

INFORMATION PIECE – 11 November 2010

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## LOCAL RADAR TECHNOLOGY USED FOR BIRD FLIGHT OBSERVATION AT PROPOSED WIND FARM SITE

A local radar company, Reutech Radar Systems, will be deploying its Spider mobile border surveillance radar as part of a bird flight path tracking exercise at a proposed wind farm site between the Langebaan Lagoon and Berg River estuary along the Cape West coast. The study, led consultant ornithologist Dr Tony Williams, will involve combined radar and visual observations of flock movements between the two wetlands. According to Williams there are concerns that birds could collide with the 140m high turbine blades of wind farms located along their line of flight.

The developer of the wind farm in the Vredenburg area, Rural Maintenance (Pty.) Ltd, approached local radar company Reutech Radar Systems (RRS) to assist in the study of bird flight paths over the proposed site. RRS is a South African company that has been developing radar and radar-related solutions for the defence and industrial markets for the past 23 years.

RRS will supply its Spider mobile border surveillance radar for the study. The system will be using software developed in conjunction with the King Abdulaziz City for Science and Technology (KACST) and specifically customised for this application. Conventional navigation radar is generally unable to detect small targets such as birds against complex background reflections, which dictates that advanced air surveillance radar such as Spider be applied in the role. Spider will supply the range and bearing of birds observed, whilst a thermal imager will be used to measure the bird's height. The types of birds, which are typically ducks, gulls and flamingos, will be visually identified by Dr. Williams and his team. At night they will be identified by their silhouettes as seen against the full moon, assisted by thermal imager observations.

The study is scheduled for the November full moon period, which is between 18 and 25 November, with monitoring taking place 24 hours a day. Dr Williams states that November has been chosen as the most suitable month during which to execute such a survey as migrant birds from northern Eurasia have arrived, local waterfowl have finished breeding and are beginning to move to new wetlands, and flamingos are congregating in the region prior to moving in January to their breeding grounds in Botswana.

According to Dr. Williams, this is the first time such a study is being conducted in Africa and, although there have been previous radar avian studies elsewhere, he is unaware of other combined radar and full moon watches anywhere in the world.

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