



Case Study

Project Location: RSPB Leighton Moss, Carnforth, Lancashire

Client: Royal Society for the Protection of Birds (RSPB)

Date: March 2012

Project Description

The RSPB's Leighton Moss reserve is located between the M6 Motorway and Morecombe bay and is one North West England's hidden gems. The site covers a large area of reed beds with well maintained hides overlooking scrapes where a variety of birds come to feed and roost throughout the year. As part of a long term project the reserve's management team have been improving the facilities and wanted to introduce remote control cameras to enable close up views of the wildlife on the reserve and to enable these live images to be streamed to the Internet and also to the popular cafe within the Visitor Centre. There was also a need to maximise the use of various social media platforms that the RSPB uses including Facebook, Twitter and a blog page.

One of the pre-requisites was that the system had to operate on a day to day basis with very little input from staff and volunteers which meant everything had to 'just work'. We also had to take into account the seasonal nature of a reserve like this and allow for the cameras to be relocated by staff throughout the year to follow the life cycle of the different species on the reserve this meant we had to 'connectorise' the cameras to make them 'plug and play'. To assist with maintenance all parts of the system are accessible online by our maintenance team to allow remote fault finding and maintenance which is provided as part of an annual support package.

We specified that each of the three main hides would be connected back to the Visitor Centre by armoured fibre optic and low voltage power cable. This was put in place and lightly trenched alongside existing pathways by RSPB staff and volunteers. We installed an electronics enclosure within each hide where we terminated the fibre and power cables. Outside of the hide we installed a digital wireless camera link and a low voltage socket (weather-proof to IP68) for the 150 metres camera power cable to be plugged into. The wardens can then deploy a camera anywhere within a radius of 145 metres from the hide which gives some excellent views of nesting and roosting locations. We supplied two



transportable pan and tilt cameras and one that is fixed to Lillian's hide that will eventually move to the top of a viewing tower to give a fantastic overview of the reserve. We also provided a solar powered camera system that can be deployed close to Bearded Tit or Marsh Warbler nests and this wirelessly links back to the nearest hide and then over the fibre to the Visitor Centre. We have designed this camera system to be very quick and easy to deploy but also to have a long life battery to enable the camera to be left in position for many days without maintenance as any disturbance can cause the birds to abandon their nest.



Back in the visitor centre we installed a rack to hold all the recording and signal routing equipment as well as a Live streaming encoder to encode any of the camera feeds for the internet using our cost effective, live streaming system. All cameras and output devices are connected to a video and audio matrix switcher which allows any signal to be viewed on any screen and recorded. We also installed an editing laptop to enable footage to be captured and edited and uploaded to Youtube or Facebook very efficiently.



There are several Otters on the reserve and we provided a High Definition trail camera that could be placed, securely around the reserve to get a better idea of Otter behaviour, this has proved to be a very easy way to get not only still images but also high quality video footage that is very easily uploaded to Facebook or played on the main screens via the solid state media player that we also installed.



The two 42" LCD screens that we installed in the Cafe area have been a big hit with both staff and visitors and give a real insight into the goings on around the reserve really 'bringing the outside in'.



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