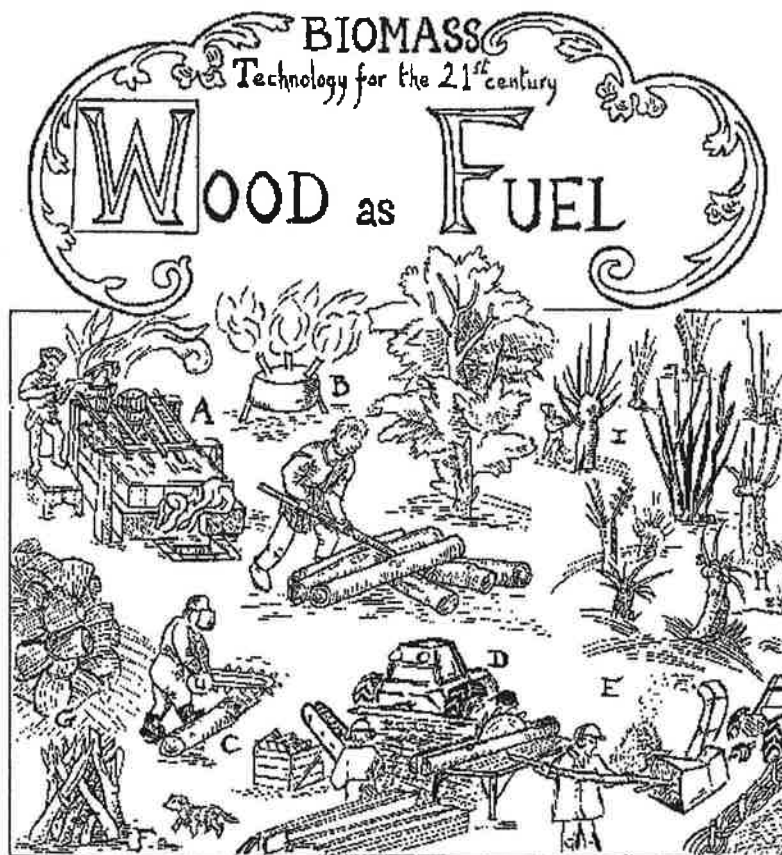


# The MUNDLING STICK



the LION  
Salt Works  
TRUST

Special Event Newsletter of the Lion Salt Works Trust : **SPRING 1999**



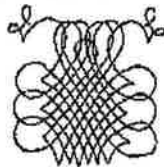
A - saltmaking, B - charcoal clamp, C - chainsaw, D - sawbench, E - woodchip  
F - logs, G - straw, H - coppice, I - pollard.

Practical demonstration & Instruction

**LIONSALTWORKS**  
Friday and Saturday  
12<sup>th</sup> & 13<sup>th</sup> March 1999

10:00am to 5:00pm  
Iershaw Lane, Marston, Northwich

for information telephone 01606-41223



THE ROYAL SOCIETY OF ARTS  
LOCAL AREA 21  
LOCAL SUSTAINABILITY GRANTS

\* A national celebration of science, engineering and technology  
co-ordinated by the DTI's Committee

**Two day demonstration of the uses of wood as a fuel. Part of Science Week 1999.**

**These two demonstration days stem from the interest of the Lion Salt Works Trust in using biomass technology to heat the restored salt pans of the Lion Works.**

The requirements to make salt from brine are very simple - the evaporation of water from the brine to leave white crystal salt. Through out time the process has been achieved by different methods - the oldest and cheapest requires brine or sea water to be left in shallow lagoons or containers for the sun and wind to carry out the evaporation.

To artificially heat weak brine such as sea water would be very wasteful of energy and expensive. In Cheshire artificial heating was possible because the saturated brine derived from brine streams was 8 times saltier than sea water and could produce a variety of salt crystals at any time of the year.

The process of evaporation was different across the country and through time reflecting local circumstances and materials and the cost of transport. In Lincolnshire Roman salt making used sea water evaporated in ceramic trays whilst in Cheshire lead pans were used. Until at least the sixteenth century local woodlands provided fuel for the process until eventually iron pans and coal fires were adopted.

The use of coal expanded enormously and salt produced increased for both the home and export markets. It is interesting to note the relatively short historic period during which smoke pollution, ground contamination and subsidences were associated with salt production, but what a huge legacy it has left behind. Increases in labour and heating costs eventually lead to the vacuum process of evaporation and the development of combined heat and power plants which increased efficiency and reduced costs of production.

The retention of traditional overseas markets at the Lion Salt Works became the only traditional open pan salt maker in Cheshire but as other coal users declined the Lion Works eventually used recycled oil as a fuel.

In restoring the last of the Victorian style salt works it would be unacceptable to also restore the pollution which was created at that time. In adopting wood as a fuel the works would be once again be adapting to external changes but would in fact be returning to use sustainable and renewable managed woodland a used 2000 years ago.

***Photograph : Filming lead salt pan for Channel 4 Schools programme Scientific Eye, Feb 1999.***

### LRZ Consultants

The Trust has sought advise from LRZ about which type of wood burner would be appropriate to heat its salt pans. Robert Rippengall visited the works in February and his report is eagerly awaited.

The use of process heating is still unusual and not as much in demand as more typical central heating systems.

The type of slow steady heat required by a salt pan is however ideal for biomass heating. Our exhibition area will be updated with details of Robert's report when it is received

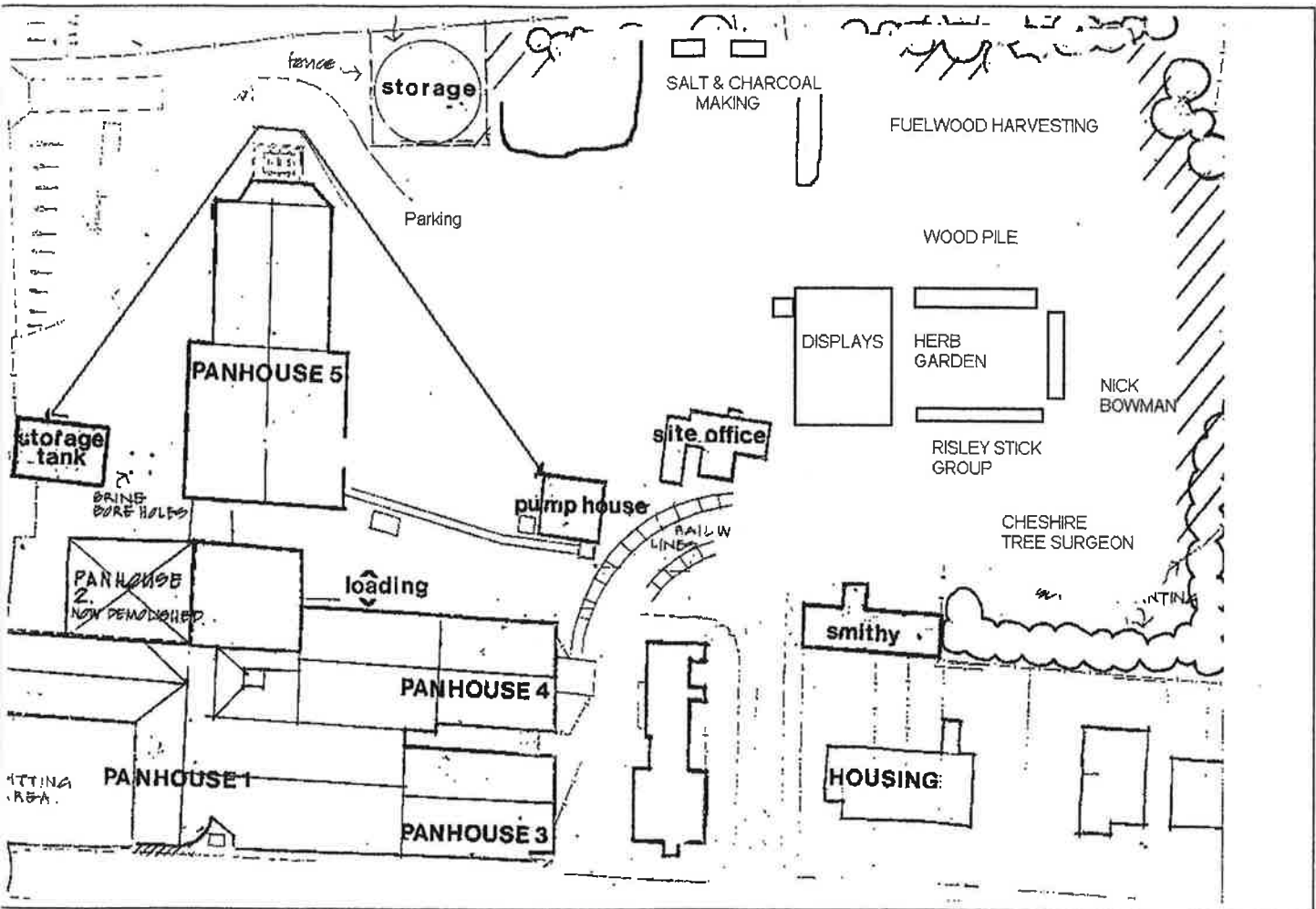
### LION SALT WORKS SALT MAKING DEMONSTRATIONS

The use of wood fires to heat demonstration salt pans is becoming a popular event at the site. We currently have three pans to choose from. The replica Roman lead pan is being used for experimental work to analyse the take up of lead into the salt. This is high and means that the salt made cannot be eaten. The second is a half scale replica of a sixteenth century iron pan. A stainless steel pan used for events where visitors may want to taste natural salt made from unrefined brine.



These demonstration days are to exhibit equipment used in the processing and management of woodlands and address different aspects of woodland use. A selection of tools and machines are available for you to see in action. They are operated by trained professionals who are experts in their field. All demonstrators will be pleased to answer any of your questions.

### LOCATION OF DEMONSTRATIONS



In addition to the outside demonstrations please look for leaflets and displays inside the mobile classroom and within the Lion Salt Works Exhibition building, the former Red Lion Inn. Talbot heating have supplied a company video showing some of their plant in operation.

On Friday Paul Trimble meet from The Centre for Alternative Technology, Machynlleth.  
On Saturday meet Alex Argyropulo, from the National Small Woods Association

You may also view the Manager's Office, Boiler House, Brine Pumping Engine and look inside Pan House No 3.

**THE EXHIBITIONS INVOLVE WORKING MACHINERY.  
WORKING EQUIPMENT WILL BE OPERATED BEHIND BARRIERS.  
DO NOT ENTER THESE AREAS .  
PLEASE TAKE CARE DURING YOUR VISIT.  
A member of the St John Ambulance is in attendance**

## EXHIBITORS

### Traditional Charcoal

**Carl Cooper**  
10 Manor Crescent  
Middlewich CW10 0EW

### Nick Bowman

JJodrell Bank Poultry Farm  
Holmes Chapel CW4 8BU

### Fuelwood Harvesting

**Richard Slatem**  
Claywood, Beausale  
Warwick CV35 7NX

### Cheshire Tree Surgeons

**David Lloyd-Jones**  
Arberculture and Activity Furniture  
56, Blake Lane  
Sandiway, Cheshire

### The Mersey Forest

**Lee Dudley/Paul Nolan**  
Risley Moss, Ordnance Avenue  
Birchwood, Warrington  
WA3 6QX

### National Small Woods Association

**Alex Argyropulo**  
3, Perkins Beach Dingle  
Stiperstones  
Shropshire SY5 0PF

### Centre for Alternative Technology

**Paul Trimby**  
Machynlleth  
Powys SY20 9AZ

### Risley Stick Group

**Charles Blackwell**  
23 Neveille Avenue  
Orford Warrington  
WA2 9BQ

### Cheshire County Council

**Ian Dale**  
Environmental Planning  
Commerce House, Hunter Street  
Chester

### Vale Royal Borough Council

**Kirsty Hughes**  
Agenda 21 Officer  
Wyvern House, Winsford

### Vale Royal Environment Network

**Mac Carding**  
The Old Council House  
Church Road, Northwich

## LEAFLET INFORMATION

### British Biogen

Rear North Suite 7th Floor  
63-66 Hatton Garden  
London EC1N 8LE

### ETSU

Harwell  
Oxfordshire OX11 0RA

### LRZ Limited

Unit 39 Park Farm Industrial Estate  
Buntingfield Herts SG9 9AZ

### ARBRE Energy Ltd

2 The Embankment  
Sovereign Street  
Leeds LS1 4BG

### Dragon Biomass Heating Systems

Station Road Sibsey  
Boston PE22 0SA

### Talbot Heating

Drummond Road  
Astonfields Industrial Estate  
Stafford ST16 3HJ

## OPENING TIMES

The Lion Salt Works Trust carries out demonstration days throughout the year linked to National Campaigns. Details may be found on our answer phone prior to each event 01606-41823

Science Week	March
Museums Week	May
National Archaeology Days	July
Heritage Open Days	Sept

The site is opened each afternoon by volunteer stewards 1.30-4.30

We ask for a donation from visitors and recommend £1.50 per adult and 75p per child.

Please leave your contribution in the salt tub in the main exhibition building.

## WOOD AS FUEL

Supported by grants from :

Barclays Bank

Vale Royal Borough Council - Sustainability Grant  
Cheshire County Council - Working Woodlands Grant

With thanks to British Salt for brine and to all who provided exhibitions and displays.

## THE MUNDLING STICK

If you would like to have a regular copy of The Mundling Stick sent to you by post please send your name and address to The Lion Salt Works Trust, Ollershaw Lane, Marston, Northwich CW9 6ES or telephone/fax 01606-41823 Newsletters are sent free of

charge. Cheques or donations should be made out to THE LION SALT WORKS TRUST. The Lion Salt Works Trust is a company limited by guarantee and a registered charity.

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