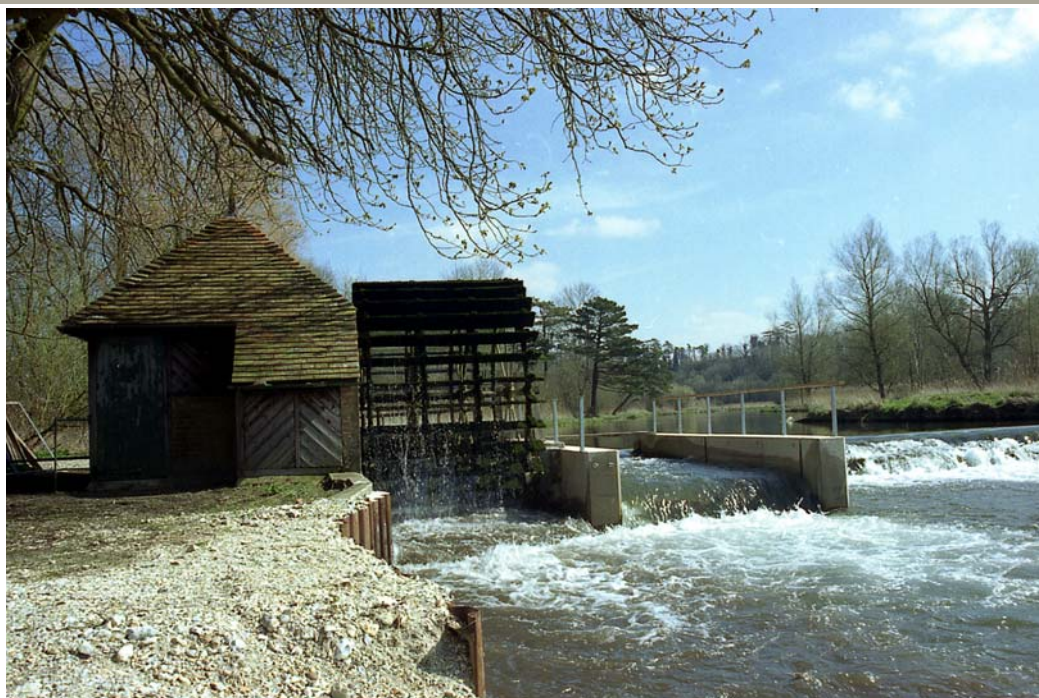


Small Wind and Solar PV (plus Short Rotation Coppice) – Leckford Estate, Hampshire

Existing or Proposed Project:	Wind & Solar: EXISTING – Commissioned October 2001 Hydro pump: EXISTING – Commissioned early 20 th C. SRC: PLANNED
Location:	Leckford, Nr Stockbridge, Hampshire
Owner / Developer:	Waitrose Plc
Description:	13 pairs of small off-grid solar PV panels and wind turbines with battery storage, each supplying power for lighting and equipment in chicken sheds. A hydro-powered water pump is also in operation. Planned: 3 hectares of short rotation willow coppice (SRC).



Background:

Leckford Estate, a branch of the John Lewis Partnership, comprises 4,000 acres in rural Hampshire. The farming estate is part of Waitrose and supplies its supermarkets, and also acts as a test bed for new methods, both in production and in developing the supply chain.

When Waitrose decided to expand the supply of traditional free-range, corn-fed broilers, Leckford Estate approached Associated Poultry Services (APS) to supply chicken sheds to match these requirements. Although there was a power line adjacent to the field, instead of paying for grid connection it was decided to integrate renewables for the lighting and operation of the thirteen automated and mobile sheds. The renewable energy thereby complements the other elements of corporate responsibility practised in the design and could be replicated by farms in off-grid areas (in the interests of increasing marketability of the technology, heating is provided by propane gas burners).

Each shed houses 1,350 birds and a fairly small and constant electricity supply is needed to provide light and power the motor for the feed hopper/feed line. In the first 2 weeks after hatching the birds need low light 24h/day but less food. The power demand increases slightly as the broilers grow: although they require ever more food, the light requirement drops because being free-range they have free access to range outside after six weeks.

A traditional waterwheel has been operating for decades on the River Test, which runs through the estate, pumping water for use in nearby buildings (see photo).

The estate is now looking in more detail at the opportunity to grow short rotation coppice on an area of farm land for use in the proposed biomass plant that will form part of the Bracknell town centre development.

