

Victorian Farmhouse
Shropshire

Case Study



The owner of this substantial Victorian farmhouse wanted a sole heating system to provide heating to the property that included an indoor swimming pool. The decision to install a wood system was supported by the fact that he has a continuous supply of fuel from his sustainably managed woodlands.

Project Type: Domestic Living

Feasibility, Design, Procurement and Project Management by MWF

- 60 kW Wood Chip Boiler
- 180,000 kWh delivered per annum
- Sole heat source – no back up
- Fuel is blown into store and supplied by MWF

Case Study Economics @ Spring 2011

Wood fuel boiler output	60	kW
Total installed cost of wood fuel system	£35,000	
Assumed seasonal efficiency	80.0%	
Annual maintenance costs	£800	/annum
Wood fuel costs delivered	£110	per tonne @30% moisture
Full load equivalent hours operation	1,800	hours/annum
Wood fuel consumption/annum	39.2	tonnes
Wood fuel costs/annum	£4,308	
RHI rebate	£6,546	
Net wood fuel costs/annum	-£2,238	
Carbon emissions	2,700	kg/yr - whole life cycle

<u>RHI Rebate Calculations</u>				
** see note bottom of page				
78,840	Kwh	@ 7.6	p	£5,992
29,160	Kwh	@ 1.9	p	£554
Total				£6,546

Verses Gas			
Gas cost per KWh	3.20	p/kWh	
Total gas cost/annum	£4,741		
Annual saving with wood fuel	£6,978		
Simple payback on net capital	5.0	years	
Carbon emissions	29,160	kg/yr	
Carbon saving	26,460	kg/yr	

Verses Oil			
Oil cost per KWh	5.71	based on	50 p/litre
Total oil cost/annum	£6,857		
Annual saving with wood fuel	£9,095		
Simple payback on net capital	3.8	years	
Carbon emissions	37,800		
Carbon Savings	35,100	kg/yr	



**KWB Multifire
Chip Boiler**

**** RHI rebates for pure domestic properties yet to be confirmed by government. Please discuss with the MWF team for further information.**