(tickets 15p) where we danced to 'The Craters' band. In complete contrast was a dance at the remote Head o' Wain (Mrs. Marsh) after a long walk down a steep ravine on a donkey path bordered with flax.

Watching cricket at Francis Plain, before the Prince Andrew School had been built; filming Jonathan, the giant tortoise thought to be 200 years old, at Plantation House; and being shown round the Napoleonic museum at the Pavilion by 'The Briars', which was just being opened - were some of my other activities.

One of the reasons for my visit was to carry out further research into the island's postal history, but I was not able to discover anything that I had not already unearthed in London. It was interesting, however, to see the Post Office stone then outside the Castle in Jamestown. It commemorates the arrival of the ship 'Dolphin' in 1645. Melliss in his 'St Helena" says, '..... the island was for a while deserted, though still used by the captains and crews of ships as a South Atlantic Post Office. It was customary to place letters under huge boulders of stone, marked in a conspicuous manner, so that the crews of ships returning from India might obtain letters from home .....' 'The Government stamp collection in the Castle contained most issues in blocks of four, but was sparse on the early issues. Mr. Broadway, who walked up the hill to the Cable station at 'The Briars' every working day of his life, had a good collection of the early First Day covers, many of which are now in my own collection.

Among my many memories of the island are the flowers (the night blooming cereus, the frangipani, bougainvillaea, and jacarandas); the birds (the red bird, canary bird, Java sparrows, Fairy Tern, and of course the mynah birds); the beautiful woods and walks inland; and, above all, the hospitality and friendliness of the people.

A 16mm. colour film of my visit is held by the National Film Archive in London..

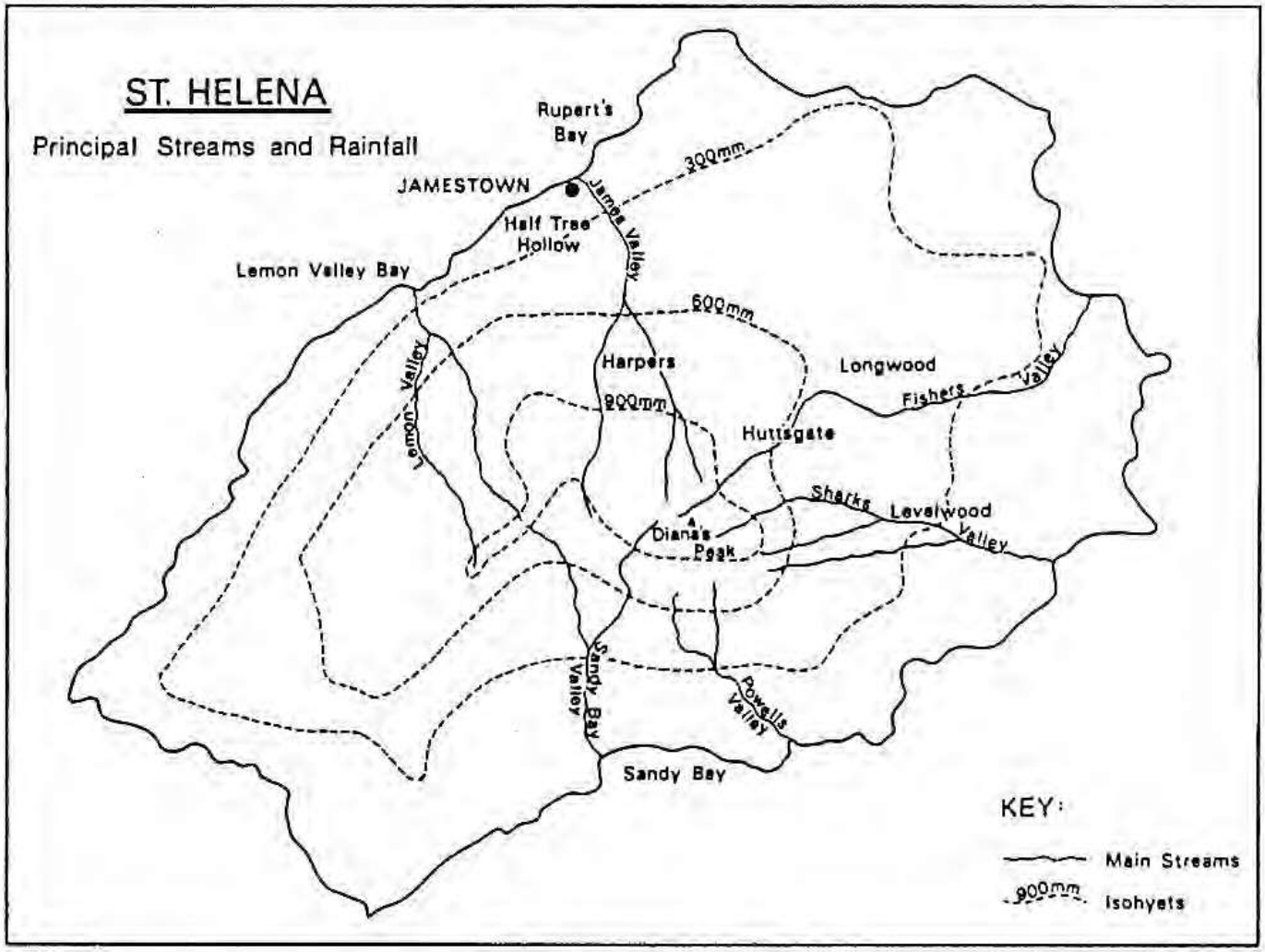
MEETING ST HELENA'S WATER DEMANDS

by Ian Mathieson

Unlike many small tropical and sub-tropical islands St Helena is relatively well endowed with water. The quantity and quality of the water contributed significantly to the island's importance as a staging post for the returning East India fleet in the eighteenth and nineteenth centuries.

St Helena has five perennial streams - James Valley, Lemon Valley, Sharks, Fishers and Sandy Bay. Powells also runs continuously in most years. As the diagram shows,

the island's average annual rainfall is over 900 mm in the vicinity of the Peaks and here lie the sources of the perennial streams. James and Lemon Valleys discharge into safe anchorages and so their exploitation has been possible although the Lemon Valley supply was of much greater significance in the past. The other main streams all discharge into unsheltered waters and the only effective way of harnessing their flows has been to intercept them before they drop too far down the valley In the case of Sharks this has proved impossible because the main flow issues from a spring known as Hancock Hole situated well down the valley. Not only is the island fortunate in having James Valley, it's principal stream, discharging into a sheltered anchorage but also with Lemon Valley this is the only stream that is not saline at low levels.



Despite having a relative abundance of water, droughts have also been a regular part of St Helena's history. The effect of drought has been mainly felt by cattle - no rain to grow fodder crops and no water to supply the large pastures on the western side of the island. Until the last ten years little attempt was made to conserve water for dealing with drought periods which, during this century, have occurred about once every 15 years and have tended to last for two or three years with varying degrees of severity. The last drought lasted from 1983 to 1987. Although major attempts to improve the island's supplies had already started by the construction of Scotts Mill reservoir in 1982 the severity and duration of this drought made it clear that increased attention would need to be given to improving the island's water supplies.

Between 1984 and 1990 St Helena's total demand for water nearly doubled to around 0.5 million cubic metres per annum. This increase was in part due to the ending of the restrictions imposed by the drought but also reflected the increased affluence of islanders, many of whose homes began to contain automatic washing machines, dishwashers and the other water demanding accoutrements of a more affluent society. In 1990 a plan, combining estimates of the island's future water needs and with its water resources, was prepared by a joint team from PWD, A&F and the Castle. The study showed that by 2010 demand can be expected to rise by a further 50 percent to 0.75 million cubic metres per annum. About 25 percent of this demand would be created by agriculture and businesses and the remainder by domestic consumers.

The Water Plan also estimated the island's total water resources. Of some 47 million cubic metres of rain falling on the island in an average year only about 4.5 million cubic metres emerges as spring or stream flow; the rest is lost to evapotranspiration. So to meet future demands in an average year nearly twenty percent of the island's total water resource will have to be recovered; in a drought this could be more than 30 percent - a considerable challenge.

In the last ten years construction of storage reservoirs has been continuing apace. The programme has focused on trying to tap the supplies from the perennial streams. Following the completion of Scotts Mill, a second reservoir was constructed just upstream at Harpers. A third reservoir is under construction and a fourth planned so that the complex around Harpers will eventually have a total capacity of 50,000 cubic metres. This is being used to supply the treatment works at Redhill and from there to feed Half Tree Hollow, the island's main growth area. Supplies from Chubbs Springs continue as strongly as they ever had, with the population of Jamestown static or even declining, no major improvements are envisaged on this system. Water has always been a problem at Longwood which receives it supplies from the springs issuing at the head of Fishers Valley above Hutts Gate. During 1989 Willowbank was investigated as a possible dam site with which to augment the supply. The valley's gravelly bottom proved unsuitable for reservoir construction but was shown to provide a very substantial groundwater reservoir. Tubewells were sunk and the resulting abstraction pumped to Hutts Gate to give Longwood a much more reliable supply. Another small reservoir was constructed at the head of Deep Valley to supply the Levelwood area. With the commissioning of the island's fourth water treatment works near this site during 1990, more that 90 percent of the island's dwellings now have access to a treated water supply.

The success of these developments has greatly raised islanders' expectations both about the quality and reliability of supply. A series of wet years since 1988 has meant that it has been relatively easy to meet demands. However, statistics point to the likelihood of a drought occurring before the end of the century. Will the island cope?

One encouraging factor is the enlightened management of the system. Ahead of Britain, all St Helena's homes have their supplies metered and charging is being introduced this year aimed at reducing wastage. But as we have seen, in a drought, about one third of the total water resource will need to be collected if major restrictions are to be avoided. There are few places in the world where such high levels of recovery are attained and certainly not anywhere with such difficult terrain. There is a possible solution and the key to this is provided by the island's endemic vegetation.

Anyone who has lived at Longwood will know that mists are a common occurrence. During the summer when the grass on the golf course is brown they may have noticed areas of green under some of the trees and hedges. This greenness is due to the trees' leaves intercepting the mist and causing it to condense and drip onto the grass beneath. Mists are most common on the Peaks and this area is the principal source of the island's streams. In fact it is estimated that about one third of the stream flow is generated from an area of about 650 hectares around the Peaks (five percent of the island's area). However, the most effective mist interceptors, the endemics, have been largely cleared from this small area and replaced by flax and grass. Neither of these plants are good mist interceptors because they do not allow air to move through their leaves. The replacement of the grass and flax in the Peaks area by efficient mist interceptors, be they endemics or other trees like the Norfolk Island pine, would increase precipitation. At present rainfall in this area just exceeds evapotranspiration by about 10-20 percent. The excess all goes towards spring and stream flow. A ten percent increase in precipitation could cause stream flows to increase by as much as 50 percent.

So it seems likely that the destruction of St Helena's endemic flora has significantly contributed to the severity of the effects of drought. Future prosperity could well be linked to the future management of the island's vegetation.

April 1992.

THE LAST VOYAGE

by Tony Cross

Everyone making a first landfall at the Island of St Helena, whether as the Navigating Officer of a large modern cruise liner or working from the cramped cockpit of a yacht being sailed single-handed around the world is wise to consult the Admiralty Charts and Instructions to Pilots for the Anchorage at Jamestown; to be sure, there is a good depth of water close to the shore but there are numerous hazards which are best avoided unless the possibility of risking one's vessel is of little consequence. It has