

## **FLIGHT PATHS OF SEABIRDS AND MIGRATING BIRDS IN AND AROUND AN OFFSHORE WIND FARM IN THE DUTCH NORTH SEA**

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This study concerns ecological effects of an offshore wind farm on flying birds in the Dutch North Sea. It shows data on flight paths of birds in relation to this wind farm. Both visual and radar observations were carried out to provide information on the occurrence of birds in and around the wind farm, as well as on the deflection of flight paths.

Within the wind farm, visual observations were carried out one day per month, from spring 2007 until December 2008. These data provide information at species level. To observe flight paths during night time, and in order to collect data on flight paths continuously, irrespective of weather, an automated radar system was used (Merlin, provided and installed by DeTect Inc, Florida). Data thus collected provide information on birds in general in the area.

Flight paths of many different species were registered. Interspecific variation in reactions was considerable. However, intraspecific variation was low. Different groups or individuals of one species very much showed the same response to the wind farm. Reactions of the birds to the wind farm can be separated in four categories. Local birds either avoided the wind farm (e.g. Gannets) or did not avoid the wind farm (e.g. Cormorants that were attracted to the wind farm from the main land). Similarly, migrant birds either did (e.g. geese) or did not avoid the wind farm (e.g. terns, nocturnal thrushes). For each category, we will present and discuss examples of these flight paths.

Furthermore, we show results on flight paths that were recorded using radar. These flight paths were analysed to differentiate between flight directions within the wind farm, on the edges of the wind farm and further away from the wind farm. This provides information on the occurrence of deflection.

This study was commissioned by 'NoordzeeWind' (a joint venture of Dutch utility Nuon and Shell Wind Energy).