

# Coastal Habitat Creation – Are We Delivering?

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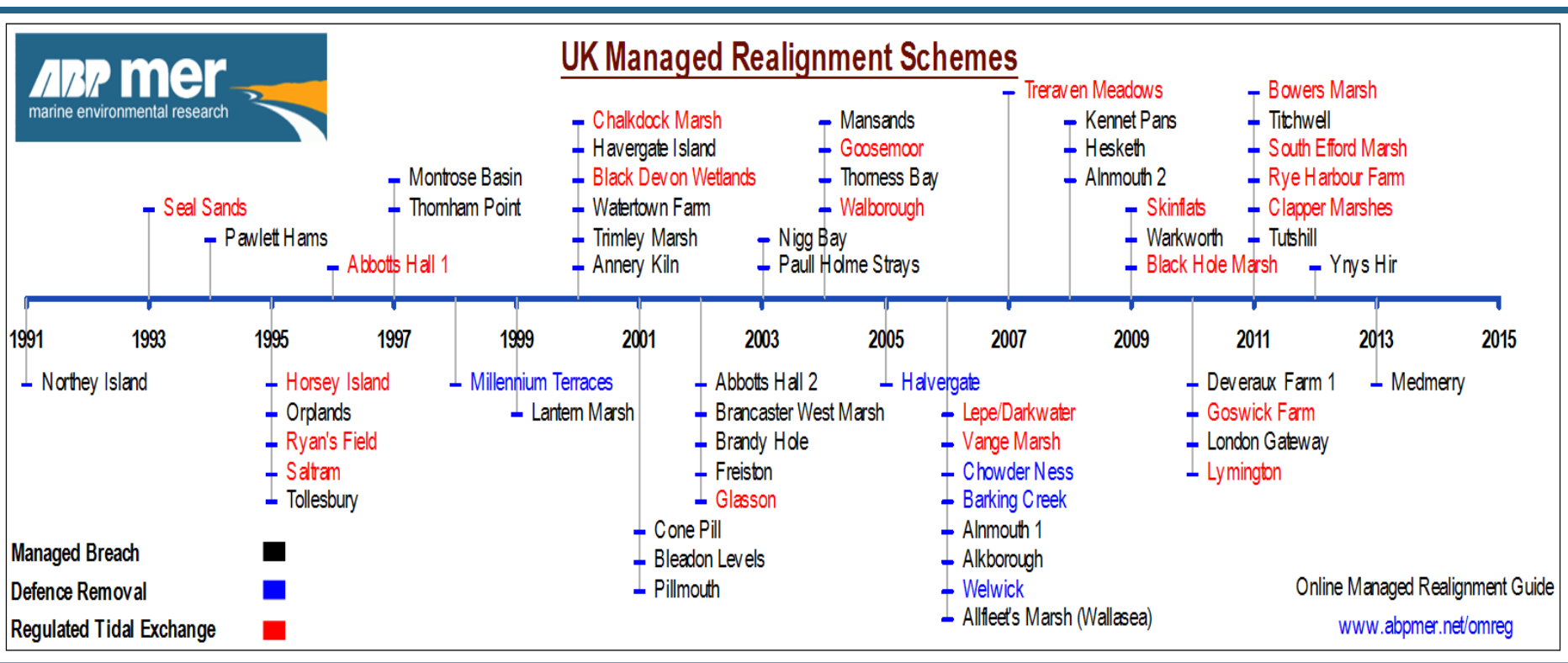
**Colin Scott**

**Solent Protection Society**  
**20 February 2014, Lymington Community Centre**



- **Methods for Creation/Restoration.**
  - Managed Realignment (inc. sea wall breaches and sluices)
- **Methods for Protection/Enhancement .**
  - Sediment Recharge
  
- **Logic of Managed Realignment.....**
  - Reduces maintenance costs for coastal defence;
  - Space for sea level rise, reduces habitat loss;
  - Improves flood protection;
  - Creates 'new' intertidal habitats plus many other gains; and
  - Leads to more sustainable shorelines and estuaries.

- Over the last 23 years....
  - Over 60 completed MR and RTE projects in UK... extensive practical experience



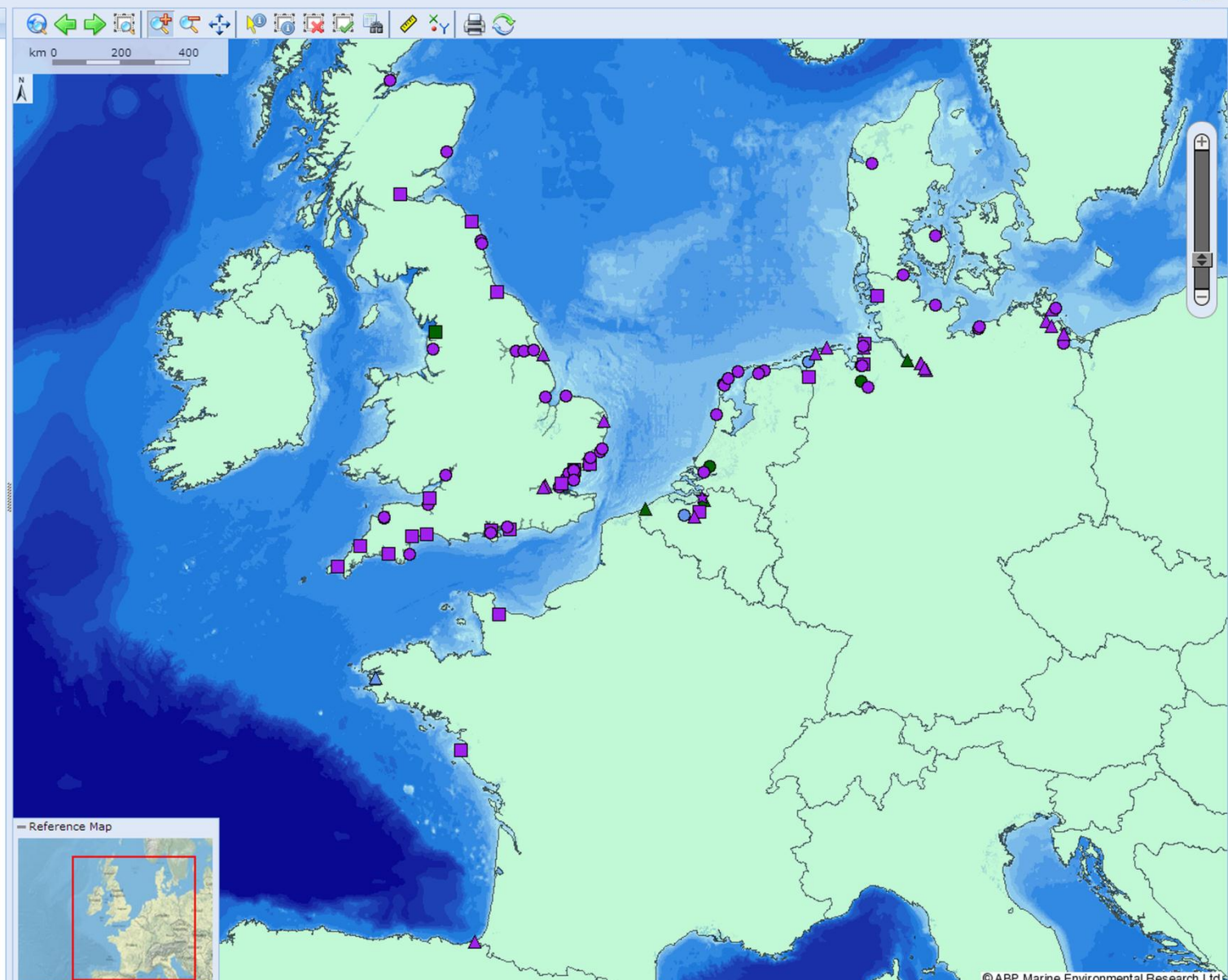


Scale 1: 10921750

Welcome Downloads Layers Legend

Managed Realignment Sites

- ▲ Defence removal
- ▲ Defence removal & land lowering
- ▲ Defence removal & regulated tidal exchange
- ★ Land lowering
- Managed breach
- Managed breach & land lowering
- Managed breach & partial defence removal
- Regulated tidal exchange
- Regulated tidal exchange & managed breach







**Bank**



**Breach**



**Regulated Exchange**



**Regulated Exchange**



**Regulated Exchange**



**Natural Morphology**



**Landform Change**



**Culvert Gate**

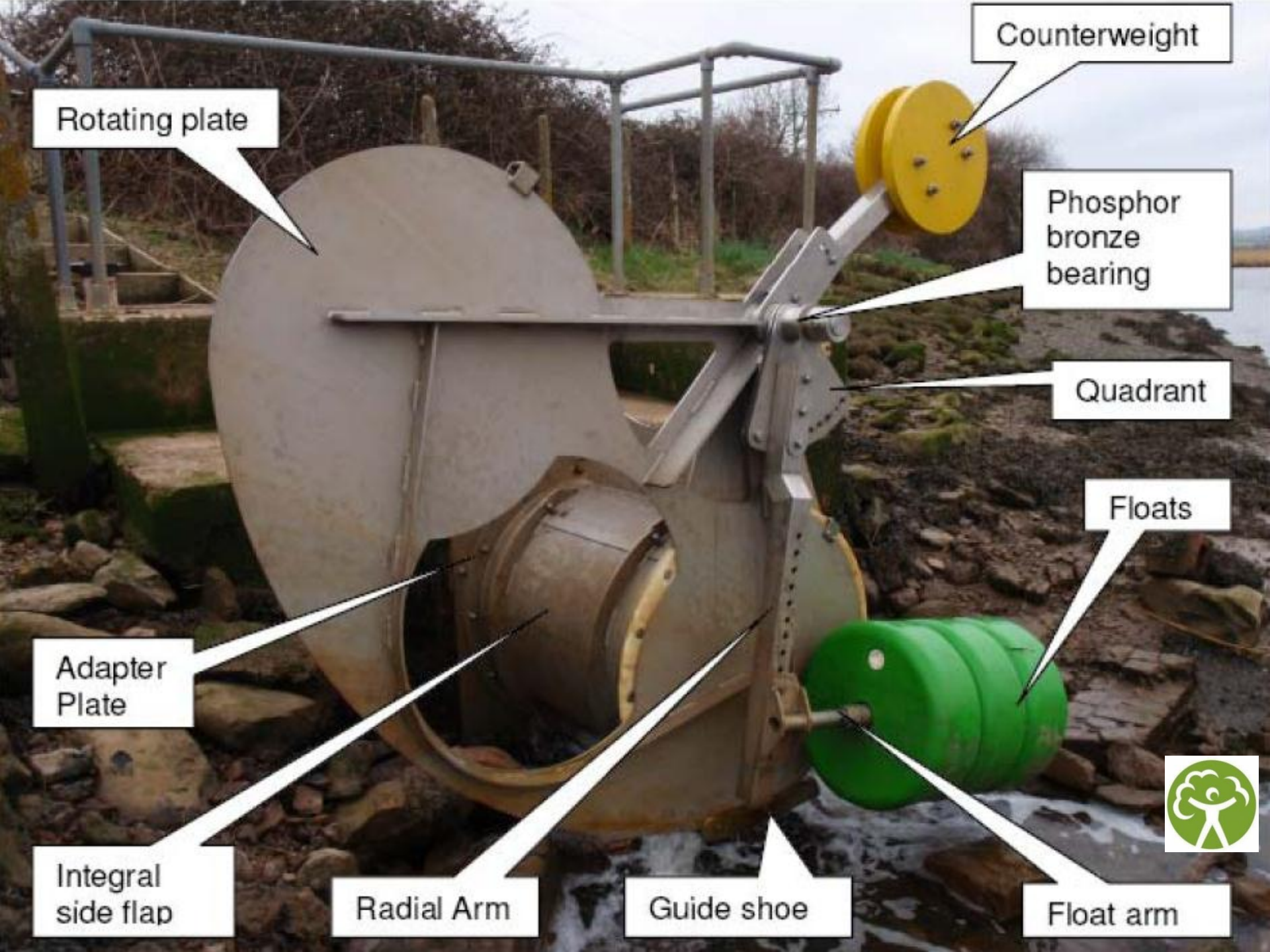


**Coastal Shingle**









Rotating plate

Counterweight

Phosphor  
bronze  
bearing

Quadrant

Floats

Adapter  
Plate

Integral  
side flap

Radial Arm

Guide shoe

Float arm











Roman Landing

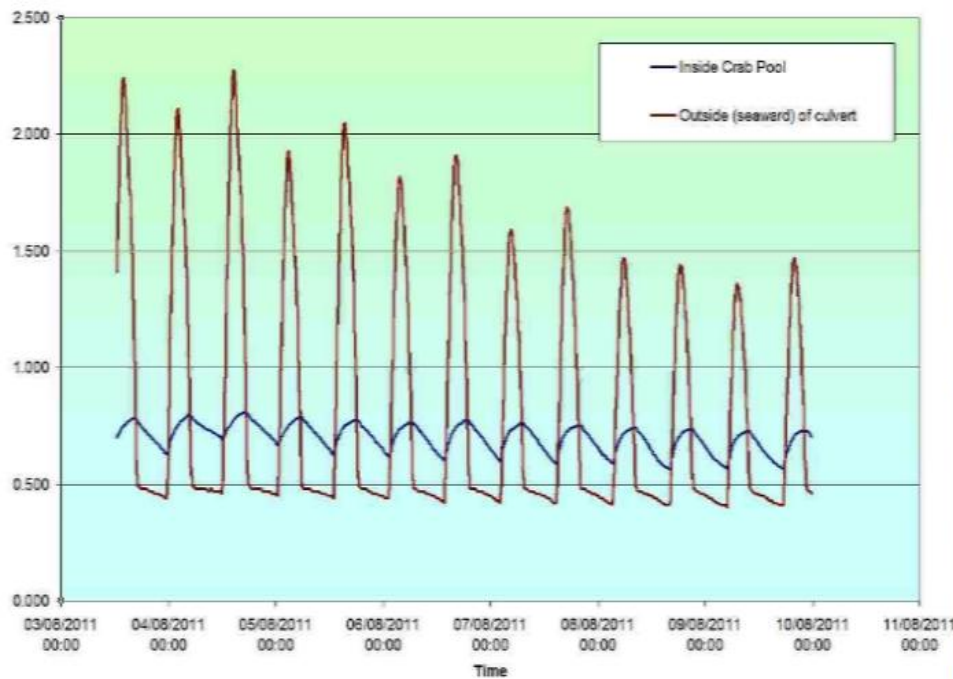
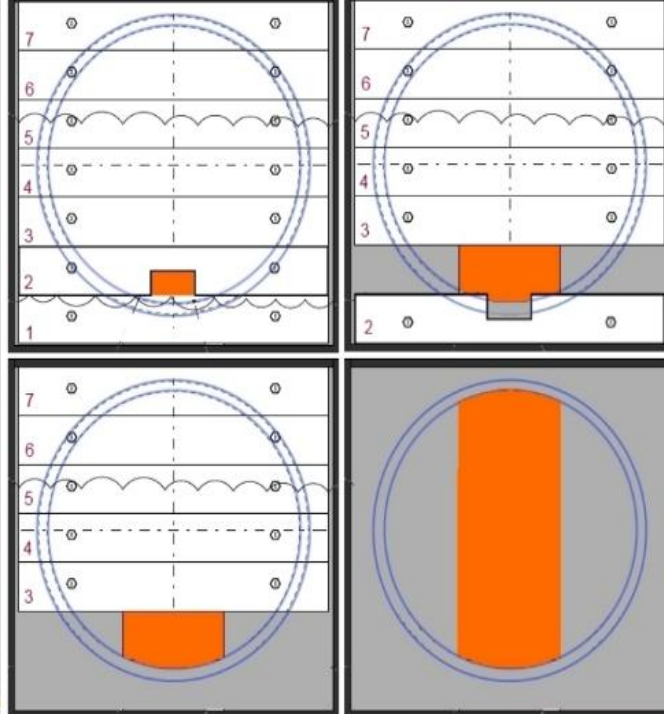
Coastguard Lane



# West Wittering Regulated Tidal Exchange











## Coastal Habitat Creation – Are We Delivering?



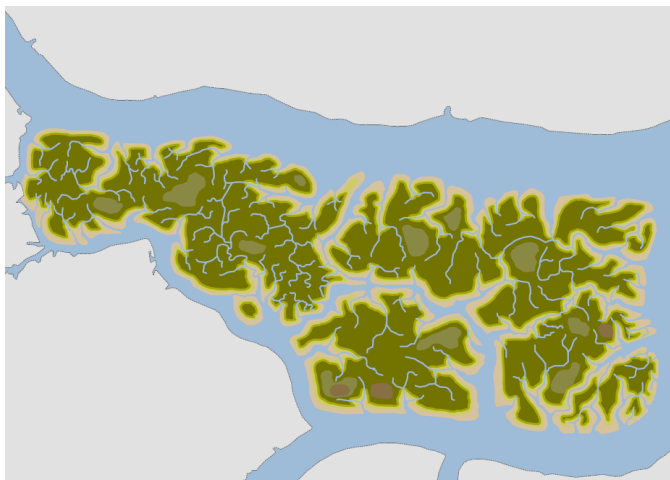


- **Yes and No...the Future has more challenges ....**
  - **Work to Do** - To meet SMPs aims by 2050 - realignment needs to increase 5-fold from 6km/year to 30km/year;
  - **Cost** – Increasing cost of project; even as projects get larger there are no economies of scale....
  - **Land Purchase** – Problems with securing correct land;
  - **Communicating Project Rationale** – A challenge for all projects; raising issues such as “food security” .....need to clarify the relevance of such issues and the multiple benefits...
  - **What are the incentives/funds:** Other than fish, carbon?
  - **Need to think bigger?...**

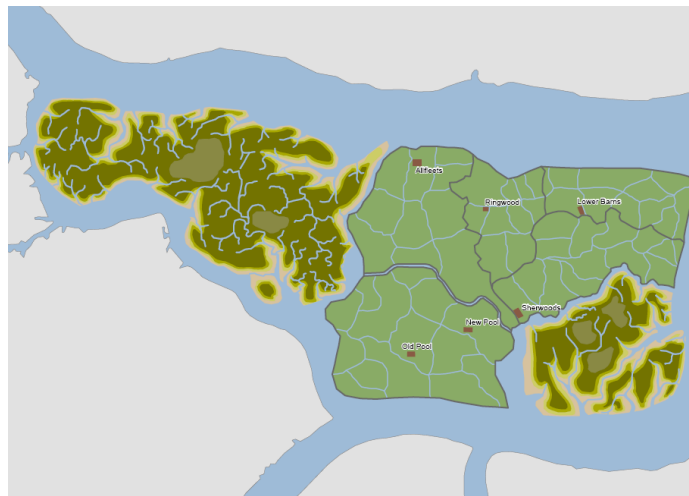


Allfleet's Marsh (Wallasea)

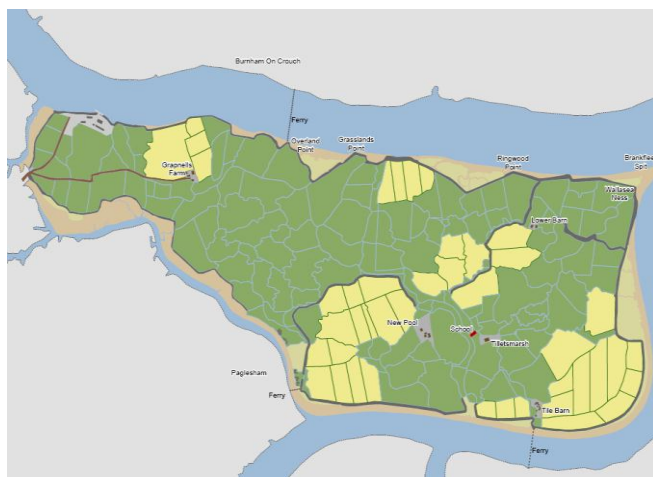
1200



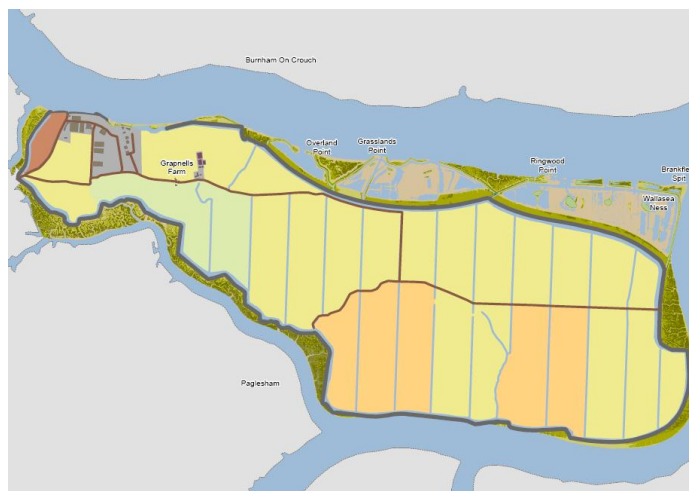
1320



1920



Present Day











giving  
nature  
a home





Wallasea Island Wild Coast (RSPB Project)

Wallasea Island



giving  
nature  
a home





Wallasea Island Wild Coast (September 2013)





Wallasea Island Wild Coast (September 2013)



## Social Value

- ✓ Improved access to the coast
- ✓ Social and health benefits from new amenities and facilities
- ✓ Connecting people with the coastline
- ✓ Climate change / Sea-level rise outreach
- ✓ Enhanced visual landscape
- ✓ Focus for local volunteering

## Economic Gain

- ✓ Catastrophic flood risk reduction
- ✓ Jobs and skills creation in construction
- ✓ Future-proofed sustainable coastal defence
- ✓ Waste management partnership

### Wallasea Island Wild Coast Project

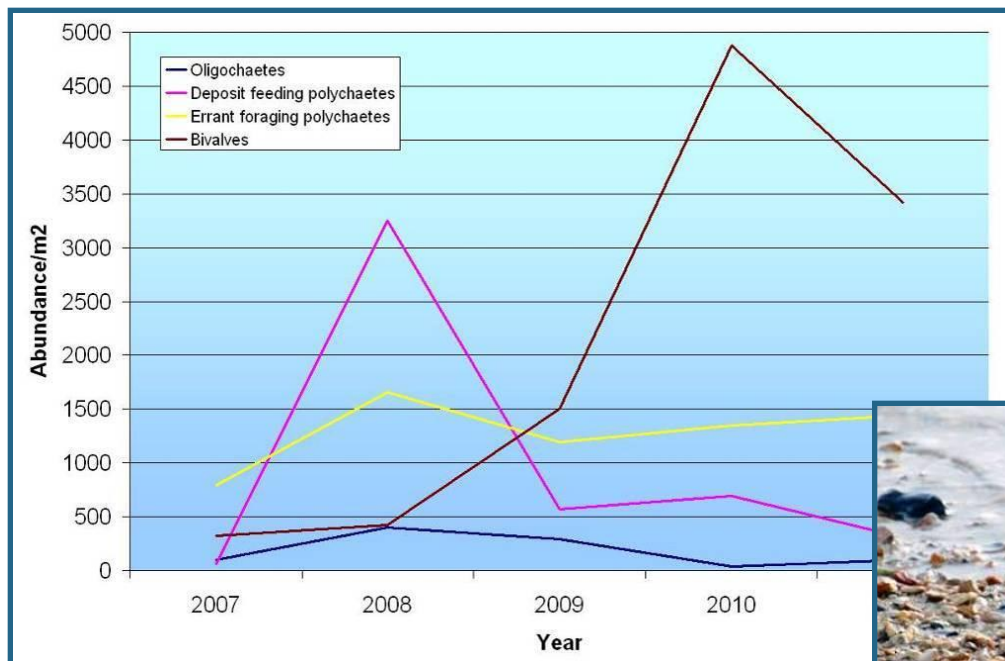
- ✓ Fish & shellfish habitat
- ✓ Carbon sequestration
- ✓ Improved water quality
- ✓ Landfill alternative

- ✓ New angling & bird watching sites
- ✓ 'Living' research laboratory
- ✓ Avoids road transport impacts

## Environmental Benefit

- ✓ maintaining populations of protected terrestrial species
- ✓ coastal feeding and roosting areas for important species
- ✓ internationally protected mudflats and marshes
- ✓ high biodiversity habitats restoration





[www.oceansedgephotography.co.uk](http://www.oceansedgephotography.co.uk)



**Allfleet's Marsh (Wallasea)**



**2007**



**2008**



**2009**



**2010**



**Allfleet's Marsh (Wallasea)**



2007



2011

Allfleet's Marsh (Defra Project)  
Wallasea Island



2006

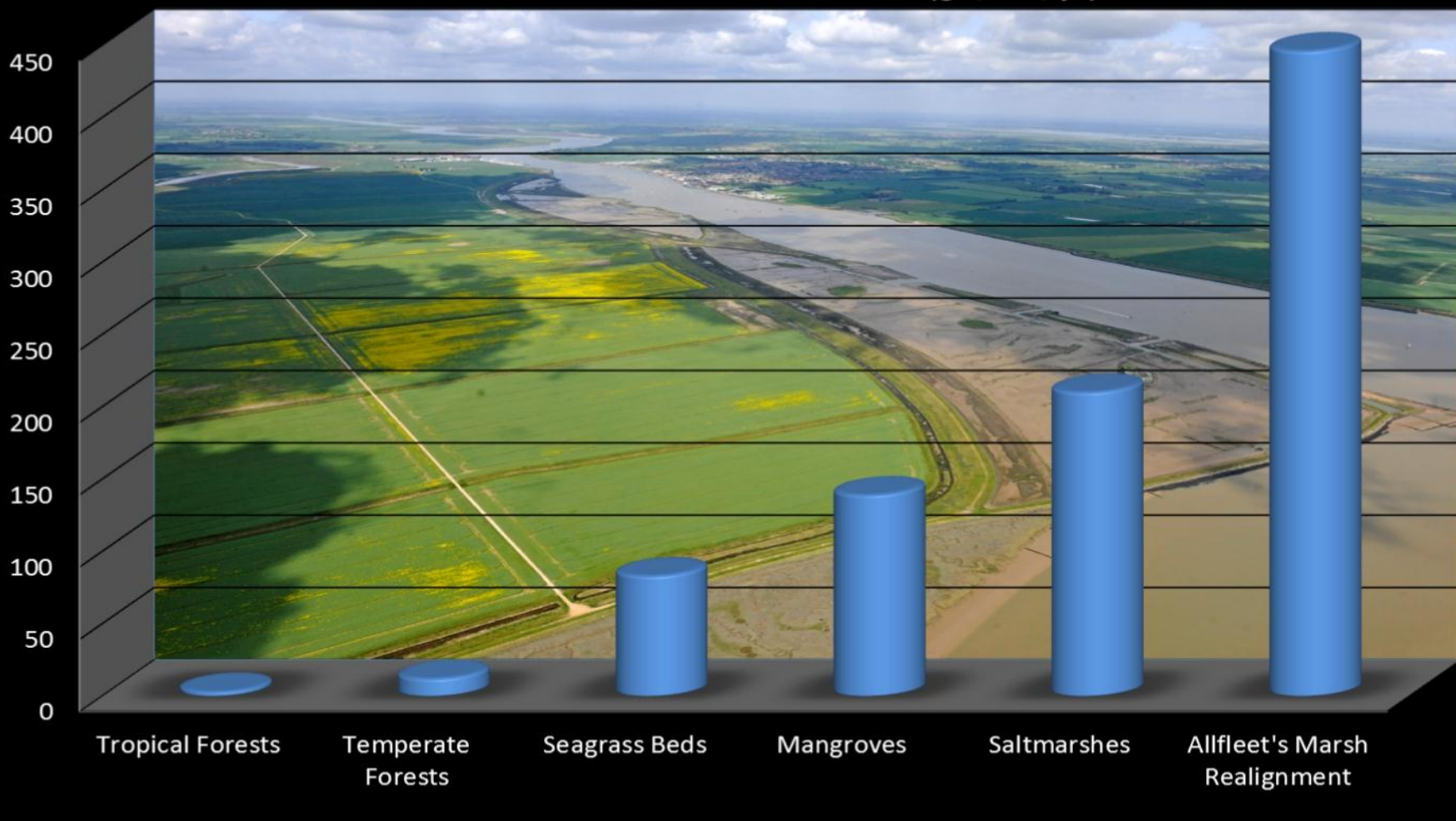


2011

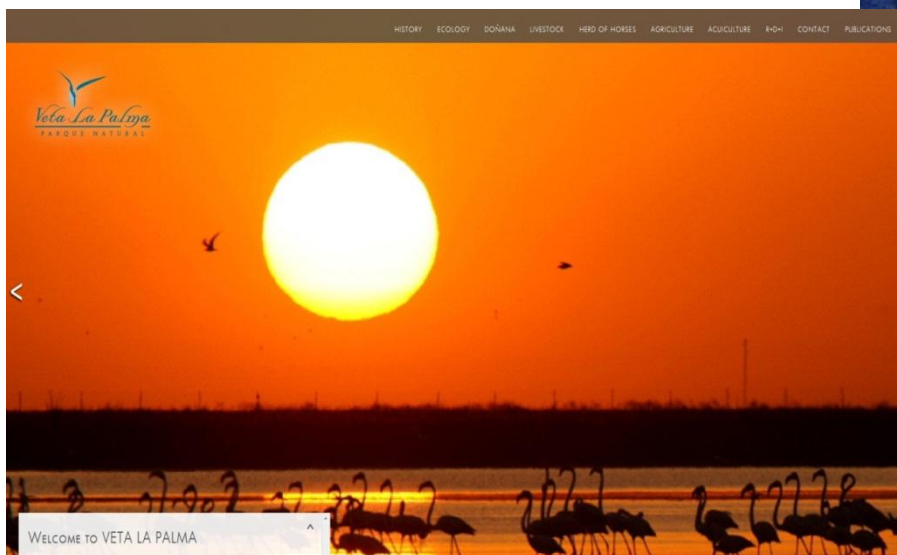




Blue Carbon Burial Rates (gC/m<sup>2</sup>/yr)













Scale 1: 2200760

Welcome Downloads Layers Legend

Sediment Recharge Sites

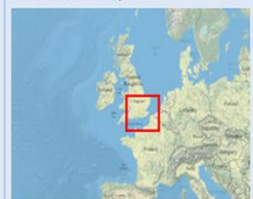
✚ Sediment recharge



km 0 40 80






Reference Map





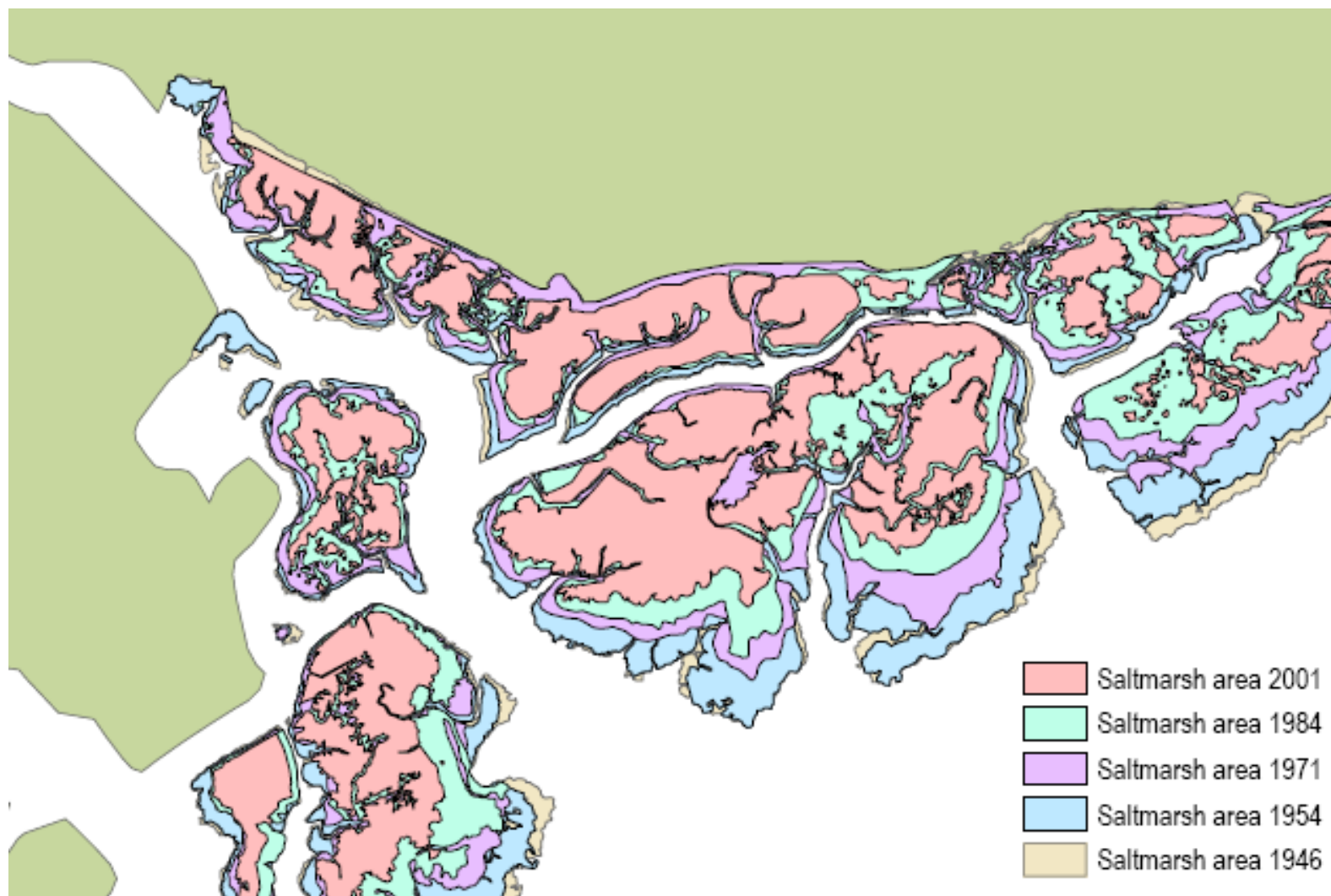


Completed section  
(Phase 1) of LHC  
Breakwater

-  LHC recharge site
-  Wightlink Ltd recharge site
-  Proposed alignment of  
LHC breakwaters

0 0.1 0.2 0.3 0.4 0.5  
km







# Boiler Marsh, Lymington







**Lymington Recharge - Wightlink Ltd., Land and Water Ltd & ABPmer.**



# Boiler Marsh, Lymington











2 February 2013

PLOTWATCHER PRO LYMINGTON 02-FEB-13 11:30:51 56% -1C (



8 February 2013

PLOTWATCHER PRO LYMINGTON 08-FEB-13 16:42:51 52% -4C (



17 March 2013

PLOTWATCHER PRO LYMINGTON 17-MAR-13 10:44:24 52% -3C (



11 April 2013

PLOTWATCHER PRO LYMINGTON 11-APR-13 19:07:52 45% 0C (



12 May 2013

PLOTWATCHER PRO LYMINGTON 12-MAY-13 09:10:54 42% 10C (



2 June 2013

PLOTWATCHER PRO LYMINGTON 02-JUN-13 04:02:36 40% -2C (



23 July 2013

PLOTWATCHER PRO LYMINGTON 23-JUL-13 12:23:56 47% 16C (



4 August 2013

PLOTWATCHER PRO LYMINGTON 04-AUG-13 07:02:17 45% 19C (

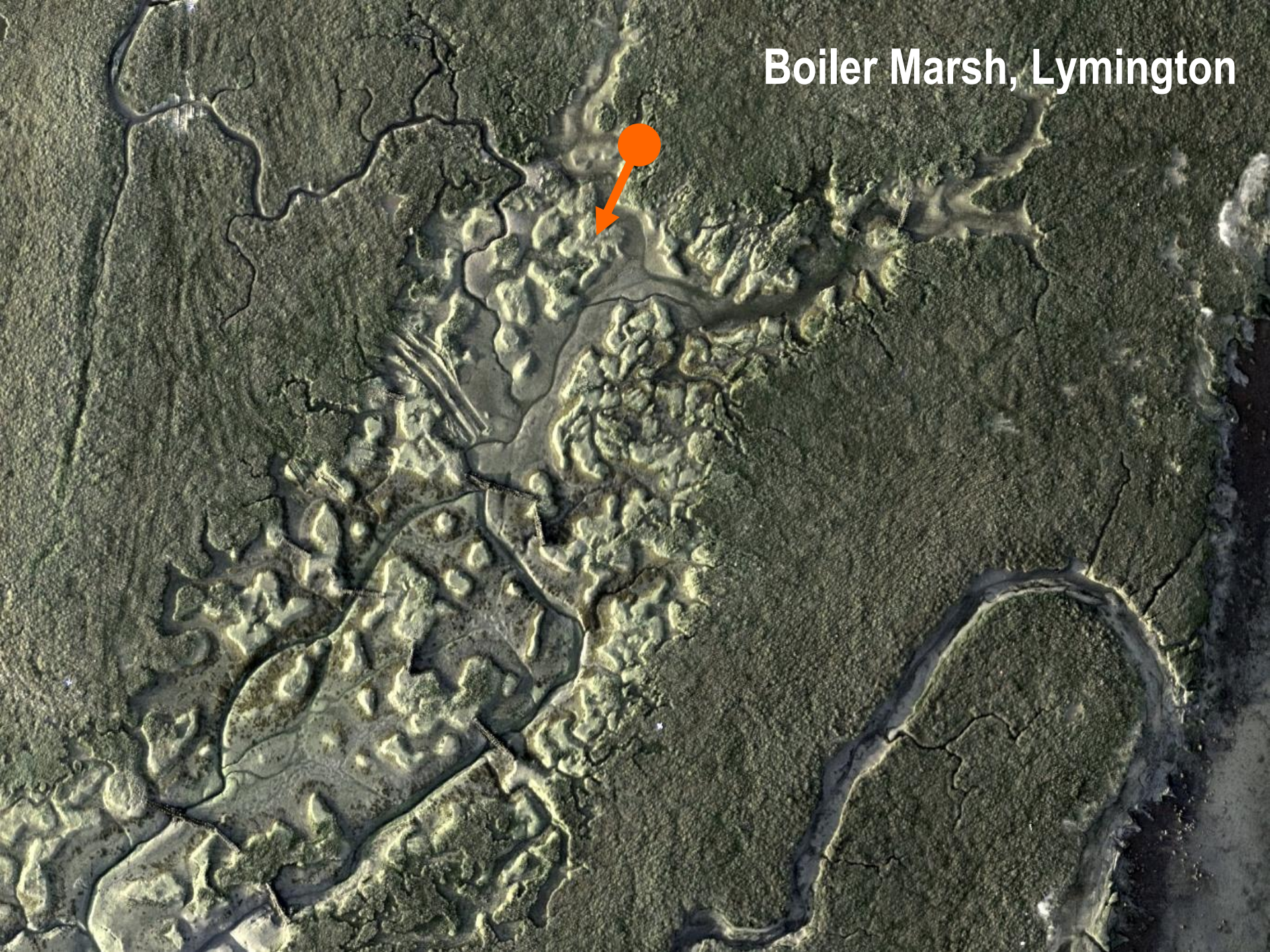


1 September 2013

PLOTWATCHER PRO LYMINGTON 01-SEP-13 18:58:47 42% 12C (



# Boiler Marsh, Lymington





February 2012



September 2012



September 2013






















Completed section  
(Phase 1) of LHC  
Breakwater

-  LHC recharge site
-  Wightlink Ltd recharge site
-  Proposed alignment of  
LHC breakwaters

0 0.1 0.2 0.3 0.4 0.5  
km









# Thank you for your attention

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