



The Moors at Arne, Coastal Management Project

Frequently asked questions

January 2018

What are we doing?

The Environment Agency is working with the RSPB and Natural England to explore how to adapt approximately 150ha of The Moors at Arne into a diverse wetland habitat.

This will create a valuable protected place for birds and other wetland species to rest and feed. It is expected to include building a new tidal embankment closer to the Arne Road and creating gaps in the existing bank bordering the harbour to allow the low-lying land to be exposed to the tide. Shallow lagoon areas may also be constructed within the site to create a variety of habitats that will attract numerous animal and plant species. The area is low lying, low grade agricultural land that is grazed for conservation purposes and owned by the RSPB.

Why are we doing it?

Much of the Poole Harbour area has man-made, sea defences along the coastline. Currently, in front of many of these defences are saltmarshes and other salt water habitats. With sea level rise, and also due to increased storminess, these coastal habitats will become trapped between the hard sea defences and the rising waters and be lost. Without the man made defences, they would naturally move inland, this loss is termed coastal squeeze.

The Environment Agency is legally responsible, to Government, for providing alternative / compensatory locations for coastal habitat that is lost in front of man-made defences. This project will allow the Environment Agency and partners to continue to maintain defences so that we can protect properties from flooding. It is predicted up to 10,000 local properties could be at risk of flooding within 100 years.

What effect will this have on the existing flood risk at Ridge?

In general, flood risk to properties can come from either the river, the sea, surface water drainage or groundwater.

Rivers and the Sea: the present flood risk to properties is shown on <https://flood-warning-information.service.gov.uk/long-term-flood-risk> . Any proposal developed by the project will have to demonstrate *no adverse impact* through a combination of its basic design and / or parallel control measures before it can be given approval. There will be a new embankment built across The Moors, to modern standards, that will keep the seawater separate from the surrounding roads and properties.

Surface water drainage and groundwater: There are existing problems in Ridge with the surface water drainage system and with a high water table.

The **surface water** drainage system seems to have evolved piecemeal with development - as the land use has changed from open land to a cement works (1875 - 1910) to a residential area. Some properties are designed with soakaways, that work only marginally and cause ongoing concern to the residents.



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The **groundwater** is present as a high water table which is linked to the soils being a complex mix of clay and sand layers above the deep clay and deeper chalk. Many properties have land drains in their gardens, without which the gardens would regularly have ponded groundwater.

The project will evaluate what effect the additional wetting of The Moors will have on the drainage of the surface water and groundwater. To do this a detailed survey of the surface water and land drainage network is planned, and monitoring boreholes have been installed in 3 locations in Ridge. The project proposals will need to be capable of accommodating any drainage that comes from Ridge, and water from the Furzebrook Stream and other more minor watercourses along the Arne Road.

In addition the Environment Agency will be working with Dorset County Council (Flood Risk Team) and (Highways Team) and with Purbeck District Council (Land Drainage Authority) and Wessex Water to share the knowledge gained and identify areas where works are needed. Long term maintenance of the systems will be reviewed, including the role of riparian responsibilities.

When our studies have concluded their current phase of investigation, we will look to share our findings with the affected local community. We hope that this will be in spring 2018.

What affect will this have on the River Frome flooding?

The Frome will continue to respond upstream of Ridge Wharf in exactly the same way as it does at present. As the tidal inlets to the project site are expected to be adjacent to the open harbour we do not believe there will be any measurable impacts on the way the River Frome behaves, but we will carry out modelling in order to be able to reassure interested parties.

The River Frome is subject to a tidal influence as far as the A351 road near Stoborough. There are raised banks adjacent to the river for the majority of this length down to Poole Harbour. These tidal banks can be overtopped or outflanked by the river in flood in response to heavy or prolonged rainfall in its catchment area. They can also be overtopped by the tide coming in and combining with river flows. On occasions the flood water which has gone over the banks has to wait for river/tidal levels to drop before they can exit via a series of tidal sluices. The modelling work is ongoing and we hope to have results to share in mid-2018.

What affect will this have on the sewage pumping station on Barnhill road?

This pumping station at the lower end of Barnhill Road, operated by Wessex Water sits outside of the mapped floodplain for the River Frome. Any existing pressures on the sewer network from local surface water and groundwater would not be made worse by the Moors at Arne project and we would provide modelling and analysis to demonstrate no adverse impacts before proceeding with the works. We will be discussing this with Wessex Water during the detailed design phase of the works.



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Will there be public access to the site?

The land is owned by the RSPB. The main attraction at the site will be the wildlife and landscape. As such we envisage it being primarily an attraction for people who live locally and for visitors to the area who have a keen interest in watching wildlife.

Ideas for access are being worked on at the moment and will take into account the sites special character as a place for quiet enjoyment. We want people to feel welcomed and to enjoy nature, therefore we will always work hard to make any site accessible.

No decision has been made on dog access to the site, however dogs are welcome on leads at the other areas of the RSPB Arne Nature reserve.

Will it smell?

We will take into consideration in the development of the project, the concern among the community that there should not be any increase in odour as a result of developing the site. On similar sites elsewhere existing vegetation has been kept short and hedgerows and trees removed prior to breaching. This reduces the short term risks of odour from rotting vegetation. The site is already located next to the estuary and the anoxic odour associated with sediment is generally only emitted when disturbed. Significant disturbance of the sediment is unlikely as we are not planning widespread access within the new intertidal area.

What about the existing butterflies, bees and flowers on the site?

The project partners have carefully assessed the likely biodiversity gains and losses which this project will cause in the light of designations covering the area. In summary, whilst there will be some losses we are content that:

1. None of the critical biodiversity (rarest habitats and species) will be lost
2. There will be an overall net gain for biodiversity
3. The integrity of all of the international designations [Wetland of International Importance (RAMSAR site), Special Area of Conservation (SAC) and Special Protection Area (SPA)] have been protected.
4. Where interest features will be lost from the nationally designated site [The Moors Site of Special Scientific Interest (SSSI)] appropriate arrangements have been made to provide compensation.

In considering the effects of the project on biodiversity you should also bear in mind the following;

Much of the biodiversity, including many of the plants mentioned in Rodney Legg's book, occur around the southern and eastern fringes of the Moors in areas that would remain protected from tidal inundation by a new embankment. This includes areas supporting the rarest species and habitats.



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There are small areas of good quality grassland on the Moors but most of the existing grassland on the site, where there would be tidal inundation, is not species rich. Similar areas of this type of good quality grassland exist behind where a new embankment would be positioned and these grasslands can be expanded.

Some of the more interesting habitats on the Moors occur where there is some saline influence on the vegetation. The saline influence would of course increase significantly but this would not mean that the whole area would become mudflat. There is sufficient variation in height for there to be a corresponding variation in the degree of saline influence so that there would be an increase in the range of saltmarsh habitats (lower/mid/upper) as well as saline influenced grasslands at a slightly higher level again. You can see this general effect already on the newly flooded grasslands at Lytchett Bay where saltmarsh plants have been quick to come in. Thus birds would not be the only wildlife interest that would benefit.

Management of the existing conservation interests will become harder and harder as, with sea level rise, drainage of the freshwater habitats becomes increasingly difficult. There is already a large disparity between the height of the grasslands on the Moors and the reedbeds/saltmarsh on the Harbour side of the existing embankment, with the inland Moors side being much lower. This is because the reedbeds/saltmarsh is subject to ongoing sediment deposition which the Moors currently is not. Without implementation of the project, this problem will only get worse.

What is a saline lagoon? What are they for?

Saline lagoons are shallow pools of slightly salty water that are suitable for feeding waterbirds such as godwit and avocet. They are to support the birds for which Poole Harbour is internationally important, both those that visit in winter and those that might be encouraged to breed.

What will be the impact on the existing agricultural land?

Overall the impact on existing agricultural use is neutral. The land is currently poor grade agricultural land (grade 4 and 5) and is grazed only to meet the nature conservation objectives of the site paid for under agri-environment. The project would mean significant changes to the floodplain land that would also require changes to the way it is managed. Land will be wetter and more suitable for low input grazing, perhaps with traditional breeds. We anticipate that the land would still be eligible for agri-environment scheme agreements.

Will there be an increase in mosquitoes in the area?

Careful design and management of intertidal habitat sites can be done so that the risks are not increased. We are still in the early stages of the project but advice from Public Health England on other similar sites indicates that this sort of habitat creation can be done without increased risk. We will be discussing this with Public Health England during the detailed design phase.



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Will it affect Navigation along the River Frome?

We will be using computer models of water flow to assess the impact of the project on many things, including its effect on navigation. The modelling will look at different numbers and locations for the breaches in the tide banks to check their impact on navigation and this will help us choose the final option.

For an option to be approved it will be subject to checks required by legislation to make sure that it does not unduly impact the River Frome channel and adjacent areas of Poole Harbour. This considers public and business amenity and areas designated for their ecological value.

Will the river silt up?

The modelling work, described above, will include an assessment of changes to water levels and flows near the site and in the River Frome channel. This assessment will be used to understand what changes, if any, are likely. The construction works are likely to result in a very short term increase in suspended sediment, resulting from the disturbance of material. However, we anticipate that some areas of the new intertidal area may attract sediment, as the hydrodynamics of the harbour work to bring the relatively low lying intertidal area up to a level more consistent with the existing foreshore. N.B. much of the project area is currently lower than the mudflats on the seaward side of the existing tide banks, generally by between one quarter and half a metre.

What are the legal reasons for the project?

We have taken a long term look at what flood and coastal erosion risk management activities are appropriate along the coast. Locally, this resulted in the publication of the Poole Bay, Poole Harbour and Wareham Flood and Coastal Erosion Risk Management Strategy published in December 2014, following public consultation.

(<https://www.gov.uk/government/publications/poole-flood-and-coastal-erosion-risk-management-draft-strategy>). Along with other requirements, this work must be compliant with the Conservation of Habitats and Species Regulations 2010 (SI no. 2010/490). This regulation recognises that there are occasions where habitats will be damaged but this is acceptable if there are reasons of overriding public interest for this to happen. Compensation areas are then required to reduce the overall impact on habitats as much as possible. This project is to provide the compensation habitat required for flood risk management activities within the Poole Harbour area.

How can the Environment Agency and Natural England provide independent review of this project as part of the approvals process and planning application when it is their project?

The Environment Agency and Natural England will provide relevant views to Purbeck District Council (PDC) who, as the planning authority, will need to decide if the project should go



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ahead. If PDC feel that the government agencies are unable to provide an impartial view they can commission an independent view from elsewhere.

This is the same for all flood risk management projects that the Environment Agency promote and we have a separation between our 'regulatory' and 'development' roles.

How do we know our modelling work will be accurate?

Modelling like this has been used on numerous projects around the country. It has successfully shown the impact of the scheme and predicted the outcomes. It is common for monitoring to be put in place after the works are completed to confirm that the study area has changed as predicted. Our consultants, CH2M and ABPmer have worked separately and together on at least 20 different projects with similar objectives to this project.

The software being used is internationally recognised, specialist software that is tested, maintained and subject to independent checks. CH2M and ABPmer work to internationally recognised management systems for quality. The data used in the model build is validated and checked throughout the process, including using local level data and past flooding records. The Environment Agency also use internal specialists to check on the modelling work to make sure that the model has been built correctly and that the levels of accuracy achieved are appropriate.

Will it affect my house insurance premiums?

The proposal should have no impact on insurance cover as the present risk from rivers and the sea is outside of the developed area of Ridge, and we are seeking to sustain that position. However it is our practice in situations requiring clarification of flood risk status of a particular location, influenced by changes in our mapping of flood risk or the infrastructure in place, to provide a letter of evidence for householders to share with their insurance company, if requested.

Will there be an increase in traffic as a result of the project?

This project is not being undertaken with the intention of increasing the number of visitors coming to Arne.

The Moors are already a part of the RSPB Arne Nature Reserve and RSPB are keen to look at ways of encouraging sustainable access to the site, as well as working locally to manage the ways in which people access the RSPB Arne. This could include working with others on a plan that looks at access roads, best routes in to the site for the public, and appropriate speed restrictions, and working with the local community to look at sustainable access to the nature reserve, through greater use of cycles or provision of regular shuttle busses.



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How much disruption will there be during construction?

At this stage in the project, we don't know what construction traffic will be needed or what routes it will take. We will work with the appointed contractor to minimise disruption as much as possible. It is likely that the routes will be similar to those used by the clay pit traffic.

How long will it take to complete the project?

We are in the early stages of the project and it is hard to give specific dates when we don't yet know what our investigations might uncover. The Environment Agency are leading on the project and we have a comprehensive assurance process to follow that means we will have to pause the design work at key points to get approval to continue with the project. At the moment we are doing outline design work which includes ground investigations (boreholes to install water monitoring equipment and to obtain soil samples), topographic surveys, tidal modelling work and ecological and archaeological assessments. We will use this information to select a preferred option which will then be subject to detailed design. We will have to get planning permission for the work from Purbeck District Council. At this stage, we anticipate that the construction work will take about two years, although this is only indicative at this stage as is the start date.

Why are we talking to the public now?

We are keen to involve the local community as much as possible throughout the project. Engaging early helps us to identify local concerns and to address them at an early stage of the project. Your views are important to us. Wherever possible the project team will take account of the local needs and an open dialogue will be maintained.

How are we engaging with stakeholders and local communities?

We are committed to sharing information and listening to feedback throughout this project. We had our first public exhibition on 3rd October 2017 and we will continue throughout the project to share our proposals with the local community and other agencies and organisations in order to seek feedback. In due course, we will be applying for planning permission for the project which will have its own statutory consultation procedure. We expect to have the next public exhibition in autumn 2018 where we will share the results of studies completed thus far.

The project has a webpage: <https://www.dorsetcoast.com/groups/the-moors-at-arne-coastal-change-project/> where people can access the latest information on the project and a dedicated email address TheMoorsatArne@environment-agency.gov.uk, please contact us at any time with questions, queries and suggestions.