A strict dogs-on-leads policy is actively enforced elsewhere on the reserve.

- In 2003, an area adjacent to the Visitor Centre was fenced off as an outdoor classroom and named the Discovery Area. In 2008, the Discovery Area was awarded a small grant and was enhanced to inspire visitors that small changes can make big impacts for wildlife.
- Until the end of 2011, visitors were served by three car parks - Visitor Centre, Church Norton and Pagham Spit. Pagham Spit car park, which could hold c.40 vehicles when open, closed to the public in July 2011 on the instruction of the owners (Pagham Beach Holdings Ltd), concerned about the impact of visitors on the unadopted road leading to the car park. Reserve staff open this facility for a very limited number of organised events and education visits, and to manage the land.
- The waymarked trail from the Visitor Centre was created in the 1980s. In the early 1990s, a similar trail was introduced around Pagham Spit, but this was phased out due to the lack of a local outlet for the leaflet.
- A formal education service has operated since the 1980s. Under RSPB management, an Education Officer was employed on a permanent employment contract for the first time in spring 2012. Currently the service attracts upwards of 1000 pupils a year.
- A major Feasibility Study was conducted between 2006-10 by WSCC, the EA, RSPB and the South East England Development Agency (SEEDA) to investigate the options for a new Visitor Centre.

#### **b. What is the current visitor experience offered?**

- Access to long, quiet, coastal walks
- Good free parking
- Friendly welcome, plus information at the small visitor centre, with toilet facilities and very limited catering
- Note however the geography of the site, which has three distinct and geographically separate access points, and hence many visitors do not get to access the Visitor Centre.
- Guided activities – events and education service.

#### **c. What are the wildlife and other spectacles through the year?**

**All seasons:** The unspoilt and extensive coastal and harbour landscape, including great sunsets, provide year-round attractions.

##### **Monthly spectacles:**

January	Brent Geese peak at up to 3000 birds. Good numbers of winter wildfowl and waders including Pintail, Wigeon, Teal, Grey Plover and Dunlin.
February	Large numbers of wildfowl and waders which can increase dramatically during a cold spell. Offshore and on lagoons there are divers, grebes and ducks such as Eider and Red-breasted Merganser.
March	Early summer visitors start to arrive such as Wheatears, Sandwich Terns, Sand Martins and Chiffchaffs. Strange purple fleshy leaves of Sea Kale emerge from the shingle.
April	Many breeding migrants arrive. Bird song becomes more noticeable; butterflies emerging.
May	Breeding season activity. Late migrants such as Swift, Spotted Flycatcher and Turtle Dove are still arriving. Young Shelduck are seen. Sometimes rare birds turn

	up. Southern Marsh Orchids in flower. May blossom.
June	The vegetated shingle areas are at their best with colourful flowers such as Yellow Horned Poppy and Viper's Bugloss. Birds are busy rearing their young.
July	Good numbers of butterflies and dragonflies. The first returning wading birds are seen, especially Black-tailed Godwits. Childing Pink in flower
August	Autumn migration. A good month for migrant butterflies, moths and dragonflies. Usually the peak month for Little Egrets.
September	Probably the best month for rare birds. Curlew Sandpipers on the Ferry Pool. The first Brent Geese arrive. Hawthorn berries. Migrant Hawker dragonflies on the wing.
October	Wader numbers increase. Good chance of rarities. Red Admirals and Common Darters may still fly on sunny days.
November	Brent Geese arrive in large numbers. The North Fields can be a good feeding site for wildfowl and waders if flooding occurs. Winter thrushes and finches pass through.
December	Numbers of geese, ducks and waders continue to increase. A good month to see Slavonian Grebe offshore at Church Norton.

#### d. What facilities do you have?

Facility	Comments
<b>Visitor Centre</b>	Temporary building in need of replacement. Feasibility Study into new centre has been completed and sets out possible next steps, dependent on more investigative work.
<b>Visitor toilets</b>	Rather old, cramped and difficult to service to high standard. Disabled toilet not up to standard and difficult to access.
<b>Welcome team</b>	One full time equivalent Visitor Services Warden post, 30 regular Stewarding Volunteers (on rota), one part-time Community Liaison Officer out on site.
<b>Picnic benches outside visitor centre</b>	Area not landscaped in any way
<b>Visitor Centre car park</b>	Open 24/7. With one Blue Badge bay and coach parking. It is short of welcome and orientation information. Bay markings are poor. Car park is liable to flood at entrance after rain. Overspill car park is closed with a gate at night.
<b>Church Norton car park</b>	Open 24/7. Small car park shared with church. Signs reserving parking spaces for church goers need replacing. Road surface is rutted.
<b>Pagham Spit car park</b>	Opened solely for events and education. Its continued use is the subject of discussion between PBHL and WSCC.
<b>Waymarked nature trail</b>	From Sidlesham visitor centre only
<b>Classroom</b>	Portacabin. No cover when students are outside.
<b>Cycle racks</b>	Facility for six bikes at the Visitor Centre
<b>Boardwalks</b>	Two recycled plastic boardwalks at Pagham Spit with viewpoints and wheelchair passing bays. Is now poorly located after car park closure.
<b>3 bird hides</b>	Ferry Pool hide is in a state of disrepair. Pagham Spit hide is locked to the public from spring-autumn and is something of an eyesore. Hide at Church Norton is good state, but not necessarily in the best location. All three need the addition of interpretation.
<b>5 site specific</b>	Relatively recent additions, which need rebranding. Under WSCC, these

<b>interpretation lecterns</b>	were intended to be part of a larger suite of welcome and orientation signs. Location needs review in light of Pagham Spit car park closure.
<b>Benches</b>	Several around the Reserve at key rest and viewpoints.
<b>Discovery Area</b>	Developed with Lottery Funding in 2008 as an outdoor education area for schools and families.
<b>Reserve map, introduction and dog walking leaflets</b>	Produced by WSCC.
<b>Dog waste bins</b>	Poorly located at Pagham Spit after closure of car park.
<b>Events programme</b>	c. 50 public events per year; 20 events volunteers.

**e. What information do you have about what your visitors think about your nature reserve?**

- **2008 Visitor Survey:** 31% said they enjoy the wildlife and the excellent bird watching; 14.9% the peacefulness; 11.4% the walks.
- **Visitor Book at the Visitor Centre:** Comments largely positive. Comments (2011-12) include: “welcoming and interesting”, “as always a lovely visit”, particularly helpful volunteer”, “educational informative and relaxing”, “lovely, amazing, beautiful, brilliant and nothing much more to say about this wonderful place”.
- **Event feedback forms.** The ratings and comments are largely positive, consistently scoring very highly for the booking process, the welcome and organisation, event content, and supporting resources. The facilities are consistently scored less highly.
- **Education feedback forms:** Predominately positive. Recent comments include: “We had a fantastic time... The children were so inspired and learned lots. We will return next year!”; “An engaging day which covered all the objectives”; “The staff are always positive, engaging and enthusiastic”; and “A great trip, well organised and with real enthusiasm from the leader which rubbed off on the children.” The few negative comments are often about facilities, for example, “Perhaps a bigger room for the children – the weather wasn’t particularly good that day”.
- **We have loyal audiences** for events and education.

**f. How do people find out about the site?**

- Word of mouth
- RSPB web site
- RSPB press releases
- Events leaflet & poster distribution
- Visitor information on online search sites such as Freds Days Out, Visit West Sussex and others
- Tourist Information Centres
- Information provided to neighbouring accommodation providers
- Bird sightings online eg Sussex Ornithological Society (SOS), Birdline
- Links with local volunteer bureaux in Chichester and Arun District
- Advertisements placed in local magazines e.g. Primary Times, Selsey Life, Witterings Rag
- Staff and volunteer presence at community events and school outreach
- Links with external organisations and partnership working e.g. Chichester Festivities, Shark Trust, British Festival of Archaeology to build a public profile
- Friends of Pagham Harbour communications e.g. newsletter, AGM.
- Inclusion in externally published books and pamphlets, such as WSCC’s Wheelchair Walks

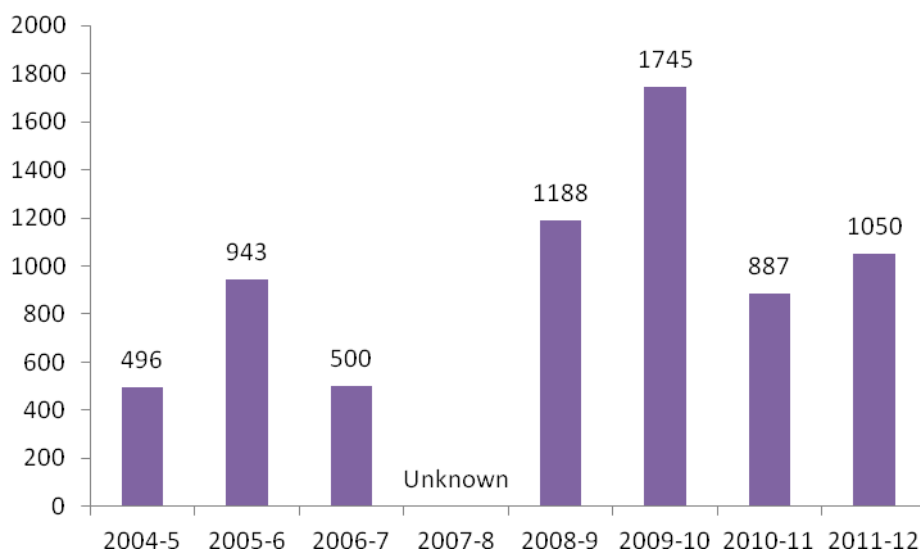
Written feedback gathered at WSCC public events suggests that attendees find out about on-site activities in the following ways:

Promotional tool	% of event attendees
Events leaflet	44%
Internet	8%
Poster	3%
Newspaper/ magazine	19%
Word of mouth/ recommendation	22%
People joining in an event during visit to reserve	4%

#### g. Education programme

- A formal education service has operated since the 1980s.
- The LNR is an excellent and inspiring place for the education of young people. As well as wildlife, it has a colourful history.
- It offers schools the chance to study many different environments, with two shingle beaches, the salt marsh, river and ponds all in close proximity.
- The team also offers outreach.
- The classroom and surrounding area sit on top of a poorly-capped landfill, where man's impact on the environment can be demonstrated; to this day, rubbish is found coming to the surface from 40 years ago.
- The Education Officer is supported by a growing team of skilled and dedicated volunteer field teachers, enabling more and larger groups to be taught.

#### Annual Pupil Visits



Note: 2010-2011 Education Officer only in post for 6 months.

#### h. How can people currently travel to the site?

- **Car**
- **Train:** Chichester station is 7 miles from the Visitor Centre
- **Bus:** Regular bus services from Chichester Bus Station to Sidlesham, Selsey and Pagham. There is a bus stop on either side of the road immediately outside the Visitor Centre.
- **Bicycle:** Sustrans Route 88 from Chichester Canal Basin to Pagham Harbour Visitor Centre.

- **On foot:** The Reserve, and wider Manhood Peninsular are well served by a network of footpaths.

**i. How does the reserve reflect the RSPB brand and cater for the values and motivations of the people who visit?**

The habitats, landscape scale conservation and large audiences make the LNR a great fit with RSPB brand, and a wonderful opportunity to engage people with the themes of saving nature, and the threats of climate change and coastal change. The presence of a visitor operation gives a great platform from which to deliver RSPB-standard facilities and service.

**j. Visitor Capacity**

- **What is the carrying capacity of the site?**

Size of facilities: Car parking

Visitor Centre car park	Church Norton car park	Visitor Centre	Classroom
50 car spaces 2 coaches	10 cars	37.63 sq m	41.27 sq m

**Visitors:** The LNR has enough wildlife and landscape interest to sustain visits throughout the year. The profile of visitors changes with the seasons, with more locals and bird watchers in winter, and more holiday makers, day trippers and a family audience in the school holidays.

Given the visitor figures in Section 1.5.1b, with estimated visitor numbers varying between 31,000 in August and 9,000 in December, it would appear that the reserve could hold more visitors in the quieter months, although care would need to be taken that there is no impact on the Harbour environment or the SPA/SSSI. Indeed it is quite possible that more visits will be made in the future irrespective of management or promotion, due to the developing nature of public leisure activities in Britain and the increasing human population, and RSPB will need to be ready to monitor this. The management challenges will be to ensure that visiting does not impact on the wildlife conservation designations, to retain the sense of wilderness and quietness, and to ensure that any visitor increases do not impact on already congested access roads, while accommodating those people who want to visit.

**Education:** The size and set up of the indoor facilities, and the location of visitor facilities and infrastructure, limit capacity. There is only undercover space to accommodate school groups of two classes or less. In inclement weather both the classroom and the Visitor Centre may be used for teaching, which compromises the visitor experience. We only have coach parking and toilets at the Visitor Centre, which limits our ability to deliver coastal and river studies.

**k. How is the site currently zoned?**

The RSPB tends to think about how it zones its reserves in terms of a Welcome Zone, Discovery Zone, Explorer Zone, and Wilderness/Adventure Zone. This is not like at a zoo or theme park! It is just a way of thinking about a site to guide you as to how much signage/visitor interaction, infrastructure goes in a particular place. Pagham Hbr is currently not specifically zoned, except for dog walking. However, there is a 'natural' zoning that concentrates visitors to certain areas due to:

- the geography of the site and the main roads leading to it (two separate spurs down from the A27 meaning that it takes 20 minutes to drive from Pagham to Sidlesham Ferry)
- the location of local communities (including caravan site visitors)

- the location of the Visitor Centre and its toilets
- the size and location of car parks
- the key areas of wildlife interest
- the beaches and shingle spits, separated from one another by the harbour mouth.

## **l. What potential is there to grow visitor numbers?**

The RSPB's focus at the LNR will be on engaging existing audiences and not on increasing overall visitor numbers. For example, 70,000 visits are made to the Sidlesham Ferry car park but as few as 12,000 enter the Visitor Centre. The estimated 130,000+ other visits across the whole Harbour are rarely engaged face to face.

However, the Visitor Centre Feasibility Study showed that the development of a better Visitor Centre, if possible with new access being opened up to the disused landfill and Medmerry, could allow an increase to 100,000 visits to the Visitor Centre, with minimal impact on the road system, and possibly actually *reducing* road traffic by encouraging cycle and pedestrian use and encouraging visitors to the Peninsula to reduce their car use while on holiday. This does not mean that these numbers will be realised or even sought. But visitor information should focus on sustainable access and on staying visitors using local accommodation.

## **m. Education potential**

- Public events for adults are rarely fully booked.
- There is provision for secondary school teaching. However, only a small proportion of visits are from secondary, tertiary or Further Education groups. There is scope to increase their number.
- Outreach, outside of the traditional peak season for school visits, could increase bookings in the winter season and promote the service.

## **n. Are there any legal requirements or constraints regarding visiting?**

- The byelaws (1997) restrict wide-ranging aspects of access and activities throughout the LNR. The byelaws are administered by the RSPB, although any prosecution would need to be brought by WSCC as designating authority of the LNR. WSCC would also be the body who would need to lead on the updating of the byelaws. Note that the byelaws in relation to boating, fishing and bait digging are incorrect, and will need amending at next revision.
- The nature of the many management agreements and leases means that the RSPB has varying levels of authority and responsibility to make changes or improvements to visitor facilities.
- The Service Level Agreement (SLA) with West Sussex County Council imposes conditions regarding visiting and visitor facilities (see SLA for full wording)
  - 7.3 Responsibility to notify WSCC in advance of any planning application
  - 7.7.1 Responsibility to use best endeavours to maintain existing access arrangements
  - 7.7.2 Responsibility to seek to improve access for all

## **o. Who are your existing funders and grant aiders?**

- Core RSPB funding
- West Sussex County Council
- Friends of Pagham Harbour
- Visitor donations.
- Note that Sussex Ornithological Society bought Ferry Field after an appeal, and handed to the Wildlife Trust.

## **p. Friends of Pagham Harbour**

Pagham Harbour is unusual for an RSPB nature reserve in that there is an independent charity dedicated to the LNR – The Friends of Pagham Harbour (FoPH). Formed in 1974, its Objects are “For the benefit of the public to conserve and assist in the conservation of all forms of wildlife, flora and fauna...and to advance the education of the public in all flora and fauna and all matters relating to the Nature Reserve”. The RSPB is committed to working with and promoting the role of the Friends for the overall benefit of the Harbour.

## **1.6. History of recent management**

WSCC managed areas of the LNR over which they had management responsibility from 1964 to 2012 (bar the coastal defence responsibilities). Past habitat management is well documented in previous WSCC Management Plans and Warden's Reports. The transfer of management included transfer of the existing staff.

### **Coastal defences:**

- Flood risk and erosion risk is managed on the shingle beaches and spits by the EA and the District Councils, under Shoreline Management Plans (SMP). Church Norton Spit was replenished annually with shingle until 2004. There have been shingle recharges of Pagham Beach using shingle from further south within the LNR in autumn/winter 2012, and ongoing flood risk management operations of some kind are likely.
- Within this context, there has been some habitat management to beaches. Sensitive areas of Pagham Spit have been fenced since 2003. Church Norton Spit is fenced off from April to August to protect ground-nesting birds.

### **Shingle features within the Harbour**

- Tern Island was raised by 0.7m in 1991 to bring more of the island above the high water mark and to counteract erosion. Half of Tern Island is cleared annually to provide nesting habitat for shorebirds.

### **Saltmarsh and intertidal mudflats**

- Almost no active habitat management has been done on these habitats.

### **Permanent wet grassland:**

- Most is grazed by cattle for waders and Brent Geese, with a close turf in winter to help divert Brent Geese away from cereal fields. Most is subject either to a management agreement with Natural England or the Environmental Stewardship Scheme administered by DEFRA.
- In 2011, foot drains were excavated and water control devices installed at Ferry Field and Mill Pond Marsh.

### **Cover crop:**

- Since 2005 Slipe Field has been sown with cover crops.

## **2. EVALUATION and RATIONALE FOR MANAGEMENT**

## 2a. Conservation

### 2a.1. Current issues and constraints

**This section highlights major issues and constraints that have an impact on management**

#### **Nature conservation designations:**

- Most of the land within the LNR (Local Nature Reserve) is designated as a Site of Special Scientific Interest (SSSI), which is a national designation, for a variety of features, and as a Special Protection Area and Ramsar site (for its assemblage of migratory and wintering waterbirds, and specifically for Brent Geese, Pintails, and breeding Little Terns). It is a legal obligation for owners, or occupiers, to inform Natural England (NE) in writing and obtain its permission before carrying out any potentially damaging operations of these listed operations.

#### **Protected species:**

- Certain wildlife species within the LNR, such as Water Voles and reptiles, are protected under European law. Pagham Harbour is also a nesting site for the Schedule 1 species Little Tern, Avocet and Cetti's Warbler. For these species, it is an offence to intentionally or recklessly disturb birds and their young at, on or near an 'active' nest.

#### **Occupiers Liability Act 1957 & 1984:**

- It is the Occupier's Duty to render his visitor safe and give adequate warning of any danger.

#### **Coastal flood risk and erosion management:**

- Local communities face substantial risk of flooding, both from the sea (in particular erosion in front of Pagham Beach, and flooding from the 'back door' from inside the Harbour, especially in the Slupe Field area). The RSPB is not responsible for, nor has the authority, for coastal flood risk management, which sits with the EA and the District Councils. However, it is vital that physical reserve management is undertaken so as to not conflict with Flood and Coastal Risk Management. It is vital too that the RSPB is well aware of the local issues, and keeps closely involved with issues as they are progressed by the agencies. Potential issues that are likely need to be taken account of at some stage, and which may have an effect on reserve management, include: flood management proposals (including shingle transfer), the possible natural closure of the Harbour, and that managed realignment may be required by the agencies at some stage. The RSPB will not oppose coastal defence works which comply with all the relevant legislation.

#### **Freshwater flood risk management**

- The EA manages the flood risk on Main Rivers, which includes a reed-cutting and de-silting regime. The RSPB, where it has tenure responsibility along a Rife, is allowed to do management work above and beyond the basic cutting regime, but anything that alters the channel (for instance, the width or depth), or adds structures, would require consent. Note that the RSPB does not have the authority to do works on Pagham Rife. The RSPB helped the EA create a fact sheet about who does what on the Pagham Rife.

#### **Landfill site**

- There are major implications for habitat work, or the construction of improved visitor facilities, on the landfill. Permissions would be needed to do any intrusive work and there may be consequences for whoever holds liability. Innovative approaches may be needed, and the area ideally needs capping to stop the rising up of landfill material to the surface, which would require stripping of existing vegetation first and would be unsightly in the short-term for the long-term good.



### **Landowner permission**

- Most of the LNR is covered by Management Agreements, which permit very limited management activity and, in some cases, only permit wildlife monitoring and byelaw enforcement. In many areas of the LNR where RSPB does not have tenure, landowners pursue their own commercial farming activities.

### **Sea water incursion**

- The location of many of the LNR's habitats, including reedbeds and grassland are at risk of saltwater intrusion from storm breaches.

### **Sea-level rise and intertidal habitats**

- Sea levels are predicted to rise significantly within the next few decades. This could have a profound effect on habitats.

### **Agricultural run-off**

- The watercourses flowing into the intertidal area are subject to run off from neighbouring cultivated land and subsequently are at risk from pollution from nitrates, phosphates etc. PBHL inform us that recent investigations by WSCC Highways and Southern Water have revealed that water courses, particularly Pagham Lagoon, are subject to run-off from the public highway and adjacent paved areas, that there is no filtration or hydrocarbon interceptors, and that there is unauthorised discharge from the public foul sewer.

### **Human activities**

- The Harbour is small for an intertidal site and hence at risk of disturbance, eg from low-flying aircraft, illegal activities, or over-use by legitimate interests. Careful management and advocacy is essential. Disturbance of waterbirds is well researched nationally by the Wader Study Group.

### **Planning**

- Many development pressures are likely to occur, from housing schemes to energy schemes.

### **Floating pennywort**

- currently being controlled by EA but the aspiration should be to eradicate it. This may limit the possible works in the affected area

## **2a.2. Identification of the Features Influencing Management of the site**

The following tables list all the important features identified in Section 1.2-1.4, and identifies which of these are the **Features Influencing Management**. These include:

\*\* = Features which are the prime reason for RSPB maintaining the LNR (or at least those areas it has management authority over) and which will drive its management.

✓✓ = Features for which the RSPB has legal responsibilities (SSSI interest features) and which will influence the management undertaken at the site.

✓ = Features for which the RSPB has legal responsibilities (SSSI interest features) but which will not influence the management undertaken at the site.

\* = other important conservation features whose requirements need to be taken into account when deciding upon management of the site.

V = Features of particular importance to visitors.

**NOTE THAT SOME OF THE FEATURES MIGHT BE WHOLLY OR LARGELY ON LAND OVER WHICH RSPB HAS NO AUTHORITY TO CARRY OUT PHYSICAL MANAGEMENT.**

**a) Saltmarsh, mudflats and intertidal habitats**

Important feature	Influencing Management?	Why?
Saltmarsh, mudflats and intertidal habitats	✓✓	SSSI, SPA and Ramsar feature
Wintering waterfowl	✓✓	SSSI, SPA and Ramsar feature
Eelgrass ( <i>Zostera</i> spp.)	*	Proposed MCZ Feature
Common Eel ( <i>Anguilla anguilla</i> )	*	Proposed MCZ Feature

**b) Lowland wet grassland (semi-improved and improved)**

Important feature	Influencing Management?	Why?
Lowland wet grassland	✓✓	SSSI and SPA feature, RSPB priority habitat
Freshwater scrape and field (North Wall)	✓✓	Is listed as wet grassland in SSSI and flood alleviation agreement
Wintering Dark-bellied Brent Goose	✓✓V**	SSSI, SPA Feature, Ramsar Feature
Wintering Black-tailed Godwit	✓✓**	SSSI, Ramsar Feature
Breeding waders (Lapwing and Redshank)	✓✓**	SSSI, RSPB priority species
Wintering Ruff	✓	SPA
Southern Marsh Orchid	*	Locally important population
Brown Hare	*	BAP species

**c) Shingle**

Important feature	Influencing Management?	Why?
Vegetated shingle communities including Childing Pink, and Toadflax Brocade moth	✓✓*	SSSI, BAP priority habitat Geological Conservation Review site (Could be a constraint if we require to move shingle around in the future ie tern island)  One of very few native populations of Childing Pink in UK
Breeding terns (Little and Common) and Ringed Plover	✓✓ V **	Little Tern is SPA feature, Amber listed

Population of Defolin's Lagoon Snail <i>Caecum armoricum</i> and <i>Truncatella subcylindrica</i> snails	*	Proposed Marine Conservation Zone (pMCZ) – yet to go through public consultation. Defolin's Lagoon Snail has been proposed as the basis for a Reference Area within the MCZ
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**d) Saline Lagoons**

Important feature	Influencing Management?	Why?
Saline lagoons	✓✓	SSSI feature
Lagoon invertebrates	✓✓	SSSI feature
Passage waders and waterbird spectacles	V	A key attraction for many wildlife watchers

**e) Reedbed/fen/freshwater rifes and pools (Long Pool, Mill Pond Marsh, rifes)**

Important feature	Influencing Management?	Why?
Reedbeds	✓✓	SSSI feature; RSPB priority habitat
Rifes and watercourses (including the vegetated margins)	✓✓	SSSI
Water Vole	✓	Protected species
Flame Wainscot and invertebrate assemblage	*	Flame Wainscot is nationally scarce (categorised as Na)
Wintering Bittern	**	Priority Species

**f) Woodland, hedges, scrub and ruderal habitats (eg landfill)**

Important feature	Influencing Management?	Why?
Semi-natural deciduous Woodland	✓✓	SSSI feature
Scrub, hedges and tall herb vegetation	✓✓	SSSI feature
Breeding Grey Heron & Little Egret	*V	Attractive feature for visitors
Breeding scrub birds	*	BAP (Linnet, Turtle Dove, Yellowhammer)
Migrant passerines	V	Exciting part of the visit in spring and autumn for many birdwatchers

**g) Arable cover Crop**

Important feature	Influencing Management?	Why?
Arable Cover Crop	✓✓	Part of the HLS agreement – providing summer nectar and winter seed
Wintering finches, Breeding Turtle Dove, Corn Bunting	*	BAP finch species, Turtle Dove priority species

**h) Archaeology**

Important feature	Influencing Management?	Why?
The Mound	✓✓	Scheduled Ancient Monument (SAM)

**i) Geo-morphological Features**

Important feature	Influencing Management?	Why?
Shingle spit landform		SSSI and Geological Conservation Review Site. However, the RSPB will defer to the relevant authorities regarding any management to affect the landform.

## 2a.3. Condition of the features influencing management and the main factors affecting them

### a) Saltmarsh and intertidal mudflats

Feature	Attribute(s)	Current	Target(s) for attribute	Main factor(s)	Target for main factor(s)	Comments
Saltmarsh, and mudflats	Extent	155ha saltmarsh, 140ha mudflat	No net loss	coastal flood defence works and/or 'natural' processes	Monitor extent of the habitats and ensure that government agencies are aware	
Wintering waterfowl	Numbers	13578 (5yr mean, 2008-13)  2553 (5yr mean, 2008-13 Dark-bellied Brent Geese  372 (5yr average, 2008-12) Northern Pintail	2000+ (International threshold) Maintain current or increase. Dark Bellied Brent (5yr average)  600+(International threshold) Northern Pintail (5yr average)	Disturbance (water-based and land-based) Coastal changes altering the nature of the Harbour  fluctuations in world population  Climate change causing short-stopping	Minimal disturbance	Through education and wardening, and possible habitat creation
<i>Zostera</i> spp.	Extent	1.5Ha	No Net Loss	Pollution	Protect where reasonably practical the	

				Boating  Climate change affecting water temperature	areas if there is a pollution incident  Monitor Boating	Through education and wardening,
Common Eel	Presence	Present	Present	Unknown		
Slender Hare's Ear	Presence and extent	Unknown, a baseline assessment is required	Present and if it is rediscovered it extent	Unknown		

**b) Lowland wet grassland**

Feature	Attribute(s)	Current	Target(s) for attribute	Main factor(s)	Target for main factor(s)	Comments
Lowland wet grassland	Extent	69.7ha with a further 177.3ha of permanent dry grassland  Between 5-13cm by November, set by HLS	Maintain area	Succession  Sward length  Sward quality  Grazing  Water level	<5% of sward with scrub  Vegetation height in November is 80% of sward (6- 15cm),  <5% injurious weeds  1.44LSU between April to October  Surface water from Nov-Mar; high groundwater levels in early spring; exposed mud lasting to June	Matches HLS prescription.             Note that the RSPB only has water level management control in small areas of the reserve, eg Ferry Field, Halsey's Farm. Care must always be taken to ensure that water level management does not affect Flood Risk Management.
Freshwater scrape and Field	Extent	4Ha	Maintain	Small isolated area which is difficult to manage as wet grassland  Water level	To establish a management regime which is sustainable for the small area and delivers the objectives of the flood alleviation scheme mitigation	After a meeting with NE it has been agreed that the area of reeds in this field will be managed as such. The rest of the field will be managed as a grassland being entered

				Agricultural weeds such as docks, thistles, rushes, and Common Ragwort	<p>Surface water in the field from Nov-Mar; high groundwater levels in early spring; exposed mud lasting to June.</p> <p>Weeds &lt;5% of sward, As Above</p>	<p>in to an option covering bird assemblages. The HLS has been amended to show this. If RSPB maintain management control this is how the field will be managed as above</p> <p>Water levels can be controlled via a drop board sluice connecting the scrape to Pagham Rife allowing water to be discharged from the scrape when levels are low in the rife, but RSPB does not have management authority over the water control structures leading <i>into</i> the scrape.</p>
Wintering Dark-bellied Brent Goose	Population size	2000+ (5-year mean)	Regular use of the fields by main flock	<p>Disturbance</p> <p>Sward length</p>	<p>Minimal disturbance</p> <p>Vegetation height in November is 80% of sward (6- 15cm),</p>	<p>Consider methods to better keep visitors to footpaths</p> <p>Matches HLS prescription</p>
Wintering Black-tailed Godwit	Population size	157 max winter count (5yr mean)	Maintain;			Monitor through WeBS
Breeding waders (Lapwing and Redshank)	Population size (figures are for entire LNR)	8 pairs & 2.2 pairs (5 yr mean)	10prs & 5 pairs (5yrs mean)	Water levels	10-80% of the field should be soil damp enough for a six inch nail to be pushed in to the ground with ease Apr and June.	<p>New water control devices and storage structure were developed in 2011.</p> <p>Investigate creation of a</p>



	Productivity (figures are for entire LNR)	0.82 Lapwing young per pair (5yr mean)	0.6-0.8 Lapwing young per pair (5yr mean)	<p>Predation</p> <p>Grazing</p> <p>Agricultural weeds such as docks, thistle, rush and ragwort</p> <p>Visibility/predator perches</p>	<p>5-25% standing water between March and May</p> <p>5-75% standing water (max depth 25cm) from Nov to Feb Predation minimised</p> <p>Vegetation height in March is 80% of sward (2.5- 5cm), with some tussockiness</p> <p>1.44LSU between April to October</p> <p>Weeds comprise &lt;5% of sward</p> <p>Wider vistas at Halsey's</p>	<p>more varied topography in Ferry Pool</p> <p>Topping (not before 15th July) Remove scrub where necessary</p>
Wintering Ruff	Population Size	1 (5 year average)	Maintain	unknown		Monitored through WeBS
Southern Marsh Orchids	Size of population	5000+	5000+	Competitive plants ie rushes	Maintain competitors at less than 5% of the sward by cutting	
Brown Hare	Size of Population	6 breeding males	maintain	Coursing	Liaise with the authorities to prevent	

c) Shingle

Feature	Attribute(s)	Current	Target(s) for attribute	Main factor(s)	Target for main factor(s)	Comments
Vegetated shingle communities including Childing Pink	Extent of habitat (area of Childing Pink population)	50ha (9ha)	Maintain extent (in collaboration with flood risk management authorities)	<p>'Natural' processes: shingle spit movement, climate change, sea level rise and storms may shift shingle and destroy areas of habitat</p> <p>Coastal flood defence works or other activities may impact on shingle and its movement, or disturb it</p>	<p>Monitor and report</p> <p>Vegetated shingle factored into coastal defence plans</p>	No control
	Quality	Quality compromised by invasive garden plants	Vegetated shingle communities predominantly key native shingle species	<p>Invasive garden plants</p> <p>4WD damage</p>	<p>Control programme limits spread and extent of garden plants</p> <p>Control 4WD access from south</p> <p>Avoid undue physical disturbance to shingle where possible</p>	Research needed
<p>Breeding</p> <p>a) Little Terns</p> <p>b) Common Terns</p> <p>c) Ringed Plover</p>	No. of pairs (5yr mean)	<p>a) 8</p> <p>b) 12</p> <p>c) 12</p> <p>a) 0.44</p>	<p>a) 12</p> <p>b) 12</p> <p>c) 12</p> <p>a) 0.5</p>	<p>Shingle extent/alignment</p> <p>Succession on the shingle</p>	<p>Outside RSPB control</p> <p>0.7ha of open sparsely vegetated on Tern and New Islands.</p>	Need to balance vegetated shingle management with management of shingle for

	Productivity (5yr mean)	<b>b)</b> 0.3 <b>c)</b> 0.63	<b>b)</b> 0.7 <b>c)</b> 0.7	Predation, especially from Foxes  Disturbance	No predation  Minimal disturbance	breeding terns and Ringed Plovers  Effective monitoring to be sure whether predation occurs or not.
<i>Caecum armoricum</i> <i>Truncatella subcylindrica</i>	Presence	<i>C. armoricum</i> probably present; <i>T.</i> <i>subcylindrica</i> present in 2012	Present	Unknown		Absence of repeatable, sustainable survey and expertise
Toadflax Brocade moth	Presence of larvae	Present	Present	Presence of Purple Toadflax	Present	

**d) Saline lagoons**

Feature	Attribute(s)	Current	Target(s) for attribute	Main factor(s)	Target for main factor(s)	Comments
Saline lagoons	Extent	13.6ha	Maintain and improve	Reeding over or silting of lagoons	Maintain 25-95% of open water by scrub removal and reed cutting	
Lagoon Invertebrates	Population size and diversity of lagoon specialists	2-5 species depending on lagoon	Maintain	Pollution  Salinities	No pollution incidents.  0 – 4 pph where water control is feasible	Ensure process and connections are in place with all relevant stakeholders If incidents happen, locate the cause and establish protocol to try to stop repeat.
Passage waders	Species Assemblage	6 regular species	Maintain	Unknown		

e) Reedbed, fen, rifes and pools

Feature	Attribute(s)	Current	Target(s) for attribute	Main factor(s)	Target for main factor(s)	Comments
Reedbeds	Extent	5ha	Maintain; increase where not at expense of other habitats	Build up of reed litter	Cut on 10-year rotation for Flame Wainscot and invertebrates	Ensure that areas where the moth is shown to be present are not cut more than twice in a 10yr period
	Condition	Good	Maintain	Water supply	No control over water level in most reedbeds, although some control at Mill Pond Marsh	
	Open water			Build up of silt	Investigate whether excavation is possible or desirable	
Rifes and watercourses (including the vegetative margins)	Length of water courses  The quality of bank side vegetation, as shown by structure and species richness	8km  Unknown, a baseline assessment is required	To maintain the present extent and to increase by reinstating disused features at Halsey's Farm	silting up of the ditches and rifes	Rotational ditch cleaning ( <b>on ditches where we have the authority to do so, not on Main River</b> ): <ul style="list-style-type: none"> <li>• 5-10 year rotation on key ditches to maintain as water carrying ditches and wet fences</li> <li>• 7-13 year rotation on</li> </ul>	All work must be within the context that the EA has responsibility for management regimes along Main Rivers, which is the key for flood risk management

					<p>key ditches within the priority wader areas to maintain as wet fencing</p> <ul style="list-style-type: none"> <li>• 10-15 year rotation on non-key ditches to maintain senescing condition for invertebrate assemblage.</li> </ul> <p>Senescence:</p> <ul style="list-style-type: none"> <li>• Open 10-30%</li> <li>• Mid succession 30-60%</li> <li>• Choked 20-30%</li> </ul>	
				Pollution	No incidents that are within our control	
Water Voles	Population	Present	Increase distribution by recolonising historic sites	<p>Predation by American Mink</p> <p>Trampling of bank side vegetation by stock</p>	<p>No Mink.</p> <p>Where there is grazing alongside rifes, maintain one side of occupied water courses ungrazed</p>	<p>Monitor using rafts</p> <p>Seek to liaise with neighbouring landowners and MWHG to ensure viability of wider population.</p>
Flame Wainscot and invertebrate	Size of population	3 trapped in Mill Pond	Continue to monitor by showing	Cutting of the reeds	Ensure that areas where the moth is	

assemblage		Marsh in Spring 2011	continued presence in moth traps		shown to be present are not cut more than twice in a 10yr period	
Wintering Bittern	Size of wintering population	1-2	Maintain	Population of fish	>54g/ m <sup>2</sup> of fish <15cm (including eels >15cm)	Survey to establish the fish population in rifes near wintering areas for Bittern

f) Woodland, hedges, scrub and ruderal areas (eg landfill)

Feature	Attribute(s)	Current	Target(s) for attribute	Main factor(s)	Target for main factor(s)	Comments
Semi-natural deciduous woodland	Species composition	Unknown	<10% non natives - ie Sycamore, Horse Chestnut	Shading of the woodland floor by invasive and non native species	Less than 10% cover/composition by invasive or non-native species	Current guidance for sycamore is that is should not dominate.  Monitor - pressure most likely in winter/ Protect young trees if necessary.
	Age structure	Mature oaks with little or no regeneration	Varied age structure	Rhododendron and Japanese Knotweed	Eradicate	
				Regeneration of saplings	Oak regenerating	
				Grazing from Rabbits and deer	No grazing	
Scrub etc	Area	4Ha	4.5Ha	Lack of available area to encourage	Land acquisition	

				increase of scrub		
Hedgerows and Scrubbed Ditches	Length	13.5km	12km	Unknown		
Breeding Grey Heron and Little Egret	Population	4.4prs/ 13.4 pairs (5yr mean) The Grey Heron population has declined from about 12prs down to one in 2011	Maintain 6 pairs/13 pairs	Disturbance  Winter weather	Minimal disturbance  No control	Explore whether fencing might reduce disturbance
Breeding farmland birds <ul style="list-style-type: none"> <li>• Yellowhammer</li> <li>• Linnet</li> <li>• Turtle Dove (see also Arable Cover Crop below)</li> </ul>	Pairs (5yr means)	6.4 3.4 0.2	8 7 1	Succession of scrub     Agricultural activities, eg use by dairy herd	Rotational management. Maintain present area of scrub in areas we have management responsibility  Liaise with tenant farmer to develop 100m of grass field margins not intensively grazed by cattle.	Locate other potential areas on Reserve to allow the development of scrub       Landfill needs capping although not certain it will be possible in this mangement plan period
Passage passerines	Species Assemblage	10 regular species	Maintain	Unknown		

g) Arable cover crop

Feature	Attribute(s)	Current	Target(s) for attribute	Main factor(s)	Target for main factor(s)	Comments
Arable Cover Crop	Extent Quality	8ha	Maintain  Maintain	Agricultural weeds in particular thistles and ragwort.	90% of area with successful crop germination	
Feeding Turtle Dove	Records	None (2011)	Recorded annually	Food Supply	Successful establishment of Turtle Dove mix	
Wintering finches	Size of population	5yr mean winter maximums: 143 Linnet 21 Reed Bunting 5 Yellowhammer 0.2 Corn Bunting	Maintain Linnet and Reed Bunting Increase Yellowhammer to 10 Corn Bunting to 4		Any reduction in local population should be $\leq$ that of the birds moving in to the country over the winter period	To see increases of target species around the reserve Natural processes/global issue
Breeding Corn Bunting	Singing males (5 year mean)	0	1	Disturbance away from rights of way	No disturbance	Liaison with landowner needed
Invertebrates	Species Assemblage	Unknown, a baseline assessment is required		Food Supply	Establish nectar and pollen mixes	



#### h) Archaeology

Feature	Attribute(s)	Current	Target(s) for attribute	Main factor(s)	Target for main factor(s)	Comments
The Scheduled Ancient Monument	Condition	Good	Maintain	<p>Scrubbing over</p> <p>Illegal digging (metal detecting) on the SAM</p>	<p>Ensure no scrub or tree regeneration occurs</p> <p>No digging.</p> <p>Management Plan</p>	

#### 2a.4. Habitat management to enhance the visitor experience

Feature	Attributes	Works	Comments
Path from Visitor Centre to Ferry Hide	Spring migrant birds within scrub. Teasels – finches and invertebrates	<ul style="list-style-type: none"> <li>Create and maintain path-side scallop glades on left-hand side from which to better view spring migrants, or create elevated viewing area.</li> <li>Investigate opportunities for habitat enhancement within Discovery Area. For instance, could ponds be made more sustainable on lower ground?</li> <li>Investigate and develop opportunities for improved bird feeding/photography options, possibly with screen, close to visitor centre.</li> </ul>	
Ferry Pool	More and closer birds on Ferry Pool	<ul style="list-style-type: none"> <li>Installation of gauge board to monitor water levels, followed by water level management to attract a variety of passage wading birds,</li> <li>Creation of island/s to the front right of the pool</li> </ul>	

		<p>to increase muddy margins at times of high water, and block fetch (wave action) reducing bank erosion on pool.</p> <ul style="list-style-type: none"> <li>• Removal of vegetation along road edge to enhance views of pool.</li> <li>• Investigate potential to open up pools and hydrologically separate pool system on N side of Ferry Field, closer to footpath to Medmerry</li> </ul>	
Nature Trail path alongside Red Barn Ditch	Improve the opportunities for people to watch the small numbers of wildlife that use the tidal channel	<ul style="list-style-type: none"> <li>• Cutting back of vegetation to create viewing points</li> </ul>	
Long Pool	Opportunities to bring people closer to passage waders and reedbed species	<ul style="list-style-type: none"> <li>• Management of the reeds and maintain open water, especially regarding the potential siting of a possible blind or hide.</li> </ul>	
Halsey's Farm	Increase breeding wader and wintering waterfowl without disturbance.	<ul style="list-style-type: none"> <li>• Investigate potential for creation of a number of new wetland features, ensuring they do not affect Flood and Coastal Risk Management.</li> </ul>	
Discovery Area	Increase variety and reliability of wildlife	<ul style="list-style-type: none"> <li>• See if there is some way to make pond water level more sustainable</li> <li>• Do nettles and copse area need clear management prescriptions?</li> </ul>	
Visitor centre area	Increase variety and reliability of wildlife	<ul style="list-style-type: none"> <li>• Explore options for butterfly garden outside visitor centre</li> <li>• Explore options for short routes into landfill scrub</li> <li>• Explore options for better bird feeding areas</li> </ul>	
Church Norton	<ul style="list-style-type: none"> <li>• Increase number of passage migrants (warblers, flycatchers etc)</li> </ul>	<ul style="list-style-type: none"> <li>• Increase scrub in grazed field behind hide by thickening the back hedge line and creating a scalloped edge.</li> <li>• Create and maintain sightlines from hide through</li> </ul>	

	<ul style="list-style-type: none"> <li>• Viewing from hide</li> <li>• Improve Tern Island to better attract nesting terns</li> </ul>	<ul style="list-style-type: none"> <li>• scrub</li> <li>• Cut back vegetation on seaward side of hide to improve views of harbour</li> <li>• Increase the area of shingle of Tern Island by the removal of vegetation on the east side of the island.</li> <li>• Fence the tern colony to ensure that it is protected from predators and therefore persists</li> </ul>	
Landfill	<ul style="list-style-type: none"> <li>• Area of reserve that could potentially absorb some of the visitor pressure without affecting the key species on the reserve</li> <li>• Migrant birds, butterflies, reptiles</li> </ul>	<ul style="list-style-type: none"> <li>• Explore options to cap the landfill (or parts of it) to allow management of the vegetation and possible access</li> </ul>	

## 2a.5 Predicted impacts of climate change on existing and potential important features

Important feature	Predicted impacts of climate change on the condition of the feature over the next <i>ca</i> 25 years, if no adaptation measures are taken	Potential adaptation measure(s)
Saltmarsh/mudflats	If no action is taken the saltmarsh/mudflats ratio that is present out in the harbour during the tidal cycle will change. Due to potential sea level rises the amount of saltmarsh could be reduced. This may benefit the area of mudflat but the sea level rises may also impact the amount of mud which is exposed during each tidal cycle. However, the saltmarsh is currently accreting, reducing the tidal prism, which makes the Harbour more likely to seal up.	At present the harbour is enclosed by a series of coastal defences. There is the possibility, indicated in coastal defence strategies, that at some stage it will be more sustainable for the government agencies to realign some of these defences to allow small areas of managed realignment. This won't be the responsibility of the RSPB, although there will be the need to offer the RSPB's position if and when plans are raised.
Grasslands	At present, the majority of the grasslands are protected directly from the sea by a series of coastal defences. If the predicted sea level rises occur, then the present defences may not be able to contain the water level rises and breaches will inundate the grasslands.	Ensure the correct protection, with any necessary work being carried out on the coastal defences (ie liaison with the statutory authorities). However these habitats are also the areas where any mitigation for lost of intertidal habitats would take place. So the lost of the grasslands adjacent to the present harbour would need to be replaced by grassland further north.
Wetlands	There may be an increase in salinities through the intrusion of seawater in to the aquifer of the coastal wetlands. Also, with the change in rainfall in the southern region, water accessibility will become an issue.	Little can be done
A change in species assemblages and numbers of each species	Some species will colonise the area, some will become extinct, populations will change.	Ensuring that there is as much landscape-scale conservation across the Portsmouth to Pagham area as possible should help species populations be as robust as possible. However, other factors along their migration routes cannot be accounted for.  Tern colonies in particular may be displaced from other sites due to flooding; therefore providing alternative protected areas at Pagham Hbr is important.

## 2a.6 Rationale for any changes to conservation objectives and targets

### 2b. Visitors and Public Affairs

Our key objective is to improve the visitor experience so that people have an inspiring visit. Detailed plans for key aspects of infrastructure such as paths and buildings will be shared with, and views sought from, key stakeholders including the Pagham Harbour Community Forum. Objectives will be subject to funding being found. The following table is not listed in any priority order. 'Whole reserve' is taken to mean those areas where we have the tenure and authority to undertake such activities.

Location	Opportunity	Audience	Action	Result	Timescale
Whole reserve	Create clear messages, signage & branding	All visitors	<ul style="list-style-type: none"> <li>Review signage and interpretation and draw up an action plan (including funding), taking care to balance the needs of visitors for information while retaining the sense of 'wildness' and 'naturalness'</li> <li>To include H&amp;S signage and regular checks</li> <li>Ensure that relevant landowners and authorities are fully acknowledged where appropriate</li> <li>Review how the reserve is 'zoned' to ensure that the right signage and infrastructure is in the right places</li> </ul>	Interpretation and signage audit/plan implemented	Year 1-3
Whole reserve	Create better wildlife viewing facilities	All visitors	Review facilities and then develop a phased project plan to fundraise for and deliver replacement or upgraded facilities	Programme of hide/viewpoint enhancement and replacement, and associated habitat management. Key potential	Years 1-5 and beyond. This is a big programme of work

				locations: <ul style="list-style-type: none"> <li>• Ferry Pool hide area</li> <li>• Long Pool</li> <li>• Thrift Shelf area</li> <li>• Ferry Field as seen from Southern Water footpath to north</li> <li>• Tramway at Red Barn Ditch on edge of Harbour</li> <li>• Pagham Spit hide</li> <li>• Church Norton Hide</li> <li>• North Wall</li> </ul>	
Whole reserve	Improved access for all users	All, including wheelchair users and other disabilities	Audit and review access routes, and develop phased project plan to fundraise for and deliver replacement or upgrade facilities	Programme of infrastructure improvements	Years 1-5
Sidlesham Ferry area	Create a better gateway to the reserve and for exploring the Manhood Peninsula's wildlife and landscape	All visitors (accepting the difficulties in accessing Sidlesham Ferry from Pagham)	Explore the options for taking forward the ideas for replacement visitor gateway at Sidlesham Ferry.	Clear direction and agreement by the end of the Management Plan period	Years 1-5
Visitor centre	Create a gateway to Selsey/the Manhood, signposting visitors to their facilities, attractions and accommodation	Visitors who are staying locally, or might stay	Ensure visitor work and information addresses this key aim	More visitors are inspired to stay and support the local economy	Years 1-5
Whole reserve	Create better green access links to and across the reserve for local communities and visitors	Cyclists	Support others in exploring the options for better cycle access around the reserve	Ideas explored, including working in partnerships	Years 3-5

Sidlesham Ferry area	Engage a wider audience	Active Nature Enthusiast Families	Develop an interactive nature & history trail	Sidlesham Nature Trail (inc Discovery Area) enhanced	Year 2-3
Whole reserve	Engage a wider audience	All	Run a broad events programme, to include all nature, heritage and culture	More people are inspired by Pagham harbour LNR	Years 1-5
Sidlesham Ferry area	Engage a wider audience	General public (increase membership)	Enhance visitor centre draw / welcome	Enhancements to centre and immediate environs	Years 1-5
Halsey's Farm	Enhance wildlife and landscape spectacle	Birdwatchers, Active Nature Enthusiast families, walkers	Secure funding (HLS) for breeding wader habitat	Wet grassland habitat creation	Year 3?
Tern Island / Church Norton	Enhance wildlife and landscape spectacle	Birdwatchers and Active Nature Enthusiast families	Secure funding (HLS) for restoration of Tern Island Limit time that tern fencing is up to a minimum without compromising responsibility for breeding birds	Tern Island restored for breeding little tern	Year 4?
Whole reserve	Greater cooperative working	Sailors, canoeists, fishers, bait diggers	Seek to engage positively and cooperatively for the good of the reserve and all	Constructive dialogue; understanding of the needs of all	Year 1 onwards
Whole reserve	Engage a wider audience	Young people	Promote & launch Wildlife Explorers Group	Wildlife Explorers established	Years 2 onwards
Whole reserve	Engage a wider audience	All including holiday makers and visitors	Promote diverse events programme, extending to include heritage/history/health	Events outreach established	Year 2 onwards
Whole reserve	Engage all local schools in the Selsey/Sidlesham/Pagham area	Primary and secondary	Promote and support education service	Programme of field visits and outreach established	Ongoing
Church Norton	Improve vehicular access	All visitors	Repair pot-holed car park at Church Norton	Reasonable standard of parking	By year 2/3
Pagham	Improve vehicular access	All visitors	In liaison with local stakeholders, explore if there are any possibilities, for	Only develop a solution if there is	By year 4 / 5

			enhancing car parking on the Pagham side	broad backing for it and a good case for it	
Sidlesham	Enhance visitor experience / engagement	All visitors	Landfill restoration and reedbed creation alongside new Coastal Centre	Phase 2 of Feasibility Study	Year 5 or beyond



## 2c. Demonstration use

### 2c.1 Identification of Key Demonstration Reserves

Criteria	Evaluation
<p>Does the reserve management address a priority conservation issue and the management activities on the reserve either:</p> <ul style="list-style-type: none"> <li>• have proven benefits for target species or habitats or,</li> <li>• are being trailed, and the reasoning behind them can be explained and discussed? This will also allow an exchange of ideas about the trial management.</li> </ul> <p>It should be clearly identified whether the management is proven or trial, and whether there is adequate monitoring in place to prove the effect of trial management.</p>	<p>No, not at present. There is the potential in the future for demonstration aspects such as lowland wet grassland or Little Tern conservation, but not currently</p>
<p>Is the reserve better placed to demonstrate the management practice than a private land holding? We may also wish to establish a working relationship with a complementary holding, demonstrating e.g. good practice in a commercial context.</p>	<p>n/a</p>
<p>Is there a target audience to whom the management practice will be demonstrated and the site is appropriate to that audience? Does the site show:</p> <ul style="list-style-type: none"> <li>• the management on an appropriate scale</li> <li>• the management in an appropriate economic context</li> <li>• the ideal end result of management?</li> </ul>	<p>n/a</p>
<p>Is the reserve accessible to the target audience?</p>	<p>n/a</p>
<p>Are there adequate resources available to deliver the demonstration use of the reserve, including staff with the necessary skills and experience? These staff may not have to be on-site, but could be available to assist with events if required.</p>	<p>n/a</p>
<p>Does the reserve have adequate facilities for its use as a demonstration site? Does it have:</p> <ul style="list-style-type: none"> <li>• appropriate access routes.</li> <li>• adequate catering and toilet facilities – either on-site or nearby.</li> <li>• a suitable indoor venue – either on site or nearby?</li> </ul>	<p>Yes No to catering but there a number of places nearby Yes – has toilet facilities There is a classroom</p>
<p>Is the reserve likely to provide inspiration to the target audience, eg. through providing an appropriate wildlife/landscape spectacle?</p>	<p>n/a</p>
<p>Can demonstration use of the site be managed in a way that will not have a significant adverse effect on the conservation interest of the site? ie</p> <ul style="list-style-type: none"> <li>• increased human disturbance will not have a significant adverse effect on key breeding species.</li> <li>• increased trampling will not have a significant adverse impact on key habitats?</li> </ul>	<p>n/a</p>

## 3. VISION AND MANAGEMENT OBJECTIVES

### 3.1 Vision for the site in 25 years

Pagham Harbour Local Nature Reserve is one of the most precious and beautiful natural landscapes on the south coast. It is a place of big skies and vast vistas and the ebb and flow of tides across the mudflats and saltmarsh. Travelling east, it is the last such wilderness before 40 miles of almost continual coastal sprawl.

As a result, internationally-important numbers of migratory birds flock here; a key refuelling stop on their journeys between Africa and the Arctic. There are rare plants and insects and other wildlife in abundance here too. And, it is important for people as a place where they can feel in touch with nature, watch the special wildlife, and enjoy the coastal scenery, fresh air and tranquillity.

This vision looks forward a generation - what will the reserve be like, and what will it have delivered? In 25 years time:

- i. Pagham Harbour LNR\* will remain much like it is today – an important wetland nature reserve in a distinctive landscape and an important place for local communities and visitors to come and enjoy, and we will have worked hard to retain its valued qualities.
- ii. The important habitats in Pagham Harbour LNR will have been maintained and, where possible, improved and extended. They will form a key part of a renowned complex of nature reserves in the area, supporting some of the most important wetland bird populations and wildlife in southern England. In particular, the site will maintain its Special Protection Area and Ramsar status for Brent Geese, Black-tailed Godwits, Pintails and Little Terns, and the Site of Special Scientific Interest will be in favourable condition.
- iii. Our management will have been adaptable so that we successfully meet the many environmental challenges the area is facing, especially regarding coastal erosion, sea level rise, climate change, and human and development pressures.
- iv. We will be engaging with a greater proportion of visitors and with local communities to help them understand and appreciate the importance of this landscape and its wildlife, the threats it faces, and how to safeguard it.
- v. We will have improved people's experience. Any improvements to visitor facilities will have been extremely sensitive to the nature reserve and landscape, and will have been focused on sustainable access. We will have built a replacement visitor centre, a gateway to Selsey and the Manhood Peninsula, appropriate to the location, and in close consultation with local people.
- vi. We will have an excellent, open, working relationship with local communities and stakeholders, involving them in what we do. We will help them understand, and maximise, the economic benefits that nature reserves and environmental improvements can bring to their communities, especially through green tourism, green access links, and by enhancing the 'sense of place' and pride.
- vii. We will have been vigilant throughout regarding the significant flood risk faced by local communities and we will have given support to the community as they work to secure a reasonable standard of coastal defence.
- viii. The reserve will be on a sound financial footing, through uptake of agri-environment schemes, successful grant applications, careful budget management, and long-term partnership with WSCC.
- ix. We will be delivering an exemplar field teaching scheme, and have a particular focus on reaching young people.

- x. We will be working with local landowners, farmers, government agencies and communities to further enhance the wildlife and environment of the Manhood Peninsula and wider landscape, for the benefit of all.
- xi. We will have sought to deliver all aspects of the nature reserve's management of the LNR in a sustainable way.

\* The Vision accepts that the RSPB does not have tenure over the entire LNR, and it is not in our gift to guarantee that the entire LNR as defined by the current boundaries will be the same in 25 years time.

## 3.2 Objectives and management

### 3.2.1 Conservation Objectives

**a. Saltmarsh & mudflats: To monitor saltmarsh and mudflats for its SSSI condition and regionally/internationally important assemblages of waterfowl, managing disturbance. *Note: RSPB can only achieve the following on land where we have tenure. Figures to be revised as tenure is resolved.***

**Species targets/CMS prescriptions:**

- 2000+ Dark-bellied Brent Geese; 600+ Northern Pintail. Maintain and increase.

**Habitat conditions/CMS prescriptions:**

- The RSPB has no mechanism for physically managing the habitat or its extent.
- Intertidal habitats relatively stable in extent (140 ha intertidal; 155ha saltmarsh)

**Summary management/CMS projects:**

- Minimise disturbance to roosting and feeding waterfowl by improving signage and information provision
- RSPB and NE to work together to better understand likely impacts on protected species should the Harbour mouth close.
- Seek to understand the decline in Pintail numbers

**Summary monitoring/CMS projects:**

- Monitor the extent of the saltmarsh and mudflat using aerials once in the 5-year cycle or when up to date aerials are available
- Monitor sensitively to check if the boating Code of Conduct is working
- Survey for Slender Hare's-ear once during the 5-years
- Monitor non-breeding birds through WeBS counts
- Monitor the areas of Eel grass once in the 5-year cycle

**b. Lowland wet grassland: To maintain permanent wet grassland and permanent dry grassland in favourable condition for breeding waders, wintering wildfowl and waders, and Southern Marsh Orchid. *Note: RSPB can only achieve the following on land where we have tenure. Figures to be revised as tenure is resolved.***

**Species targets/CMS prescriptions:**

- Southern Marsh Orchid - 5000+ flowers each year
- Increase Lapwing to 10 pairs; maintain productivity at 0.6-0.8 young/pair
- Increase Redshank to 5 pairs

- Maintain wintering Dark-bellied Brent Goose at 2000+ (5-yr mean max)
- Increase Black-tailed Godwit from 157 maximum winter count 5-year mean 800-900 (international threshold = 610)
- Bulbous Foxtail – survey once in Management Plan cycle
- Brown Hare – maintain present population

**Habitat conditions/CMS prescriptions:**

- Maintain extent of grazing marsh
- Halsey's Farm enhanced to be more suitable for breeding waders

**Summary management/CMS projects:**

General

- Graze to create a favourable sward of 6-15cm by November
- 10-80% of the field should be soil damp enough for a six inch nail to be pushed in to the ground with ease Apr and June. 5-25% standing water between March and May 5-75% standing water (max depth 25cm) from Nov to Feb
- Weeds comprise less than 5% of sward
- In certain years and in certain fields, take a hay cut.
- Top (i.e. cut) rushes and control Stinging Nettle, Common Ragwort, docks and thistles, and encroaching scrub and Bramble, where needed
- Agricultural operations to be carried out under the terms of HLS agreements, where relevant
- Gather evidence of whether predation is happening; if so, consider electric fencing to exclude Foxes and Badgers from the main wader breeding areas

Halsey's Farm

- Investigate the potential to enhance wet grassland at Halsey's Farm, without affecting Flood Risk Management activity. If it is feasible, develop a project plan, seek permissions and funding, and deliver the work. The project might include:
- Creating foot drains following the old creek system and connecting to the existing ditches.
- Raising the footpath to keep it dry, plus fencing/ditching work to encourage people to keep to the right of way while still giving a pleasant experience.
- Installing sluices to improve water control
- Removal of scrub/hedge line along key ditches in the heart of the grassland, to reduce cover for predators and open line of sight for breeding birds
- Fencing Bremere Rife to protect Water Vole habitat

Ferry Field:

- Investigate the potential to hold more water/create pools and any alternative water sources, on the northern side of the field, without affecting Flood Risk Management activity.
- Manage the new foot drain system on Ferry Field through a rotation of rotavation to maintain <5% bare soil for feeding wader chicks.
- Investigate whether to increase the number of foot drains in the field

Norton Priory Pasture

- Graze sheep or mechanically control in spring and autumn
- Control invading scrub and re-establish the grassland

**Summary monitoring/CMS projects:**

- Monitor breeding birds by standard RSPB methods
- Monitor Lapwing productivity using modified Smith and O'Brien method
- Monitor non-breeding birds through WeBS and farmland bird surveys
- Monitor the length of the sward
- Monitor Southern Marsh Orchids annually by counting number of spikes in Chapel Meadow and Yeoman's (with volunteers)
- Map area of Bulbous Foxtail once in Management Plan cycle
- Monitor the Brown Hare Population

c. To maintain in Favourable SSSI and SPA Condition the shingle at Church Norton and Pagham Spits and on Tern and Little Islands for the benefit of the breeding shorebird communities (in particular Little and Common Terns) and the vegetated shingle flora communities, within the context of coastal flood risk management work undertaken by the relevant authorities. **Note: RSPB can only achieve the following on land where we have tenure. Work also needs to be undertaken in close liaison with the flood and erosion risk authorities. Figures to be revised as tenure is resolved.**

**Species targets/CMS prescriptions:**

- Little Tern 12 pairs, productivity 0.5 young/pr
- Common Tern 12 pairs, productivity 0.7 young/pr
- Ringed Plover 12 pairs, productivity 0.7 young/pr
- Childing Pink distribution covers an area of 9ha
- *Caecium armoricum* establish as certain presence
- *Truncatella subcylindrica* establish extent

**Habitat conditions/CMS prescriptions:**

- Maintain area of vegetated shingle at 50ha
- Red Valerian and other garden escapes species controlled and not spreading

**Summary management/CMS projects:**

- Maintain close contact with coastal flood risk management authorities and Pagham Coastal Issues Group to ensure any ecological work planned or undertaken is compatible with flood risk management activity.
- Selectively pull/spot spray vegetation on half of Tern Island & New Island
- Erect predator-proof fence and signage around tern breeding areas (on Tern Island and the breeding area on Church Norton Spit) from 1 Apr - 31 Aug to protect from Foxes. See Map 7i for current arrangement of fencing, which is liable to change as the terns shift their nesting position. Ensure fencing is as unobtrusive as possible.
- Restore all of Tern Island, by removing vegetation to create shingle attractive to breeding Terns.
- Consider action plan/contingencies for species translocation during any managed re-alignment, or shingle relocation schemes – these must be in line with the RSPB Translocations Policy.
- Establish methodology and programme for controlling Red Valerian and invasive garden escapes.
- Extend groyne landward, opposite 2nd several reedbed, to prevent 4WD damage to shingle/access onto the Reserve from the south.
- Maintain fencing on Pagham Spit.

**Summary monitoring/CMS projects:**

- Monitor shingle breeding birds
- Monitor the vegetative shingle area, exotic species and extent.
- Monitor the population of *Truncatella subcylindrica* and *Caecium armoricum*

**d. Saline lagoons: To maintain saline lagoons in Favourable SSSI condition for the benefit of invertebrate and bird communities.**

**Species targets/CMS prescriptions:**

- Assemblages of saline lagoon specialist invertebrates present
- Seek to establish whether Starlet Sea-anemone is still present
- Passage waders increase in number, range of species, and time present on reserve

**Habitat conditions/CMS prescriptions:**

- Maintain area of saline lagoon
- Provide wet mud and varying water levels at Ferry Pool from Mar-Oct, and especially April-May and July-October.
- Maintain high water levels in Breach Pool & Ferry Pool from Nov-Mar.
- Maintain salinity levels within range 5.0 – 25.0 ppt
- Add gauge board to monitor water levels in Ferry Pool

**Summary management/CMS projects:**

- Top up Ferry Pool from the Harbour in November to prevent salinity becoming too low and to create conditions in field suitable for wintering waterfowl
- Place shingle around the margins of the newly created islands in Ferry Pool
- Consider the use of rafts for terns on Ferry Pool to supplement the newly created islands, but not until after 2013 when results of raft trials nationally are in.
- Investigate the creation of an island at the eastern end of Ferry Pool.
- Monitor water levels weekly, or more in key periods on Ferry and Breach Pool

**Summary monitoring/CMS projects:**

- Survey for Starlet Sea-anemone once in Management Plan cycle
- Monitor the fauna communities once in Management Plan cycle
- Monitor the salinity monthly
- Monitor waterbirds all year through Wetland Bird Survey (WeBS) counts
- Monitor breeding birds through BBS

**e. Reedbed/fen/freshwater rifes and pools: To maintain in SSSI Favourable Condition for the benefits of Water Vole, bird and invertebrate communities. **Note: RSPB can only achieve the following on land where we have tenure. Figures to be revised as tenure is resolved.****

**Species targets/CMS prescriptions:**

- Flame Wainscot presence established annually
- Water Vole present on 8 out of 10 transects in known range annually
- At least one wintering Bittern annually

**Habitat conditions/CMS prescriptions:**

- Overall present extent of reedbed, and open water within, maintained, except at Long Pool where the amount of open water to be increased

- Winter water levels maintained, summer ground water levels increased, monitored using dip wells

#### **Summary management/CMS projects:**

- Establish rotational Reed cutting regime for Long Pool and, where necessary, maintain open water by excavation.
- Control Japanese Knotweed by an appropriate method
- Selective clearances of invasive willow scrub, Bramble and scrub
- At Mill Pond Marsh, selectively control scrub and bramble from boundary of the marsh and in northern section. Remove tree saplings. Cut and rake off reeds/accumulated plant debris on an 8-10 year rotation. Partly retain material for habitat piles and partly burn on site.
- Clear Sycamore and coppice/pollard Willow at interface with reedbed and millstream.
- North Wall Scrape: Management of water levels as far as is possible given that we do not have management control of water into the scrape.
- Rotational cut of the reeds
- Cutting/Grazing of the fen vegetation in field
- Establish a rotational clearance of ditches etc which are not managed by the EA
- Remove regenerating scrub along ditches and Broad Rife bank and maintain the area clear of scrub to reduce areas available to predators.
- Control Floating Pennywort in Pagham Rife in liaison with EA

#### **Summary monitoring/CMS projects:**

- Carry out Breeding Bird Surveys
- Monitor Mink by rafts (or other method?).
- Monitor Water Voles
- Monitor nutrient levels of rife
- Monitor Floating Pennywort
- Monitor Flame Wainscot
- Monitor ground water levels using dip wells in location

**f. To Maintain semi natural deciduous woodland, scrub and ruderal habitats and hedgerow in SSSI Favourable Condition for its bird assemblages** **Note: RSPB can only achieve the following on land where we have tenure. Figures to be revised as tenure is resolved.**

#### **Species targets/CMS prescriptions:**

- Yellowhammer 8 pairs
- Little Egret (13prs) & Grey Heron (6prs) – monitor and seek to prevent disturbance
- Linnet 7 pairs
- Adder monitor on landfill to establish presence

#### **Habitat conditions/CMS prescriptions:**

- Maintain present area of woodland and establish greater age-mix of trees
- Seek to increase scrub area if possible at Church Norton for migrant passerines by thickening the hedgeline at the back of the field – may need protection from Rabbits or grazing livestock. Create scalloped edges. Relate to HLS prescriptions.

#### **Summary management/CMS projects:**

Poplar Copse

- Consider selective coppicing/pollarding of Willow and the planting up of open area with Black Poplar, using plants propagated from the master tree.

#### Norton Priory Woodland

- Clear Rhododendron regeneration.
- Clear Sycamore and Horse Chestnut regeneration
- Manage Bracken
- Retain and maintain open areas/glades to encourage more diverse ground flora.
- Due to lack of natural regeneration plant Oak singly at wide spacing or in small groups. Restocking should be via seeds collected from the site or natural regeneration.
- Plant small/occasional groups of Hazel within existing glades or open areas.

#### Owl Copse (nesting site for Grey Herons and Little Egrets)

- Maintain central glade by cutting back/coppicing encroaching scrub and bramble on rotation.
- Consider under-planting with a range of scrub/hedgerow species to create structural diversity.
- Fence off to prevent trespass.

#### Hedgerows

- 5-year cutting regime.

#### Scrub

- Increase the area of Scrub in Glebe Meadow for migrating birds in accordance with advice from the archaeological unit

#### **Summary monitoring/CMS projects:**

- Monitor non-native species, age composition, and regeneration in woodlands
- Establish the NVC communities
- Survey breeding birds
- Monitor Adders for presence

**g. Arable cover crop : To maintain a rotational cover crop on Slipe Field including both seed and nectar sources for the benefit of wintering finches and buntings**

#### **Species targets/CMS prescriptions: (five-year means)**

- Corn Bunting 4
- Linnet 143
- Yellowhammer 10
- Reed Bunting 21
- Invertebrate Assemblage require baseline data

#### **Habitat conditions/CMS prescriptions:**

- HF4 - Nectar Flower mixture (50% nectar and 50% seed mixes)

#### **Summary management/CMS projects:**

- Leave southern corner as long grass/seasonally wet habitat, cut on a 5-year rotation.
- Plough the greater part of the field after 15<sup>th</sup> March. Sow HF4, with wild flower/grass margins, before the end of May. Leave crops/cereals standing until end of February.
- Manage the field margins on a 5 year rotational cut.
- Fence the arable area off and increase information provision to limit disturbance.



#### **Summary monitoring/CMS projects:**

- Monitor agricultural weeds
- Monitor wintering farmland birds
- Monitor the butterfly population using transect.
- Establish invertebrate baseline data

#### **h. Archaeology**

SM 12887, Ringwork South of St Wilfred's Chapel, Church Norton (see map X). The following management will be undertaken during the course of the plan, in consultation with English Heritage and WSCC:

- Manual vegetation control and grass strimming to prevent scrub development, no burning or stump removal on site
- Investigate re-establishment of sheep grazing on monument
- Repair /reinstate boundary fencing including rabbit fencing and monitor whether rabbits present.
- Seek funding to renew site interpretation panel and summarise panel for inclusion on reserve web page
- Removal of dead wood/fallen trees in NE corner of monument to investigate whether earthwork bank present. Consult on whether any further works needed to expose bank
- Consultation with English Heritage concerning any proposed works other than removal of dead wood / manual scrub control

#### **Non-designated heritage assets (WSCC Historic Environment Record)**

There are c. 30 heritage assets recorded either within the reserve or 50m of boundary as noted in the WSCC Historic Environment Record (HER) HLS FEP consultation. During Year 2-3 of the Management Plan, these assets will be surveyed and mapped in consultation with WSCC archaeologists in order to provide a clear understanding of the resource. The following approach will be taken:

- A definitive list and map of asset boundaries will be produced for the lease holding which will combine results of field survey and polygon data held by WSCC.
- Any features which are not recorded in the HER will be included in the survey and their whereabouts communicated to WSCC.
- Efforts will be made to improve the positive condition and visibility of assets in line with management advice provided by WSCC archaeologists and the HER FEP consultation
- Assets will not be subject to potentially damaging operations including earth-moving, planting schemes, tipping or deliberate flooding
- Non-designated heritage assets will be interpreted for visitors, to include information provided on reserve web page and events/walks
- Any proposed works or archaeological excavations on features will only take place following receipt of relevant consent/ derogation from Natural England and WSCC.

## 3.2.2 Objectives for People

### Working with local communities

**1. To inspire local communities and visitors about the Harbour, and generate a greater understanding of its worth and of the threats and challenges it faces**

Deliverable	<u>13/14</u>	<u>14/15</u>	<u>15/16</u>	<u>16/17</u>	<u>17/18</u>
Getting people closer to nature and the history and heritage of the reserve through a programme of events	✓	✓	✓	✓	✓
Attend community outreach events off site, making use of volunteers to enable this.	✓	✓	✓	✓	✓
Maintain a weekly blog	✓	✓	✓	✓	✓
Help people understand sensitivity of habitats and wildlife through permanent, seasonal and temporary signage	✓	✓	✓	✓	✓
Identify and recruit new volunteer roles needed to help manage the reserve	✓	✓	✓	✓	✓
Share news and stories with local communities and audiences through regular press releases as determined by a media plan	✓	✓	✓	✓	✓

**2. To maintain excellent working relationships with the local community**

Deliverable	<u>13/14</u>	<u>14/15</u>	<u>15/16</u>	<u>16/17</u>	<u>17/18</u>
To deliver the governance system as agreed under the Service Level Agreement, including the Local Communities Forum	✓	✓	✓	✓	✓
To attend quickly to community concerns as they occur, and offer open routes of communication	✓	✓	✓	✓	✓
To maintain effective systems of disseminating information, through e-updates and working with Friends of Pagham Harbour on Harbour Flyer or any such replacement	✓	✓	✓	✓	✓
To work closely with and support Friends of Pagham Harbour	✓	✓	✓	✓	✓
To work closely with and support Manhood Heritage and Wildlife Group/ Manhood Wildlife Alliance	✓	✓	✓	✓	✓
To work with local communities to maximise the benefit of the LNR as a part of the emerging green tourism offer on the Manhood Peninsula, including Pagham Harbour Visitor Centre acting as a key gateway to Medmerry, Selsey and the Manhood Peninsula, helping to bolster the local economy	✓	✓	✓	✓	✓

To work with WSCC and stakeholders to deliver a successful boating Code of Conduct in the harbour and a constructive ongoing relationship with that audience	✓	✓	✓	✓	✓
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## Visitors on reserves

### 1. To contribute to overall national reserve visiting targets.

A large number of visits are already made to Pagham Harbour, which contribute to the RSPB's national target. The aim at Pagham Harbour is not to proactively increase visiting, but increase the proportion of visitors that are engaged with, especially in the visitor centre, to manage the reserve in a way that can cope with visitors, for instance by giving visitors new options such as visiting Medmerry, and to focus on sustainable access and staying visitors rather than day trippers.

Deliverable	13/14	14/15	15/16	16/17	17/18
Maintain accurate, consistent counts of visitors	✓	✓	✓	✓	✓

### 2. Provide a high quality visitor experience

Deliverable	13/14	14/15	15/16	16/17	17/18
Maintaining all public access routes and infrastructure in a good state of repair	✓	✓	✓	✓	✓
Review and develop a plan for the upgrade/replacement of site-wide visitor facilities including hides, to give visitors a more enjoyable experience. Upgrading visitor toilets at the Visitor Centre will be a key priority. Any path improvements will be done in collaboration with WSCC	✓	✓	✓	✓	✓
Use the results of the Visitor Centre Feasibility Study to explore options for upgrading/replacing the buildings, such that there is a clear plan and agreement by Year 5, including close consultation with the local community.	✓	✓	✓	✓	✓
Get people closer to nature through habitat management and manipulation	✓	✓	✓	✓	✓
Audit (in year 1) existing footpaths and develop and deliver (years 2 – 5) a plan for upgrading some of the routes for disabled users	✓	✓	✓	✓	✓
Audit signage around the reserve (in year 1), and develop and deliver a plan (years 2-5) to replace or upgrade existing signs and interpretation	✓	✓	✓	✓	✓
Work with local authorities and interest groups to explore options for increasing cycle access	✓	✓	✓	✓	✓
Improve the access links from Pagham Harbour visitor centre across the B2145 towards Medmerry	✓	✓	✓	✓	
Provide sightings, news and events information on the Pagham side of the Harbour, potentially in liaison with SWAWMA at the Salthouse	✓	✓	✓	✓	✓
Improve and increase mechanisms for collecting visitor feedback	✓	✓	✓	✓	✓
Undertake visitor surveys	✓	✓	✓	✓	✓
Investigate whether there are options for improved car parking on the Pagham side of the Harbour		✓	✓		

As detailed plans are developed for key aspects of infrastructure, such as paths and buildings, share them with, and seek views from, key stakeholders including the Pagham Harbour Community Forum.	✓	✓	✓	✓	✓
Develop and deliver an on-site Quality Assurance system	✓	✓	✓	✓	✓
Gain VAQAS accreditation of the site through the VisitEngland scheme		✓	✓	✓	✓
Work with WSCC to help them revise the byelaws	✓	✓	✓		
Monitor the byelaws on site, encourage adherence to them by users, and assist WSCC in bringing any prosecutions if necessary	✓	✓	✓	✓	✓

### 3. Engage with a greater proportion of visitors and offer a better quality service to each one.

Deliverable	13/14	14/15	15/16	16/17	17/18
Seek to establish a baseline figure of what proportion of visitors we are engaging with, and set targets for improving that	✓	✓			
Recruit and train more volunteer stewards for the Visitor Centre and to assist on events	✓	✓	✓	✓	✓
Recruit and train a team of volunteer wardens to help engage with visitors across the wider site	✓	✓	✓	✓	✓
Work with local tourism sites to inspire holiday makers about the reserve	✓	✓	✓	✓	✓

### 4. Offer local communities and visitors the chance to support the reserve and its work

Deliverable	13/14	14/15	15/16	16/17	17/18
RSPB memberships recruited annually at Pagham Harbour (for each membership recruited on a site, the RSPB commits £75 to the reserve budget)	✓	✓	✓	✓	✓
Provide support to help Friends of Pagham Harbour remain visible, active and viable. Ensure that Friends of Pagham Harbour has an effective space to promote itself within the Visitor Centre	✓	✓	✓	✓	✓
Help Friends of Pagham Harbour identify and approach local grant giving bodies	✓	✓	✓	✓	✓
Explore landscape scale funding opportunities with partner organisations	✓	✓	✓	✓	✓
Explore options for increasing donations	✓	✓	✓	✓	✓

### 5. Improve the visitor experience for family groups

<b>Deliverable</b>	<b><u>13/14</u></b>	<b><u>14/15</u></b>	<b><u>15/16</u></b>	<b><u>16/17</u></b>	<b><u>17/18</u></b>
Family backpacks available for loan from Visitor Centre	✓	✓	✓	✓	✓
Seek to establish temporary trails and an improved nature trail for families (note that a 'trail' is not a new access route or path – it is interpretation along an existing route)	✓	✓	✓		

## 6. Wildlife Explorers group

<b>Deliverable</b>	<b><u>13/14</u></b>	<b><u>14/15</u></b>	<b><u>15/16</u></b>	<b><u>16/17</u></b>	<b><u>17/18</u></b>
Wildlife Explorers group up and running by 2014	✓	✓	✓	✓	✓

## 7. To increase attendance and quality of the field teaching scheme

<b>Deliverable</b>	<b><u>13/14</u></b>	<b><u>14/15</u></b>	<b><u>15/16</u></b>	<b><u>16/17</u></b>	<b><u>17/18</u></b>
Learning Outside the Classroom Quality Badge achieved by 2015	✓	✓	✓	✓	
Field teaching scheme grows annually, reaching over 2000 pupils by year 5 of this Management Plan period	✓	✓	✓	✓	✓
Adopt RSPB booking, recording, invoicing and feedback procedures	✓				
Provide expenses and uniform for education volunteers and field teachers	✓	✓	✓	✓	✓
Manage to budget, with the ultimate aim of running a programme without a deficit	✓	✓	✓	✓	✓
Prepare and deliver a comprehensive field-teaching programme related to the national curriculum	✓	✓	✓	✓	✓
Collect feedback from schools	✓	✓	✓	✓	✓
Create a greater online presence readily available for teachers	✓				
Outreach to new audiences	✓	✓	✓	✓	✓
Develop promotional materials such as teachers packs, leaflets and postcards		✓			
Advertise in appropriate media	✓	✓	✓	✓	✓
Write and deliver a maintenance and improvement plan for teaching areas	✓	✓	✓	✓	✓
Improve facilities and resources to enhance the learning outside the classroom experience at Pagham Harbour	✓	✓			

Increase the undercover space	✓	✓			
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#### 4. FIVE-YEAR WORK PROGRAMME

Pagham Harbour Local Nature		2013/14	2014/15	2015/16	2016/17	2017/18
RP13/02	Collect data, hydrological, monitor MONITOR THE SALINITY LEVELS IN FERRY POOL	1	1	1	1	1
RP13/03	Collect data, hydrological, monitor MONITOR THE WATER LEVELS IN FERRY POOL	1	1	1	1	1
RP13/04	Collect data, hydrological, monitor MONITOR THE WATER LEVEL THROUGH DIP WELLS -- MILL POND MARSH	2	2	2	2	2
RP13/05	Collect data, hydrological, monitor MONITOR THE SALINITY -- CHAPEL MEADOW	2	2	2	2	2
RP13/12	Collect data, hydrological, monitor MONITOR THE SALINITY LEVELS IN PAGHAM MAIN LAGOON	1	1	1	1	1
RP13/14	Collect data, hydrological, monitor MONITOR THE SALINITY LEVELS IN PAGHAM SPIT LAGOON	1	1	1	1	1
RP13/17	Collect data, hydrological, monitor MONITOR THE SALINITY LEVELS IN BREACH POOL	1	1	1	1	X
RP13/29	Collect data, hydrological, monitor MONITOR THE NUTRIENT LEVELS IN THE PAGHAM MAIN LAGOON --	X	X	2	X	X
RP13/31	Collect data, hydrological, monitor MONITOR THE NUTRIENT LEVELS IN THE PAGHAM MAIN LAGOON --	X	X	2	X	X
RP13/32	Collect data, hydrological, monitor MONITOR THE NUTRIENT LEVELS IN THE PAGHAM MAIN LAGOON --	X	X	2	X	X
RP13/54	Collect data, hydrological, monitor MONITOR THE SALINITIES IN BREMERE RIFE	2	2	2	2	2
RP13/55	Collect data, hydrological, monitor MONITOR THE SALINITY LEVELS IN SMALL POOL	2	2	2	2	2
RP13/56	Collect data, hydrological, monitor MONITOR THE SALINITY LEVELS IN LONG POOL	2	2	2	2	2
RP23/01	Collect data, geological, monitor MONITOR THE SOIL PH OF SLIPE FIELD	X	X	2	X	X
RP23/02	Collect data, geological, monitor MONITOR THE NITRATE CONTENT OF THE SOIL IN SLIPE FIELD	X	X	2	X	X
RP23/03	Collect data, geological, monitor MONITOR THE PHOSPHOROUS CONTENT IN SLIPE FIELD	X	X	2	X	X
RP23/04	Collect data, geological, monitor MONITOR THE POTASSIUM CONTENT OF THE SOIL IN SLIPE FIELD	X	X	2	X	X
RP54/01	Collect data, landscape, count/estimate/measure/census ESTIMATE THE PRESENT EXTENT OF THE SALT MARSH	X	X	X	1	X
RF00/01	Collect data, vegetation MONITOR THE LAGOONS FLORA IN FERRY POOL	1	1	1	1	1
RF02/18	Collect data, vegetation, survey SURVEY FOR SOUTHERN MARSH ORCHID IN THE REEDBED AT MILL	2	2	2	2	2
RF03/03	Collect data, vegetation, monitor MONITOR THE PLANTS COMMUNITIES ON THE CHURCH NORTON SHINGLE	X	X	2	X	X
RF03/04	Collect data, vegetation, monitor MONITOR THE GRASSLAND IN CHAPEL MEADOW -- NORTH END	1	1	1	1	X
RF03/11	Collect data, vegetation, monitor MONITOR THE AMOUNT OF REED COMPARED TO OTHER PLANTS IN THE	2	2	2	2	X
RF03/33	Collect data, vegetation, monitor MONITOR THE PLANTS COMMUNITIES ON THE PAGHAM SHINGLE SPIT	2	2	2	2	X
RF03/35	Collect data, vegetation, monitor THE DISTRIBUTION OF EEL GRASS SPP	X	X	2	X	X
RF03/52	Collect data, vegetation, monitor MONITOR THE REED HEIGHT -- MILL POND MARSH	X	X	X	2	X
RF03/61	Collect data, vegetation, monitor MONITOR THE GRASSLAND IN CHAPEL MEADOW -- SOUTH END	1	1	1	1	1
RF03/62	Collect data, vegetation, monitor MONITOR THE PLANTS COMMUNITIES ON THE CHURCH NORTON SHINGLE	X	X	2	X	X
RF05/12	Collect data, vegetation, research project SET UP EXPERIMENT PLOTS FOR THE CONTROL OF RED VALERIAN	1	1	X	X	X
RF13/06	Collect data, trees/shrubs, monitor MONITOR THE POPULATION OF BLACK POPLAR (SAP)	X	2	X	X	X
RF23/01	Collect data, other vascular plants, monitor MONITOR THE POPULATION OF SOUTHERN MARSH ORCHIDS	1	1	1	1	1
RF23/02	Collect data, other vascular plants, monitor MAP OUT THE AREA OF CHILDLING PINK	1	1	1	1	1
RA03/03	Collect data, mammals, monitor	2	2	2	2	2

RA03/04	MONITOR THE POPULATION OF THE BROWN HARE Collect data, mammals, monitor	1	1	1	1	1
RA12/01	MONITOR THE WATER VOLE POPULATION Collect data, birds, survey	X	2	X	2	2
RA12/02	CARRY OUT BBS ON PAGHAM SPIT Collect data, birds, survey	1	1	1	1	1
RA12/03	CARRY OUT BBS ON PAGHAM LAGOON Collect data, birds, survey	1	1	1	1	1
RA12/05	CARRY OUT BBS AT SLIPE FIELD Collect data, birds, survey	1	1	1	1	1
RA12/06	CARRY OUT BBS NORTH FIELDS Collect data, birds, survey	1	1	1	1	1
RA12/07	CARRY OUT BBS AT CHAPEL MEADOWS AND MILL POND REEDBED Collect data, birds, survey	1	1	1	1	1
RA12/08	CARRY OUT BBS DOWN WEST SIDE Collect data, birds, survey	1	1	1	1	1
RA12/10	CARRY OUT BBS ALONG CHURCH NORTON SPIT AND TERN ISLAND Collect data, birds, survey	1	1	1	1	1
RA12/11	CARRY OUT BBS IN NORTON PRIORY Collect data, birds, survey	3	3	3	3	3
RA12/12	CARRY OUT ANNUAL ROOST COUNTS OF LITTLE EGRET Collect data, birds, survey	1	1	1	1	1
RA12/20	CARRY OUT BBS IN FERRY FIELD COMPLEX Collect data, birds, survey	1	1	1	1	1
RA13/03	CARRY OUT BBS -- VISITOR CENTRE AND YEOMAN'S Collect data, birds, monitor	3	3	3	3	3
RA13/04	MONITOR THE WINTERING POPULATION OF FARMLAND BIRDS IN FERRY Collect data, birds, monitor	1	1	1	1	1
RA13/05	MONITOR THE WINTERING POPULATION OF FARMLAND BIRDS IN SLIPE Collect data, birds, monitor	3	3	3	3	3
RA13/06	MONITOR THE WINTERING POPULATION OF FARMLAND BIRDS IN Collect data, birds, monitor	3	3	3	3	3
RA13/09	MONITOR THE WINTERING POPULATION OF FARMLAND BIRDS IN THE Collect data, birds, monitor	2	2	2	2	2
RA13/13	CARRY OUT THE BREEDING HERON SURVEY AT OWL COPSE Collect data, birds, monitor	2	2	2	2	2
RA13/14	CARRY OUT THE BREEDING LITTLE EGRET SURVEY AT OWL COPSE Collect data, birds, monitor	2	2	2	2	2
RA13/16	MONITOR THE WINTERING POPULATION OF FARMLAND BIRDS HONER Collect data, birds, monitor	1	1	1	1	1
RA13/17	MONITOR THE POPULATION WATEFOWL THROUGH THE WEBS COUNT Collect data, birds, monitor	1	1	1	1	1
RA13/18	MONITOR THE SIZE OF THE WINTERING POPULATION OF BRENT GEESE Collect data, birds, monitor	1	1	1	1	1
RA13/19	MONITOR THE SIZE OF THE WINTERING POPULATION OF PINTAIL Collect data, birds, monitor	1	1	1	1	1
RA13/20	MONITOR THE SIZE OF THE WINTERING POPULATION OF BLACK TAILED GODWIT Collect data, birds, monitor	1	1	1	1	1
RA13/21	MONITOR THE BREEDING POPULATION OF LITTLE TERNS THROUGH THE Collect data, birds, monitor	1	1	1	1	1
RA13/22	NUMBER OF PAIRS OF LAPWING ON FERRY FIELD Collect data, birds, monitor	1	1	1	1	1
RA13/27	NUMBER OF PAIRS OF REDSHANK ON FERRY FIELD Collect data, birds, monitor	1	1	1	1	1
RA13/28	MONITOR THE SIZE OF THE WINTERING POPULATION OF RUFF USING WEBS Collect data, birds, monitor	1	1	1	1	1
RA23/01	MONITOR THE BREEDING POPULATION OF COMMON TERNS Collect data, herptiles, monitor	2	2	2	2	2
RA42/02	ESTABLISH BASELINE DATA AND MONITOR THE ADDER POPULATION ON Collect data, Lepidoptera, survey	3	3	3	3	3
RA42/03	CARRY OUT A BUTTERFLY TRANSECT IN CHAPEL MEADOW Collect data, Lepidoptera, survey	3	X	3	X	3
RA42/05	CARRY OUT MOTH TRAPPING IN CHAPEL MEADOW Collect data, Lepidoptera, survey	X	3	X	3	X
RA42/07	CARRY OUT A BUTTERFLY TRANSECT DOWN WEST SIDE Collect data, Lepidoptera, survey	2	2	2	2	2
RA43/01	CARRY OUT BUTTERFLY TRANSECT THROUGHOUT THE PROTECTED Collect data, Lepidoptera, monitor	1	1	1	1	1



RA43/02	MONITOR THE POPULATION OF TOADFLAX BROCADE Collect data, Lepidoptera, monitor	2	2	2	2	2
RA53/11	MONITOR THE FLAME WAISCOT -- MILL POND MARSH Collect data, Odonata, monitor	X	X	X	X	3
RA83/05	MONITOR THE POPULATION OF ODONTA ON BREMERIE RIFE Collect data, other/general invertebrates, monitor	1	1	1	1	1
RA83/06	MONITORING OF THE LAGOONS INVERTEBRATE FAUNA IN FERRY POOL Collect data, other/general invertebrates, monitor	3	3	3	3	3
RH33/02	MONITOR THE WASP SPIDER Collect data, public use, recreation	X	X	1	1	1
ML00/01	MONITOR THE IMPACTS OF THE BAIT DIGGING AND FISHING ON THE Liaise, owners/occupiers	1	1	1	1	1
MH02/02	LIAISE WITH THE ENVIRONMENT AGENCY OVER ANY MANAGEMENT Manage habitat, woodland/scrub, by thinning/group felling	1	1	1	1	1
MH02/03	REMOVAL OF SYCAMORE FROM PRIORY WOOD Manage habitat, woodland/scrub, by thinning/group felling	1	1	1	1	1
MH03/02	REMOVAL OF RHODODENDRON FROM PRIORY WOOD Manage habitat, woodland/scrub, by assisting natural regeneration	1	1	1	1	1
MH04/02	CONTROL OF BRACKEN Manage habitat, woodland/scrub, by ride/path/glade maintenance	1	1	1	1	1
MH07/01	MAINTAIN CENTRAL GLADE IN OWL COPSE Manage habitat, woodland/scrub, by scrub control	X	1	X	1	X
MH07/02	REMOVAL OF SCRUB FROM FERRY FIELD Manage habitat, woodland/scrub, by scrub control	X	1	1	1	1
MH10/02	MANAGEMENT OF SCRUB Manage habitat, grassland, by controlled grazing	1	1	1	1	1
MH10/03	LIGHT GRAZING OF THE CHAPEL MEADOW Manage habitat, grassland, by controlled grazing	1	1	1	1	1
MH10/04	GRAZE USING CATTLE FROM APRIL – OCTOBER OUTER FERRY FIELD Manage habitat, grassland, by controlled grazing	1	1	1	1	1
MH10/05	GRAZE WITH CATTLE FROM JULY – OCTOBER INNER FERRY FIELD Manage habitat, grassland, by controlled grazing	2	2	2	2	2
MH10/08	GRAZE AFTER THE HAY CUT USING SHEEP/CATTLE - YEOMANS Manage habitat, grassland, by controlled grazing	1	1	1	1	1
MH10/13	GRAZE WITH SHEEP OR CUT -- GLEBE MEADOW AND THE MOUND Manage habitat, grassland, by controlled grazing	X	1	1	1	1
MH10/14	GRAZE THE GRASSLAND TO ACHIEVE SUITABLE WINTER FEEDING FOR Manage habitat, grassland, by controlled grazing	1	1	1	1	1
MH12/01	ENSURE ALL STOCK FENCING IS MAINTAINED Manage habitat, grassland, by mowing	1	1	1	1	1
MH12/06	CUTTING OF CHAPEL MEADOW Manage habitat, grassland, by mowing	1	1	1	1	1
MH12/08	TAKE A HAY CUT BEFORE GRAZING – YEOMANS Manage habitat, grassland, by mowing	1	1	1	1	1
MH12/09	MANAGE ROUGH GRASSLAND IN SLIPE FIELD ON ROTATION Manage habitat, grassland, by mowing	2	2	2	2	2
MH12/10	TAKE A CUT OF HAY IF REQUIRED -- HALSEYS Manage habitat, grassland, by mowing	1	1	1	1	1
MH12/11	TOPPING OF THISTLE -- FERRY FIELD Manage habitat, grassland, by mowing	2	2	2	2	2
MH12/12	CUTTING OF RUSHES Manage habitat, grassland, by mowing	1	1	1	1	1
MH19/08	CUTTING OF THE OUTSIDE OF SLIPE FIELD Manage habitat, grassland, by other activities	1	1	1	1	1
MH19/10	CREATION OF FOOTDRAINS AND MANAGEMENT OF WATER LEVELS Manage habitat, grassland, by other activities	X	X	1	X	X
MH22/02	THE SPRAYING OF WEEDS -- NORTH FIELDS Manage habitat, bracken herb, by mowing/selective cutting	1	1	1	1	1
MH29/01	CONTROL OF AGRICULTURAL WEEDS IN HALSEY'S FARM Manage habitat, bracken herb, by other activities	1	1	1	1	1
MH50/02	CONTROL OF AGRICULTURAL WEEDS ON THE SPITS Manage habitat, swamp/fen/inundation, by water level control	1	1	1	1	1
MH53/01	CONTROL THE WATER LEVEL IN MILL POND MARSH Manage habitat, swamp/fen/inundation, by mowing	1	1	1	1	1
MH55/01	CUT THE REEDS IN A SET ROTATION -- MILL POND MARSH Manage habitat, swamp/fen/inundation, by excavation	1	1	1	1	1
MH60/01	CREATE AND MANAGE AN AREA OF OPEN WATER IN REED BED Manage habitat, open water, by water level control	1	1	1	1	1

	CONTROL THE WATER LEVELS ON FERRY POOL					
MH60/03	Manage habitat, open water, by water level control	1	1	1	1	1
	ENSURE THAT ALL WATER LEVEL DEVICES ARE WORKING IN THE					
MH61/01	Manage habitat, open water, by excavation	X	X	1	X	X
	RE-PROFILE THE FERRY POOL IN INCREASE THE DRAW DOWN ZONE AND					
MH79/01	Manage habitat, coastal, by other activities	1	1	1	1	1
	REMOVAL OF VEGETATION FROM THE SHINGLE ISLANDS					
MA09/01	Manage habitat, artificial, by other activities	1	1	1	1	1
	SOW A COVER CROP IN SLIPE FIELD					
MS40/01	Manage species, bird	1	1	1	1	1
	PROTECT NESTING SHOREBIRDS ESPECIALLY OYSTERCATCHER, RINGED					
MS40/02	Manage species, bird	1	1	1	1	1
	PROVIDE FENCED OFF AREA - SEASONALLY					
MS40/03	Manage species, bird	1	1	1	1	1
	MAINTAIN PERMENANTLY PROTECTED AREAS					
ME02/01	Other structures	3	3	3	3	3
	CONSTRUCT AND REPAIR BIRD BOXES					
MM10/01	Acquire/service machinery	1	1	1	1	1
	ANNUAL SERVICE OF MACHINERY					
AR01/01	Prepare report, project review, new projects	1	1	1	1	1
	PREPARE A ANNUAL MONITORING REPORT					
RP43/01	Collect data, pedological, monitor	3	3	X	X	X
	MONITOR THE PARTICLE SIZE TO COMPARE WITH THE INVERTEBRATE COMMUNITIES					
RP33/02	Collect data, geomorphological, monitor	X	1	X	1	X
	MONITOR THE MOVEMENT OF THE SHINGLE BY NATURAL PROCESS ON ALL SHINGLE AREAS					
RV10/02	List/collect photographs, general	X	X	X	X	2
	COLLECT ARCHIVE PHOTOS OF THE SHINGLE SPITS TO ESTABLISH PAST MOVEMENTS					
RV20/02	List/collect/commission photographs aerial	X	X	X	X	3
	AERIAL PHOTOGRAPHS OF THE SITE FOR MONITORING PURPOSES					
RV00/01	List/collect references, published and unpublished	X	X	X	X	3
	COLLECT AND CATALOGUE HISTORICAL EXTENT OF SALTMARSH					
RF02/03	Collect data, vegetation, survey	X	X	3	X	X
	SURVEY TO ESTABLISH EXISTENCE OF NATIONALLY SCARCE SPECIES -- SLENDER HARE'S EAR					
RF03/19	Collect data, vegetation, monitor	X	X	X	3	X
	MONITOR SLENDER HARE'S EAR IF FOUND					
RF03/34	Collect data, vegetation, monitor	X	X	X	3	X
	MAP AND MONITOR THE DISTRIBUTION OF EEL GRASS SPP					
RF00/02	Collect data, vegetation	2	2	2	2	2
	MONITOR THE SWARD HEIGHT IN CHAPEL MEADOW BETWEEN AUG AND OCT					
RF03/44	Collect data, vegetation, monitor	3	3	3	3	3
	MONITOR THE HEIGHT OF THE SWARD IN THE SPRING IN CHAPEL MEADOW					
RF03/04	Collect data, vegetation, monitor	X	3	X	3	X
	MONITOR THE GRASSLAND IN CHAPEL MEADOW -- NORTH END					
RF03/61	Collect data, vegetation, monitor	X	3	X	3	X
	MONITOR THE GRASSLAND IN CHAPEL MEADOW -- SOUTH END					
RF03/30	Collect data, vegetation, monitor	X	X	3	X	X
	MONITOR THE SWARD COMPOSITION OF THE GRASSLAND IN YEOMAN'S FIELD					
RF23/08	Collect data, other vascular plants, monitor	2	2	2	2	2
	MONITOR SMO IN YEOMAN'S					
RF03/37	Collect data, vegetation, monitor	X	2	X	2	X
	MONITOR THE LENGTH OF THE SWARD IN THE NORTH FIELDS					
MH10/01	Manage habitat, grassland, by controlled grazing	1	1	1	1	1
	GRAZE THE GRASSLAND TO ACHIEVE SUITABLE WINTER FEEDING FOR WATERFOWL -- NORTH FIELDS					
MH22/01	Manage habitat, bracken herb, by mowing/selective cutting	2	2	2	2	2
	TOPPING OF AGRICULTURAL WEEDS -- NORTH FIELDS					
RF03/56	Collect data, vegetation, monitor	2	2	2	2	2
	MONITOR THE PRESENCE OF AGRICULTURAL WEEDS					
RA82/10	Collect data, other/general invertebrates, survey	X	X	3	X	X
	CARRY OUT A GENERAL SURVEY OF THE LANDFILL FOR INVERTEBRATES					
MH10/06	Manage habitat, grassland, by controlled grazing	1	1	1	1	1
	LIGHT GRAZING OF THE PADDOCK FIELD					
MH12/03	Manage habitat, grassland, by mowing	2	2	2	2	2
	INCREASE GRASSLAND DIVERSITY BY SELECTIVE MOWING					
MH19/09	Manage habitat, grassland, by other activities	X	X	1	X	X
	INTRODUCTION OF FOOT DRAINS AND WATER CONTROL HALSEY'S 1					
MH19/01	Manage habitat, grassland, by other activities	2	2	2	2	2
	TOPPING OF AGRICULTURAL WEEDS -- HALSEY'S FARM					

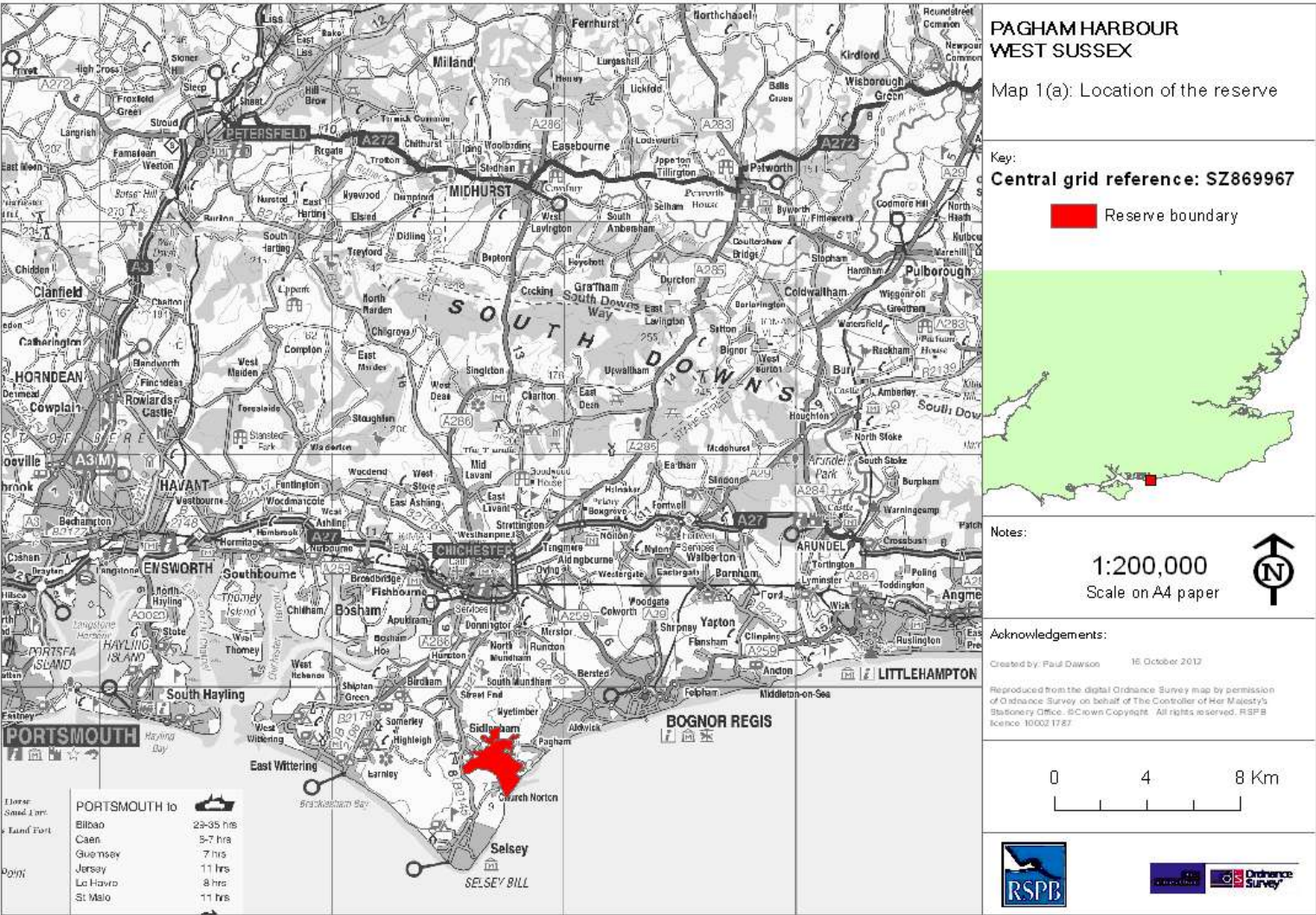
MH64/03	Manage habitat, open water, by clearing/dredging/reprofiling RENOVATE THE CENTRAL DITCH IN HALSEY'S 1 FOR WATER CONTROL	1	1	1	1	X
MH69/05	Manage habitat, open water, by other activities INSTALL SLUICES ON HALSEY'S 1 DITCH	X	X	1	X	X
MH19/11	Manage habitat, grassland, by other activities IMPROVE FOOTPATHS AND PROTECT BREEDING AREAS IN HALSEY'S FARM	X	X	1	X	X
RF03/07	Collect data, vegetation, monitor MONITOR THE AREA OF BULBOUS FOXTAIL	X	X	X	X	2
RF03/48	Collect data, vegetation, monitor MONITOR THE SWARD HEIGHT AND TUSSOCKS IN THE INNER FIELD -- FERRY	1	1	1	1	1
RF03/49	Collect data, vegetation, monitor MONITOR THE SWARD HEIGHT, TUSSOCKS IN THE OUTER FIELD - FERRY	1	1	1	1	1
RF03/50	Collect data, vegetation, monitor MONITOR THE COMPOSITION OF SWARD -- INNER FIELD -- FERRY	X	2	X	2	X
RF03/51	Collect data, vegetation, monitor MONITOR THE COMPOSITION OF SWARD -- OUTER FIELD -- FERRY	X	2	X	2	X
MH19/07	Manage habitat, grassland, by other activities THE CONTROL OF RAGWORT, THISTLES ETC IN FERRY FIELD	1	1	1	1	1
MH69/03	Manage habitat, open water, by other activities MANAGE FOOTDRAINS USING ROTAVATION IN FERRY FIELD	X	X	1	1	1
MH69/04	Manage habitat, open water, by other activities CONTROL WATER LEVELS IN FOOTDRAINS USING DROP BOARDS IN FERRY FIELD	1	1	1	1	1
ME11/02	Buildings, construct REPLACE FERRY POOL HIDE	X	1	X	X	X
RF03/32	Collect data, vegetation, monitor MONITOR THE AREA OF SHINGLE PLANT COMMUNITIES IN ALL SHINGLE AREAS	X	X	2	X	X
RF23/02	Collect data, other vascular plants, monitor MAP OUT THE AREA OF CHIDLING PINK	X	2	X	2	X
RF23/03	Collect data, other vascular plants, monitor MONITOR THE EXTENT OF THE GORSE ON PAGHAM SPIT	X	X	X	3	X
RF23/04	Collect data, other vascular plants, monitor MONITOR THE EXTENT OF INVASIVE SPECIES AND NON-NATIVE SPECIES ON THE SHINGLE AREAS	X	1	X	X	1
RF53/01	Collect data, lichens, monitor MONITOR THE LICHEN COMMUNITIES ON SHINGLE SPITS	X	X	3	X	X
RA83/13	Collect data, other/general invertebrates, monitor MONITOR THE POPULATION OF <i>TRUNCATELLA SUBCYLINDRICA</i> AT CHURCH NORTON	1	X	X	X	X
RA83/18	Collect data, other/general invertebrates, monitor MONITOR THE POPULATION OF <i>CAECUM ARMORICUM</i>	1	X	X	X	X
ME02/02	Other structures REPAIR OR REPLACE OBSERVATION HIDE ON TERN ISLAND	X	1	X	X	X
ME02/03	Other structures BUILD A REPLACEMENT BOARDWALK UP ON TO CHURCH NORTON SPIT	X	X	X	X	3
ME03/01	Remove structures REMOVE THE SLEEPER BOARDWALK FROM THE CHURCH NORTON SPIT	X	X	X	X	3
ME12/02	Buildings, maintain/improve MAINTAIN AND IMPROVE THE PAGHAM SPIT HIDE	1	1	1	1	1
MH79/02	Manage habitat, coastal, by other activities CONTROL OF INVASIVE AND EXOTICS BY REMOVAL FROM THE SHINGLE SPITS	X	X	1	X	1
RF03/15	Collect data, vegetation, monitor MONITOR THE FLORA IN PAGHAM SPIT LAGOON	X	X	X	3	X
RA93/04	Collect data, fauna, monitor MONITOR THE FAUNAL COMMUNITIES ASSOCIATED WITH PAGHAM SPIT LAGOON	X	X	X	3	X
MH65/01	Manage habitat, open water, by clearing surrounding vegetation MAINTAIN OPEN WATER IN SMALL POOL BY REMOVAL OF ENCROACHING VEGETATION	X	X	X	2	X
MH65/02	Manage habitat, open water, by clearing surrounding vegetation MAINTAIN OPEN WATER IN LONG POOL BY ROTATIONAL CUTTING OF ENCROACHING VEGETATION	X	X	X	2	X
RF03/14	Collect data, vegetation, monitor MONITOR THE FLORA IN PAGHAM MAIN LAGOON	X	X	1	X	X
RA93/03	Collect data, fauna, monitor MONITOR THE FAUNAL COMMUNITIES OF PAGHAM MAIN LAGOON	X	X	1	X	X
RA82/05	Collect data, other/general invertebrates, survey CARRY OUT SURVEY FOR <i>NEMATOSTELLA VECTENSIS</i>	X	2	X	X	X
RA83/09	Collect data, other/general invertebrates, monitor MONITOR (IF LOCATED) <i>NEMATOSTELLA VECTENSIS</i>	X	X	X	2	X
RF03/16	Collect data, vegetation, monitor MONITOR THE FLORA IN BREACH POOL	X	X	X	3	X
RA93/05	Collect data, fauna, monitor	X	X	X	3	X

	MONITOR THE FAUNAL COMMUNITIES OF BREACH POOL					
MH60/02	Manage habitat, open water, by water level control	X	X	X	1	1
	CONTROL THE WATER LEVELS IN BREECH POOL					
RF03/11	Collect data, vegetation, monitor	X	X	X	3	X
	MONITOR THE PERCENTAGE OF REED COMPARED TO OTHER PLANTS IN THE STAND -- MILL POND MA					
RF03/23	Collect data, vegetation, monitor	X	X	X	3	X
	MONITOR THE VEGETATION COMMUNITIES IN MILL POND MARSH					
MH59/01	Manage habitat, swamp/fen/inundation, by other activities	1	X	X	1	X
	CONTROL THE JAPANESE KNOTWEED IN NORTON PRIORY MARSH					
RF03/39	Collect data, vegetation, monitor	1	1	1	1	1
	MONITOR THE FLOATING PENNYWORT IN THE RIFES					
ML40/01	Liaise, local/national authorities	1	1	1	1	1
	LIAISE WITH EA OVER THE ERADICATION OF FLOATING PENNYWORT					
RA52/03	Collect data, Odonata, survey	X	X	X	X	3
	ESTABLISH BASELINE DATA FOR THE OCCURRENCE OF THE HAIRY DRAGONFLY OF THE RIFES					
MH10/08	Manage habitat, grassland, by controlled grazing	1	1	1	1	1
	GRAZE WITH SHEEP OR CUT -- GLEBE MEADOW AND THE MOUND					
MH61/02	Manage habitat, open water, by excavation	X	2	2	2	2
	ROTATIONAL CLEARANCE OF THE DITCHES					
MH64/02	Manage habitat, open water, by clearing/dredging/ re-profiling	1	1	1	1	1
	MAINTAIN THE DRAINAGE DITCHES CLEAR OF VEGETATION					
RA83/10	Collect data, other/general invertebrates, monitor	X	X	3	X	X
	MONITOR THE AQUATIC INVERTEBRATE POPULATIONS IN THE NEW FRESHWATER SCRAPE					
RA23/05	Collect data, other vascular plants, monitor	X	X	3	X	X
	MONITOR THE AQUATIC FLORA OF THE FRESHWATER SCRAPE					
MH60/04	Manage habitat, open water, by water level control	2	2	2	2	2
	MANAGE THE WATER LEVELS IN THE FRESHWATER SCRAPE					
MH53/04	Manage habitat, swamp/fen/inundation, by mowing	X	X	2	X	X
	ESTABLISH A CUTTING REGIME FOR FRESHWATER SCRAPE REEDBED					
RF13/03	Collect data, trees/shrubs, monitor	X	X	2	X	X
	MONITOR THE RHODODENDRON AND SYCAMORE IN PRIORY WOOD					
MH00/01	Manage habitat, woodland/scrub, by coppicing	X	X	X	X	3
	COPPICING AND PROTECTION OF HAZEL STOOLS IN PRIORY WOOD					
MH01/01	Manage habitat, woodland/scrub, by planting/sowing	X	X	X	X	3
	PLANTING OF PROVENANCE SAPLINGS AND PROTECT					
MH03/01	Manage habitat, woodland/scrub, by assisting natural regeneration	X	X	X	X	3
	FENCING OFF IDENTIFIED AREAS TO ASSIST REGENERATION AT PRIORY WOOD					
MH04/01	Manage habitat, woodland/scrub, by ride/path/glade maintenance	X	X	X	X	3
	MAINTAIN GLADES IN PRIORY WOOD					
MH07/02	Manage habitat, woodland/scrub, by scrub control	2	2	2	2	2
	MANAGEMENT OF SCRUB IN MILL POND MARSH					
MH09/02	Manage habitat, woodland/scrub, by other activities	X	X	X	X	X
	COLLECTION OF ACORNS TO GERMINATE					
MH09/03	Manage habitat, woodland/scrub, by other activities	X	X	X	X	3
	TAKING CUTTINGS FROM THE MASTER TREE BLACK POPLAR					
MB01/01	Manage habitat, hedgerows, by providing enclosures	3	3	3	3	3
	PROTECT ANY HEDGES THAT REQUIRE IT					
MB02/01	Manage habitat, hedgerows, by planting/sowing/propagating	X	3	X	3	X
	PLANT UP ANY HEDGES THAT REQUIRE IT					
MB03/01	Manage habitat, hedgerows, by cutting/trimming	2	2	2	2	2
	ROTATIONAL CUTTING OF HEDGES ON THE RESERVE					
MA04/01	Manage habitat, artificial, by felling/cutting /pruning/clearing	X	X	2	X	X
	MANAGE BUFFER STRIP AROUND SLIPE FIELD					
MH65/03	Manage habitat, open water, by clearing surrounding vegetation	X	X	X	3	X
	MANAGE THE POND AND SCRAPE IN SLIPE FIELD					
RF03/27	Collect data, vegetation, monitor	X	X	X	X	3
	MONITOR THE VEGETATION COMMUNITIES ON THE MOUND					
AP20/01	Prepare/revise plan, management plans	X	X	X	1	1
	REVISE MANAGEMENT PLAN EVERY FIVE YEARS					
AP50/01	Prepare/revise plan, safety	1	1	1	1	1
	MAINTAIN SAFETY PROCEDURES UP TO DATE					
AP60/01	Prepare plan, annual work	1	1	1	1	1
	PREPARE ANNUAL WORK PROGRAMMES					
AI20/01	Implement inspection, site buildings	1	1	1	1	1
	INSPECT USING APPROVED CONTRACTORS, ALL ASPECTS OF BUILD AND VISITOR SERVICES					
AI40/01	Implement inspection, other	1	1	1	1	1
	ENSURE HLS AGREEMENT COMPLIANCE					
AT60/01	Liaise/supervise voluntary/other working groups	1	1	1	1	1

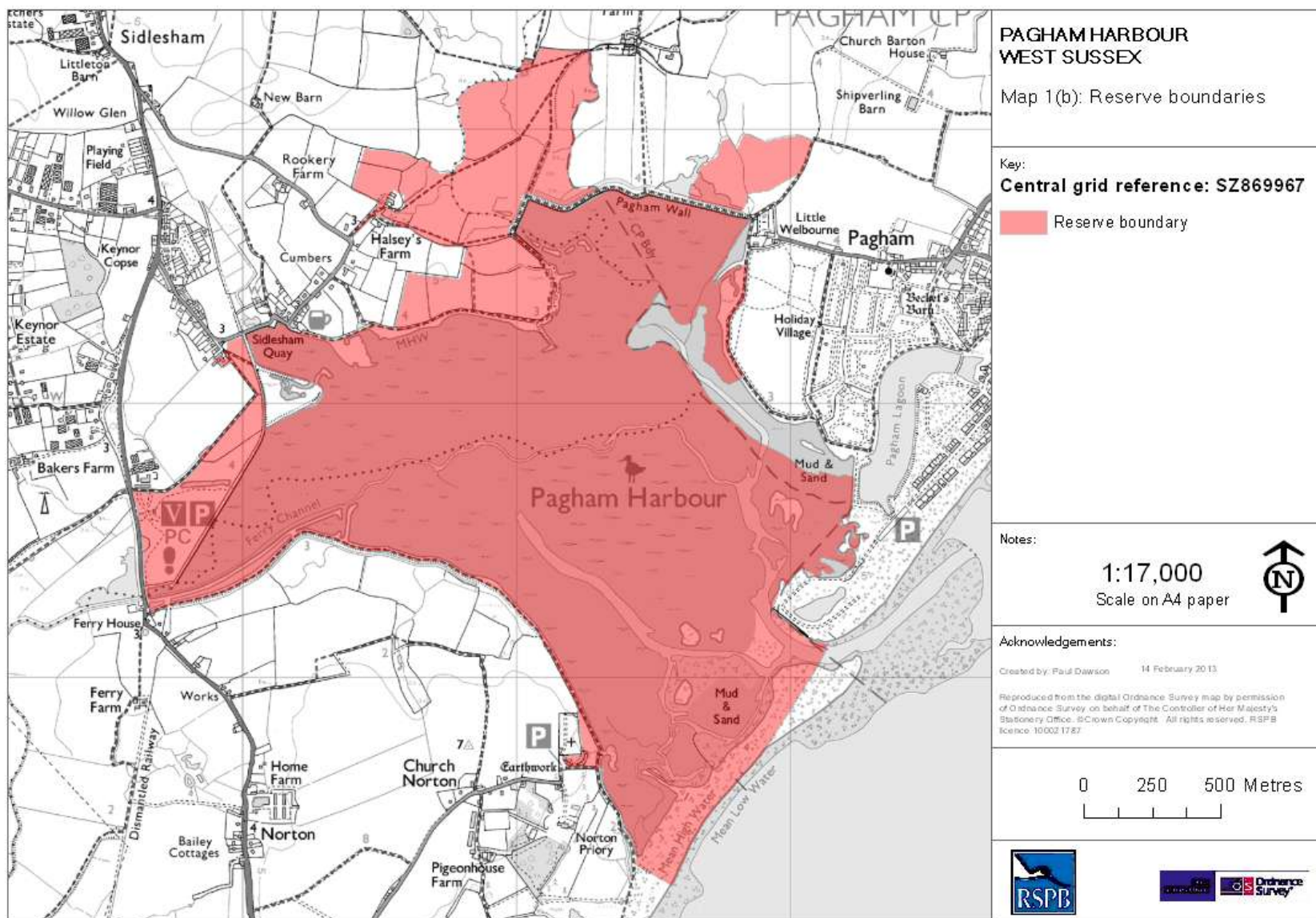
DEVELOP/MAINTAIN A NETWORK OF VOLUNTEERS						
ML00/02	Liaise, owners/occupiers	1	1	1	1	1
LIAISE WITH THE VARIOUS LAND OWNERS AND TENANTS						
ML00/03	Liaise, owners/occupiers	1	1	1	1	1
LIAISE WITH SWT AND WSCC						
ML00/04	Liaise, owners/occupiers	1	1	1	1	1
LIAISE WITH OWNER REGARDING ANY WORK IN PRIORY WOOD						
ML50/01	Liaise, local community/groups	1	1	1	1	1
LIAISE WITH LOCAL PARISHES ETC						
ML60/01	Liaise, emergency services	1	1	1	1	1
LIAISE WITH THE POLICE AND FISHERIES						
ML80/01	Liaise, others	1	1	1	1	1
ESTABLISH AND NURTURE LINKS WITH OTHER ORGANISATIONS						
MP00/03	Protect site/species by patrol	1	1	1	1	1
ENFORCE THE BYELAWS ON THE RESERVE						
RD03/01	Monitor human population	2	2	2	2	2
MONITOR THE HUMAN USAGE OF THE SITE						
ME40/02	Provide/maintain paths/rides/roads	X	X	1	X	X
UPGRADE PATH AT LONG FERRY LONG POOL TO BECOME WHEELCHAIR ACCESSIBLE						
MM20/01	Acquire/maintain tools/equipment	1	1	1	1	1
MAINTAIN TOOLS IN SAFE WORKING ORDER						
MH79/03	Manage habitat, coastal, by other activities	3	3	3	3	3
ORGANISE BEACH CLEANS ON BOTH SPIT						
MA09/03	Manage habitat, artificial, by other activities	2	2	2	2	2
CARRY OUT THE PLAN FOR DISCOVERY AREA						
ME11/01	Buildings, construct	X	2	X	X	X
CONSIDER THE CONSTRUCTION OF HIDE AT THE END OF FERRY LONG POOL						
ME12/01	Buildings, maintain/improve	1	1	1	1	1
MAINTAIN ANNUAL CONTRACTS FOR BUILDING AND VISITORS SERVICES						
ME01/01	Boundary structures	X	X	2	X	X
REPLACE THE FENCE ON THE SOUTHERN AND EASTERN BOUNDARIES OF THE LANDFILL						
AR01/01	Prepare report, project review, new projects	1	1	1	1	1
PREPARE ANNUAL REPORT						
MH79/04	Manage habitat, coastal, by other activities	X	1	X	X	X
RENOVATION OF TERN ISLAND TO SHINGLE						
MH01/02	Manage habitat, woodland/scrub, by planting/sowing	X	1	X	X	X
INCREASE THE						

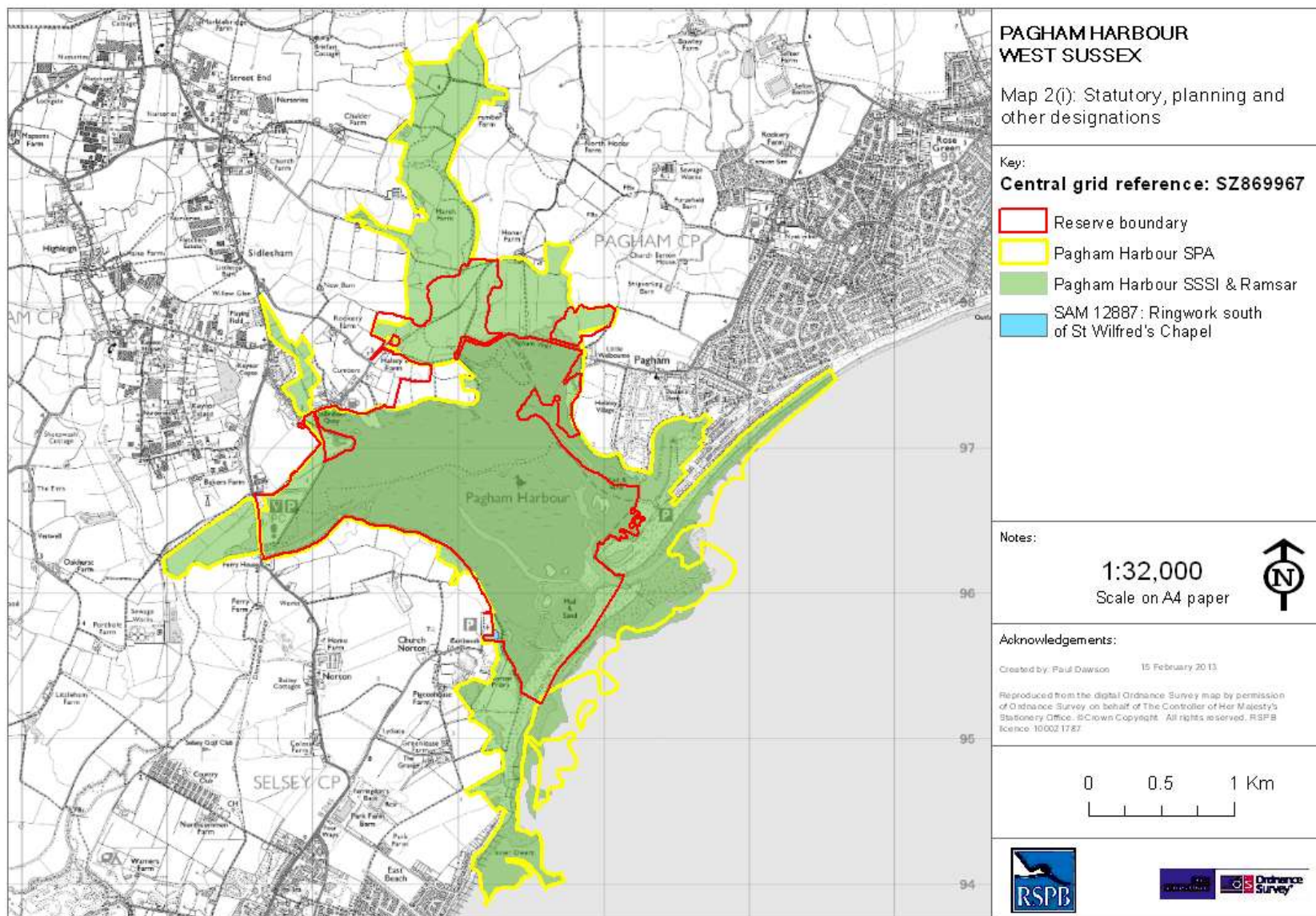
5. MAPS

IMPORTANT: NOTE THAT THE 'RESERVE' BOUNDARY SHOWN IN RED IN THE FOLLOWING MAPS IS THE AREA OVER WHICH RSPB HAS TENURE.

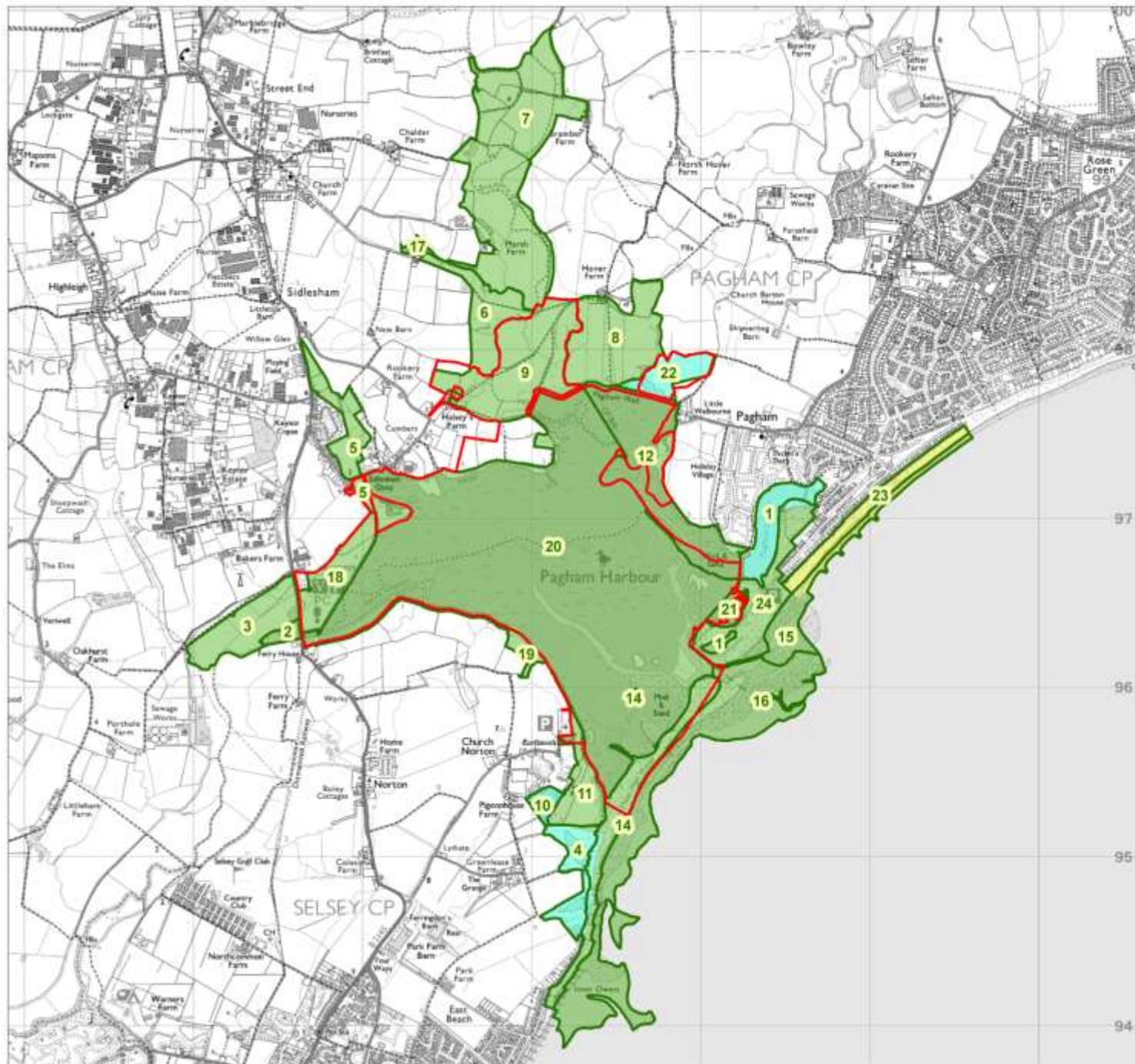












## PAGHAM HARBOUR WEST SUSSEX

Map 2(ii): Statutory, planning and  
other designations

Key:

**Central grid reference: SZ869967**

Reserve boundary

SSSI units

**SSSI condition**

Favourable condition

Unfavourable recovering

Unfavourable no change

Notes:

1:32,000

Scale on A4 paper



Acknowledgements:

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