

**DRAFT V16 12/10/12**

**RSPB  
Medmerry DRAFT Management Plan**

**April 2013 - March 2018**

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# 1. SITE INFORMATION

This section sets out the key background information on which the management actions are based.

## 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>	Medmerry (subject to public consultation)
<b>Site Survey Data Bank /Countryside Management System code</b>	25500551 (current Bracklesham code)
<b>Area (ha)</b>	541.19 total TBC includes:- 17.39 (TBC) Contingency land (only to mitigate freshwater wetland) 69.42 (TBC) Non-core
<b>Grid reference (centre of reserve)</b>	SZ833 955
<b>District</b>	Chichester
<b>County Council</b>	West Sussex County Council, County Hall, Chichester, West Sussex, PO19 1RQ
<b>District Council</b>	Chichester District Council, East Pallant House, East Pallant, Chichester, West Sussex, PO19 1TY
<b>Parish Council</b>	Sidlesham/Earnley
<b>Parliamentary Constituency</b>	Chichester
<b>Local EA office</b>	Southern Region, Guildbourne House, Chatsworth Road, Worthing, West Sussex, BN11 1LD <b>Internal Drainage Board to be referenced</b>
<b>Drainage Authority<sup>4</sup></b>	EA
<b>Airport Safeguarding zone</b>	n/a

\* mineral planning authority

\*\* general planning authority

<sup>4</sup> or Internal Drainage Board

The public can view The Environment Agency's Flood and Coastal Risk Management planned maintenance activities at <http://www.environment-agency.gov.uk/homeandleisure/floods/109548.aspx>. A spreadsheet on this webpage covers the whole country, but there is specific reference to the Manhood peninsula. If the public have any enquiries, they can call 03708 506506 or email [SSD.Enquiries@environment-agency.gov.uk](mailto:SSD.Enquiries@environment-agency.gov.uk) and a customer service advisor will pass on their query to the relevant team to respond.

### 1.1.2. Aerial photographic coverage

Details of aerial photographic coverage are given below.

Date	Cover	Details	Location of copies
1947	Bracklesham Bay	Ministry of Defence Series	RSPB South East Regional Office & West Sussex County Council Archive
1976	Part Bracklesham Bay	West Sussex County Council Series	West Sussex County Council Archive
2000	100%	Ordnance Survey	RSPB South East Regional Office
2008	Selsey to Earnley	Oblique	EA & RSPB South East Regional Office
2004 - 09	Various	Oblique	EA & ABP Marine Environmental Research Ltd
2011-12	All	EA Medmerry Scheme	EA

### 1.1.3. Statutory, planning and other designations

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

Designation	All or part of site?	Name and other details
SSSI	Part	Bracklesham Bay SSSI
NNR	None	
SPA	None at date of implementation of Man Plan	Intertidal habitat is being created to replace habitat being lost elsewhere in the Solent. EA and NE expect this area to be given SPA status in due course
SAC	None yet	As above
RAMSAR	None yet	As per SPA above
SINC	Part	Bracklesham Bay
LNR	None	
Statutory Bird Sanctuary	None	
National Park	None	
ESA	None	
RSS	None	
Habitat Scheme	None	
SNH Natural Care Scheme	None	
AONB	None	
Heritage Coast	None	
National Scenic Area (NSA)	None	
Conservation Area	None	
Common Land	None	
Listed Building	None	
Archaeological site	Part	Wide range of archaeology from Iron/Bronze

		Age to WWII
Finds	Part	Some significant finds including Ice Age erratics, raised beach, Iron/Bronze Age, homestead/cemetery, Roman artefacts, Medieval fish weir, WWII crash site and pill boxes. None are designated but there is a duty through the Environment Act and through Government Estate protocols to consider these features.
Scheduled Ancient Monument	None	None. No other heritage designations.
IACS (RLR) registered	All	
UKWAS registered	No	
Contaminated land	No	
Other*	recommended Marine Conservation Zone (rMCZ)	The breach point currently falls within the boundary of the rMCZ. Although the MCZ is outside of the RSPB management, if designated, we will need to consider operations that may have an impact or influence the features proposed for protection. The Minister will be making a decision on which rMCZs will go forward for designation in 2013. It has been NE advice to change the boundary of the rMCZ to exclude the breach point.

\* WGS, WIGS, FWPS, Scottish Forestry Grant Scheme (SFGS), Peatland Management Scheme (PMS), Countryside Premium Scheme (CPS),

#### 1.1.4. Statutory site condition assessment

		Organisation responsibility to be added once tenure situation complete			
SSSI/ASSI name	Unit or feature	Assessment	Date	Reason	Remedy
Bracklesham Bay	Lowland wet grassland	Unfavourable Recovering	17 Oct 2008	Was assessed as recovering, but a new assessment will be needed as scheme will turn the habitat into largely intertidal.	
SSSI/ASSI name	Unit or feature	Assessment	Date	Reason	Remedy
Bracklesham Bay	3 (shingle bank)	Unfavourable No Change	17 Oct 2008	Vegetated shingle is in poor condition due in part to current beach profile. Cessation of this post breach will	It is anticipated that natural processes will largely take over post

				allow recovery	breach
Bracklesham Bay	??		??	Geological features: foreshore exposures (geological features)	??

\*Natural England is responsible for these features

### 1.1.5. Tenure

As of Aug 2012, the RSPB and the Environment Agency have drafted a lease under the terms of the Collaborative Agreement between the two parties, but the RSPB has yet to take on a lease of the Environment Agency's land. The Environment Agency is still in negotiations to acquire land required for the scheme. The RSPB is expected to take on management of this land once negotiations are completed. All these factors inevitably complicate the drawing up of a management plan at this stage and this should be borne in mind when reading it. .

#### a) Land / Rights held by RSPB

##### i) Freehold:

Land Agency Deed ref No.	Agreement date	Vendor	Area (ha)	Comments
1	2 <sup>nd</sup> March 2006	Rusbridge, Carter and Loveys	55.68	

##### ii) Leasehold:

Land Agency Deed ref No.	Agreement date	Lessor	Area (ha)	Term and expiry date	Rent review dates and break-clauses
Land formerly forming part of Grange, Ham, Greenwood and Easton Farms		EA			

##### iii) Management agreements, licences, consents and other rights:

Land Agency Deed ref No.	Management agreement /licence/ consent etc	Agreement date	Lessor	Area (ha)	Term and expiry date

## b) Land/rights let by RSPB

### i) Leases

Land Agency Deed ref No.	Land/right	Date	Lessee	Area	Term and review/expiry date
BRA/3 – revised under section 46 agreement	To visit with or without guests and invitees for the purposes of walking, private reflection and contemplation only  With or without guests and invitees to put up temporary tents for the purpose of camping	Original March 2 2006	Anthony Blunden	Land east of Marsh Farm	Lifetime of tenant

### ii) Tenancies

Land Agency Deed ref No.	Land/right	Date	Lessee	Area	Term and review/expiry date
BRA/3.1	Farm Business Tenancy	July 1 2006	Eric Bell	42.51	7 yrs, Notice to quit served to terminate tenancy 30 <sup>th</sup> June 2013
??	Farm Business Tenancy		TBC Andrew Heaton		
??	FBT		TBC Barfoots		

### iii) Licences

Land Agency Deed ref No.	Land/right	Date	Licencee	Area	Term and review/expiry date

## 1.1.6. Wayleaves and easements

Wayleaves and easements are shown in Map 5 and the table below.



## Taken by RSPB

Land Agency Deed Ref No.	Date	Owner	Comments

## Granted by RSPB

Land Agency Deed Ref No.	Date	Owner	Comments
			Cabling work by EA will need referencing
			Rights of Way to householders will need referencing

### 1.1.7. Conditions of land purchase/management grants, gifts and corporate sponsorship

Conditions of land purchase/management grants, gifts and corporate sponsorship are given in the table below.

Grant	Conditions

### 1.1.8. Planning permissions, statutory consents and statutory licences

Planning permissions, statutory consents and statutory licences are shown in the table below.

#### Planning permissions

Planning Consent Ref. No.	Date	Subject	Type of consent	Expiry date	Comments
					Medmerry scheme consent will need referencing

#### Statutory consents and statutory licences

Land Agency Deed Ref No.	Date	Owner	Comments
			Waste Exemptions to be applied for

### 1.1.9. Public access

The access, car parking and public rights of way that are due to be complete by April 2013 are shown in Map 1. Most will be delivered by the Environment Agency as part of the Medmerry managed realignment scheme (spring 2013), to plans agreed by the Medmerry Stakeholders Advisory Group (MStAG).

The scheme is creating c7km of new footpath; c5km of new cyclepath; and c4km of new equestrian access\*. It is also creating a 15 space car park at Earnley (with 2 horse box bays), and a 4 space (including two Blue Badge spaces) car park at Easton Lane\*. The scheme is diverting two lengths of existing public footpath. Access from Selsey to Bracklesham along the beach will be broken by the creation of the breach. The shingle beach is expected to roll back once maintenance ceases and, over time, is likely to cover the maintenance track along the back of the beach.

(\*Note that the exact lengths of path, and the car park at Easton Lane, are subject to the successful completion of a landswap by the Environment Agency).

The General Right of Navigation will apply on intertidal waters into Medmerry. However,

- the Right does not include the right to launch or land and there will be no permission to do either from any of the Environment Agency's or the RSPB's land at Medmerry. Any boating activity would therefore need to be from the sea;
- the volume of water flowing in and out of the Harbour is expected to be relatively small although fast moving, and the developing intertidal mudflats and creeks are likely to be extremely hazardous. Therefore the intertidal waters will be generally unsuitable for most boating activity, which is best done in other locations along the coast;
- the area is being created to compensate for internationally important wildlife habitats being lost elsewhere; people will therefore be requested not to attempt any boating activity in Medmerry, although it will be legally possible from the sea.

### 1.1.10. Revenue grant schemes and area-based subsidies

Land entered into revenue grant schemes is shown on Map 8. Further details are given in the table below.

Scheme	Commencement and expiry dates	Tier/landscape type etc	Area (ha)	Capital works	Who receives grant	Comments
ELS*	1/11/2007 to 31/9/2017	EK2	19.3		RSPB	
HLS*	1/11/2007 to 31/9/2017	HK9	42.4		RSPB	
HLS	1/11/2007 to 31/9/2017	HP6	6.11		RSPB	
HLS	1/11/2007 to 31/9/2017	HP8	0.11		RSPB	
HLS	1/11/2007 to 31/9/2017	HQ1	1		RSPB	
HLS	1/11/2007 to 31/9/2017	HQ2	1		RSPB	

SPS*	?to be completed		42.51		J. Bell	
ELS*	9/10/2006 to 8/10/2016	EB2/EB3			?	Hedgerow
ELS*	9/10/2006 to 8/10/2016	EB6/EB7			?	Ditch
ELS*	9/10/2006 to 8/10/2016	EB10			?	Ditch/hedgerow
ELS*	9/10/2006 to 8/10/2016	EE3			?	6m buffer
	Are the 2016 references the ELS agreement on the EA land? If not this will also need to be referenced					

\* Higher Level Stewardship (HLS) and Entry Level Stewardship (ELS) are agri-environment schemes that provide funding to farmers and other land managers in England to deliver effective environmental management on their land. We will apply to NE for the modification of the existing HLS and ELS schemes relating to the project area in 2012/13 to take account of construction works prior to breaching of the seawall. We will apply for the termination of the schemes prior to breach (currently March 2013) and replacement with a new Environmental Stewardship scheme to cover the majority of the Medmerry reserve. The new scheme will include both Higher Level and Entry Levels options to create and maintain new intertidal habitats, vegetated shingle, wet grasslands for breeding waders and wintering waterfowl and low intensity spring cropping with wildflower margins.

### 1.1.11. Main fixed assets

Details of all fixed assets are given in the tables below, and their location shown in Map 9.

#### Houses and other residential accommodation

Land Agency Ref. No.	Name	Insured by policy?	Comments
None			

#### Farm buildings and offices

Land Agency Ref. No.	Name	Insured by policy?	Comments
	Marsh Barn buildings and courtyard	No	Main barn currently sound but derelict. Complex made safe and all asbestos removed in Mar 2012
	Ruined WWII brick building 1	No	No public access, boarded up and asbestos roof removed in Mar 2012
	Ruined WWII brick	No	No public access, boarded up and

	building 2		asbestos roof removed in Mar 2012
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## Timber buildings and hides

Land Agency Ref. No.	Name	Insured by policy?	Comments
	Wooden pole barn	No	Derelict, but all asbestos removed and made safe in Mar 2012
	Various WWII pillboxes	No	Derelict, but sound

## Miscellaneous structures

Land Agency Ref. No.	Name	Insured by policy?	Comments

## 1.2. Environmental information

### 1.2.1. Geology and soils

*The following details are taken from Spoor, Gord. Wet Grassland Possibilities in the Bracklesham Area – Feb 2005 and from West, Ian. Geology of the Wessex Coast of Southern England.*

There are two dominant soils in the Medmerry area. These belong to the Park Gate and Newchurch 1 soil associations. The Newchurch soils are found in the flood plains of the stream or rife areas and the Park Gate soils beyond.

The Newchurch soils, clayey and silty clay in nature, are derived from marine alluvium and are relatively well structured in the top 1.0 m giving them fairly high permeability relative to clay soil in general. Below about 1.0 m the soils tend to be unconsolidated with little structure and their permeability will be very low.

The Park Gate soils are deep stoneless silty soils derived from wind blown silt. They are quite fertile and well suited to high value arable crops such as potatoes and vegetables. The water holding capacity of these soils is high. Both soils will have groundwater tables. The boundaries between the two soils largely follow the edge of the flood plain.

The Southern end of the site is 1 m AOD, rising to 4 m AOD in the North.

### Important geology/geomorphology

Geology/geomorphology	Status	Comments
Exposures on foreshore at low tide, complex series of Eocene [Tertiary] beds with some overlying younger Pleistocene	Nationally important.	Strictly speaking, these are not on the reserve as they are below the high water mark. However, visitors will come to the reserve to search for fossils, which are

[Quarternary] deposits.		best found at very low tides. See SSSI citation for a fuller description of the important plant and fish remains here. Fossil sharks teeth, shells, etc. are easily found on the beach. Also see West, Ian. Geology of the Wessex Coast of Southern England.
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## 1.2.2. Hydrology

Key hydrological features (once the scheme is completed) are shown in Maps [11a](#) and [11b](#).

The hydrology of this part of the peninsular will be developed as part of the Medmerry Managed Realignment scheme. The existing main watercourses (Broad Rife in the west, Grange Rife in the centre and Easton Rife in the north) will continue to gravity feed to seven kilometres of new perimeter ditch just landward of the new defences. This perimeter ditch will direct water to four drainage outfalls (sluices) with tidal flaps, which will then allow freshwater to drain off the Peninsula into Medmerry and out to sea from Broad Rife, a new Earnley Diversion Channel, Easton Rife and at Bunn Leisure. These outfalls will be tidelocked on high tides, with freshwater being collected in storage areas just inland of the outfalls, until the tide falls.

Water levels in the perimeter ditch will be maintained, to provide both ecological and drainage functions, by a number of simple weirs, crossing points and water retention structures. In addition, a number of pools, scrapes and reedbeds have been constructed along the perimeter ditch to compensate for freshwater habitats that will be lost due to tidal inundation, once the old seawall is artificially breached.

In terms of tidal hydrology, once the breach is made at the lowest point, the intertidal system will be allowed to develop naturally. It has been modelled that the volume of seawater that Medmerry will hold (the tidal prism) is enough to maintain the breach. However, it is very possible that the shingle beach, as it is reprofiled by the sea and storms, may breach in other locations. This will not compromise the flood defence aspects of the realignment and is therefore considered an acceptable part of 'natural processes'.

The mean rainfall for the area is 807 mm, which is close to that of Chichester which is 787 mm (MAFF Technical Bulletin 34, Climate and Drainage).

The following data relate to the 807 mm rainfall and is taken from *Spoor, Gordon. - Wet Grassland Possibilities in the Bracklesham Area – Feb 2005*

Moisture deficits at end of June (mm)

	Dry grassland	Wet grassland	Open water
Wet year ( lower quartile)	50	50	62
Average year (median)	80	110	140
Dry year (higher quartile)	95	140	175

Average monthly moisture deficit April – June (mm)

	April	May	June	Total
	7	26	48	81
% of April-June total	9	32	59	

Excess winter rainfall under dry grassland (mm)

Wet winter (higher quartile)	420
Average winter (median)	310
Dry winter (lower quartile)	210

The higher land rife catchments above about five metres are relatively small, being approximately 2, 3 and 4.5 km<sup>2</sup> for the western, Easton and Keynor Rifles respectively. The Park Gate soils covering most of the catchments will release little water during the spring/summer period, with the predicted 'low flow' (95% exceedence) being only 6.5 % of the mean flow. Relatively more water will be released into the watercourse running north to the pumping station during the summer period, due the presence and nature of the Hamble soils north of Selsey. The catchment for this greater input is, however, small and hence the actual water volumes will be relatively small. Winter discharges will be 'flashy', excess water being released rapidly following rainfall. It is now clear that there is the potential for summer 'flashy' discharges.

### 1.2.3. Projected changes in climate

#### 1.2.3.1 Sea level rise

The modelled development of the intertidal habitats within the new sea defence embankments has taken into account the effects of relative sea level rise, with suitable areas calculated at current Highest Astronomical Tide (HAT) and Highest Astronomical Tide in 100 years (HAT+1).

However, the development and subsequent sustainability of the intertidal habitats, particularly the islands and saltmarsh, will be affected by any increase in the frequency and size of storm events and tidal surges through damaging wave action and the flooding of drier habitats).

Projected mm increases in relative sea levels from 2010 to 2030  
(UK Climate Projections 2009 - UKCP09)

	Lower 5 %ile	Median 50 %ile	Upper 95 %ile
<b>High emission</b>	39	87	135
<b>Medium emission</b>	36	73	110
<b>Low emission</b>	33	62	91

The present values (10-year average for 2009) for mean actual recorded spring tides are 4.633m for all tides and 4.558m for breeding season tides. During the Jan 1991 to June 2010 period, the British Oceanographic Data Centre (BODC) tidal data shows that 43% of all spring tides were higher than the mean value.

Based on the UKCP09 projections and assuming that the tidal cycle and dynamics remain similar as sea level rises, the corresponding mean spring high-tide levels in metres, in 2030, are shown in the following table.

<u>Actual Recorded Tides</u>	All tides			Critical breeding season (15 May/23 July)		
	Lower 5 %ile	Median 50 %ile	Upper 95 %ile	Lower 5 %ile	Median 50 %ile	Upper 95 %ile
High emission	4.672	4.720	4.768	4.597	4.645	4.693
Medium emission	4.669	4.706	4.743	4.594	4.631	4.668
Low emission	4.666	4.695	4.724	4.591	4.62	4.649

The present values (10-year average for 2009) for mean predicted astronomical spring tides are 4.574m for all tides and 4.512m for breeding season tides.

Based on the UKCP09 projections and assuming that the tidal cycle and dynamics remain similar as sea level rises, the corresponding mean spring high-tide levels (predicted astronomical tides) in metres, in 2030, are shown in the following table.

<u>Predicted Astronomical Tides</u>	All tides			Critical breeding season (15 May/23 July)		
	Lower 5 %ile	Median 50 %ile	Upper 95 %ile	Lower 5 %ile	Median 50 %ile	Upper 95 %ile
High emission	4.613	4.661	4.709	4.551	4.599	4.647
Medium emission	4.61	4.647	4.684	4.548	4.585	4.622
Low emission	4.607	4.636	4.665	4.545	4.574	4.603

Projected long-term linear trends in skew surge in mm/year (1951-2099) based on medium emission level (UKCP09):

Uncertainty level (%)	Return level (years)			
	2	10	20	50
5	0.147	0.232	0.261	0.296
50	0.239	0.385	0.437	0.501
95	0.332	0.538	0.613	0.706

The present values (10-year average for 2009) for mean surge heights are 0.111m for all tides and 0.086m for breeding season tides. During the Jan 1991 to June 2010 period, the BODC tidal data shows that 2% of all surges coincided with high tide and 23% occurred in the period 1hr before to 2hrs after high tide.

Based on these UKCP09 trends, the corresponding mean surge heights in metres, in 2030, are shown in the table below:

Uncertainty level (%)	All tides				Critical breeding season (15 May/23 July)			
	Return level (years)							
	2	10	20	50	2	10	20	50
5	0.114	0.116	0.116	0.117	0.089	0.091	0.091	0.092
50	0.116	0.119	0.120	0.122	0.091	0.094	0.095	0.097
95	0.118	0.122	0.124	0.126	0.093	0.097	0.099	0.101







Presently, no projections are available for frequency and scale of storm events, which are the main sources of surges.

Apart from surges, wind-generated wave action also has the potential to threaten nesting habitats; but as Medmerry is a developing intertidal site, there is no data available.

### 1.2.3.2 Climate Change

Data from the UKCP09 weather generator was used to generate graphs for predicted high emission scenario changes in temperature, precipitation, the length of the growing season (number of days per month with a temperature greater than 5°C) and potential soil moisture deficit.

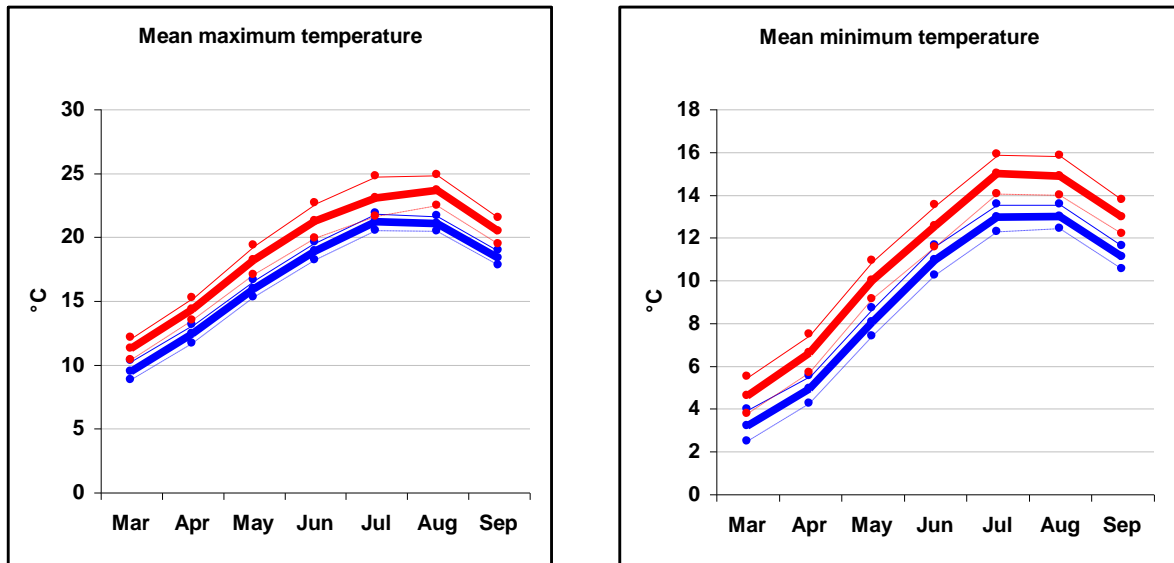
Key to graphs:

	Present	2030 High Emissions Scenario
Upper quartile		
Median		
Lower quartile		



Temperature:

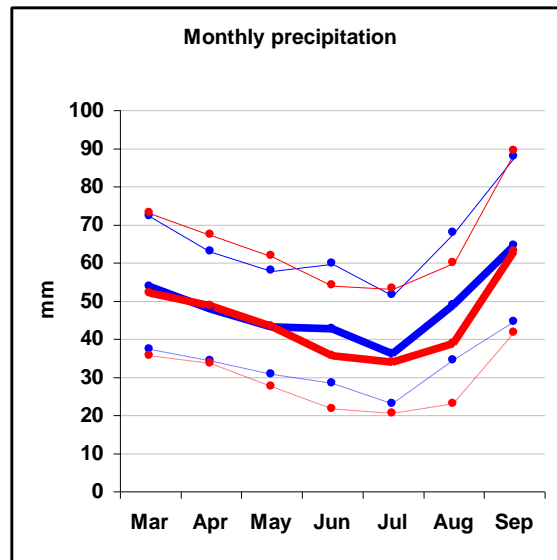
*Predicted changes in temperatures during the breeding season*



Mean, minimum and maximum temperatures are all predicted to increase by 2030 (by 2.0, 1.9 & 2.1 °C respectively). Increases are predicted for each month and this would be of benefit to nesting birds.

Precipitation:

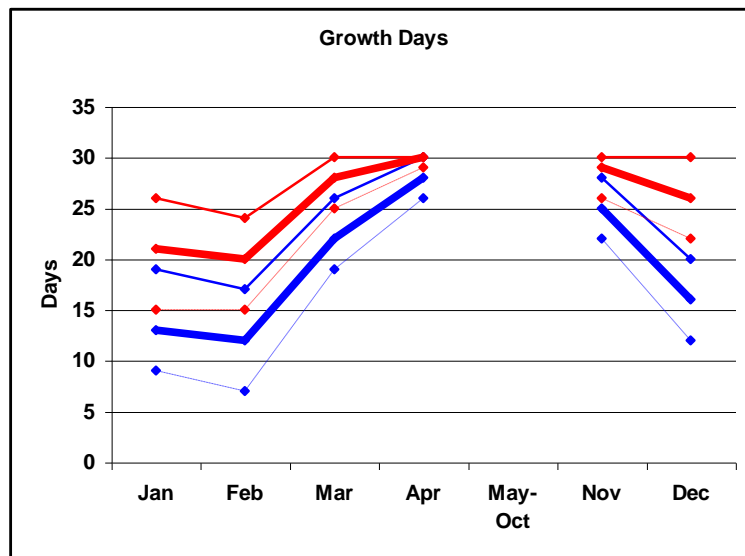
*Predicted changes in precipitation during the breeding season*



Annual precipitation is predicted to decrease by 3.1mm by 2030, when the period June to October is predicted to become significantly drier, which could benefit nesting birds, and when the period November to February is predicted to become wetter.

Growth Days (days in a month when temperatures are above 5°C):

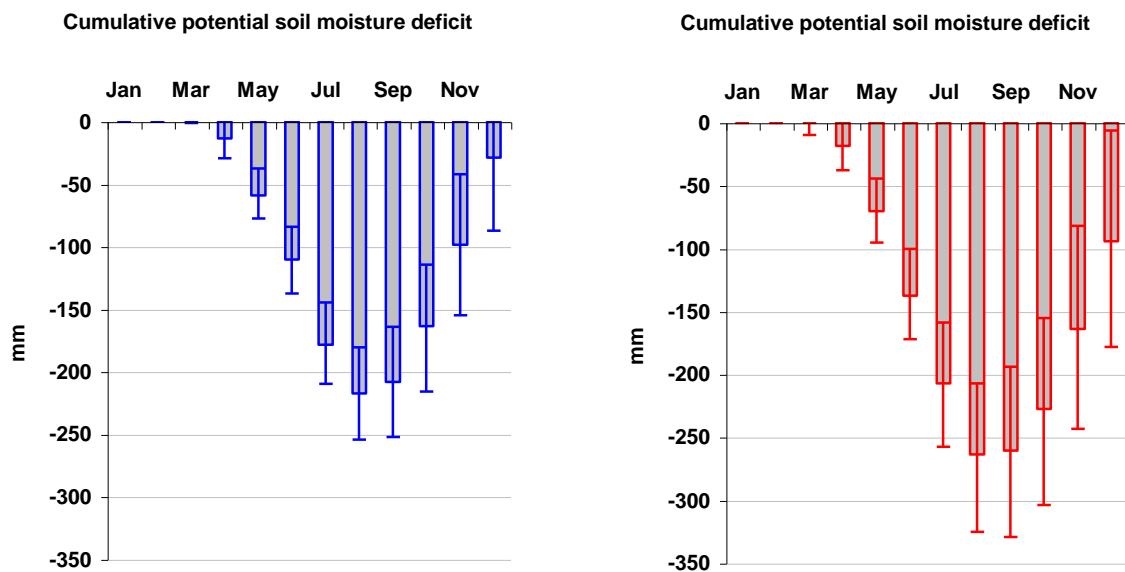
*Predicted changes in vegetation growth days Nov to Apr*



The predicted increase in growth days (November to April) and the predicted increase in precipitation (November to February) could necessitate selective vegetation control to maintain areas of bare shingle.

Soil Moisture deficit:

*Predicted changes in potential soil moisture deficit*



## 1.3. Biological information

### 1.3.1. Recording areas

Recording areas are shown in Maps **12a** (add in additional map numbers)

### 1.3.2. Wildlife data sources and under-recorded groups

Specific data sources are listed below and copies are held on reserve file.

Group	Data source(s)
Birds	Breeding Bird Surveys Volunteer & farmer Alliance Surveys Wetland Bird Surveys
Plants	Vegetation description - compiled by Nature Conservancy Council 1982 Shingle bank flora - A Parker, 2006. Casual botanical records A Parker, M Ausden, 2006 One day botanical survey by James Cadbury and A Parker, Sept 2007 <b>SBRS survey</b> Knapp, A. (Sept 2009)
Shingle lichens	Undisturbed shingle areas surveyed - Street, L & S, 2006
Saline invertebrates	One-day survey by Graeme Lyons, Oct 2007.
Selected insect groups	Entomological Survey of Proposed Managed Retreat, Medmerry, Selsey, W. Sussex – report to ABPmer by Edwards, M. (2009)
Water Voles, reptiles, Great Crested Newt, Badger, invertebrates, fish	Date to be sourced from EA from Medmerry work

### Under-recorded groups

Group(s)	Habitat	Current level of recording	Comments
Ground beetles ( <i>Carabidae</i> ) and rove beetles ( <i>Staphylinidae</i> )	Saltmarsh, margins of saline incursion, grazing marsh.	None	Potential for several rare species in saline areas. Grazing marsh may support a rich beetle fauna.
Moths	Grazing marsh /saltmarsh	None	Only daytime Lepidoptera
Molluscs	Freshwater ditches	None	Potential for specialised molluscs
Spiders	Saltmarsh, undisturbed	2009	<i>Argiope bruinnichi</i> present

	grazing marsh/shingle.		
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### 1.3.3. Habitats

The possible distribution of habitats on the reserve once the managed realignment is completed is shown in Map 13. However, it is expected that the modelling cannot predict exactly how habitats will develop within a new managed realignment scheme. The expected approximate areas of Nature Conservancy Council (NCC) Phase 1 habitats are given in the following table. These are based on best estimates from ABPMer and Jacobs Engineering and relate to the whole lease area.

#### NCC Phase 1 habitats on the reserve

Habitat	Code	Status	Existing Extent (ha)	Possible Extent (ha)
Grassland, neutral, unimproved	B.2.1	BAP priority coastal floodplain grazing marsh	48.8	30
Coastland: saltmarsh, Pioneer - mid	H.2.4	BAP priority coastal saltmarsh	0.55	125
Coastland: saltmarsh, Upper	H.2.4	BAP priority coastal saltmarsh	0	33
Coastland: transitional grassland			0	80
Coastland: intertidal muds/sands	H.1.1	Required as part of scheme, will be SSSI Feature, RSPB Priority Habitat, BAP Priority Habitat	0	25
Coastal lagoons	H.7	BAP priority habitat-saline lagoon	0.26	5.0
Coastland: shingle above high tide mark	H.3	BAP priority coastal vegetated shingle	0.63	6.0
Coastland: shingle above high tide mark	H.3	Poorly vegetated shingle due to EA works	5.56	0.2
Semi-improved grassland			30	50
Scrub			10	2.5
Ruderal vegetation			7.5	5
Rifes and ditches			12km	12km
Open water - reservoirs			3.25	1.0
Arable/construction land			434.45	31 + 121
<b>TOTAL</b>			<b>541</b>	<b>541</b>

Note these figures need checking

### 1.3.4. Vegetation communities

National Vegetation Classification (NVC) communities on the reserve will not be completed until the new habitats have established.

NVC community	Status	Area (ha)	Comments
Total			

Linear communities along ditches	Status	km	Comments
<b>Total</b>			

### 1.3.5. Important plant and animal species

#### Plants

Species	Popn. size	Status	Comments
Curved Hard-grass <i>Parapholis incurva</i>	Small	NSc	Shingle track behind sea wall
Slender Hare's-ear <i>Bupleurum falcatum</i>	Localised	BAP	Around main saline incursion in more open sward. Few plants at NW extremity
Stiff Saltmarsh Grass <i>Puccinellia rupestris</i>	Localised	NSc	In wet areas behind seawall, mostly c100m W of outfall sluice,
Borrer's Saltmarsh Grass <i>Puccinellia fasciculata</i>	Small	BAP	SE of EA sluice
Saltmarsh Goosefoot <i>Chenopodium chenopodioides</i>	Small	RDB	In cattle pond (100s) also 3 other sites. May be W-most site in UK
Sea Kale <i>Crambe maritima</i>	C100 plants	NSc	Mostly on N end of seawall, inward face, other areas damaged by seawall repairs

## Breeding birds

Species	Popn. Size (mean 2006 – 10)	Medmerry scheme area (EA)		Construction area only	Status	Comments
	Bracklesham Bay Reserve mean 2006 -10	2009	2011	2012		
Oystercatcher	1	0	1	1	Sussex BAP	
Avocet	<1	1(1*)	1	2	FDIV	4 young reared in 2008, flooded out and predated in 2011
Lapwing	8	11 (9*)	20 (12*)	24 (14*)	FDIV	Productivity has been falling with increasing fox activity.
Redshank	6	6 (6*)	7 (7*)	7 (6*)	Sussex BAP	Productivity was highest post saline flooding in 2008
Ringed Plover	1	1 (1*)	1 (1*)	3(1*)	Sussex BAP	
Water Rail	>1	2 (1*)	-	2(1*)		1 – 2
Grey Partridge	2	4 (2*)	5(2*)	5 (1*)	FDIV/Sussex BAP	At least 2 coveys recorded each year
Skylark	8	80 (11*)	NC	55 (15*)	FDIV/Sussex BAP	Numbers up on 2010
Yellow Wagtail	0	1 (1*)	0	0	Sussex BAP	Present only in spring 2009-10
Linnet	<1	6 (0*)				
Corn Bunting	<2	5	12	10		Up to 12 territories present in 2011

(x\*) = number of breeding pairs on RSPB Bracklesham Bay

## Non-breeding birds

All figures in the following table are for the Medmerry scheme area, not just RSPB Bracklesham Bay, and are pre-breach.

Species	Popn. size	Status	Comments
Brent Goose	50 - 400	0.4% UK pop	Peak count 1000+ in Dec 2011
Wigeon	25 - 150		Peak count 500 in Dec 2010
Shelduck	25 - 30		
Gadwall	<5		
Teal	100 - 150		Peak count 275 in Dec 2010
Pintail	5 - 10		
Oystercatcher	1 - 2		Peak count of 15 along beach in Dec 2009
Golden Plover	25 - 50		Peak count of 125 winter 2007-08 Flock of 350 present just off site in Dec 2011
Grey Plover	<5		
Lapwing	100 - 450		Peak of 450 in Jan 2010
Dunlin	5 - 10		100 - 150 along shoreline in Oct 2011
Ruff	5 - 15		
Snipe	30 - 40		Most records from RSPB reserve, but up to 20 present along rifes in Dec 2010
Black-tailed Godwit	5 - 10		
Curlew	5 - 25		Regular roost of 20+ birds on RSPB reserve
Redshank	<5		Very few winter records
Mediterranean Gull	5 - 25		45 present in fields to west in March 2011
Hen harrier	1 - 2		
Merlin	1		
Short-eared Owl	1 - 2		
Corn Bunting	10 +		Recent increase in both the wintering and breeding populations in the area

All counts taken from Sussex Ornithological Society (SOS) records, WeBS counts and more recent surveys of the area in 2009 (A. Parker) and 2010 (T.Callaway)

## Other Fauna

Species	Popn. size	Status	Comments
<b>Mammals</b>			
Brown Hare	Up to 4 - 6	BAP	Most on RSPB reserve
Water Vole	Difficult to estimate	BAP	Widespread in main rifes and wet ditches. Extensive mitigation habitat

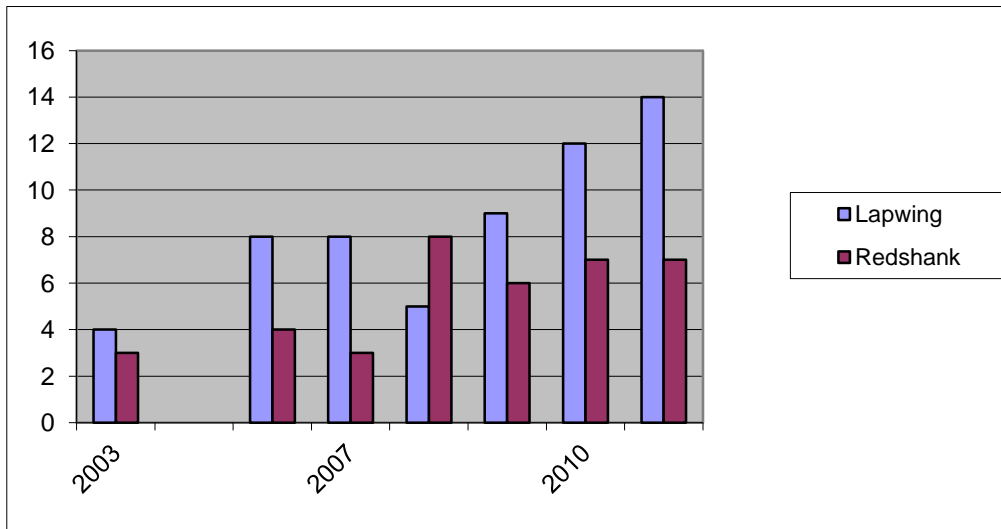
	accurate numbers, which are variable by seasons and year.		being created, which must be maintained to be suitable for the Voles.
Bat spp		BAP	Desktop search by Jacobs but no survey. Data held by Sussex Bat Group
<b>Reptiles</b>			
Adder	Up to date estimates to be provided by Jacobs		Occasional sightings in ungrazed grassland and old banks. A considerable amount of mitigation habitat is being created for the reptiles as part of the scheme.
Grass Snake	“		Rare in ponds and freshwater ditches
Slow-worm	“		Occasional sightings on old banks
Common Lizard	“		Large population
<b>Amphibians</b>			
Great Crested Newt	1	BAP	Male recorded in one pond within boundary, small but important population just outside scheme
<b>Invertebrates</b>			
<b>Spiders</b>			
<i>Argiope bruennichi</i>	Frequent	NSc (a)	Throughout rough grassland
<b>Odonata</b>			
<i>Sympetrum sanguineum</i>	unknown	NSc 9b)	Ponds and ditches with water
<i>Brachytron pratensis</i>	unknown	?	
<b>Orthoptera</b>			
<i>Conocephalus discola</i>	Frequent	NSc (a)	Coastal marsh and grassy banks
<i>Metrioptera roeselli</i>	Frequent	NSc (b)	Rough grasslands
<b>Weevils</b>			
<i>Oxystoma cerdo</i>	unknown	NSc (b)	Vetches in rough grassland
<i>Sibinia arenariae</i>	unknown	NSc (b)	Spurrys along vegetated shingle
<i>Trichosirocalus dawsoni</i>	unknown	NSc (b)	Saltmarsh
<b>Water Beetles</b> (Hydraenidae/Hydrophilidae)			
<i>Ochthebius marinus</i>	unknown	NSc (b)	Brackish pools
<i>Ochthebius viridus</i>	unknown	NSc (b)	Tiny beetle in brackish pools
<i>Enochrus halophilus</i>	unknown	NSc (a)	
<b>Picture-wing Flies</b>			
<i>Campiglossa absinthii</i>	unknown	NSc	
<b>Bees</b>			
<i>Bombus humilis</i>	Occ	BAP	Rough grasslands along banks
<i>Colletes halophilus</i>	a colony	NSc (a)	Sandy areas near sea aster
<i>Heriades truncorum</i>	Scarce	RDB3	Dead wood nesting



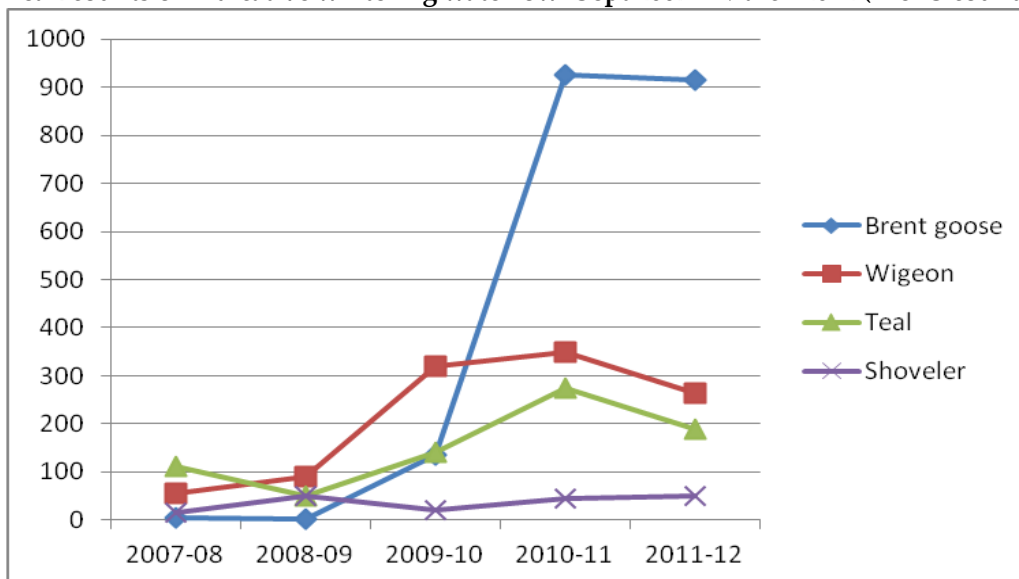
<i>Lasioglossum malachurum</i>	unknown	NSc (a)	
<i>Lasioglossum minutissimum</i>	unknown	NSc (a)	
<b>Molluscs</b>			
<i>Menina similis</i>	small	RDB	

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

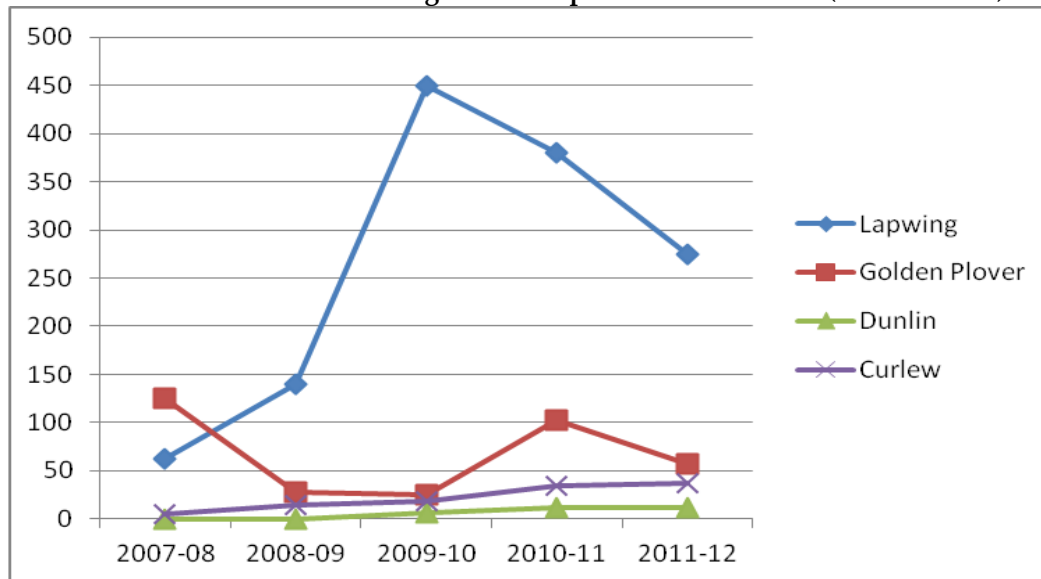
Population trends for key breeding waders (pairs)



Peak counts of indicative wintering waterfowl Sept 2007 – March 2012 (WeBS counts)



Peak counts of indicative wintering waders Sept 2007 – March 2012 (WeBS counts)



## 1.4. Visitors and public affairs

### 1.4.1 Where are we now?

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

The scheme's primary function is flood risk management for local communities. It will improve flood protection for about 350 residential properties and help protect a sewage treatment works and the main road into Selsey. The new flood defences will offer 1,000 times better flood protection than the existing defences, and are designed to provide flood protection against rising sea levels over the next 100 years.

The new Medmerry reserve will sensitively open up an area of undeveloped landscape inland of the Sussex coast that has previously been difficult to access, and an area that is one of the very few undeveloped stretches of coast between Southampton and Brighton. It will include a wide range of habitats, which are expected to support some interesting wildlife. The off-road access on foot and by bike and horse will be a major extension to the rights of way network in the area, for local people and for those who visit the area, although it is important to note that access along the beach between Selsey and Bracklesham will be broken by the new breach.

The access scheme has been designed based on the recommendations of the Medmerry Stakeholder Advisory Group (MStAG). With Pagham Harbour one side and Chichester Harbour the other, Medmerry will become a key link in a chain of nature conservation and coastal countryside sites.

The community's 2011 Destination Marketing Plan, done as part of the Manhood Peninsula Partnership's Pathfinder Project, identified the importance of Medmerry as a catalyst for enhancing the green tourism offer on the Manhood Peninsula, bolstering the local economy and helping create a 'sense of place' based around coast, scenery and wildlife for the peninsula.

#### b. What are your visitor numbers and trends?

Occasional visitor sampling along the seawall and footpaths suggests a maximum of around 3,500 – 4,000 visits per annum, with a peak of around 20 per day at weekends. It is anticipated that there will be interest from local communities, the users of the very extensive caravan parks local to the scheme, and ‘green tourists’ coming to the peninsula, either as day or staying visitors, for its coastal scenery and wildlife. The audiences who currently visit Pagham Harbour (walkers, birdwatchers) may wish to spend more time at Medmerry.

### **c. How do you count your visitors?**

No mechanism for formal counting of visitor is currently in place. A programme of installing automatic visitor counters at key points will be investigated.

## **1.4.2 What is the profile of your visitors?**

Unknown

### **a. What is the split between the various activities?**

This will be monitored once the scheme is open.

### **b. What is the make up and need of your existing visitors?**

This is a new site. The nature, number and composition of visitors is likely to change considerably.

It is anticipated that visitors to Medmerry will be a mix of the local residents of Ham, Earnley, Bracklesham, Medmerry and Selsey, people staying locally (mainly at the local caravan sites), and visitors coming for a day or half-day trip. Such visitors are likely to engage in activities such as walking, birdwatching, cycling, horse-riding and dog-walking.

Visitors will need clear instruction about where they can go and what they can do (and any restrictions), and help to ensure that different user groups get along well together.

The scheme has tried to balance the wishes of those who would like more access, those (especially those residents very local to the scheme) who are nervous about having more people in the area, and the nature conservation interests.

## **1.4.3 Visitor capacity, facilities and services**

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

The creation of so much new public access means that this is effectively a new site.

Historically, the Medmerry managed realignment project area was relatively little visited. The most popular area was the beach, with holiday makers from Bunn Leisure and other caravan parks walking along the beach and a few people commuting, usually by bicycle, along the back of the seawall. There was a small amount of illegal off-road motorbike activity. The few public footpaths inland of the beach were used by dog walkers, especially from Ham, and by a few birdwatchers. There was some unofficial access to the farmland off public rights of way. Access until now has always been difficult, except for those living or staying at Bracklesham, Ham or Medmerry/Bunn Leisure.

The former RSPB Bracklesham Bay reserve had limited visitor appeal, due to its small size and limited wildlife spectacle, compared to other nearby sites such as Pagham and Chichester Harbours. Given these limitations the RSPB has not attempted to promote access previously.

There is good public transport to Selsey and car parking in Bracklesham, 1.7km west of the reserve, and at Selsey Bill 2.7 km to the east. However, it is then a long walk to the reserve.

The difficulties with parking may limit the number of people frequenting the site, and the Caravan Park residents, in particular, appear to stay close to their site.

### **b. What visitor experience you are offering?**

We anticipate that Medmerry will allow visitors to take walks, cycle rides and horse rides around a wonderfully quiet and undisturbed stretch of coastal countryside, offering all the fascination of watching new habitats develop. The new access routes will be made as visually attractive as possible, through the strategic planting of hedges, scrub and wildflowers, the creation of wetland features along the route, and the building of four viewpoints.

There will be a programme of guided walks and occasional talks, on site and in the local community, to engage people with the site, to engage with and inspire local communities and visitors about the nature reserve.

The RSPB is working with local stakeholders to try and establish green access links from Medmerry out to Pagham Harbour Visitor Centre and surrounding communities.

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

We anticipate the following spectacles:

#### **All seasons:**

- sunsets
- extensive coastal views
- heritage, especially archaeology (requires engagement through interpretation)
- engagement with the coast.

Winter	Brent Geese, wading birds, wildfowl, Short-eared Owls
Spring	Birdsong and migrants
Summer	Butterflies, wildflowers
Autumn	Migrants

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

<b>Facility</b>	<b>Comments</b>
Warden	One budgeted to start by Spring 2013
Information staff and volunteers	Volunteer team to be built up, through RSPB and through liaison with local organisations
Car park	Parking for 15 cars/2 horse boxes at Earnley; parking for four cars (two Blue Badge) at Easton Lane; parking for c70 cars at Pagham Harbour visitor centre
Visitor centre	None; Pagham Harbour visitor centre forms a key hub for the area for visitors. Through work with the Selsey Coastal Trust and the Manhood Peninsula Partnership, it is hoped to link the experience at Medmerry to visitor facilities at Selsey and Bracklesham.
Toilets	At Pagham Harbour visitor centre, plus public toilets at Selsey and Bracklesham
Refreshments	None on site
Tearoom	None on site
Viewpoints	Four viewpoints, unscreened
Facilities for visitors with	Two dedicated Blue Badge parking spaces at Easton Lane;

disabilities	wheelchair access to viewpoint at Easton Lane; all access ramps onto new seawall and to viewing areas will be at a gradient of 1:12 or less.
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### **e. What is the carrying capacity of the site?**

The carrying capacity of the site will be determined once the site is open. It is such an extensive site that it is likely to have hugely varying visitor numbers according to location. Access to some of the more remote areas will be limited by the lack of large car parks close to the site and these areas will probably be very quiet. Conversely, the viewpoints adjacent to the Bunn Leisure caravan site is likely to be visited by many people each day. It would be unwise to guess overall visitor numbers at this stage, but the vast majority are likely to be people already visiting the caravan sites or living locally. Any work carried out to judge carrying capacity will need to be very mindful of the local roads, which already struggle at peak times and which is of local concern. Car parks were kept deliberately small to be sensitive to road capacities and neighbours.

### **f. How is the site currently zoned?**

Seaward of the new defences (bar the seaward side of the beach) is an area for wildlife. The layout of the new green access routes has been devised to offer a great experience of the site without compromising the wildlife or the privacy of local residents. Access routes have been carefully zoned to try to limit conflict between different user groups (walkers, cyclists, dog walkers, horse riders). Car parks have been carefully located to limit impact on the minor road network and on local residents. The viewpoints have been located at Bunn Leisure, Ham, Easton and Earnley (Sussex Beach) to give people clear destinations from local communities, caravan sites and the small car parks.

### **g. What information do you have about what your visitors think about the nature reserve?**

To be researched once open with visitor surveys.

### **h. What opportunities are there for education?**

In principle, the largest open coast managed realignment presents opportunities for formal education activities based around geography, ecology and climate change. However, access will be a challenge for large school groups, given the absence of facilities. There is the opportunity to work with the current education provision at RSPB Pagham Harbour LNR. However, informal lifelong learning activities, such as guided walks and interpretation, should be easy to offer

### **i. Are there any legal requirements or constraints?**

- The Planning permission for the Environment Agency to construct Medmerry included the following conditions which apply to the RSPB's management of the site:
  - i. "... all structures and apparatus built for wartime purposes in connection with the Second World War...shall thereafter be retained in situ unless the written approval of the Local Planning Authority is granted following consideration of an appropriate request and justification statement by the Environment Agency. The investigation shall be undertaken by an appropriately qualified archaeologist, and shall include the recording of findings and subsequent publication of results.  
Note: The Local Planning Authority acknowledges that some structures will be exposed to tidal inundation and no future repair or maintenance is required."
  - ii. "This permission shall authorise the erection of bird hides, bird screens and interpretative boards details of which must be submitted to the Local Planning Authority for written

approval before erected or placement on the site. Thereafter such facilities shall at all times be maintained or shall be removed from the site.”

- The site must be treated in accordance with its expected future designation as a SSSI , Natura 2000 site (SPA, SAC) and Ramsar site.

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

To be determined – the RSPB is taking over the site with no external funding assured.

It is expected that the Environment Agency will offer some ongoing payment, in particular for monitoring activity.

#### **k. How can people travel to the site?**

- Local people, including those staying locally, can come on foot or bike.
- Car parking will be at Pagham Harbour visitor centre and the new small Earnley and Easton Lane car parks.
- There are bus links from Chichester (with links to the rail network) that stop within walking distance of Medmerry.

#### **l. How will people find out about the site?**

RSPB website; Pagham Harbour visitor centre; Medmerry reserve leaflet; RSPB reserves guide; local caravan sites; local tourist information centres; press releases; RSPB local groups.

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

Medmerry is a very good fit with the RSPB brand. It will :

- inspire a wide range of people, including local communities, holiday makers and day trippers to value and enjoy the countryside;
- demonstrate the value and worth of habitat creation schemes through managed realignment,
- demonstrate effective partnership working and increase the profile of the RSPB with many local and national organisations;
- show that nature conservation embraces all wildlife, plus heritage too;
- demonstrate the conservation work needed to cope with climate change.

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

This is a new site. It is important that visitor numbers are appropriate to the site and the ethos that was agreed at MStAG. Visiting is targeted at the local community and at enhancing green tourism locally. The main task in this management plan period is to monitor visitor numbers and their impact on local infrastructure and the local economy.

The main catchment is the West Sussex area (Chichester, Bognor, Littlehampton, Worthing), and to a certain extent the SE Hampshire area (Portsmouth, Gosport, Fareham, Southampton, Havant) with a combined population of c735,000 (22% of which are 65yrs or older).

The nearest RSPB reserves are at Pagham Harbour LNR, Langstone Harbour (restricted access), Brading (IoW) and Pulborough Brooks (W Sussex).

## **1.5. History of recent management**

This is largely a new site, and the habitats, which the RSPB acquired at Bracklesham Bay in 2006, are set to change fundamentally as part of the Medmerry managed realignment scheme and have little bearing on future management.

Previous management is summarised below:-

#### **RSPB Bracklesham Bay reserve**

- Increasing surface freshwater:
  - Creation of a wide, deep ditch linking various low spots around the reserve
  - Installation of a higher level dam (March and October 2007).
- Creation of a shallow saline lagoon:
  - Installation of a second dam with outflow pipe.
- Although this was not a managed change, the site was inundated with seawater following a major seawall breach in March 2008, causing extensive saline flooding throughout reserve. Large quantities of seawater resulted in brackish marsh following autumn rains and the site has remained thus.
- Increased open aspect
  - Die-back of bramble bushes (due to brackish conditions).
  - Subsequently grubbed out in autumn 2008 and 2009.
  - Installation of a new top-level pipe to limit the effect of future inundations.
- Increased and targeted grazing to improve sward for breeding waders
  - Dilapidated reserve fencing replaced in autumn 2007.
  - Cutting of invasive bramble bushes in 2007.
- Management of the shingle sea defence by the Environment Agency during the winter months, with only the NW inland face of the wall being left relatively undisturbed.

#### **Wider Medmerry Project area**

- Dominated by intensive arable management
  - Winter cereals and maize
  - Lesser areas of potatoes, rape and pulses
  - Salad crops on edge of project area
- Small area of grassland with intensive livestock management
- Limited amount of farmed land (near Earnley) in Entry Level Stewardship (field margins and boundaries)
- Soil moisture and hydrology affected by extensive surface and under field drainage and abstraction of water for arable crop reservoirs
- Old, internal, un-managed seawalls and old ponds scrubbing up.

## 2. EVALUATION and RATIONALE FOR MANAGEMENT

### 2a. Conservation

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

The Environment Agency's key objectives of the site are to provide an improved flood risk management function for the community, and to deliver an environment that supports internationally important habitats and species to fulfil designation. To achieve this, it will be necessary to monitor very closely the development of the habitats and address any issues should they occur.

Key issues include:

- Having clear protocols and lines of communication for working with the Environment Agency to understand how they will manage flood risk, either from the sea or freshwater, for which they retain full responsibility. The Environment Agency intend to:
  - Monitor the state of the flood banks and rock revetments
  - Monitor salinity levels landward of the bank
  - Use their permissive powers to undertake maintenance of the freshwater outfall (sluice) structures on the site, monitoring for debris and checking the tide gates are working well
  - Monitor the freshwater storage areas, freshwater ditches and Earnley Diversion Channel to.
  - Deal with flooding emergencies if they occur.
- Maintaining close relationships with local community representatives and the Environment Agency regarding longshore movement of shingle, and the wish of local communities to protect themselves using that shingle resource. Management of the site should seek to encourage the wildlife for which the site is likely to be designated, in particular breeding terns or roosting waders, to use the islands and habitats within the site. In this way, if the community ever seek permission to move shingle from Medmerry's beaches to Selsey, the risk of objections due to protected wildlife should be minimised. Making the inside of Medmerry as attractive to wildlife as possible will require a mix of careful habitat design and maintenance, and minimal disturbance.
- The exact extent of priority habitats is hard to predict due to the complexities of the models used and the uncertainties about how long these habitats will take to establish
- Existing coastal processes, the speed of sea level rise and the predicted increase in storm events caused by global warming will have significant impacts on both the development and the continued existence of the shingle and saltmarsh habitats on the reserve
- Creation of replacement freshwater wetland habitat to mitigate for that being lost at RSPB Bracklesham Bay due to the scheme will be constrained by:
  - A lack of a suitable extent of low ground outside the new embankments
  - Insufficient winter rainfall and catchment to create wetland habitat in most years
  - The need to maintain flood storage and minimise the impacts of tidal locking
  - Neighbouring landowners' arable operations
    - seeking to retain low field water levels
    - water abstraction for high yielding crops.
- With such a new high-profile site, so much new access, and limited staff, it is critical that 'visitor rules' are well explained, publicised, understood and managed, especially in the early weeks and months.
- The new intertidal habitats will need to be managed in a way that satisfies the minimum legal requirement to provide compensatory habitats for loss of Special Protection Areas, Special Areas of Conservation and Ramsar sites elsewhere.



- Certain archaeological finds will need to be preserved in situ, in accordance with agreed protocols established with Archaeology South East, the Environment Agency and the county archaeologist. Any future excavation work will need to take account of archaeological potential.
- Habitat created to mitigate for the protected species on the site, such as Water Voles, will need to be maintained according to the NE licences held by the Environment Agency.
- Habitat created to mitigate for the change of use of Bracklesham Bay SSSI to intertidal habitats will need to be maintained to benefit the designated species.
- The granite erratics will need to be placed in appropriate locations, to be determined in consultation with experts.

Current issues and constraints are shown on [Map 17](#).

## 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 **from a conservation perspective** (ie there may be other factors which influence management from a community/social perspective). These include:

\*\* = Features which are the prime reason for RSPB maintaining the reserve and which will drive its management.

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

✓ = Features for which there are legal responsibilities (SSSI interest features) but which will not influence the management 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 the community and visitors.

### a) Intertidal mudflats, saltmarsh and saline lagoons

Important feature	Influencing Management?	Why?
Intertidal mudflats and sandflats	✓✓*	<ul style="list-style-type: none"> <li>• Replacement for lost SSSI, SPA and SAC Interest Features in the Solent. (It is imperative that this need is carried forward to all subsequent Management Plans).</li> <li>• RSPB and BAP Priority Habitat.</li> <li>• Important food source for over wintering and passage waterbirds.</li> </ul>
Saltmarsh	✓✓*	<ul style="list-style-type: none"> <li>• Replacement for lost SSSI, SPA and SAC Interest Features in Solent (it is imperative that this need is carried forward to all subsequent Management Plans).</li> <li>• RSPB and BAP Priority Habitat.</li> <li>• Important roost site for waterbirds and breeding site for regionally important skylarks.</li> </ul>
Saline incursions & lagoons	✓✓*	Saline lagoons are a BAP Priority habitat and SSSI interest feature, and count as a driver for habitat compensation within the Solent Shoreline Management Plan
Saline flora (NSc plants)	✓✓*	SSSI Interest feature
Rare and notable invertebrates, esp. <i>Colletes halophilus</i>	✓*	SSSI Interest Feature nationally important,
Breeding Redshank & Avocet	*	RSPB and BAP priority species.

**b) Farmland: Lowland grassland, transitional grasslands, spring arable, hedges**

Important feature	Influencing Management?	Why?
Lowland grassland	✓✓**	The lowland wet grassland is a SSSI Interest Feature that will mostly be lost after the breach. In its place will be a mosaic of habitats that attempt to replace the functionality of lowland wet grassland for the species for which it was designated, although the habitats will be different.
Breeding waders	✓✓**	Lapwing and Redshank are priority species for RSPB and are SSSI Interest Features. Avocet should colonise and is a priority species for RSPB.
Breeding ducks		Shoveler an important grazing marsh species
Grey partridge	*	RSPB priority species and declining BAP species.
Corn Bunting and other key farmland species (Yellowhammer, Skylark)	*	Key farmland species.
Wintering wildfowl	**	SSSI citation
Raptors/owls	V*	Short-eared Owl is a SSSI interest feature; Hen Harrier is an RSPB priority species. Barn Owl is a charismatic visitor species.
Brown Hare	✓*	UK BAP
<i>Bombus humilis</i>	*	UK BAP
Hedgerows and banks; Bramble and Blackthorn scrub	* V	Important for a range of breeding and wintering birds, invertebrates and small mammals, reptiles and amphibians.
Poplar plantation	V	Out of character with landscape

**c) Shingle beach, shingle islands and foreshore**

Important feature	Influencing Management?	Why?
Shingle above high tide mark for breeding birds, especially Little Tern, Ringed Plover, and roosting waders	✓✓*	SSSI Interest Feature. BAP Priority Habitat BAP species, RSPB priority species Breeding area for seabirds and roosting sites for assemblage of passage/wintering waders

Shingle flora (NSc Plants)	✓✓*	SSSI Interest feature
Longshore drift of shingle, and potential for community to use for coastal defence	V	Attempt to focus wildlife interest on inside of new intertidal areas/back of beach, through zoning
SSSI sediment features	✓	While outside the RSPB's management area, any activities eg on the shingle beach, that might affect that neighbouring SSSI should be borne in mind

#### d) Ponds, reedbeds, ditches

Important feature	Influencing Management?	Why?
Ponds, reedbed, reed fringed ditches and willow/alder carr	*V	BAP habitat, dependent on water levels, water vole, great crested newt, etc. Little management required.
Water Vole	✓✓	UK BAP. Most of the new ditches are to mitigate for the loss of Water Vole habitat on site, and it is vital that RSPB permanently maintains these in a fit state.
Wintering Bittern	*	UK BAP; RSPB Priority species

#### e) Areas of archaeological interest

Important feature	Influencing Management?	Why?
Bronze Age cemetery and homesteads & Roman features;	*V	More to be added here There have been a diverse range of finds which may indicate the area to be of Regional if not national relevance and more information is needed to inform management
WWII features	*V	More to be added here

### 2a.3. Condition of the Features Influencing Management & the Main Factors affecting them

The following tables identify the target condition of the features influencing management and the main factors influencing whether these target conditions are attained.

#### a) Intertidal mudflats and saltmarsh to Highest Astronomical Tide (HAT)

Feature	Attribute(s)	Current	Target(s) for attribute	Main factor(s)	Target for main factor(s)	Comments
Intertidal mudflats and sandflats and saltmarsh	Extent of muds and extent of permanent seawater.	None	c. 25ha muds and permanent seawater	Breach and tidal influence Breach remains viable; tidal system works Disturbance	Work with the Environment Agency to monitor development of system, and address if failing badly Ranger and clearly signal rights of way and areas out of bounds to limit disturbance	
	Extent of saltmarsh	0.55ha	Pioneer saltmarsh - 125ha Upper saltmarsh – 33 ha			
	Quality of saltmarsh		Above targets may change as the reality of what the scheme can achieve becomes clearer			
	Use by assemblage of waterbirds		Waterbird target?			
Saline incursions and lagoons	Extent and duration of saline lagoons	0.26ha	5ha			
Saline flora	Presence of scarce	2 BAP species	Retained	Extent of tidal prism	Suitable saline	Seed collection &

	species	1 RDB, 3NSc species		Grazing	lagoons and intertidal areas	transplantation will be required
Rare & notable invertebrates, esp. <i>Colletes halophilus</i>	Nest burrows (peak count)	Small isolated population	> 5	Availability of sunny sand banks and sea aster rich grassland	Provide sand banks. Ensure sea aster by controlled grazing	Survival may be dependant on successful transplantation of nest cells from current nest site (Nov – July)
Breeding Redshank and Avocet	Pairs	Avocet <1 (Redshank targets are included under lowland grassland)	Avocet 1+	Extent of saltmarsh and tidal pools Disturbance Predation	Ensure adequate saline lagoons Control trespass	Grazing saltmarsh benefits breeding Redshank

**b) Farmland: Lowland grassland, transitional grasslands, spring arable, hedges**

Feature	Attribute(s)	Current (pre breach)	Target(s) for attribute	Main factor(s)	Target for main factor(s)	Comments
Lowland grassland	Extent	49ha [42.5 grazed]	No net loss	Sward height. Extent of rush  Bramble encroachment	49ha [42.5 grazed]. Reduced in core area  Absent from core area and banks adjacent to areas used by breeding waders.	
Breeding waders (across all habitats)	Breeding pairs (young fledged per pair)	Lapwing – 8 (0.8)  Redshank – 6	25 pairs (0.6-0.8)  15 pairs	<ul style="list-style-type: none"> <li>• Median vegetation height in March</li> <li>• Surface water in Feb</li> <li>• Extent of summer pools</li> </ul>	<ul style="list-style-type: none"> <li>• &lt;5cm over 80% of the site</li> <li>• 10-20%</li> <li>• Maintain</li> <li>• Foxes/transect</li> </ul>	Targets to be revised following inundation Predator deterrents to

				<ul style="list-style-type: none"> <li>• Fox predation</li> </ul>		be considered if nest losses exceed target
Grey Partridge	Population	5 pairs	5 pairs	<p>Extent of banks with longer grass</p> <p>Fox predation?</p> <p>Rough grass margins</p>	<p>Retain stretches of existing banks next to grassland and arable</p> <p>Field margins (wide)</p>	Core breeding areas will be lost post breach, therefore will accommodate needs within management of transitional and arable areas
Corn Bunting and other key farmland species (Yellowhammer, Skylark, Turtle Dove, Cuckoo)	Territories	c.5 (5 yr mean)	10	Mixed arable with extent of fallow, spring sown wildbird seed mix and grass margins	<p>Min. of 15ha wildbird cover/ grass margins per 100ha :-</p> <p>4.5 ha wildbird</p> <p>4.5ha spring sown</p> <p>2.5ha grass margin</p> <p>4ha/100ha of wildbird friendly crop management –</p> <p>20 Skylark plots in winter cereal, 1ha of insect rich, 2ha of wild bird seed mixture</p>	Will also benefit grey partridge and other farmland priority birds
Wintering wildfowl	5 yr mean of peak WeBS counts:- brent geese, wigeon, teal, shoveler and pintail by 2014	<p>Brent geese –395</p> <p>Wigeon – 215</p> <p>Teal – 155</p> <p>Shoveler - 35</p> <p>Pintail – 5</p> <p>Total 805</p>	<p>Brent geese - 500</p> <p>Wigeon – 500</p> <p>Teal – 500</p> <p>Shoveler - 30</p> <p>Pintail – 200</p> <p>Total 1730</p>	<p>Median vegetation height in November</p> <p>Surface flooding in December</p>	<p>&lt;10cm over 80% of site</p> <p>10-15 %</p>	Numbers difficult to predict due to the uncertainties over extent of permanent

						water bodies.
Raptors/owls	Regular wintering Hen Harrier and Short-eared Owl Resident Barn Owl	<2 Short-eared Owl Hen Harrier  Barn Owl	Average of 2 Short-eared Owls; average of 1 Hen Harrier  2 Barn owl on average	Availability of grassland with small mammal populations	33% flood defence bank to be ungrazed/cut. Old seawalls to ungrazed/cut	Wintering raptor numbers heavily influenced by breeding success elsewhere
Brown Hare	Population	4-6	4-6	Rough margins, mixed grassland/arable	As per Corn Bunting	
<i>Bombus humilis</i>	Peak count	Widespread in suitable grassland	> 5 recorded on transect	Availability of flower rich grassland, in particular, red clover	As per Corn Bunting	New sea defences and increased field margins
Hedgerows and banks, Bramble and Blackthorn scrub	Extent Maturity	Mainly within area due to become intertidal or saline- influenced				
Poplar plantation	Visual amenity	Solid block of poplar	Gradually reduce proportion of poplar and replace with native trees			

### c) Shingle beach, shingle islands and foreshore



Feature	Attribute(s)	Current (pre breach)	Target(s) for attribute	Main factor(s)	Target for main factor(s)	Comments
Shingle above high tide mark for breeding birds, especially Little Tern, Ringed Plover, and roosting waders	<ul style="list-style-type: none"> <li>Extent of refuge area</li> <li>Longevity of islands</li> <li>Pairs of Oystercatcher and Ringed Plover</li> <li>Presence of Little Tern</li> <li>Mean Monthly maxima of WeBS Core Counts and number of species (Sep-Mar)</li> </ul>	<ul style="list-style-type: none"> <li>6.2ha predominantly shingle sea defence</li> <li>Islands not yet in place</li> <li>Oystercatcher – 1</li> <li>Ringed Plover – 2</li> <li>None</li> <li>Assemblage of passage/wintering waders – 200 (2010-11) ?</li> <li>2011/12 figures?</li> <li>Number of species</li> </ul>	<p>Naturally re-profiling sea defence c.6 ha</p> <p>Intertidal ‘islands’ c 5.5ha</p> <p>Islands all persist</p> <p>5</p> <p>5</p> <ul style="list-style-type: none"> <li>Little Terns prospect or roost during 5-year period</li> </ul> <p>Increase numbers and species assemblage</p>	<ul style="list-style-type: none"> <li>Speed with which shingle bank ‘rolls back’;</li> <li>Recreational disturbance;</li> <li>Design and construction of shingle islands</li> <li>Predation</li> <li>Extent of shingle above high tide.</li> <li>Extent of vegetation growth on roost sites</li> </ul>	<ul style="list-style-type: none"> <li>Monitor island durability repair if required</li> <li>Appropriate fencing to maintain no access</li> <li>No mammalian predation via anti-predator fence and maintenance of deep water channels</li> <li>Create adequate bare shingle areas</li> <li>Vegetation clearance at selected sites.</li> <li>Fenced refuge areas</li> </ul>	<p>Difficult to predict usage by roosting waders – dependant on factors such as disturbance, use of alternative sites, etc. Needs to be balanced against requirement to maintain public access to the outer beach, and the stated aim of creating a contrast between highly attractive to waders/coastal birds inside the scheme and</p>

Shingle flora (NSc plants)	Presence and extent of scarce species	1 NSc- Sea Kale 0.63ha vegetated shingle (Curly Dock-Yellow-horned Poppy community)	Shingle flora typical of undisturbed shingle spreads to colonise.50% of suitable areas of shingle bank, ie 3ha or estimated 6ha	Re-profiling of shingle bank under natural processes, machinery operations on bank	Retain sufficient extent of shingle bank whilst natural processes occur Low machinery use over much of shingle	EA works to shingle banks will be minimal with new sea defence embankment
Longshore drift of shingle, and potential for community to use for coastal defence	Attractiveness or not of shingle to wading birds	n/a	Shingle on coastline at breach unattractive to waders; single inside site very attractive	Disturbance	Managing people, so high levels of disturbance on sea edge; minimal inside scheme	

#### d) Ponds, reedbeds, ditches

Feature	Attribute(s)	Current	Target(s) for attribute	Main factor(s)	Target for main factor(s)	Comments
Ponds, reedbed, reed-fringed ditches and willow/alder carr	Extent Establishment of vegetation	???	TBC	Water levels in ditches Variety of successional stages	Maintain at 0.3m mean	
Water vole	Ditches/mitigation habitats with signs of presence	Scattered small population across area, but extensive mitigation habitat being created	>75% transects showing signs of presence	Ditch water levels. Saline inundation. Grazing/mowing. Presence of mink.	No mink present. Water vole ditches maintain water levels year round	
Wintering Bittern	Presence	None	Average 1 bird seen/winter	Reed edge in fish-rich ditch	4ha of reedbed with plenty of	

					margin	
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### e) Areas of archaeological interest

Feature	Attribute(s)	Current	Target(s) for attribute	Main factor(s)	Target for main factor(s)	Comments
Bronze Age cemetery and homesteads, & Roman features This section will need to be expanded considerably once features and management is known	advice needed	n/a	Archaeological interest undamaged by any RSPB operation Any erosion of features by tides is monitored and reported	Farming operations Vandalism Livestock damage Tidal damage	No damage due to farming, vandalism or livestock	
WWII features						

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

The Medmerry scheme is being created as a completed set of habitats. Once the scheme is complete and the breach made, we will then be able to monitor the situation to see if any tweaks are necessary to offer better experiences for visitors.

### 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)
Intertidal habitats	Sea level rise creates more intertidal habitat within site	Key aim of site – no adaptation needed
Transitional grasslands and farmland habitat seaward of the new defences	Sea level rise will reduce the habitat available for breeding terrestrial wildlife on site	Create compensatory habitats landward of new sea defences
Shingle features	Sea level rise and storm events may reform, breach and move shingle, with consequences for breeding birds	??
Wintering and migrant waterbird populations	Temperature rise may see increased ‘short-stopping’ on the Continent (birds not migrating as far as the UK because climate change allows them to survive further north and east) leading to reduced populations; Temperature rise on Arctic breeding grounds may affect breeding area	Ensure suitability of habitats for migrant waterbirds maintained
All fauna and flora	Increased temperature and changing rainfall regime may lead to population shifts north and east, with gains of some species and losses of others	Plan for potential future colonists

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

None applicable in first Management Plan

## 2b. Visitors and Public Affairs

### Visitor experience

Most management plans provide a strategy for a site that is already in existence. However, Medmerry is going to be a new site that has been designed and is being constructed to an Environment Agency plan that aims to marry the needs of local people (including residents living next to the scheme), visitors and wildlife. The key actions thought to be necessary, in the area of visitor experience, for the period covered by this first management plan are shown below:

Location	Opportunity	Audience	Action	Result	Timescale
At viewpoints adjacent to caravan sites	To engage with and inspire holidaymakers/local residents about Medmerry	Visitors to Bunn Leisure and Sussex Beach Holiday Village; people living locally to the site	<ul style="list-style-type: none"> <li>To establish if we have the staff and volunteer resource to deliver this</li> <li>To liaise with caravan sites to establish if they would be interested in this arrangement, and how it would work.</li> </ul>	<ul style="list-style-type: none"> <li>Excitement, enthusiasm and support for the reserve and its wildlife</li> <li>Greater understanding of coastal issues</li> <li>Key steps towards collaborative community/business/RSPB effort to create a sense of place and boost green tourism</li> </ul>	Throughout
All public access points	To best engage people with wildlife and coastal issues	All visitors	<ul style="list-style-type: none"> <li>Monitor how well the infrastructure is working</li> <li>'Tweak' if and when necessary</li> <li>Ensure all visitor infrastructure is well maintained</li> </ul>	Create the best visitor experience	Throughout

### Public affairs

**Advocacy for managed realignment and the value of nature reserves:** Medmerry offers the opportunity to help promote the fact that the scheme, by being created done sensitively and with the involvement of local communities, is a force for good, offering win-win situations that offer flood defence, wildlife conservation benefits, and access and amenity benefits. This then can help advocate managed realignment, and offer a case study, for communities facing inevitable change elsewhere.

**Designations:** Conversations with local stakeholders indicates that the biggest concern is that of designations. Medmerry's habitats are being designed and created to replace internationally protected Special Protection Areas, Special Areas of Conservation and Ramsar sites being lost elsewhere in the Solent. There is some local concern that these designations will restrict economic activity and, in particular, will restrict the ability of communities to defend themselves

from coastal change. However, on the other hand, some local residents support designation, as they like the idea that inappropriate development can be challenged. The designating authority is the Government.

The designation process is:

As the Government's statutory adviser NE is responsible for identifying possible Natural 2000 sites and conducting on behalf of Government public consultation on proposal for those sites. All European Sites in the UK (SAC and SPA) are designated by Government, in England by the Department for the Environment, Food and Rural Affairs (Defra). Designation involves several stages:

- Site is identified by NE
- Scientific case is presented to Defra for initial approval
- If there is agreement and Ministerial approval is given then NE is requested to undertake a public consultation on behalf of the government to give everyone who might be affected by the designation or has relevant scientific information, an opportunity to comment. This includes land owners, occupiers, local planning authorities other agency and interested organisation.
- Following the public consultation NE will collate the responses and draft a report outlining the final site recommendations. This report will be submitted to the Secretary of state for consideration. All stakeholders will then be informed of the status of the proposed designations.

The Environment Agency and RSPB will work with NE throughout this process.

### **Key access issues**

**Car parking:** There is a risk there will be excess demand for the car parks, and drivers will try to park on road verges. The RSPB will have to be vigilant to that and work where necessary with the local highways authority to limit that risk.

**Dog walking:** will be allowed anywhere along the new public rights of way (see map 1). Dogs will be allowed off the lead on certain of these routes if they are under close control. Close control is defined as the dog remaining on the right of way, and close enough to its owner that it will respond immediately to commands. If a dog is not under control, its owners will be asked to put it on a lead. Dog walkers will be asked to respect the presence of other users, including cyclists, horse-riders, and people (including children) who may feel nervous when approached by dogs.

On the new permissive rights of way, there may be some times and places where dogs will be required to be kept on leads in order to protect wildlife and livestock. While it is not possible to predict these occasions, any restrictions will be signed clearly.

Dogs will not be allowed seaward of the new defences, and will not be allowed along the permissive path to the Easton Viewpoint (name to be confirmed), except for Registered Assistance dogs.

### **Governance and stakeholder engagement**

It is vital that the RSPB maintains the close community working relationship established during the planning and creation of Medmerry. The Medmerry Stakeholders Advisory Group has offered a very constructive and positive way of ensuring that community concerns and needs are addressed.

### **Education and volunteering**

It is important that the RSPB offers a varied and fulfilling programme of volunteering opportunities on the reserve, aiming to work in close collaboration with local established groups such as Manhood Wildlife & Heritage.

## 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 trialled, 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>	Open-coast managed realignment
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.	Yes
<p>Is there a target audience to whom the management practice will be demonstrated and the site is appropriate to that audience?</p> <p>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>	Other possible managed realignment schemes
Is the reserve accessible to the target audience?	Yes
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>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 in-door venue – either on site or nearby?</li> </ul>	Yes
Is the reserve likely to provide inspiration to the target audience, eg. through providing an appropriate wildlife/landscape spectacle?	Yes
<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>	Yes



## 3. VISION AND MANAGEMENT OBJECTIVES

### 3.1 Vision for the site in 25 years

- i. Medmerry will be a successful and sustainable flood and coastal risk management scheme, which through its management provides increased flood and coastal protection to properties, local services and the wider community.
- ii. Medmerry will deliver an enhanced natural environment, restoring natural intertidal and wetland habitats. This will enable recovery of the Site of Special Scientific Interest to favourable condition and provide essential compensation for habitat losses resulting from flood and coastal risk management across the Solent. Medmerry will therefore ensure the coherence of the Natura 2000 network and will enable flood and coastal risk management to be implemented across the Solent for approximately the next 20 years.
- iii. Medmerry will be part of a renowned complex of coastal nature reserves in the area, supporting some of the most important wetland and coastal bird populations and other wildlife in southern England. It will be a key place for wintering and migrant waterfowl, for breeding wading birds, a key site for a thriving population of Water Voles, and for declining farmland birds such as Corn Buntings and Grey Partridges.
- iv. Medmerry will offer a quiet retreat to the coastal countryside for local communities and for people holidaying on the Manhood Peninsula. It will be a place where people go for walks and bike rides, watch the wildlife, and enjoy the open air and scenery. The Pagham Harbour Visitor Centre will act as a key hub from which many people will access the reserve and find out more about it.
- v. Medmerry will have helped create a sense of local place and pride, and will have demonstrated the value that nature reserves and environmental improvements can bring for local communities and economies. It will have been the catalyst for improvements in green tourism and green access links on the Manhood Peninsula, and local business will benefit from providing support services.
- vi. Medmerry will continue to produce food, with the RSPB working with local farming tenants to deliver crops on the higher ground using wildlife-friendly farming methods. Medmerry will also provide safe spawning grounds for sea fish, which will benefit the Selsey fishing industry.
- vii. Medmerry will have been the exemplar of managed realignment, demonstrating that such schemes can be achieved for the benefit of local communities and society, and setting the standards for other such schemes. It will be a site that helps people to understand the changing nature of our coasts, their vulnerability, and their opportunities for coastal adaptation.
- viii. RSPB will have worked with local landowners, farmers and communities to further enhance the wildlife value and environment of the Manhood Peninsula, for the benefit of all.
- ix. Medmerry will be coping successfully with the challenges posed by sea level rise and climate change.

### 3.2 Objectives and management

#### 3.2.1 Conservation Objectives

1. To manage the site to optimise the creation of intertidal habitat, to include at least 100ha of saltmarsh. The remainder will be managed to deliver a mosaic of habitats, including mudflat, saline lagoons and bird islands to meet the Medmerry scheme target of 183ha of functional compensatory intertidal habitat.

**Species targets/Countryside Management System (CMS) prescriptions:**

- More than five burrows of the Saltmarsh Solitary Bee *Colletes halophilus*
- NSc saline flora species present
- 1+ pairs of Avocet breeding

**Habitat conditions/CMS prescriptions:**

- c25ha intertidal mudflats and sandflats developing
- c125ha pioneer saltmarsh developing
- c33ha upper saltmarsh developing
- c5ha saline incursions and lagoons

**Summary management/CMS projects:**

- Collect & distribute seed and transplant NSc plants where possible
- Ensure good population of flowering Sea Aster for the Solitary Saltmarsh Bee *Colletes halophilus* by controlled grazing

**Summary monitoring/CMS projects:**

- Devise monitoring plan to append to Management Plan signed off by the Environment Agency
- Monitor wetland species for which the site is designed to offer compensatory habitat to see if site is achieving its goals
- Monitor extent of developing habitats and benthic invertebrate communities
- Monitor illegal access and disturbance
- Monitor predation

**2. To manage the lowland grassland, transitional grasslands, spring cropping and associated hedges, banks and scrub to increase the breeding wader populations, wintering wildfowl, BAP priority breeding passerines, and other key farmland wildlife**

**Species targets/CMS prescriptions:**

- Breeding Lapwings increase from 8 pairs to 25 pairs
- Breeding Redshanks increase from 6 pairs to 15 pairs.
- Peak September – March WeBS counts of key wintering wildfowl increased from 1000 (5 year average) to 1730
- Average populations of wintering raptors are maintained, Short-eared Owl (2), Hen Harrier (1), Merlin (1)
- Resident population of Barn Owl maintained (2)
- Grey Partridges maintained at 5 pairs
- Corn Buntings increase to 10 singing males.
- Population of Hares 4-6 as counted on transects

**Habitat conditions/CMS prescriptions:**

- 49ha of grazed lowland wet grassland
- Lowland grassland and transitional grasslands: in March over 80% of vegetation height less than 5cm for the benefit of breeding Lapwing and grazing wintering wildfowl
- 10-20% standing water in February

**Summary management/CMS projects:**

- Provide a mix of rotational arable crops (with farming tenants) that includes both autumn and spring sown crops (cereals, oil-seed rape, potatoes and vegetable crops)
- Provide up to 4ha per 100 ha of wildbird-friendly crop management (the 'Farmland Bird Package') to include 20 Skylark plots in winter cereal (or 1ha of fallow or extended winter stubbles), 1ha of insect rich habitats, 2ha of wild bird seed mixture, (or 5-10ha of overwintered stubbles).
- 15ha per 100ha of specialised wild bird friendly plots to benefit in particular Corn Buntings and Yellowhammers (c.4.5 ha winter sown cover; 4.5ha spring sown seed mix and 2.5ha grass margin)
- Rough grass banks with establishing wildflower populations to benefit a variety of invertebrates, particularly the bees, wasps and ants (aculeate *Hymenoptera*) and provide nest sites for Grey Partridge
- Invasive weeds not allowed to develop on >5% of total area
- Hedges and existing banks linked to create optimal corridors for wildlife out of the inundation area
- Work with farm tenants to ensure appropriate cultivation and harvesting of arable crops to an agreed programme of autumn and spring sown crops and areas of fallow
- Incorporate the 'Farmland Bird Package' (which are wildbird-friendly crop management prescriptions) as standard in each farm business tenancy to comprise per 100ha: 20 Skylark plots in winter cereal (or 1ha of fallow or extended winter stubbles), 1ha of insect rich habitats across the farm, 2ha of wild bird seed mixture, (or 5-10ha of overwintered stubbles).
- Sow and manage Corn Bunting friendly plots at a minimum of 15ha per 100ha to compromise c.4.5 ha winter sown wildbird cover; 4.5ha spring sown wildbird seed mix; 2.5ha grass margin
- Mow existing grass banks once every three years in rotation to benefit a variety of invertebrates (particularly bees, wasps and ants) and provide nest sites for Grey Partridge
- Control invasive weeds by topping and weed wiping where necessary
- Plant hedges and wildflower seed mixes where necessary on existing banks to create optimal corridors for wildlife out of the inundation area
- Gradually replace Lombardy Poplars at north end of the site with native trees
- Instigate a hedge management programme aiming for a minimum of a 5-7 year rotation
- Identify opportunities to increase wetland areas through further excavation, operation of water control structures and abstraction (via EA's remaining abstraction licence).

**Summary monitoring/CMS projects:**

- Monitor breeding birds annually
  - Carry out monthly WeBS counts
  - Monitor passage waders and wintering raptors through WeBs and causal records
  - Monitor sward height in March and October
- **To manage the shingle habitats to achieve a favourable SSSI condition for its flora, offer nesting opportunities for seabirds, and support regionally important numbers of breeding Oystercatchers and Ringed Plovers.**

**Species targets/CMS prescriptions:**

- Five-year average mean monthly maxima of WeBS Core Counts (Sep-Mar) for the assemblage of roosting passage/wintering waders is greater than 200
- Five-year average: 5 pairs of breeding Oystercatchers, 5 pairs of breeding Ringed Plovers
- Little Terns prospect or roost on the bird islands within the first five years
- Maintain the diversity and mix of rare or scarce invertebrates

- The islands and spits are maintained in suitable condition to support a breeding tern colony and in particular attract Little Tern

**Habitat conditions/CMS prescriptions:**

- The shingle flora increases to cover >50% of suitable area.
- Subject to natural change, the areas of the mosaic of habitats are maintained at least as designed;
  - 11.5ha of shingle above the high tide mark
- Subject to natural change, the distribution of breeding sites, roost sites, mudflats and sandflats, away from the beach front, are maintained free of disturbance
- NSc plants return to a least the 2010 population levels

**Summary management/CMS projects:**

Where realistic, adopt non-intervention policy for management of intertidal areas, to achieve agreed targets.

- Remove perennial vegetation from selected areas of the shingle habitats to benefit nesting terns (especially Little Terns)
- Fence along the back of the beach, as it rolls back, so that there is a splay of shingle retained as a refuge area. Maintain this restricted access by foot patrols, signage and fencing
- Whenever possible, inform visitors of the importance and sensitivity of the reserve for birds and wildlife.
- Provide interpretation to include a clear, positive message of why people should stay out of the intertidal areas and nesting/roosting areas.
- Install an obvious 'boundary' with clear signage which shows visitors when they are entering the reserve
- Minimise predation of the eggs and chicks of nesting seabirds
- Foxes: Control growth of scrub that might be used as cover for fox earths as necessary.
  - Erect temporary electrified fencing as a deterrent and identify optimum positions for more permanent anti-predator fencing.
  - Review need and options to manage avian predators (eg suitable chick-shelters on Little Tern nesting areas, deterring large gulls and Carrion Crow etc

**Summary monitoring/CMS projects:**

- WeBS Core Counts throughout year
  - Breeding waders and seabirds (potential)
  - Presence/predation of/by rat, fox and other mammals; Kestrels, large gulls and corvids.
  - Scrub growth
  - Human disturbance
  - Erosion/accretion of habitats
  - Lichen distribution
  - NSc plants
  - Rare and notable invertebrates
- **To manage the freshwater ditches, pools and reedbeds to support a thriving population of Water Voles and an assemblage of ditch flora and fauna**

**Species targets/CMS prescriptions:**

- Water Vole presence recorded in 8 transects out of 12
- Increase the range and distribution of aquatic plants in the developing ditches and pools

- Increase the range and distribution of aquatic invertebrates in the developing ditches and pools
- Increase populations of wetland passerine birds particularly Cetti's Warbler, Reed Bunting and Reed and Sedge Warbler

**Habitat conditions/CMS prescriptions:**

- Maintain area and edge habitat of designed reedbeds and reed fringed ditches at c 4ha
- Double the area of associated reed/fen where possible through further habitat creation and manipulation post breach
- Maintain originally designed water levels for each section of ditch and pool complex
- Maintain ditches with a mean of 0.3m of water in them throughout the year
- Ditches to compromise of varied successional stages (open 10-30%, mid 20-50%, closed 10-30%)

**Summary management/CMS projects:**

- Manage perimeter ditch control pipes to maintain water levels in ditches and pool complex
- Instigate annual cutting regime of reedbeds (once established or to aid establishment) over c 10% of reedbed area to maximise reed edge habitat
- Control Mink if present
- Manage ditches through mowing and clearance regimes to ensure rapid establishment of suitable aspect and vegetation for Water Voles
- Develop a ditch clearance programme on a 7 - 10 year rotation

**Summary monitoring/CMS projects:**

- Monitor distribution of Water Voles annually
- Monitor presence of Mink using rafts checked weekly
- Monitor distribution of scarce flora and ditch invertebrates once every 5 years
- Monitor breeding birds annually using Breeding Bird Survey methodology
- Water quality monitored at key points (see map) annually
- Water levels monitored at key points (see map) monthly

○ **Archaeology:**

- The RSPB will manage the site to a standard that will cause no further detriment to the known archaeology within its ability to do so. It is recognised that natural degradation of the buried archaeology, and the impacts of natural process and climate change, are beyond the ability of RSPB to manage.
- The RSPB will monitor the site to highlight areas of significant natural erosion or archaeological exposures and will seek advice accordingly. Advice will be sought from the Environment Agency, RSPB's Archaeological advisor, and the District's Archaeologist.
- The RSPB will look to work with the local archaeologists to find ways to further investigate the archaeology locally without compromising the core objectives of the scheme.

### 3.2.2 Objectives for People

#### Working with local communities

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

Deliverable	13/14	14/15	15/16	16/17	17/18

Run and publicise a programme of guided walks and occasional talks, including wildlife, conservation and land management, heritage and history.	√	√	√	√	√
Attend community outreach events off site	√	√	√	√	√
Help people understand sensitivity of habitats and wildlife through permanent, seasonal and temporary interpretation.	√	√	√	√	√

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

Deliverable	13/14	14/15	15/16	16/17	17/18
To continue to run the Medmerry Stakeholders Advisory Group (MStAG) through the life of this plan, alerting them to any issues or changes, and seeking their advice. The Environment Agency will be asked to attend such meetings to answer questions and address issues regarding flood defence and freshwater drainage issues. The RSPB will work with MStAG to revise the existing terms of reference. MStAG meetings will be held at least twice a year, unless MStAG decides that meetings are no longer required that often.	√	√	√	√	√
To offer clear routes of communication for the public (phone numbers, emails), with RSPB staff attending promptly to community concerns	√	√	√	√	√
To maintain effective systems of disseminating information, through producing quarterly e-news bulletins to share news and progress reports about the site and its management, in order to reach local communities, RSPB local groups and RSPB members	√	√	√	√	√
Collate and publish an annual review for each year of the Management Plan, to be published no later than four months after the end of the previous financial year.	√	√	√	√	√
To work with local communities to maximise the benefit of the reserve as a part of the emerging green tourism offer on the Manhood Peninsula	√	√	√	√	√

## Visitors experience

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

We expect that a relatively large number of visits will be made to Medmerry by those people either living or staying adjacent to the site. However, estimating how many visits that will equate to is not possible at this stage.

Deliverable	13/14	14/15	15/16	16/17	17/18
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Maintain accurate, consistent counts of visitors	√	√	√	√	√
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#### 4. Provide a high quality visitor experience

Deliverable	13/14	14/15	15/16	16/17	17/18
Permanent, seasonal and temporary signage, events and talks to help people understand the sensitivity of habitats and wildlife through	√	√	√	√	√
Maintain all public access routes and infrastructure (gates, signs etc) in a good standard of repair.	√	√	√	√	√
Maintain the two new small car parks, and monitor to ensure that car parking only occurs in allocated places, working with the Highways Authority should there be any problem.	√	√	√	√	√
Clear and sensitive 'behaviour' signage and face to face engagement so that people know where to go and what they can and can't do, so as to encourage respect and harmony between different user groups	√	√	√	√	√
Get people closer to nature through targeted habitat micro-management in key locations	√	√	√	√	√
Improve the access links to Pagham Harbour visitor centre	√	√			
Monitor visitor attitudes and experience with visitor surveys	√	√	√	√	√
Work with local authorities and interest groups to establish whether there are options for increasing pedestrian/cycle access to better link to local communities	√	√	√	√	√
Maintain the rights of access to the permissive path system, apart from in exceptional circumstances, such as if access compromises the integrity of the flood defences, or if there are urgent farming or ecological reasons.	√	√	√	√	√
Work with users to encourage them to respect the designated rights of access and respect other uses of the site, so as to avoid conflict between different user groups	√	√	√	√	√

#### 5. Engage with more visitors and with a better quality service to each one.

Deliverable	13/14	14/15	15/16	16/17	17/18
Recruit and train team of volunteer wardens to help engage with visitors across wider site	√	√	√	√	√

**6. Offer people the chance to support the reserve and the work we do here**

Deliverable	13/14	14/15	15/16	16/17	17/18
20 active volunteers by end of Year 3	√	√	√		

**7. Build and retain support for our conservation work on the site by using as an exemplar site of climate change mitigation and habitat creation**

Deliverable	13/14	14/15	15/16	16/17	17/18
Use the site as an exemplar of managed realignment in advocacy work	√	√	√	√	√

**8. Improve the experience that families have when they visit**

Deliverable	13/14	14/15	15/16	16/17	17/18
Seek to ensure families are catered for in events programme and interpretation	√	√	√	√	√

**9. To increase attendance and quality of our field teaching scheme**

Deliverable	13/14	14/15	15/16	16/17	17/18
The RSPB will explore options for working with secondary and tertiary students at Medmerry, using Pagham Harbour as a base.	√	√	√	√	√

**10. Produce communications plan for the site**

Deliverable	13/14	14/15	15/16	16/17	17/18
Produce a communications plan	√				

### 3.2.3 Demonstration objectives

### 3.2.4. Proposed habitats