Summer Outings

VISIT TO DUNGENESS ON 14 JULY 1999

TWO MEMBERS DESCRIBE THEIR DAY

REPORT FROM STEVE PETERS

Dungeness Nuclear Power Station is set on the tip of a remote, triangular-shaped promontory of 12,000 acres of shingle - the largest such area in Europe and possibly the world. The sea has taken at least 5000 years to build up the shingle ridges which form it and the waves still wash more than 100,000 cubic metres each year round the point to the eastern shore, from where it is transported daily back to the southern shore by a fleet of lorries so that the Power Station is protected from the sea.

Rainwater falling on Dungeness filters through the top layers of shingle to be conserved at depth allowing a unique wildlife habitat to develop, which hosts a variety of plant and insect life. Sea kale, lichen heath, broom, Nottingham catchfly, sea campion and other grasses attract rare invertebrates and insects and depend on the latter for their pollination. English Nature has designated the area as a site of Special Scientific Interest (SSSI) which also includes land within the Power Station perimeter.

2000 acres form a RSPB reserve much used by migrating birds as well as the resident bird population and visitors to the centre and hides can watch great variety of swans, geese, gulls, terns and waders. The power station buildings provide substitute sea cliffs with roosting areas for gulls and breeding sites for kestrels and black redstarts.

Since the fifteenth century there have been wooden fisherman's huts with net stores above on the more protected eastern shore . These are now over a mile from the sea because of the shingle build-up, and since the late eighties fishermen have tended to live away from the area and drive in to work.

In 1986 Derek Jarman, an artist and

Members in front of Derek Jarman's "Prospect Cottage" with the Power Station in the background. An outside staircase has been added to the loft net store of the next door cottage to give added accommodatio.

film-maker, bought one of the cottages and lived there until 1994. He made a modern home of the interior and created an eccentric garden from flotsam and jetsam and from plants growing on the shingle.

Visitors to the ness stop outside the cottage, as we did, and this must irritate the resident occupant as he has stuck the following notice on the door.

Prospect Cottage

DEREK JARMAN used to live here, he doesn't any longer.
Prospect Cottage is a private residence,
Please don't look through the windows-
as there is only an irate fisherman to see.

The notice also states that consent must be obtained for commercial photography or video. Some members of our party said they had recently seen a film on T. V. about the cottage and the area. Apparently Jarman set a trend, for most of the cottages are now owned as second homes, or owned by retired people, or those of an artistic nature requiring peace and solitude.

In 1961 a new lighthouse was built, closer to the eastern shore at the end of the ness, to prevent it being obscured by the power station when that was built nearby. Some members climbed to the top and were rewarded with wonderful views.

As an added bonus we were able to see, at this southern terminus of the Romney, Hythe and Dymchurch Railway, the arrival of a train which had travelled thirteen and a half miles by steam from Hythe. The line is said to be the world's smallest public railway.

Then it was time for the power station which we had seen from miles away. There are, in fact, two nuclear power stations on this site. The first, Dungeness A, was opened in 1965 and is cooled by water drawn from the sea, which is returned, just offshore, twelve degrees warmer. The areas where it re-enters the sea channel are visible and are called patches. The water does not come into contact with nuclear material so it is completely safe. Frequent samples are taken of the water and the adjoining beach to test for radiation levels. Incidentally, these patches of warm water occasionally attract migrating birds and beaches are used as roosts for nesting birds. The RSPB has erected hides for observing them.

The second power station, Dungeness B, is gas cooled and began production in 1983, providing 30 million K.W. hours of electricity, enough for the whole of south-east England. Like all nuclear reactors both are fuelled by uranium, a natural resource for which there is no other day-to-day use. Apparently, nuclear power contributes neither to global warming nor acid rain and is the largest source of clean electricity that we have and provides the U.K. with 30% of its power.

The Society members welcome the arrival of the miniature steam train to the Dungeness terminal. In the background can be seen some of the rows of fishermen's shacks and the new lighthouse.

We were issued with yellow helmets

and ear mufflers to visit the plant. Most of the time inside the generating rooms we saw no one; the machinery appeared to be operating without visible supervision. Occasionally some one walked through and clocked their personal radiation cards into a register on the wall. Apparently this is linked to a computer which keeps an individual tally on each person's radiation absorption.

REPORT BY SHEILA COPE

"It was a day for magic", said the Chairman at the end of the day and the first spell was the transformation of thirteen Dover Society members into sea cadets as we fitted ourselves into the S.Lynx minibus ably driven by Malcolm Liggett who had sacrificed his day off for the purpose.

We experienced a gradual change in landscape from familiar cliff and down land to the green yet holiday-coastal aspect of Romney Marsh which imperceptibly becomes shingle and pond as one reaches Dungeness. This area is both outlandish and extraordinary. Although former converted railway carriages have now gone, perhaps absorbed into more permanent dwellings, many characteristic fisherman's huts remain, linked by overhead wires and with boats beached nearby

As we drove we talked of the late Derek Jarman, film producer, and of watching a TV programme featuring his garden, when, another piece of magic, there it was! Prospect Cottage, made from black weather boarding with yellow door and window frames, is surrounded by shingle with open access to visitors provided they respect its new owner's privacy. Beautifully maintained, the garden is unique, fashioned from flotsam and jetsam which includes railway sleepers, sections of groyne, floats, rusted barbed wire supports and parts from farm implements. Many of these have been driven vertically into the pebbles providing contrast and framework for the plants, most of which grow straight out of apparently hostile terrain. The effect of gold, green and grey at first appears random but is actually careful designed and includes drought-tolerant species such as dwarf broom, sea- kale, poppies, santolina, yucca, small-leaved roses, sage, rue, acanthus and even a fig in the shelter of the house,. This strange place exceeded my expectations and I was reluctant to leave.

Next, to the lighthouse, the fourth in the area and now privately owned. Erected in 1904 when its predecessors had become redundant as the receding sea had left them too far inland, this oil-powered lighthouse had itself been masked by the power station and succeeded by the latest fully-automated one in 1960.

We climbed 169 steps, eased by 4 landings on the way and by the need to wait for a party of primary children using their voices to demonstrate echo effect. Looking inland from the top balcony it was possible to see how the shingle had accumulated in ridges rather like small fields with straight furrows in one section and curved in another. After the descent we enjoyed a cup of tea in the cafe which adjoins the terminus of the Romney, Hythe and Dymchurch Light Railway. Half our party were already walking 2 miles to our lunch stop but before boarding the minibus we watched a train arrive. As passengers stretched their legs I remembered making that monotonous journey across the marsh as a child, cramped inside a carriage.

Fish and chips are the speciality of The Pilot and the quality excellent. The magic there was that we managed to eat the generous quantities provided. Battered skate presented a challenge but fortunately there was plenty of time before our final venue at 3 pm..

First we watched an introductory film at the power station visitor centre and learned that all power stations produce electricity by the same basic method; that

is they create steam which under high pressure drives turbines which move electromagnets inside hundreds of tonnes of coiled wire However, nuclear power stations are fuelled by uranium instead of fossil fuels. When an atom of uranium is split two things happen: it creates tremendous amounts of heat (which enables the production of steam) and it releases neutrons. These neutrons collide into other atoms splitting them and releasing more neutrons. Hence the term 'chain reaction'. Thus far, nuclear generated fuel is clean and green.

It is radioactive waste produced by the nuclear process which is harmful and this is classified at three levels :- 1) low *level* - equivalent to 3 footballs in a person's lifetime if only nuclear produced electricity were used. This is incinerated and the ash sealed in drums at Drigg in Cumbria.

2) *intermediate level* - equivalent to half a football in a person's lifetime housed at power stations in concrete vaults and

3) *high level* - a cupful in a person's lifetime, sent in special flasks by road and rail for reprocessing at Sellafield.

Reassured maybe, we chose our hard hats, gave up our bags and were conducted by our two woman guides through the security turnstile into Dungeness B, run by British Energy.

Although it was carefully explained to us I did not understand the process taking place in the cathedral-sized building we entered. Wearing a hard hat with ear protectors and climbing metal stairs which vibrated with the machinery was a novel experience. We were surrounded by huge silver pipes, valves, wheels and vast cylindrical shapes. It was impersonal,.noisy and overwhelming as one imagines a space-station might be, but safety and security seemed paramount. Later, we looked at the massive gantry which can be moved into position to facilitate the exchange of uranium rods housed in graphite sleeves within the pressure vessel of pre-stressed concrete lined with steel. We observed intake and outflow points of seawater used as a coolant for the pure water within the boiler system. It would require another visit before I could begin to fully comprehend the production sequence but our use of electricity proves that, however complex, it works. Another piece of magic!

The fully kitted-out Society party in the generating room.

We returned home via the comparatively peaceful Alkham Valley after a full and fascinating day. Our thanks go to Muriel Goulding for suggesting the venue and especially to Joan our Social Secretary and her son Malcolm for organising and leading the visit.