

Thorney Island Habitat Creation Scheme

Briefing Note – June 2021

Introduction

The Environment Agency is working in partnership with the Ministry of Defence (MOD) and Chichester Harbour Conservancy, to develop a habitat creation scheme through managed realignment of the coast at the south-western edge of Thorney Island barracks. With expert support from JBA Consulting and Volker Stevin, a new set-back flood defence will be constructed to protect the barracks, and the existing defence breached, allowing seawater to cover the low-lying land as the tide goes in and out. This will enable new intertidal habitat to develop seaward of the new defence over time.

Current Project Work

The project team are investigating what is the best alignment of the set-back defence and what the defence will look like. We plan to breach the current defence to allow the area to become inundated by the sea on high tides. This will provide the conditions needed for intertidal mudflat and saltmarsh to develop.

Ground investigations and surveys were completed in November 2020 to help inform the design of the new defences and to understand:

- type of ground and geology
- water levels
- presence of contaminants
- likelihood of finding archaeology
- likelihood of finding unexploded ordnance



Figure 1: Ground Investigations being completed on Thorney Island in November 2020.

We were made aware by the MOD of historical use of the pesticide Dichlorodiphenyltrichloroethane (DDT) on the site. DDT was used widely to control insects until approximately 40 years ago but is no longer in use due to its impact on wildlife. For this reason, DDT was considered carefully in our ground investigation work.

The results of the ground investigations were returned in winter 2020 and DDT was found in low concentrations in a number of sites across the project area, which was expected. We have reviewed past investigations into the presence of DDT and it was found to be widely present in the existing saltmarsh and intertidal habitats around Thorney Island. This gives us some confidence that the project will not impact the wider harbour negatively. Although the levels of DDT are too low to pose a risk to human health and the land-based (terrestrial) environments, there is limited information and guidance on the impacts to the marine environment. Therefore, the project team are currently investigating the implications of our findings in more detail.

What do these findings mean for the project?

We need to assess what the impacts of DDT could be on the marine environment when the soils at Thorney Island are covered by tidal water, and whether there would be any effect on wildlife. This impact assessment will enable us to determine what remediation works may be required.

To determine what the DDT impact assessment needs to include, the project team have consulted with experts and specialists across the Environment Agency (Water Quality, Estuarine and Coastal Assessment, Contaminated Land and Eco-Toxicology); MOD; Centre for Environment, Fisheries and Aquaculture Science (CEFAS); Chichester Harbour Conservancy; Chichester District Council and specialist consultants.

Next Steps

We have slowed other elements of the project as the team investigate the impacts of the DDT found in the ground investigations. This is an important step we need to complete to ensure that our project does not cause any harm to the environment.

We will work with the experts and specialists to define the scope of the DDT impact assessment and following this, it could take up to a year to complete depending on the level of analysis required. Further clarity on timescales will be available once we have discussed the method with the Marine Management Organisation as the regulatory body.

The result of this additional work may lead to changes to the design of the scheme. Although DDT has been found on the site, concentrations are low. We remain confident in designing a scheme that will benefit habitat and wildlife in Chichester Harbour without risking harm.

If you would like further information regarding the project please contact Ele Pilla via email at Thorney.Island@environment-agency.gov.uk or call 03708 506 506. For further information please see [Thorney Island Information Page](#).