

The Moors at Arne



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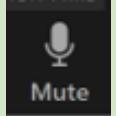
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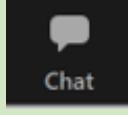
Stakeholder Liaison Group Meeting: 21st April 2021

Welcome!

Zoom Housekeeping.



- Please mute your microphone to avoid background noise



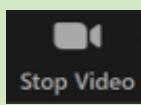
- During the presentation if you would like to ask a question please write it in the chat box

- At the end of the meeting if you would like to ask a question in the open forum, please raise your hand and we will unmute you individually so you can speak.



(In 3 dots at the bottom of the panel and raise hand.)

- There are 3 view options: full screen, speaker or gallery view you can opt to choose during the meeting. (This may be altered as the presentation is being shared but can manually be altered by each participant)



- It can be helpful to turn off your video as the presentation is shown to minimise any interruption with the internet



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Stakeholder Liaison Group Agenda

1	Introductions	5 mins
2	Review of notes from last meeting	5 mins
3	Project update with update on Heritage	10 mins
4	Traffic	15mins
5	Biting Insects (Mosquitoes)	15mins
6	Public Access	15mins
7	Open Forum	15 mins
8	Next steps and date of next meeting	5 mins



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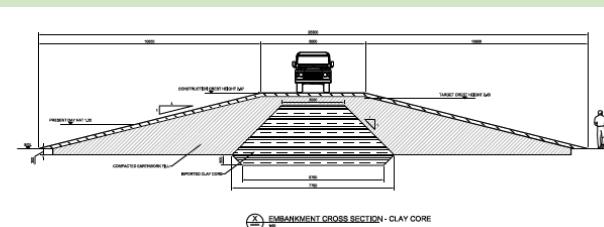
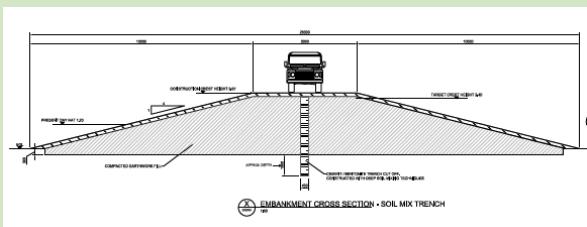
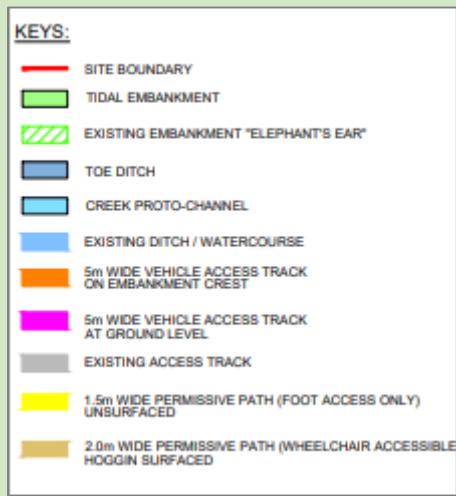


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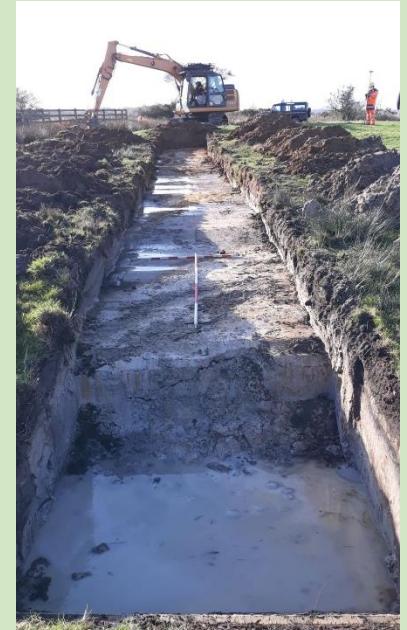
Project Update including Heritage

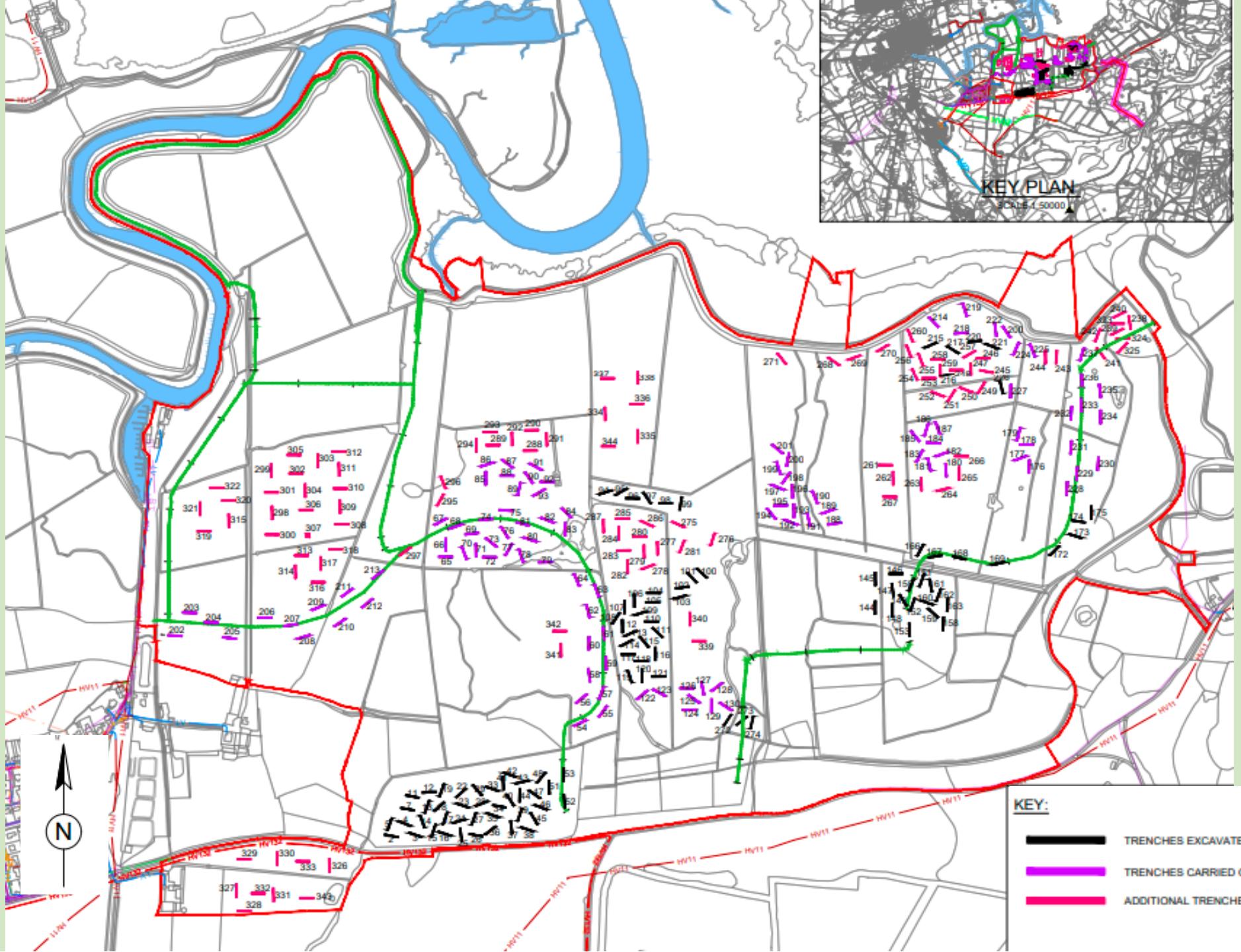
Project Update



Progress Update

- Ecological surveys
- Archaeological trenching
- Benthic ecology
- Design construction sequence
- Public access
- Planning & Consents





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Traffic Update

Construction Traffic

Matt Phillips - Kier Project Manager



Image obtained by 3D Drilling



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Construction Traffic Route



Headlines

- 1. HGV numbers reduced by 6000 through detailed design.
- 2. HGVs escorted during peak delivery periods.
- 3. Informal passing places improved.
- 4. Existing Passing places maintained.
- 5. Vegetation maintenance on the highway verges throughout the construction programme to maintain sight lines.
- 6. Traffic management cones and signs to control access.
- 7. Point of contact provided to resolve issues.



Passing Place Construction & Traffic Control



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Biting Insects (mosquitoes) Update

The Moors at Arne Coastal Change: Biting Insects

1. Introduction
2. Scope
3. Approach to the assessment
4. Effects of the Project on mosquito populations at the Moors
5. Effects of the Project on other biting insects at the Moors
6. Consideration of climate change

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What you have told us previously:

- Concerns around potential increases in populations of biting insects at the Moors
 - Mosquitoes, Blandford fly
 - Concern around potential for increased risk of disease transmission associated with biting insects, with future climate change
 - “Vector-borne” disease

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How have we approached this?

- Baseline surveys of mosquitoes undertaken by researchers from Public Health England (PHE) in 2017 and 2019
- Review of the physical changes to the Moors associated with the Project predicted by the tidal modelling work
- Use of assessment guidance provided in the PHE Wetland Mosquito Survey Handbook (2020)
- Informal consultation with the PHE researchers to address queries



The WetlandLIFE project site: www.wetlandlife.org

TAKING THE BITE OUT OF WETLANDS:
Managing mosquitoes and the socio-ecological value
of wetlands for wellbeing

Overview

WetlandLIFE is a project exploring the ecological, economic, social and cultural values associated with wetlands in England to better understand how to manage change in the future.

Wetlands have always been an integral part of our landscape. Expanding and restoring wetlands can bring many benefits to people and wildlife, but can also create concerns for local communities. Healthy wetlands provide important ways to mitigate short and long term impacts of climate change and can bring multiple benefits to people and the environment. However, as the climate changes, the way we manage wetlands will change and as people use landscapes change around them. For some communities wetlands may be invaded with invasives, associations with bugs, marshes and swamps terrain are connected with undesirable insects, particularly mosquitoes.

WetlandLIFE is an interdisciplinary project utilising a range of natural and social science research techniques, as well as methods from the humanities and the arts, to understand some of these issues of wetlands both from an historical and contemporary perspective. From 2016-2019 the project will study cultural, historical and economic aspects of English wetlands, alongside an ecological focus on mosquito management now and in the past. The overarching aim is to improve wetland management by delivering ecological guidance for managing present populations, particularly mosquitoes, for healthy wetland environments, and to assess the historical

Latest Twitter feeds

Tweets to @wetlandlife

Dr Cameron Webb There is still time to register for the Sydney Wetland Institute's "Managing Mosquitoes in Freshwater Wetlands and Urban Landscapes" workshop! Find more information here: www.wetlandlife.com/annual-workshop.html

Wetland Mosquito Survey Handbook

Assessing suitability of British wetlands for mosquitoes

UNIVERSITY OF GREENWICH NRI Natural Resources Institute

WetlandLIFE Public Health England

Frances M. Hawkes, Jolyon M. Medlock, Alexander G.C. Vaux, Robert A. Cheke, Gabriella Gibson

ENTER >

©Hawkes et al 2020

A little bit about...(1)

- 34 native recorded species of mosquito in the UK, ~25 of these species will bite humans to some degree
- Currently no mosquito-borne diseases of humans are circulating in the UK
- There is awareness of the possibility of climate change allowing new (non-native) mosquito species (and diseases) to become established in the future
 - (Dengue, Chikungya virus, West Nile Virus)



Culex modestus
©Alchetron



Asian tiger mosquito
©Defra 2009

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A little bit about...(2)

- Mosquito species use a wide variety of aquatic and wetland habitats
- Relatively few species can tolerate any salinity
- Most species have evolved to utilise a specific type of habitat
- Habitat types can therefore be used as a ‘predictor’ of the mosquito species that will use it.



©microscopy UK



Baseline survey findings

- PHE undertook:
 - Trapping surveys to capture adult mosquitoes (NB some species can fly long distances to feed)
 - Targeted larval surveys of typical ditch and wet grassland habitats at the Moors
- Adult mosquitoes captured were species typical of acidic pools, acidic bogs, brackish pools and ditches, summer-flooded grasslands and fens
- Larval surveys recorded typical species associated with those habitat types, but in relatively low numbers

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©Mosquito Magnet

Habitat change arising from the Project

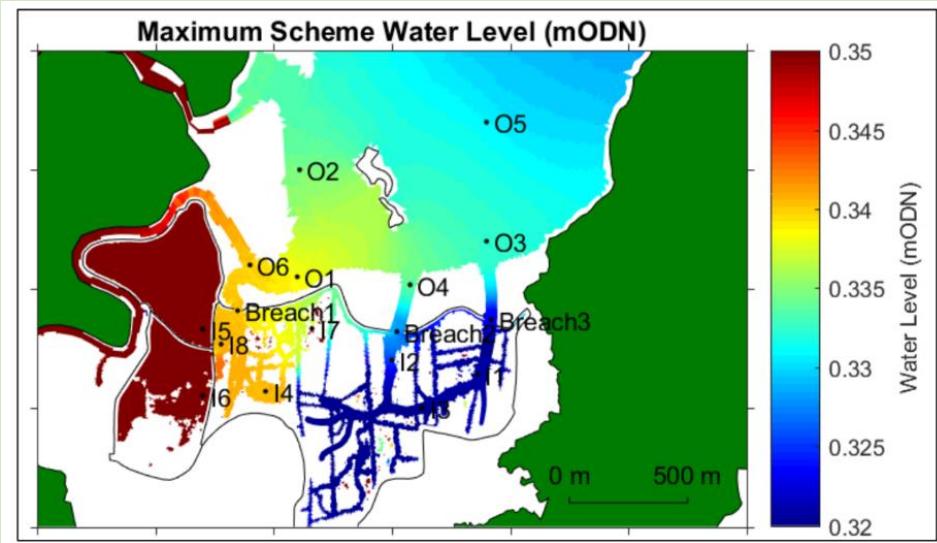
- Currently the Moors comprises coastal and floodplain grazing marsh (mostly freshwater)
- The Project will convert this existing habitat to intertidal mudflat/salt marsh, plus the two saline lagoons
- Some existing freshwater areas will be retained and enhanced
- The habitat change will also change and determine the mosquito species that can use it in the future

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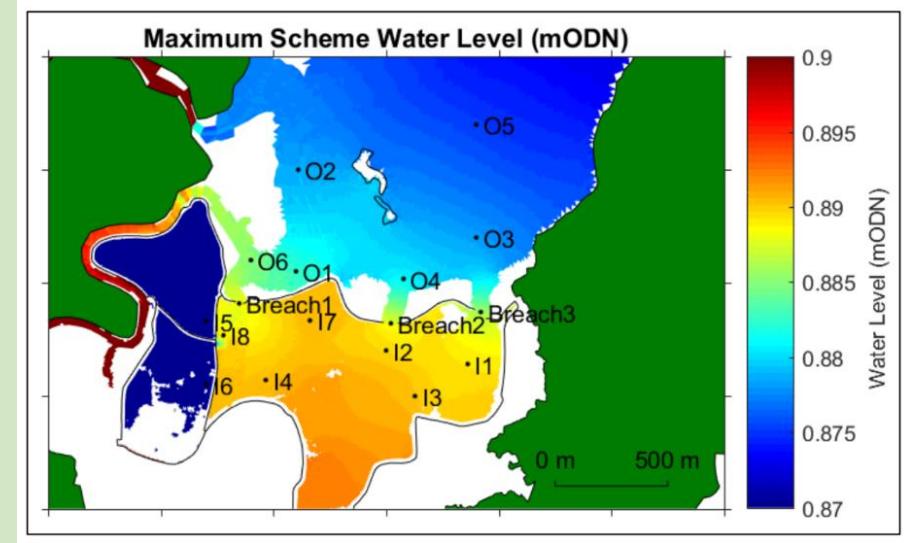




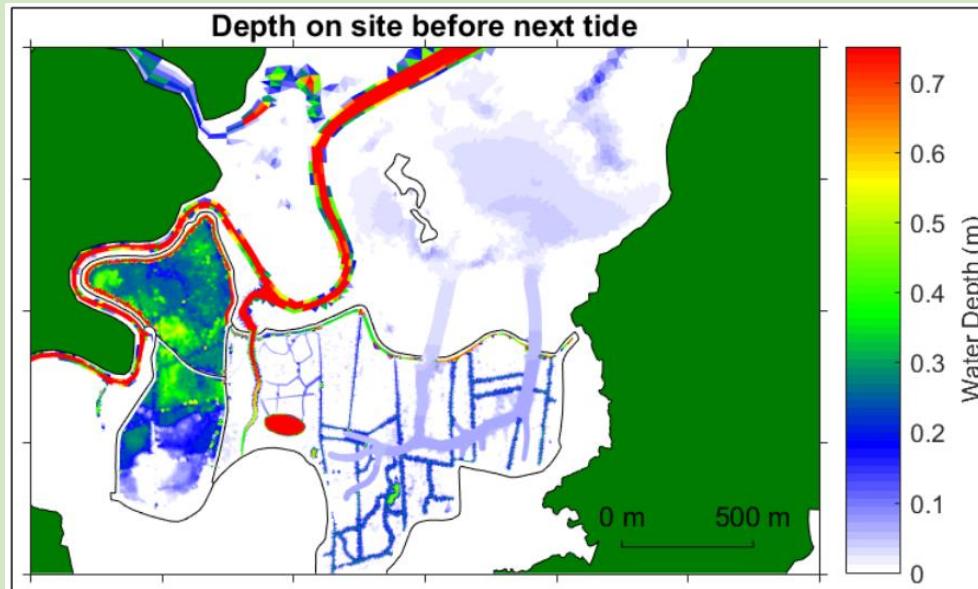
Habitat function after the Project



Maximum inundation: Mean High Neap Tide



Maximum inundation: Mean High Spring Tide



Project implications - mosquitoes

- Only 5 of the 34 species of UK mosquitoes can utilise brackish habitats
- No mosquito species can breed in a fully tidal environment
- Mosquitoes also cannot breed in large, open bodies of water
- It is therefore concluded that the new habitats created by the Project will be unsuitable for mosquitoes
- There is a net reduction in potential habitat for mosquitoes, but they will continue to be present in the surrounding wetland habitats (as they are currently, and can fly long distances to feed)



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Aedes detritus – salt marsh mosquito
©Anders Lindström



Aedes caspius – a coastal
grassland mosquito
©Anders Lindström

Project implications - Blandford fly

- A species of blackfly that does not transmit disease, but bites can cause a severe skin reaction
- Breeds in flowing rivers and streams with steep-sided banks
- These types of habitats are largely absent from the Moors, and the risk of this species being present is considered low
- Regardless, the creation of intertidal habitat at the Moors and truncation of the Furzebrook stream will result in a net reduction of stream habitat that could support this species
- There is therefore no change in health risk as a result of the Project

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©Oxford Health NHS Foundation Trust

Implications of climate change on disease vectors

- The mosquitoes that are known to transmit the Chikungya and dengue viruses are specialised to breed in ‘container habitats’ (e.g. tree holes)
- West Nile Virus is transmitted by a mosquito that has established on the coast in the east of England, but breeds specifically in brackish grazing marsh ditches
- These types of habitats are either absent from the Moors, or will be reduced in extent by conversion to intertidal habitat.
- There is therefore no change in the risk of emerging vector borne diseases as a result of the project.

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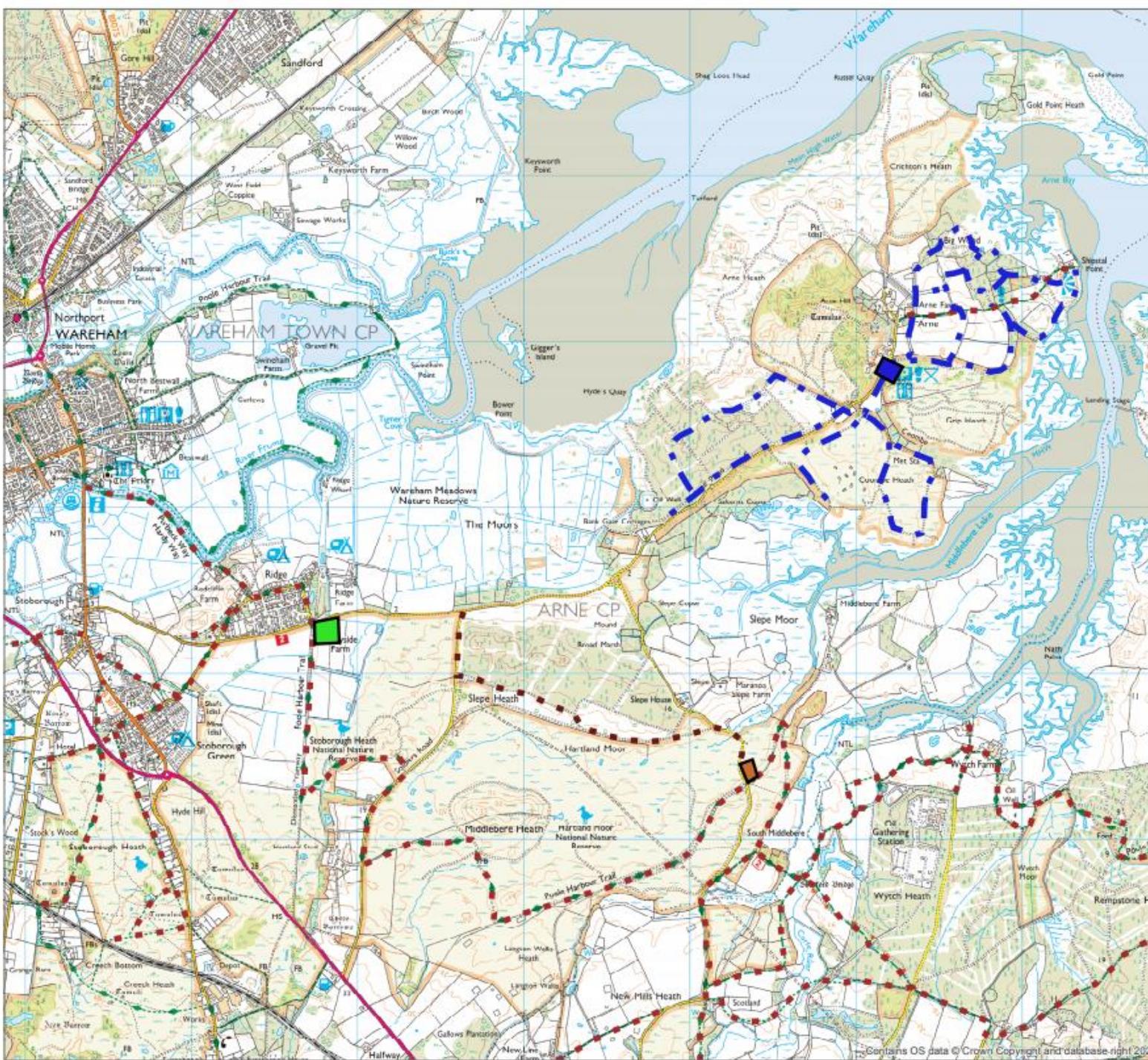
Public Access Update

Arne Moors Proposed Public Access

Peter Robertson,
RSPB Senior Sites Manager



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Existing Access Routes

Legend:

- NE Sunnyside Car Park
- RSPB Car Park
- NT Middlebere Car Park
- RSPB Access Routes
- NT Access Route
- Public Access routes

Acknowledgements & Notes:

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Map scale = 1:22,457

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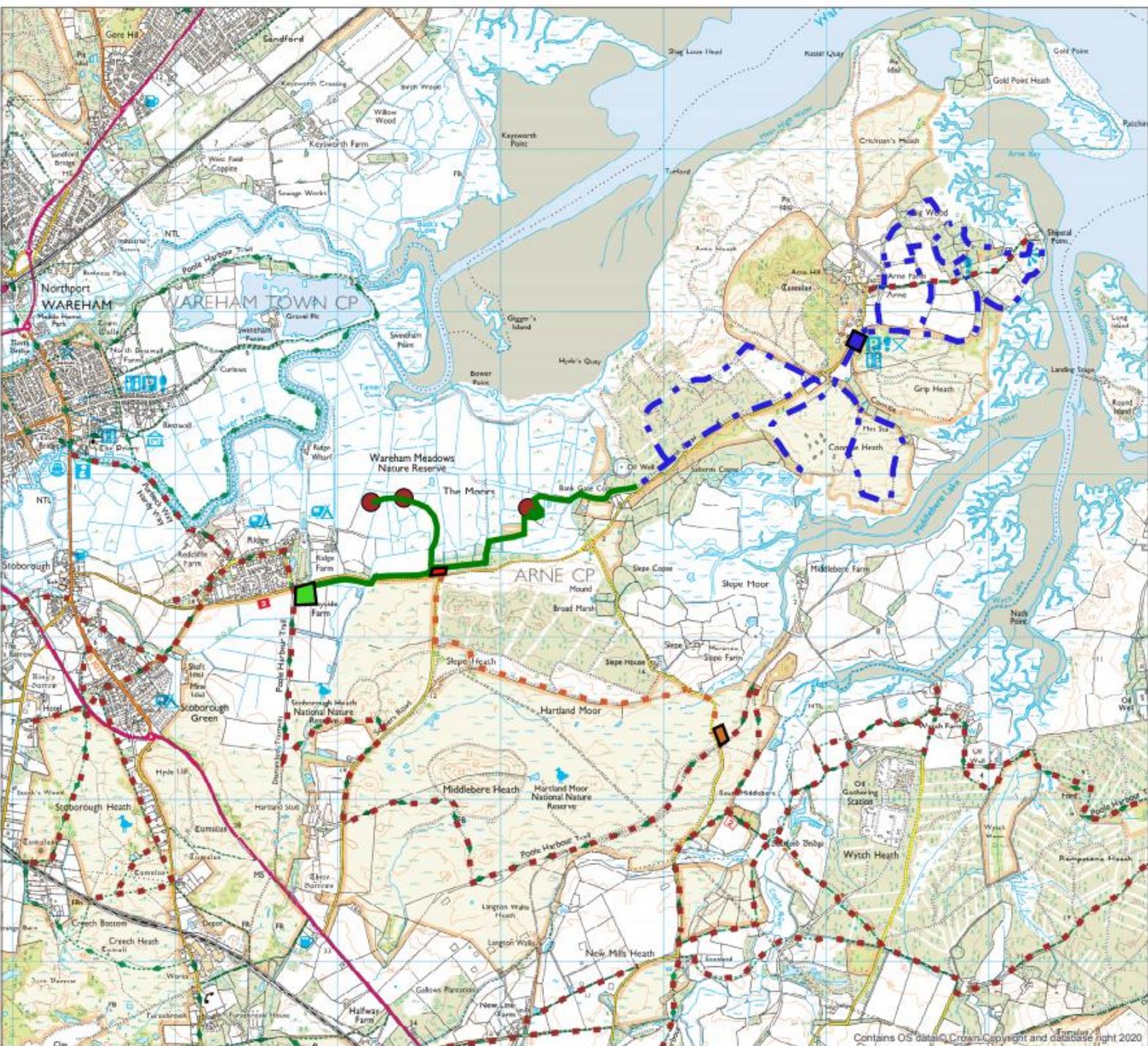
0 0.35 0.7 1.4 km



Arne Moors Proposed Access

- Disabled access from disabled parking out to view points to east and west.
- No dogs to prevent disturbance to wildlife
- Access route behind the embankment to prevent disturbance to the intertidal area
- Two viewpoints with screens on the embankment and a third on higher ground behind the embankment
- Visual access from Hydes Heath on RSPB Arne
- Linking routes to NE Sunnyside car park and onto RSPB trails at Hydes Heath





Access Routes Including Arne Moors Proposed Access

Legend:

- NE Sunnyside Car Park
- RSPB Car Park
- NT Middlebere Car Park
- Disabled Parking
- RSPB Access Routes
- NT Access Routes
- Public Access Routes
- Arne Moors Access Routes
- Viewpoint

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0 0.375 0.75 1.5 km

Parking at similar local wildlife sites

- RSPB Lytchett Fields – 6 parking spaces on the adjacent SANG
- National Trust Middlebere Hide – c.10 informal road side spaces
- Natural England Sunnyside – c. 16 spaces



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NT Middlebere

Date	Middlebere Car Park	Hartland Road
28/10/19 (11.00)	2	2
29/10/19 (13.00)	1	2
30/10/19 (08.45)	2	2
31/10/19 (08.45)	2	5
01/11/19 (10.45)	1	4
02/11/19	No count	No count
03/11/19 (14.00)	11**	4



Natural England Sunnyside Farm

Date	Time	
30/10	11.45	0
6/11	08.45	1
7/11	08.40 09.30 16.30	1 0 0
11/11	12.00	0
12/11	14.15	1
13/11	08.30 09.00	2 0
20/11	08.40	1
2/11	08.45	0
25/11	09.50	0 locked



Access Options

On foot

From Wareham

From Ridge

From Stoborough

By car

From NE Sunnyside (0.5 km)

From RSPB Arne (2.0 km)

From NT Middlebere (2.5 km)

New Disabled Parking spaces (0 km)

Open Forum



Next steps

Next Meeting/ Future meetings:

Pre Planning meeting

