



## Business case Floating solar panels - Sheeplands Farm

<b>Business case:</b>	Sheeplands Farm, near Wargrave, Berkshire, United Kingdom
<b>Application context:</b>	Floating solar panels on a reservoir
<b>Problem definition:</b>	Soiling of the panels resulting in energy loss, soiling the water and damaging the panels
<b>Pest bird species:</b>	Mainly seagulls and a few ducks
<b>Time of year with bird problem:</b>	All year round
<b>Time of the day with bird problems:</b>	From sunrise to sunset
<b>Number of systems:</b>	1 Agrilaser Autonomic 100
<b>Laser projection area:</b>	3 acres (1.2 ha)
<b>In use since:</b>	December 2016
<b>Bird numbers before Agrilaser Autonomic installation:</b>	100s
<b>Bird reduction after Agrilaser Autonomic installation:</b>	75%

### Situation before

The floating solar platform was soiled by bird guano, birds used to perch and sit on the solar panels:

- Energy production to be used or send back to the grid was not optimum.
- Panels had to be cleaned very frequently. Bird guano is corrosive and leaves traces even after cleaning. Recent studies have shown that cleaning the solar panels too frequently will eventually damage them.
- Bird guano was soiling the water in the reservoir. This water is used for the farming activities, therefore contaminaton must be avoided.

### Situation after

75% reduction in bird numbers, only a few persistent seagulls still come and try to sit on one corner of the solar panel platform:

- Almost all the birds stay away after the installation of the Agrilaser Autonomic, the energy production has increased by 20%, reaching maximum capabilities.
- The frequency of the cleaning has decreased drastically.
- Increase in quality of the water in the reservoir.



# Sheeplands Farm, first site in the UK with Hydrelio<sup>®</sup> floating solar PV, has finally found a solution for its bird problem

The owner of Sheeplands farm, Mark Bennett decided to install a reliable and cost effective solution to utilize their 60 million liters irrigation reservoirs generating free, green energy and increasing their energy independence, without using valuable land space. However, he did not forecast that the 800 Trina panels would become the favorite sitting and perching areas for the numerous local seagulls and ducks.

He tried numerous devices that unfortunately did not prove themselves very efficient: the kites were destroyed when the wind was blowing too strongly and the birds became accustomed to the acoustic devices after a short time.

He decided to go on a mission to find an easy but effective bird repellent system to solve his challenges: a long-term solution for his solar platform, enhancing the panel efficiency, decreasing the soiling of the water, reducing the cleaning and maintenance cost and prolonging the life of the solar panels. The overall goal is a solution that could help him increase the solar cell pay back to the grid, as well as the electricity production to be used on site. After a few online searches, he came across the Agrilaser Autonomic, the device from Bird Control Group which raised his interest. He watched the videos on Youtube about the product and was impressed by the testimonials from clients. He was convinced that he might have found an answer to his problems. After discussing it with Alexis Gaveau, CEO of their partner company Ciel et Terre for this solar project, who has supplied the solar island design and anchoring system design & supply on this project, they decided to purchase the device to assess the capability of this innovative solution.

The fully automated Agrilaser Autonomic provides continuous bird repelling activities after one time configuration. The principal

of repelling birds with a laser beam is inspired by nature as they perceive the approaching laser beam as a physical danger. It appeals to the survival instinct, causing the bird to fly away. The continuous presence of the moving laser beam keeps an area free of birds, 24 hours a day, 7 days a week. The laser system provides effective bird repellence over long distances and wide areas, in average around 500 acres or 2 square kilometres, making it ideal for use in the renewable energy sector. It is a clean and silent solution, which is completely harmless to birds and yet retains its repelling effect overtime. So far installed systems have been operational for over 3 years without habituation.

**“The Agrilaser Autonomic could be the best innovative product in the world for bird repellent!”**

**Mark Bennett** owner of Sheeplands Farm

Mark Bennett is very enthusiastic about his cooperation with Bird Control Group and the installation of the Autonomic Agrilaser. The installation of the Autonomic resulted in a 75% reduction of birds and therefore 15% to 20% increase in the electricity production. He mentions with a smile “The Agrilaser Autonomic could be the best innovative product in the world for bird repellent!”