

Pagham Harbour Local Nature Reserve Advisory Board

9th March 2010

Reserve Manager's Report

Habitat and Estate Management

Tern Island

Work parties have undertaken clearance of vegetation from the shingle to provide the environment required by nesting Little and Common Terns. Recent years have seen the return of these shorebirds after a period of absence and it is important that the shingle habitat is maintained in optimum condition. It is anticipated that a project to restore the remaining half of the island that is still densely vegetated will be undertaken at some point in the future (half of the island was restored back in 2001).

Ferry Field, Sidlesham

Work parties, including volunteers from the Sussex Wildlife Trust have cleared bramble scrub from alongside the ditches within the field. This is an on-going task that will make the field more attractive to breeding and over-wintering waders (Lapwing and Redshank in particular) and wildfowl, and reduce the threat of predators that use the scrub as cover and perches (foxes, corvids and birds of prey). This work is being funded by Environmental Stewardship (HLS), as part of the project to enhance the wet grassland habitat of Ferry Field.

Mill Pond Marsh Reebed

Volunteers, again including the Wildlife Trust Hit Squad, cut reeds and cleared scrub from within Mill Pond Marsh to promote vigorous growth of the reebed and to prevent succession to woodland.

Southern Water has also finally replaced the tidal flap to the outfall in the corner of the Harbour, next to the Tramway at Mill Lane, Sidlesham. More work is needed here but it is hoped that when this is completed seawater will be prevented from backing up through the disused, dilapidated drainage pipe and flooding both Chapel Meadow and Mill Pond Marsh to the detriment of the Southern Marsh Orchids and reeds.

Slipe Field

Work has been undertaken to manage the long grass areas in Slipe Field, Pagham, to provide a variety of habitats in addition to the cultivated cover cops for invertebrates and over-wintering bird in the centre of the field. The grass will be cut and cleared in rotation to prevent it scrubbing over and to provide cover for Snipe and small mammals (including Harvest Mouse), and hunting areas for birds of prey.

Halsey's Farm Hedgerow

The coppicing of the hedgerow dividing the two largest fields at Halsey's Farm, to the east of Bremere Rife has continued. This will improve the habitat along this hedge/ditch-line and open up the fields to make them more attractive to breeding waders and over-wintering waterfowl.

Norton Priory Woodland

Work continues here with volunteer work parties tackling the problems of invasive Sycamore and Rhododendron that have shaded out our native plants and prevented the natural regeneration of Oak, Ash and Hazel. This work is being funded by the Forestry Commission, with a remit to support the restoration of woodlands that are Sites of Special Scientific Interest, through their Woodland Improvement Grant. For the first time we are now starting to see signs of regeneration from dormant seeds with Oak saplings emerging from where the Sycamore, in particular, has been cleared.

Church Norton Elms

Gales in November brought down many dead and dying Elms adjacent to the car park and Church Norton Castle. For safety reasons these were cleared. The worst area affected to the south of the track leading to the Harbour will be left to regenerate naturally before any tree planting is considered.

Ponds

The Environment Agency has excavated a pond in Mill Pond Marsh from an area of poor quality grassland, to create the only open water within this reedbed (as identified under HLS). A pond and scrape have also been created in the wet permanent grassland at the southern end of Slipe Field, Pagham - an area that already supports good numbers of Snipe in the winter. The ponds at both sites are of a scale to be managed and maintained by volunteers. The proposed pond in Yeomans Field has been postponed due to localised flooding and will be considered again later in the year.

Weather and Wildlife

The freezing conditions in December and January saw the departure south of most of our Little Egrets, to the extent that on some days they were rarely seen on the Reserve.

Brent Geese numbers remained constant with over 2,500 recorded, but it was noticeable that these were more dispersed with movement between the Harbour and North Fields of smaller than usual flocks, although eventually gathering together in large numbers either inside or immediately adjacent to the Reserve north of the Harbour. Numbers increased to 3,000 in February.

Wigeon numbers doubled to over 3,000 while Teal numbers dropped slightly – interestingly the reverse of the situation at Pulborough Brooks.

Pintail numbers, which have reached over 700 in recent years, fell to under 300. These were largely concentrated at the northern end of the Harbour with a small number surprisingly on Breach Pool and the North Fields, rather than at their more traditional location along the West Side. Numbers remained disappointingly low in February.

Lapwing numbers dropped dramatically but then recovered to around 3,000 by the end of January and around 5,000 in February. Golden Plover, usually seen in the Harbour and fields from the North Wall were conspicuous by their absence although numbers have since partially recovered. Grey Plover numbers however held up.

Black-tailed Godwit numbers surprisingly persisted despite the impenetrable conditions of the grassland and the semi-frozen mudflats. In January 1,400 birds were recorded, a record for the Reserve (plus unconfirmed counts of up to 1,800). Dunlin and Knot numbers remained high during January and increased again in February.

A total of approx. 15,000 birds were recorded on the January High Tide Count. This compares favourably to 22,000 - the highest number recorded in the Harbour a few years ago.

The Reserve Office was inundated by calls from local people from Selsey, the Witterings, Chichester, Pagham, Aldwick and Bognor who had noticed individual or small flocks of Redwing in their gardens for the first time, forced there by the extreme conditions. These thrushes, along with Fieldfares, migrate here from Scandinavia in the autumn/winter, often feeding on windfalls. Fieldfares, which normally frequent open farmland, were also recorded on the beach where they have not been seen before, presumably driven there by hunger. Huge flocks of Skylark were also recorded. Over 500 were seen at Church Norton and on the fields along the West Side of the Harbour.

As the frozen conditions persisted the Southern Wildfowling and Wetland Management Association kindly provided supplementary feed in the form of grain at White's Creek, where Pagham Rife flows into the Harbour. Such freshwater flows provide relatively sheltered permanent open water for feeding, roosting and preening, at various states of the tide, when other water bodies are frozen, and are attractive to both wildfowl and waders.

There were no dead birds retrieved during the extreme weather conditions and most waders seemed active compared to the cold snap last winter when Lapwing were unwilling to fly off even when closely approached, in an attempt to conserve energy.

By the end of January Pagham Lagoon had hosted up to 20 Goldeneye, a Greater Scaup and 4 Smew (3 females and a male) and in February a Red Crested Pochard.

Despite this when the sun came out and temperatures rose significantly Peacock Butterflies and Bumble Bees could be seen on the wing!

Other records of note included flocks of 70 Reed Bunting and 16 Yellowhammer in Slipe Field; 7 Bearded Tit in Mill Pond Marsh (2nd highest record for the Reserve); 18 Avocet and Dartford Warbler on the West Side; 1000 Knot on the East Side; 3 male Hen Harrier (together), Marsh Harrier, Merlin and 2 Firecrest at Church Norton; 30 Red-throated Diver, 3 Black-throated Diver, 4 Great Northern Diver, Black-necked Grebe and 6 Common Scoter on the sea.

Biological Recording and Monitoring

Ongoing winter surveys included High Tide / WeBS Counts, Farmland Bird Surveys, Little Egret Roost Counts (put on hold from January), Water Vole surveys, moth trapping, water level and salinity sampling, water quality and algae/vegetation sampling (EA).

Full reports are now available on the invertebrates of the Ferry Field (a baseline study prior to the raising of water levels, funded by the Friends) and the Sidlesham Landfill site, following surveys during 2009. These are available on request.

The database for the Reserve now exceeds 200,000 wildlife records.

Technical Panel

The Technical Panel met in February to review the potential programme of research on the Reserve as presented in the 2007 Management Plan. A summary of the review and the agreed priorities follows this report.

Education and events

A further two schools visited the Reserve before the end of the year, bringing a total of 42 pupils. Debbie Barnes the Education Officer left in January to take up a post with Chichester Harbour. As yet it has not been possible to recruit a short-term replacement to cover the school visits until the end of the summer term (at which time the position will be reviewed in relation to progress on the RSPB transfer). This option is still being pursued.

The wildfowl and wader walks and bird watching workshops have all been successful throughout the winter with only one walk affected by bad weather immediately prior to the start.

PAGHAM HARBOUR LNR - REVIEW OF RESEARCH 2010

The aim of this review is to consider the list of research projects identified in Appendix E of the 2007 Management Plan and to establish priorities for them, as well as identifying those that are underway or have been completed. The Technical Panel undertook this review on 16th February 2010.

PRIORITY	PROJECT	COMMENT
High	<p>Pagham Lagoon Interest Features Establish cause of decline in lagoonal indicator species and identify remedial measures. Instigate monitoring programme.</p>	<p>University of Brighton looking for funding for further study and potential water quality project for Masters student. Lagoon thought to be too turbid for employing the assistance of divers.</p>
High	<p>Recreational Disturbance Establish the impact on site features, habitats and ecology, including physical disturbance/trampling, with particular reference to future housing developments and subsequent mitigation measure requirements. This also covers Projects 19 (assess effects on wintering shorebirds) and 20 (assess environmental impact of visitors to different zones of the Reserve).</p>	<p>Similar to Solent Disturbance Project research undertaken by Footprint Ecology. Possible funding from Natural England. Too late for BREQ (North Bersted) development. Aims to establish carrying capacity for the Reserve.</p>
Medium	<p>Bait digging and Fishing To build on research by the Solent Forum and Wader Study Group (Disturbance Report) into impacts on site ecology, the effectiveness of management regimes and to act as a control site for a wider study, where activity is regulated by permits.</p>	<p>Portsmouth University awaiting confirmation of funding from Defra and the Crown Estate for a study covering Pagham, Fareham Creek and Dell Quay in Chichester Harbour. Likely to start October 2010. No cost or resource implications.</p>
Low	<p>Zostera (Eel Grass) Species mapping and distribution, and identification of potential reintroduction sites.</p>	<p>EA currently undertaking periodic mapping as part of overall vegetation surveys (walking surveys, hovercraft surveys plus aerial photos and Lidar). This may be covered by selection of Marine Protected Areas (Marine Bill).</p>

Low	Saltmarsh Development Surveys to monitor impacts on distribution of invertebrates and waterfowl.	Vegetation mapping already undertaken by EA. Use of aerial photos and monitoring of bird usage (WeBS) to ensure intertidal area is in favourable condition is most efficient option.
Low	Freshwater Flows Determine the influence on benthic invertebrates and distribution of waterfowl in all outflows (White's Creek, Bremere Channel, Visitor Centre Channel and Ferry Channel)	Initial study carried out as part of River Lavant Flood Relief Scheme mitigation (birds usage/behaviour only – certain species). Very resource heavy. Non- essential.
Low	Intertidal Invertebrates Monitor Changes in species distribution – baseline survey over several years/seasons to be repeated periodically (every 5 to 10 years).	Limited survey by EA. Labour intensive. Wader usage will establish favourable status or indicate decline, following which surveys may be undertaken.
Low	Voluntary Marine Reserve Gather data to establish importance of waters offshore.	This will be addressed through proposals to identify Protected Marine Areas nationwide (Marine Bill)
Medium	Rabbit Grazing Establish exclosures in Norton Priory (linked to failure of natural regeneration), on shingle spits and certain grassland areas (linked to Ragwort infestations) to establish impact on various key habitats. This will also inform the level of resources required for pest control.	Although rabbit grazing is seen as an integral part of land management and can be beneficial for biodiversity, the Manhood has supported particularly high rabbit populations, with detrimental effects on habitats and crops.
Low	Landfill Restoration Feasibility of creating wetland habitats on landfill site (saline lagoon, scrape and reedbeds) to improve biodiversity and the visitor experience.	Ground investigations and feasibility study for a new visitor centre completed. Funding not available to progress this or the remediation of the landfill.
Low	History and Archaeology Compile and publish a full history of Pagham Harbour, requests for which are often made by visitors.	PhD University of Brighton (Heidi Burgess) includes a history of the site. WSCC 1995 Archaeology Strategy to be consulted.

PRIORITY	RESEARCH PROJECTS UNDERWAY	COMMENT
High	<p>Control of Exotic Species / Invasives Impact of non-native species (garden escapes) particularly Red Valerian on specialist vegetated shingle flora, notably Childling Pink.</p>	<p>Trials have begun into the most effective method of controlling Red Valerian on the shingle spits. These include pulling, cutting, spraying with Citronella and drenching with sea water.</p>
High	<p>Norton Priory Woodland Lack of natural regeneration of woodland – particularly Oak, Ash and Hazel (coppice) that will necessitate a planting programme.</p>	<p>Clearance of invasive Sycamore through a Forestry Commission Woodland Improvement grant is resulting in the emergence of dormant seed source and the appearance of Oak saplings.</p>
High	<p>Intertidal Processes – University of Brighton Monitoring of variations and chemical changes in suspended sediment, the impact of rainfall, sun and wind on open mudflats (sediment dispersal), changes to the bed of the Harbour from tidal movement and consolidation through the effects of seasons and tides. This also covers Projects 9 (to build on Brighton University's initial 3 year study) and 10 (to measure the effects of environmental factors on mudflats).</p>	<p>Building on initial 3 year study by University of Brighton completed in 2003, looking into nutrient and cohesive sediment transport processes within the Harbour. Parameters include flow rates, turbidity (sediment suspension), salinity and stratification of fresh and sea water, and sediment deposition. These studies will take help inform the long term Adaptive Management approach to the Pagham Harbour frontage.</p>
High	<p>Adaptive Management of the Coast Flexible approach to the long-term management of the spits, harbour entrance and inner defences. This also covers Projects 8 (study of local coastal and intertidal processes and 12 (forecast the movement of the shingle spits).</p>	<p>The Pagham Harbour Issues Advisory Group has been established to guide the Adaptive Management approach to the coastline and the inner harbour. EA have secured funding for a further study into the coastal processes and establishing long-term management solutions, building on research already undertaken by consultants Haskoning.</p>

	RESEARCH PROJECTS COMPLETED	COMMENTS
High	Mill Pond Marsh Reedbed Assess the growth and quality of Phragmites in response to changes in water level management.	A baseline survey has been undertaken over 2 years and this will be repeated after the HLS enhancement works are carried out in 2011.
High	Ferry Pool Saline Lagoon Remedial options with regard to salinity, water quality and topography to reverse decline in saline lagoon interest features	Monitoring of invertebrate fauna and flora and water quality has been carried out in response to changes in the water level management regime. Favourable status now given by NE.
High	Vegetated Shingle Effects of alien species in combination with recreational pressures on native shingle plant communities and particularly the rare Childling Pink (RDB).	Study undertaken by Degree student as 3 rd year dissertation, providing important baseline data and mapping.
Medium	Bass Nursery Site Status Use of Pagham Harbour by spawning/juvenile bass to establish the importance of the Harbour as a nursery site.	Studies carried out by EA and Portsmouth University on the use of the Harbour by juvenile fish of all species. Clearly demonstrated the importance of the saltmarsh as a refuge for large numbers of juvenile fish of numerous species, including Bass and Mullet.
	RESEARCH PROJECTS DROPPED	COMMENTS
	Church Norton Shingle Spit northwest realignment – assessment of mitigation measures for potentially catastrophic loss of special interest features and rare species.	This is no longer relevant due to extensive shingle accretion northward and seaward.