

**Submission
No 62**

**INQUIRY INTO CLOSURE OF THE CRONULLA
FISHERIES RESEARCH CENTRE OF EXCELLENCE**

Name: Mr Dennis Reid

Date received: 30/07/2012

Submission to Upper House Review of Closure of the Cronulla Fisheries Research Centre

Dennis Reid, Retired Research Scientist, CSIRO and NSW DPI, Cronulla 1974-2007

I would like to bring to the committee's attention, details of the heritage values of the Cronulla Fisheries Centre, and the importance of maintaining these for future generations. I would be happy to discuss any aspects of this submission in the Committee's hearings.

The Cronulla site represents a unique and extremely important part of Australia's marine research and education heritage.

It is acknowledged as the first marine investigation establishment in Australia, and its founder, Harald Dannevig, is widely regarded as the most important figure in the early development of the Australian fishing industry. The Cronulla marine laboratories structures on the Heritage and Conservation Register are the fish pond, former hatchery and laboratory, and the boatshed. The site as a whole has also been entered on the NSW Heritage Register (number F0013).

The work of the most prominent figures in the development of oceanography, fisheries assessment and fish taxonomy in Australia also contributed to the worldwide recognition of the Cronulla laboratories. Following are brief notes on the history of the Cronulla fisheries laboratories.

110 Years of Aquatic Research at the Cronulla Fisheries Centre**Historical Synopsis**

The Hungry Point site now occupied by the Cronulla Fisheries Centre was held as a reserve for defence purposes from 1895 until 1902, when an area of 1.37 ha on the Gunnamatta Bay side of the site was transferred from the Commonwealth for use by the New South Wales Government for the purpose of fish-culture. The land title for the eastern part of the site (1.54 ha) remained with the Commonwealth Government until 1988, following an agreement in 1984 between the Federal and State governments.

In the late 1800s and early 1900s the NSW Government was concerned at a serious depletion of fish stocks in estuaries as a result of illegal overfishing and gross chemical pollution of Sydney Harbour emanating from measures to combat the rat plague. The plan of the Fisheries Commissioners at the time was to employ aquaculture to supplement stocks of local species and also to improve the quality of the seafood available by importing live fish from the northern hemisphere for culture and release into local waters.

The NSW Government was determined to appoint a fisheries expert of world repute, and in 1902 selected a 31 year-old Norwegian, Harald Dannevig, who had constructed the Dunbar and Aberdeen (Scotland) Marine Fish Hatcheries, and supervised their operation for nine years. He also had extensive knowledge of the commercial fishing industry in the North Sea, based on his early training with his father, Gunder Dannevig, regarded as a world leader in fisheries stocking. In 1902 Harald Dannevig began duties in Sydney in the newly-created position of Superintendent of Fisheries Investigations and Marine Hatcheries. His first task was to transport adult fish from the UK to Sydney, with a view to supplementing fish stocks in depleted

estuaries in NSW. He carefully selected the Cronulla site for the new hatchery and supervised its construction and operation. While the fish stocking results were unsuccessful, Dannevig did not limit his work to aquaculture, and considered all aspects of a potential fishing industry, both freshwater and marine. Extensive plans for fisheries were formulated and promoted to the public and governments by Dannevig. His plans were always based on expert practical work in the field and extensive discussions with fishers. He was called on by government commissions looking into the fishing and food industries as well as providing advice to all Australian states.

The Commonwealth Government appointed Dannevig to the position of founding Director of Fisheries for Australia in 1908. He designed and supervised the construction of Australia's first marine research vessel (*FIV Endeavour*), and went on to conduct the first investigations of fish resources off Australia until his death (aged 43) when the *Endeavour* was lost in extreme gale conditions off Macquarie Island in 1914.

The Cronulla hatchery, experimental pool and laboratory were built in 1904, commissioned in 1905 and became fully operational in early 1906. Initial stocks of the hatchery included whiting, red bream, flathead, trevally and crayfish. Later snapper and other finfish were introduced. The hatchery continued to culture finfish and shellfish species but more emphasis was being placed upon investigations into the biology of local species by staff employed at the hatchery and staff from Sydney University. The hatchery was closed in 1914, and the NSW government embarked upon other fisheries related projects including developing a commercial ocean trawl fishery.

With the vast disruption due to the first World War, and in the absence of the leadership and insight of Dannevig, fisheries research and development in Australia did not progress substantially until the creation of the Council for Scientific and Industrial Research (CSIR, later CSIRO) in 1926. In 1937 Dr Harold Thompson, from Newfoundland, was appointed as the first Officer in Charge of the Fisheries Investigations Section of CSIR, which was renamed CSIRO Division of Fisheries & Oceanography in 1956. The NSW Government's part holding of the Hungry Point site was transferred back to the Commonwealth in 1938 to accommodate the newly established CSIR Fisheries Division, and provision was made to also house the NSW Fish Biology Branch and students from the University of Sydney. Programs were quickly developed in a wide range of research areas, initially related to tuna, whales and dolphins, coastal and estuarine hydrology, fish preservation, mullet and oysters. Subsequent decades saw the rapid expansion of research programs in physical and chemical oceanography, fish biology, population dynamics and plankton research. The CSIRO Marine Laboratories were transferred to Hobart in 1984 after 47 years of research by CSIR/CSIRO at the Hungry Point site. These five decades of research were of enormous importance in establishing the basis for oceanographic and fisheries research in Australia.

The facilities at Cronulla were transferred back to the NSW Government in 1985 for the purposes of fisheries research, and research staff of the Fisheries Division of NSW Department of Agriculture moved to the site in July 1985, when the facility was renamed the NSW Fisheries Research Institute. Research carried out since

then includes investigations into the dynamics of trawl fish, estuarine fish and invertebrate populations. There have been research projects to investigate the effects of impounding inland waterways, the impact of the Deepwater Ocean Outfalls, the ecological impact of the third Sydney Airport runway, estimation of bycatch in commercial fisheries, the effects of fishing over seagrass and estimation of the levels of effort and catches in recreational fisheries. In 2004 NSW Fisheries was amalgamated with other departments to form the Department of Primary Industries (DPI).

Significance of the Cronulla marine laboratories to marine education

The laboratories have been an important resource for tertiary marine science education since their inception, right up until today. In the early years, projects from students at Sydney University were completed at Cronulla, in the 1940s there were annual Marine Biology Schools for university undergraduates and postgraduates, and an Autumn School in Oceanography. There were numerous international conferences in fisheries and oceanography from the 1960s onward. Many collaborative projects involving university researchers and departmental staff have been completed over the full period of the laboratories' operations. There are currently a number of graduate students using the Cronulla facilities (lab and pool) for their Masters and PhD projects.

Chronology of the Hungry Point site (post European settlement):

- 1895. Reserved for defence purposes
- 1902. (August) Part of site transferred from the Commonwealth to NSW "for pisciculture purposes"
- 1904. Hatchery, laboratory, experimental pool and holding tank completed
- 1905. Hatchery and laboratory commissioned.
- 1914. Hatchery work ceased.
- 1929. Saltwater pool used for experiments on the effect of electrical fields on sharks by Swedish engineer Dr E O Möller. Results of these trials formed part of the 1929 report by the Shark Menace Advisory Committee.
- 1938. CSIR Fisheries section commenced at Cronulla.
- 1939. CSIR Fisheries main building (Building 1) completed. CSIR
- 1947. Migrant hostel built on eastern half of site.
- 1976. CSIRO Building 16 fisheries laboratories and offices completed
- 1984. CSIRO Divisions of Fisheries and Oceanography relocated to Hobart. Site handed over to NSW 'for fisheries research purposes'.
- 1985. (July) NSW Fisheries Research Institute commenced at Cronulla
- 2005. Centenary of aquatic research at the Cronulla marine laboratories celebrated
- 2007. HC Dannevig Laboratory upgraded and named after founder of the Cronulla marine laboratories.

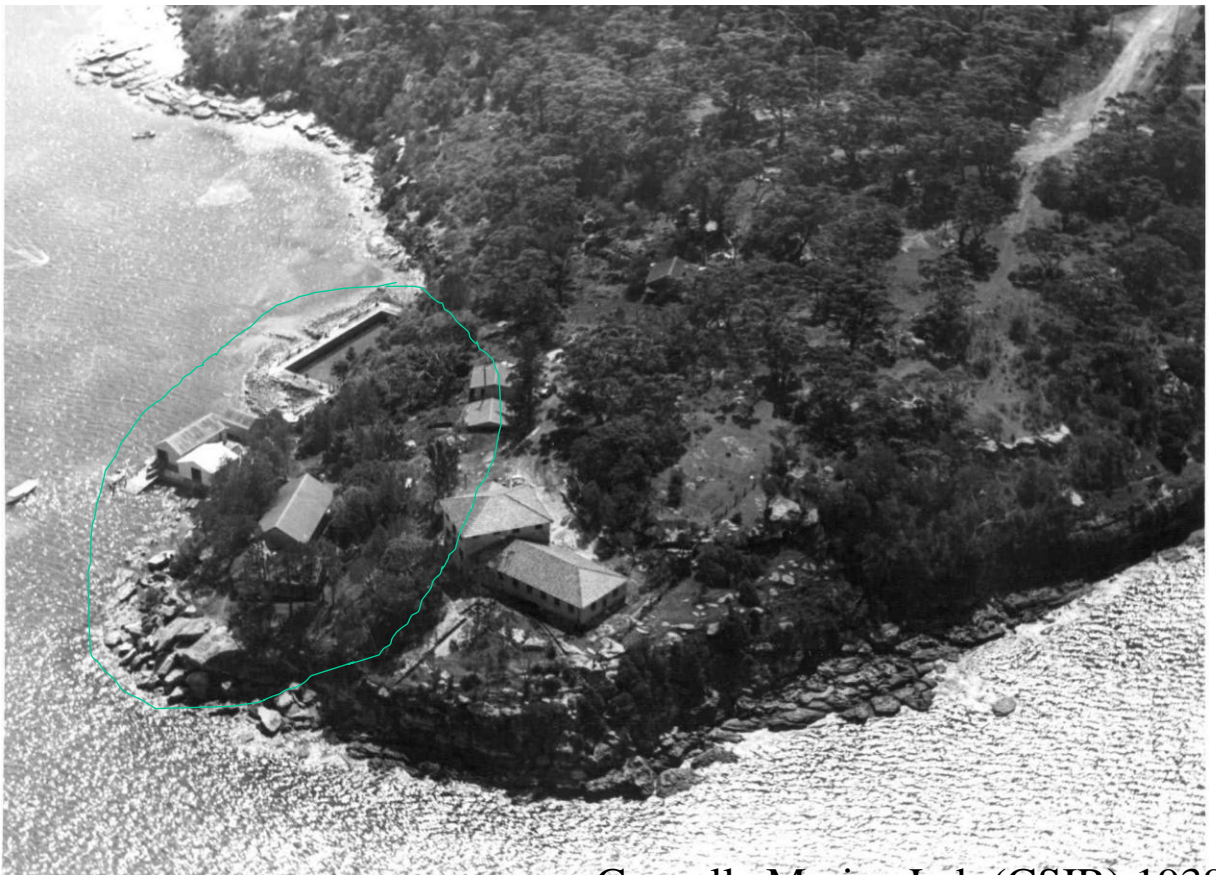
Conclusions

The Cronulla Fisheries Research Centre is recognised as the birthplace of marine science research in Australia. Marine scientists from around the world were stunned at the news of the closure decision, and many of these made detailed submissions to the NSW Minister for Primary Industries, pleading for a rethink

of the closure decision. The Cronulla Fisheries Research Centre is unique in Australia, and the site was handed over from the Commonwealth to the NSW Government in 1984 in good faith that the site and buildings would continue to be used for marine research purposes. The loss of the site on the basis of short-term political considerations would represent an unforgivable attack on the heritage values of this historically very significant site.

Early images of the Cronulla laboratories

1905 Marine Laboratory Cronulla



Cronulla Marine Lab (CSIR) 1939