



# **PEAK POWER – harnessing the power of Peak District rivers**

*Graham Woods*

*Hydro Officer*

*Friends of the Peak District*

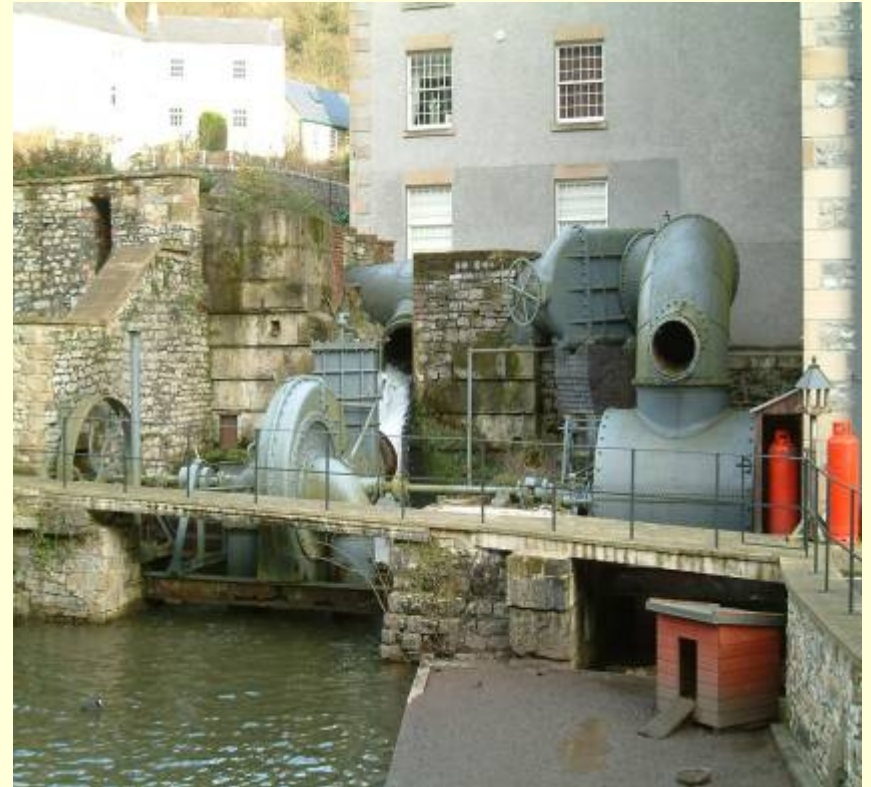
# Part of a bigger picture

- FPD support suitable rural RE projects: i.e. appropriately scaled wind, solar, biomass & hydro
- Work pro-actively on solutions, e.g. hydro
- Positive solutions: overhead wires project with NPA, £4+million budget



# Peak Power project

- Idea catalysed by FPD volunteer and Dartmoor study
- Pilot studies and Parish Council survey
- SDF/EMRA/CSG funded project
- Budget £27k with £23K in grants, rest 'in kind' FPD time



# FPD survey: headlines

- 149 sites identified and 117 visited, inside and outside PDNP: classified a/b/c
- 59 sites (a/b's) GIS mapped for constraints
- 20 sites examined in greater detail and 10 written up as exemplar 'key case studies'
- Capacity analysis reveals c.700-750 kW plus another 750 kW in reservoir sites
- Existing PD hydro installed is c.1600 kW, so total Peak hydro resource c. 3 MW

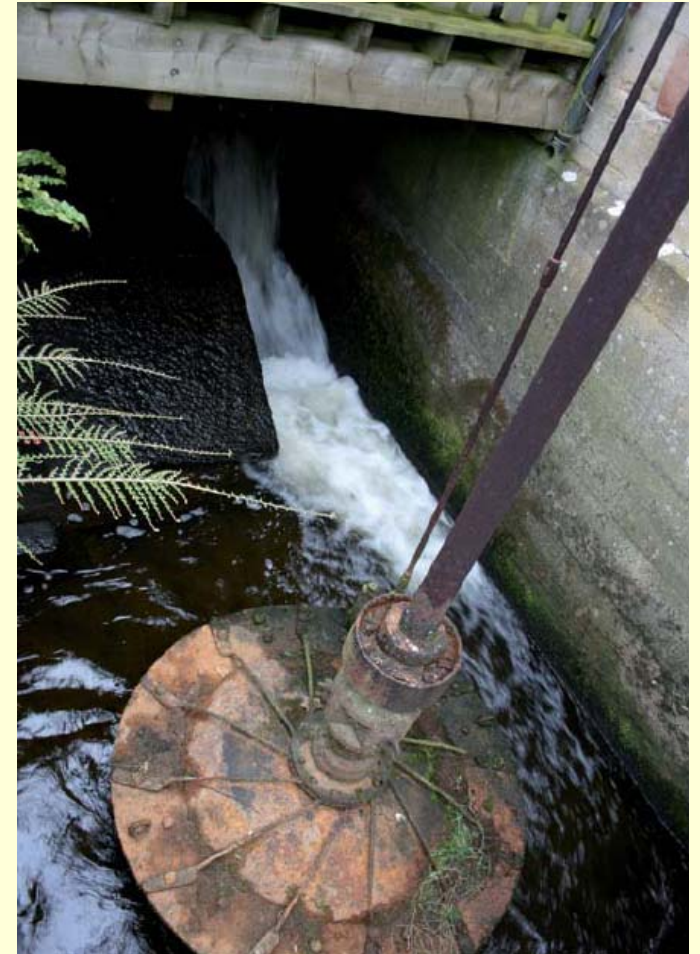
# Ashford Bobbin Mill



# Edensor Mill - Chatsworth



# Hodgkinson's Mill - Baslow



# Lumford Mill from the Air



# Before and After

January 2009



June 2009



# Calver Corn Mill



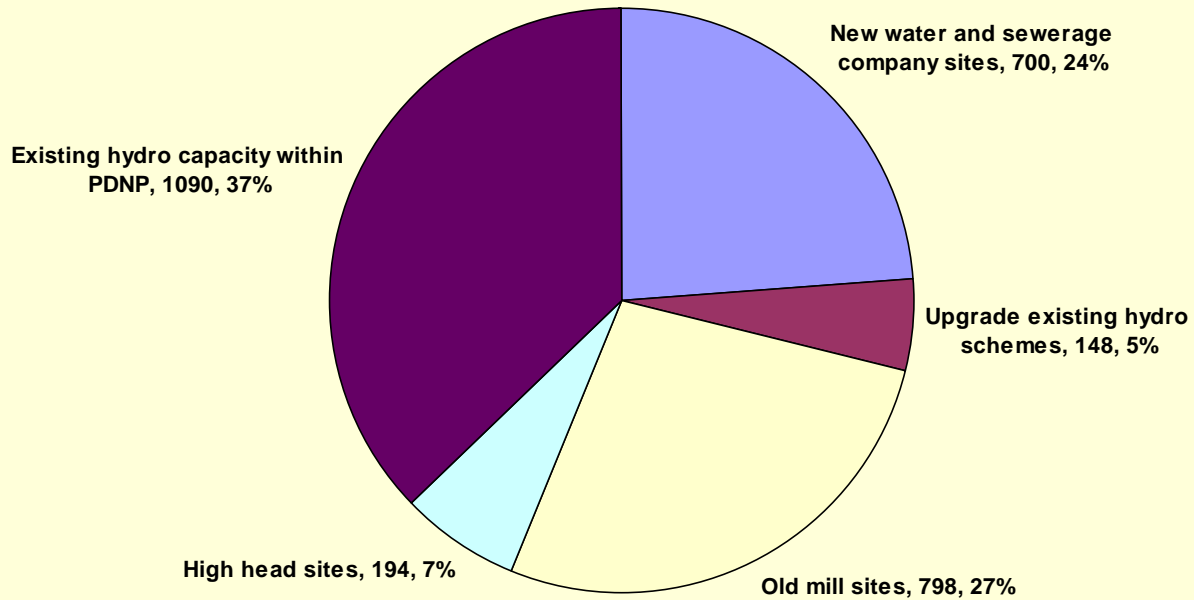
*The new wheel at Calver Corn Mill with the very compact generator on the left*

# Existing Peak Hydro Power

LOCATION	RIVER	GRID REFERENCE	PLANT	INSTALLED CAPACITY (kW)	NOTES
<i>Located wholly within National Park</i>					
Alport Mill	Derwent	SK 222 646	Turbine	30	Commissioned August 2009
Ladybower Reservoir	Derwent	SK 200 854	Turbine	234	Commissioned April 2007
Chatsworth House	Derwent	SK 260 701	Turbine	162	
Hartington Mill	Dove	SK 120 598	Waterwheel	2.5	Not working - noise issues
Bottoms Reservoir, Longdendale	Etherow	SK 023 972	Turbine	130	
Rhodeswood Reservoir, Longdendale	Etherow	SK 043 981	Turbine	170	
Torside Reservoir, Longdendale	Etherow	SK 055 983	Turbine	170	
Errwood Reservoir	Goyt	SK 016 759	Turbine	150	
Caudwell's Mill, Rowsley	Wye	SK 255 657	Turbine	42	Maximum output c.15 kW
PDNP CAPACITY				1090.5	
<i>Catchment area within National Park (powerhouse outside boundary)</i>					
Broomhead/More Hall Reservoirs	Don	SK 299 957	Turbine	200	
Dale Dike/Agden Reservoirs	Don	SK 289 902	Turbine	200	
Rivelin Valley WTW, Sheffield	Don	SK 285 869	Turbine	120	
ADDITIONAL CAPACITY				520	
<b>TOTAL PEAK DISTRICT CAPACITY</b>				<b>1610.5</b>	

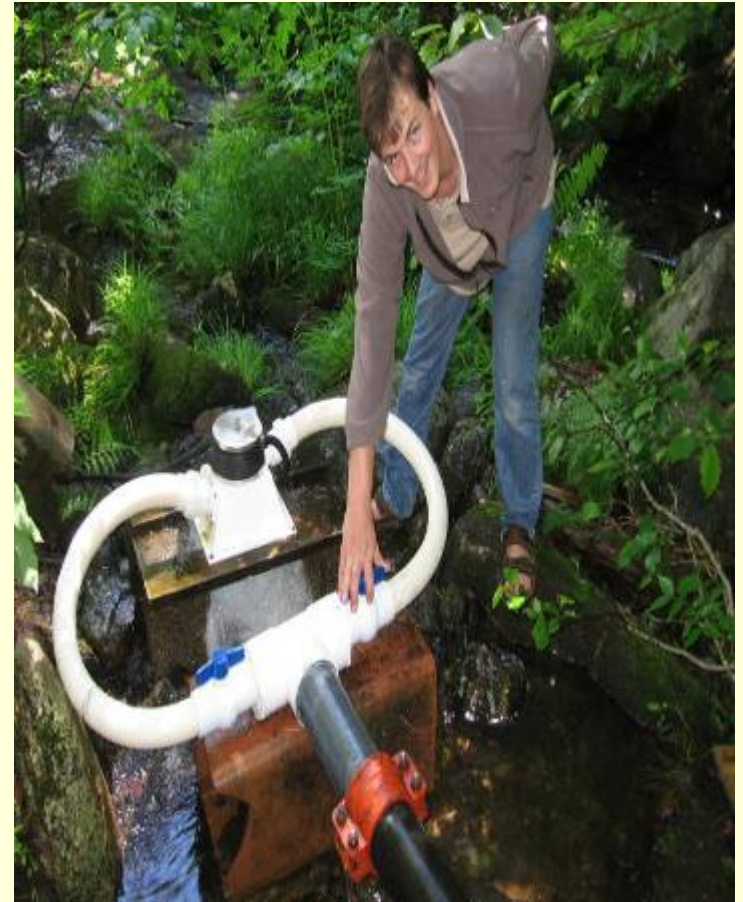
# POTENTIAL HYDRO CAPACITY (kW)

Total Capacity 2930 kW



# Peak Hydro Forum

- Community voluntary body established in 2010
- Promotes sustainable hydro power in area
- Forum for all interests
- Active membership and programme



# For further info/help:

- See [www.friendsofthepeak.org.uk](http://www.friendsofthepeak.org.uk) for all survey data and downloadable PDFs
- Call Friends of the Peak District on 0114 266 5822 or e-mail Andy Tickle at [andy@friendsofthepeak.org.uk](mailto:andy@friendsofthepeak.org.uk)
- Come along to the Peak Hydro Forum – quarterly meetings and site visits. Contact Mike (PHF secretary) on 07841 427617 or [mike.shamash@gmail.com](mailto:mike.shamash@gmail.com)