

LOW IMPACT TURF ROOFED ROUND HOUSE

An experimental structure built into a south facing bank at the head of a small valley.

The bracken covered slope was dug out using a J.C.B. and the building set into the semi-circular excavation. Visually it blends in well - It is nearly invisible from a distance. Materials: Soft-wood plantation thinnings, recycled windows, most of which are double glazed, clay, and some rubber, (N.B. Shingles on front - made from old tractor inner tubes). It is designed to last 30-40 years and then biodegrade!

Structure by Tony Wrench
Article by Olwyn.



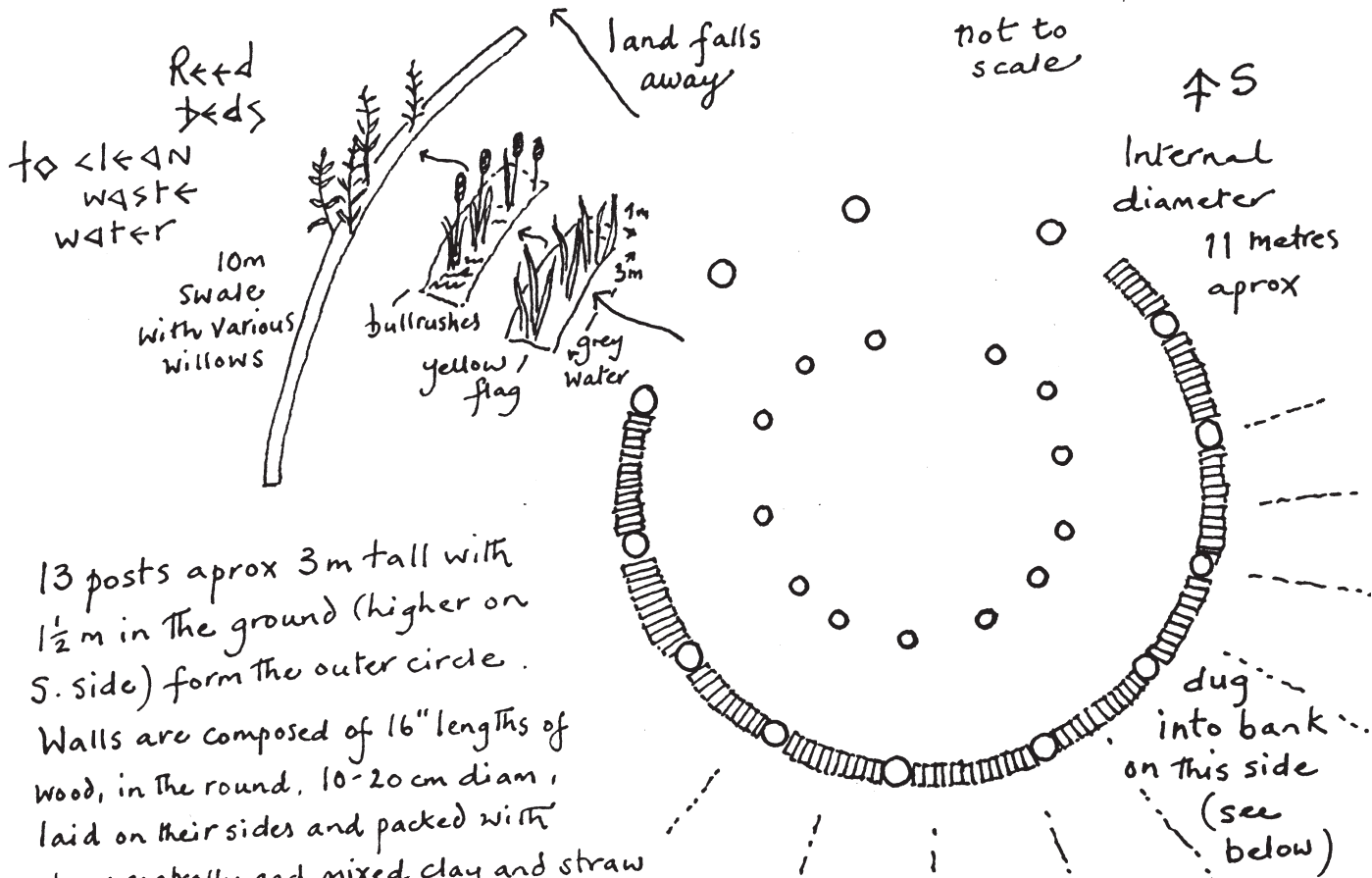
Features:

Power from Siemens 50w
Photoelectric cell (leaning
against wall) - charges 2 old 6Volt
110 amp B.T. Batteries - for lighting, radio, etc.

Strawberries in roof & by front wall - 4 grapevines, fruit bushes, and tayberries are growing on or round the structure. Reed bed on righthand side for waste water recycling. Bottles with jars on the end, set into wall, create a stained glass effect from inside.

ROUND HOUSE

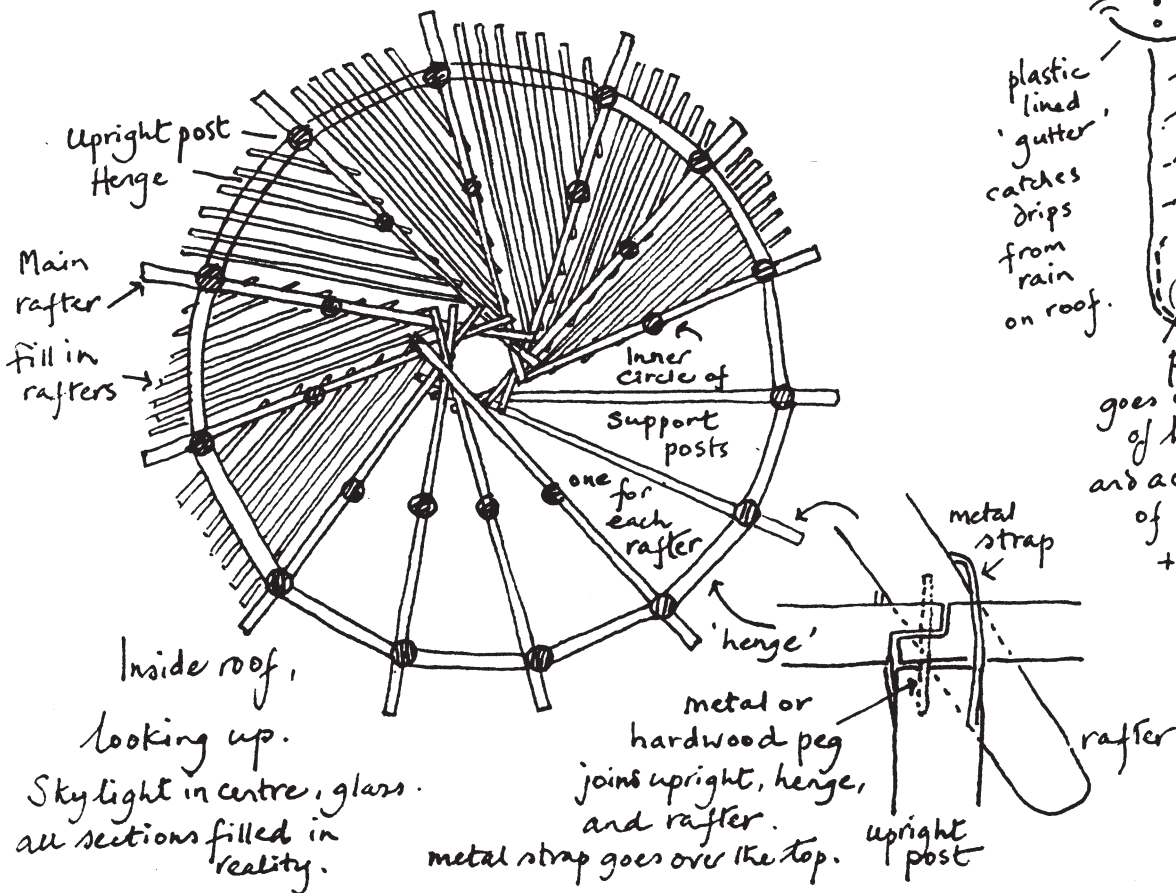
details of construction



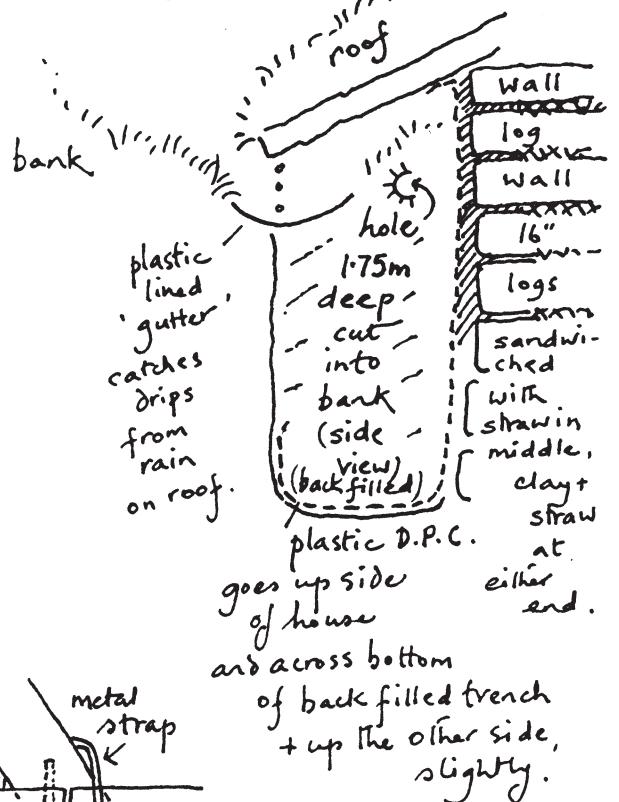
13 posts approx 3m tall with 1/2 m in the ground (higher on S. side) form the outer circle.

Walls are composed of 16" lengths of wood, in the round, 10-20 cm diam, laid on their sides and packed with straw centrally and mixed clay and straw at the ends. There is a window in every section except the N.W. which is underground.

An inner circle of 13 4m-ish posts supports the roof spans and creates a partition.

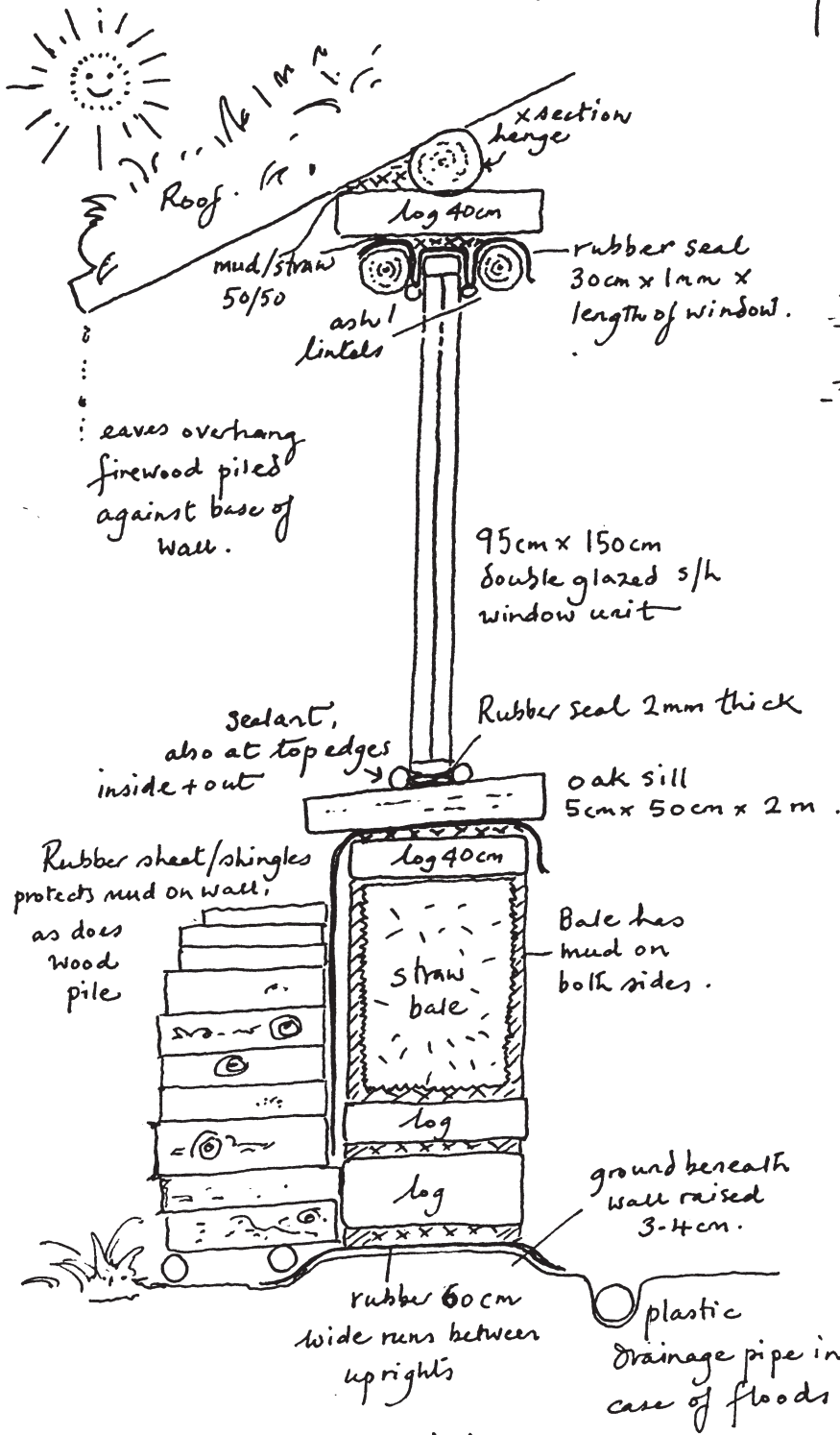


Inside roof, looking up.
Skylight in centre, glass.
all sections filled in reality.



CROSS SECTION of joint

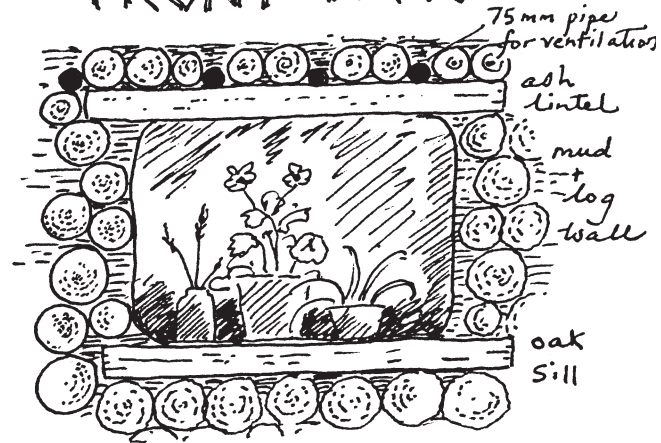
CROSS SECTION WALL / WINDOW



This design allows for shrinkage of wood, mud, etc and the wall can move up or down 3 or 4cm without causing serious problems.

ROUND HOUSE

FRONT VIEW



Sides of window and corners are sealed by Clay/mud mix. Curved corners are ∴ possible.

FLOOR: packed earth with carpets/skins on.

NO: cement, or new, sawn wood was used in the construction.

COST: £2,500 in total, + 600 person/hours over 4 months.

ROOTS: Inspired by round houses from Celtic, Miwok (N.W. USA) and Mardani (Missouri - maybe Celtic origins) cultures.

Reciprocal frame Roof: Minimises embodied Energy.

No waste: Rubber under walls
Mud on walls
Wood in fire.

Heating + Plumbing

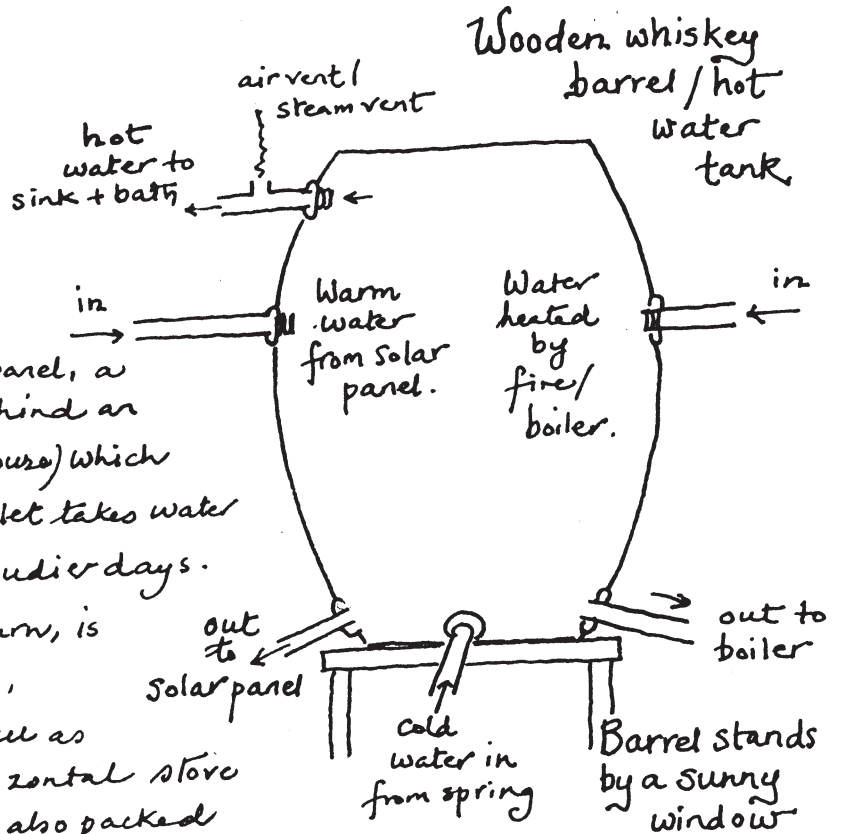
ROUND HOUSE

Cold water comes through a pipe from a spring uphill, and a modified toilet system above the house is the 'header tank'.

The water gravity feeds into the barrel, and cold water taps.

From the barrel, it goes to the solar panel, a black, ex-central heating radiator, behind an old coach window. (See drawing of house) which works well in sunshine. Another outlet takes water to a boiler on a woodstove, for cloudier days.

The stove, made from a milk churn, is housed inside a clay heat store, and provides space heating as well as hot water. A long, nearly horizontal stove pipe from the back of the churn, also packed in clay, ensures slow combustion and stores heat which would normally go "up the chimney".

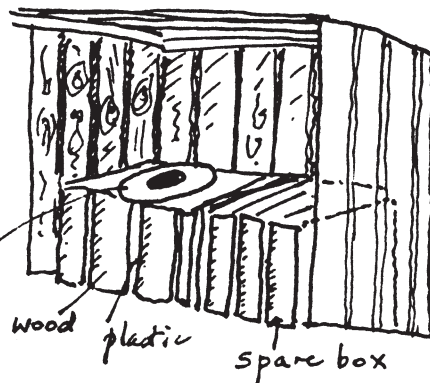


all fittings are speedfit plastic, with brass at the barrel.

Toilet faces uphill, so deposits, layered with sawdust, fall to the back of the boxes. A tarp over the shed keeps the rain off.

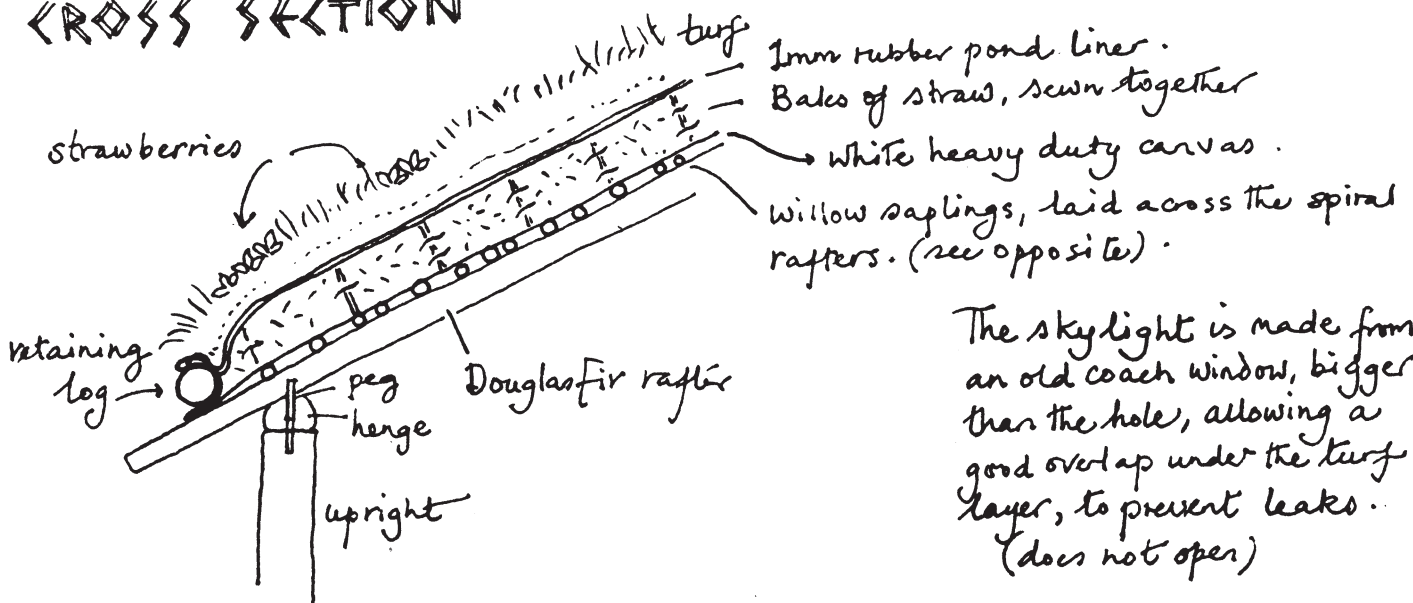
COMPOST Maker / Toilet

2 boxes, about 1m² are housed in a lean-to structure made of slabs from a sawmill, boxes are lined with D.P.C plastic. When one becomes full, it is closed and left to compost, while the other is used.



ROOF

CROSS SECTION



The skylight is made from an old coach window, bigger than the hole, allowing a good overlap under the turf layer, to prevent leaks. (does not open)

That Roundhouse - a Strategic Summary

The roundhouse was built by Jane Faith and Tony Wrench, with considerable help from our friends, over the winter 1997/8. It is an original permaculture design incorporating a round wood frame of hand-cut Douglas Fir forest thinnings.

The walls are cobwood with recycled double glazed windows. The roof is 150 bales of straw covered with a rubber pond-liner then turfed. Heating is by wood stove. Electricity is solar. Water is piped from the mountain. Toilet wastes are handled by compost toilet, and grey water is handled by reed bed. No cement was used or building waste produced in the construction, and the structure is partly earth sheltered. It cannot be seen from any of the surrounding hills, and has been upheld as a good example of low impact housing. It cost £3,000 all in.

We built it at the invitation of the owners of the land, who were establishing a community based on environmental sustainability. This community still exists (www.brithdirmawr.com).

The house was spotted from the air by the Pembrokeshire Coast National Park Authority, (PCNP) which is the local planning authority. One day in August 1999 Jane was disturbed while undressing by a man in a raincoat peering in the front door. On being spotted, he scuttled off, his little dog on a lead in tow. He turned out to be the chairman of the PCNP planning committee, and has happily now lost his council seat. We received enforcement orders for several community buildings, this being one. The first time we met Catherine Milner (CM), the development control officer, was on walking into the kitchen at the main farmhouse to find her holding court, uninvited, to a television crew.

There followed two years of intense dialogue during which the PCNP dropped their general enforcement order against the whole project (although we are still not meant to show visitors the low impact structures for educational purposes), gave us a certificate of legal use (through clenched teeth) for the Dome, and gave permission for other parts of the project, such as the main compost toilet and the straw bale barn.

When we applied for planning permission for this Roundhouse, however, the opposition of CM was implacable, amounting in several cases to abuse of power, as I shall try to explain.

I applied for planning permission for the roundhouse to be classed as an agricultural worker's cottage, since that is what Jane and I basically were. My livelihood involved coppicing hardwoods on the farm, helping transport the logs by horse and cart up to my workshop near the main house, and turning them into plates and bowls by wind power. These craft products are still our main source of income. Jane milked the goats, made cheese, and worked in the gardens. To assess the case for an agricultural worker's dwelling in the countryside, the PCNP is required to ask the advice of the County Council Estates Dept. An officer duly arrived, spent a morning looking round the project, and wrote a report saying that as this was so far from the normal type of application (usually for a house for a tractor driver on a large industrial farm), and bearing in mind the legal requirements of a House of Lords case called *Petter*, in which the essence of the rules was reiterated (the purpose of the rules is to prevent scams), he could not make a normal recommendation. CM balked at this, telephoning and writing to him to insist that he made a recommendation. He therefore wrote back saying that if she insisted, he recommended giving us a temporary permission for three years, to check if we were really genuine. If this advice had been accepted, none of these subsequent battles would have arisen. Instead, she omitted to tell the committee of this report, and also managed to steer the committee away from making a site visit. (Almost everyone who sees this house likes it, and wonders what the fuss is all about - no doubt a majority of committee members would have felt the same.)

One member, one of our neighbours across the river who is now the chairman of the planning committee, did visit. He liked the house and farm - looking at our hayfield brimming with wild flowers he referred to his super-fertilised tracts

across the way and said "I could never afford to have fields like this" - but said some of his neighbours across the way were worried about our low impact dwelling. He abstained on the vote, but has since been told that under new rules he is not allowed to speak or vote on the roundhouse issue, since, as he has been here, he now has an 'interest' in us. This is, of course, bureaucracy gone mad.

I went to the committee meeting that voted against permission. I was about to speak to a sympathetic member beforehand when CM physically threw herself between us!

I was not allowed to address the committee. This rule has now been changed - too late for us. I have never been allowed to address the committee, and they have never visited the roundhouse.

I appealed against the refusal, and was pleased to hear from the Inspectorate, appointed by the Welsh Office and now continued by the Welsh Assembly Government, that the Assembly would take the final decision on this, as it was a 'novel planning issue'. Low Impact development is, indeed, a novel planning issue and is right now the subject of heated negotiations behind closed doors and also in the public inquiry into the Joint Unitary Development Plan in Haverfordwest. (March 28th is the provisional date for the inspector to hear oral representations). One month before the appeal was to be heard by public inquiry, I was informed that the Welsh Assembly would no longer be the final arbiter. CM had rung them up and remonstrated with the inspectorate, saying "What novel planning issue?? This is merely someone trying to get away with putting a cheap house up in the countryside!" And she succeeded! Instead Cardiff sent a dinosaur who rejected the advice of the County Estates officer because he said it went beyond his brief, and rejected the evidence of the Head of the School of Architecture of The University of Wales in Cardiff, choosing instead to call the roundhouse "visually intrusive" and saying that it causes "demonstrable harm", though no harm has ever been demonstrated.

Events have proceeded inexorably from this point, as I have not had the time or the money to take the case up through the courts. The last chance we had was when

the report into Low Impact Developments (LIDs) came out, using the case of Brithdir Mawr as one of its case studies. We asked the PCNP for a delay of execution while this new policy was formulated, as this would obviously change the rules. The local Newport Town Council, asked for their comments about this, had now come round to seeing us as ordinary members of the local community, rather than as a problem, so recommended a six months delay. CM 'forgot' to report this to the planning committee, and we now stand beyond the time allowed, facing more prosecutions for not demolishing the house. TV programmes, countless articles in the press, a television vote by 'Country File' of 29,500 for against 2,400 against, emails, phone calls and pressure from the local AM Tamsin Dunwoody-Kneavesey have all made no difference. CM sees it as a matter of 'principle' to stamp out this example of permaculture design that hurts nothing or no-one and would almost certainly come within new guidelines within a year or so. It is partly because of the publicity over this house, in fact, that the issues behind the need for sustainable low impact homes have been so widely discussed and now taken on board by the Assembly and Pembrokeshire County Council.

I am totally disgusted by the machinations of CM. In my opinion her abuse of power in this case merits the sack. Other people further up the chain and on the committee should be put out to grass. The system for appointing members to this quango should be radically reviewed, and the way planning inquiry inspectors are trained, appointed and selected for particular jobs needs bringing out into the open and being subjected to democratic control. The Welsh Assembly should call in this case right now, and remove the PCNP from any further involvement with it. For us this is urgent. We stand to lose our home and I my livelihood. We cannot find as sustainable a home anywhere in Wales, so, failing a reprieve, will move to an ecovillage in Spain, after the Easter Camp here to deconstruct the house. May the right thing be done. This is all I have to say.

Tony Wrench. 21.2.04.

www.thatroundhouse.info