

The theoretical list of all sites with some potential (low, medium and high) shows a total capacity of **2,592 kW** with over half, or 1,625 kW of this total from just two sites on the River Trent at Cranfleet and Sawley Weirs (which may be marginal for development due to flood risk).

Due to various concerns with the "low" potential sites in the list, they are not recommended to be considered for development. One of these sites is already used for hydropower employing a waterwheel for milling (Claybrooke Mill) and more details on its operation is given in Annex 3.

Those seven (7) left on the list that have either a low to medium or high potential for development are discussed in detail here.

### 3.8 Hinckley & Bosworth Borough Council

#### Sheepy Magna Mill – Medium/Low

The River Sence has a reasonable flow and has a tradition of milling, for example at Sibson's Mill and at this large Mill (see Annex 1). There are a potentially a usable set of sluices and other hydraulic structures are in place, and although the head is low, a modest amount of power can be generated. The issue will be on access now that the site has been landscaped for the flats in the Mill.

River	Sence
Head	1.2 m
Rated Flow	Because this is a small scheme, the mean flow at this point (1.1 m <sup>3</sup> /s) may be taken as the scheme rated flow
Capacity	10 kW
Estimated annual energy capture	40 MWh (based on capacity factor of 45%)
Ownership	Private flats
Grid ref	328 015
Local Authority	Hinckley and Bosworth



**Figure 18: Sheepy Magna Mill – River Sence**

### 3.9 Rutland County Council

#### 1. Duddington Mill – Medium

This is a beautiful traditional mill with sluices and a spillway in good working order. The leat is long and the installation of a small hydro scheme would not disturb the deprived reach that passes to the south. The issue will be on installing a turbine large enough to take the rated flow of 2 m<sup>3</sup>/s, and a more detailed investigation is required in agreement with the owner, to size the scheme appropriately.

River	Welland
Head	1.3 m
Rated Flow	Although the mean flow at this point is about 2.2 m <sup>3</sup> /s, the scheme would be rated at 2 m <sup>3</sup> /s due to the needs for the deprived reach and restrictions at site
Capacity	20 kW
Estimated annual energy capture	70 MWh (with capacity factor of 40%)
Ownership	Private house