ENVIRONMENTAL ASSESSMENT

OYSTER FARMERS DEPURATION SITES
BY WAY OF SPECIAL LEASE
FOR

THE AUSTRALIAN OYSTER FARMERS AND PRODUCERS
ASSOCIATION
HAWKESBURY RIVER BRANCH

F. Barry-Cotter & Associates
10/31 Gladstone Street
NEWPORT .. N.S.W. .. 2106
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NEWPORT .. N.S.W. .. 2106
PROPOSED DEPURATION SITES * OYSTER GROWERS *
MOONEY MOONEY * PARISH COWAN * COUNTY NORTHUMBERLAND *
LAND DISTRICT GOSFORD * COUNCIL GOSFORD

INTRODUCTION

This assessment has been prepared to introduce to the relevant Authorities and other bodies concerned, a proposal to establish a group of fifteen (15) depuration sites in accordance with the State-wide policy adopted by the Department of Lands, for use by oyster growers in the Hawkesbury River Region.

The State-wide policy provides for -

"the title to depuration sites above and below mean high water mark will be by way of special lease for initial terms not exceeding twenty (20) years."

The programme involving the introduction of compulsory use of purification tanks for oysters harvested from the estuaries of N.S.W. introduced by the Health Commission, provides for oysters taken from highly contaminated areas to be processed by the 1st May 1981; oysters from the less polluted waters, by 1st May 1982, and oysters from all areas in N.S.W. by 1st May 1983. [Appendix (1)]

The Hawkesbury River Region is within the latter category. It is understood no extension will be granted by the Health Commission.

The "Report from the Select Committee of the Legislative Assembly upon the fishing industry, 1975-76" states -

Oyster Leases and Shore Depots -

Item 11 -

The provision of leases for shore depots is a matter of concern in most oyster growing areas. These depots are essential for the storage of oyster punts and equipment and for the packing and processing of oysters. At present the Department of Lands grants permissive occupancies on Crown Lands for oyster farming
depots on a year-to-year basis. The Committee noted that oyster farmers are reluctant to build substantial and attractive shore depots under such short term tenure, and observed that many depots have been constructed with little regard to planning in areas with poor access from water and land. It is also apparent that lending institutions do not view these short-term occupancies as a sound measure of security.

The Committee considers that the provision of special leases for shore-base depots, with a term of fifteen (15) years would substantially assist oyster farmers to improve their businesses and make it a proposition to erect structures more acceptable to councils and the community generally.

Included in the recommendations made by the Select Committee are -

**Item 17 -**

Under the heading - "Planning and Development in Oyster Farming Areas", the Select Committee recommended -

1. That the N.S.W. Planning and Environment Commission (now Department of Environment and Planning) which is responsible for promoting and co-ordinating town and country planning and securing orderly and economic development and use of land, devise policies to assist the protection and long-term development of the oyster industry. [Appendix 2].

2. That the Department of Lands grant special leases to oyster farmers for shore base depots and that the term of the leases be for fifteen (15) years with an option of succeeding terms of fifteen (15) years.

3. That the Department of Lands make every effort to grant shore base leases in centralised areas with reasonable access from water and land.

The Assessment, together with an application, will be forwarded to the Gosford Council for the preparation of a Local Environmental Plan in accordance with E.P. Ass. Regs. Clauses 5 - 18.
The Proposal -

Since the new regulations under the Pure Food Act 1908, were introduced by the Health Commission, requiring oysters to undergo the purification process, the Department of Lands and other relevant authorities have co-operated fully with the oyster farmers of N.S.W. in an effort to establish suitable shore bases. [Appendix (3)].

The requirements of a shore base depot are -

1. Location within working distance of the leases
2. Clean water with adequate tidal flushing
3. Access by both road and water
4. Utility services - power and water

The proposal covers fifteen (15) special lease applications by oyster growers for shore base depots. Six (6) of these growers have been operating in re-claimed Crown Land below high water mark for the past twelve (12) years. Tenure is by way of permissive occupancy.

Attention is invited to the accompanying diagram. [Appendix (4)].

These six occupations are numbered 10 - 15 on the diagram. The new regulations will require the growers to construct sheds of a standard to meet the requirements of the Health Commission and Council, together with the installation of costly equipment related to the purification process. In almost all cases finance will be necessary and tenure by way of permissive occupancy is generally not acceptable to finance organisations. Long term tenure is essential if these growers are to remain in business.

Of the fifteen growers concerned, there are nine still without shore base depots.

It is proposed to extend the area already under occupation to the north to provide the additional nine depuration sites required. These sites are numbered 1 - 9 on the diagram.

By letter dated 21st October 1982, the Land Board Office, East Maitland, invited the fifteen special lease applications. A copy of this letter is attached. [Appendix (2)].
LOCALITIES INVESTIGATED -

From information provided by Mr. J. Eggleston, Senior Surveyor of Lands Department, it established that four sites were investigated. Attention is invited to Diagram "A", showing the areas inspected as follows:

1. South of the existing oyster industry development (under permissive occupancy) and currently under Special Lease Application) and adjoining the Mooney Mooney Workers Club jetty, currently under a Development Application for Club facilities and marina.

   Advantages -
   adjoining existing oyster industry development, services available.

   Disadvantages -
   insufficient area
   conflict of land use, viz. industrial/tourist
   objection by Workers Club
   conservation issues
   visual impact

2. Cabbage Point Bay, within Mental Hospital enclosure being a level cleared inlet, below freeway and behind mangrove foreshore.

   Advantages -
   sufficient level area, no reclamation required
   aesthetically screened from public view
   suitable as a compromise with conservation issues

   Disadvantages -
   only land access directly through Mental Hospital development services
   difficulty or impossible to obtain land from Health Commission
   conflict in land use: mental institution/foreshore industrial


   Advantages -
   foreshore land
Disadvantages -
access through freehold land
access through National Park
steep terrain - reclamation - aesthetic problems

It was therefore concluded that none of the three areas were practical as the disadvantages in all cases outweighed the advantages.

An alternative area was then given further consideration. This is the area north of the existing oyster industry occupation numbered (4) on Diagram "A".

The area was not initially included in the investigations as Mr. N. Phillips had purchased a shore-base depot on the southern end of the area adjoining his own, within the existing oyster industry occupation (Site 15 - Diagram "A''). The depot purchased by Mr. Phillips is at present held under permissive occupancy. The residue of the area was not sufficient to accommodate the nine (9) growers seeking depots. Mr. Phillips then agreed to relinquish the permissive occupancy subject to it being made available to the oyster growers concerned.

Description of the Existing Environment -

The site selected is located on the western shore of the mouth of Mooney Mooney Creek, a major tributary of the Hawkesbury River. (Diagram "A'').

Mooney Mooney Creek is an expansive area of shallow water, over which extensive areas are under oyster cultivation, comparable with the Hawkesbury River. Due to its shallow nature, it is not generally favoured by the boating public and is usually used only by shallow draft small craft.

The attractive eastern foreshores are dominated by the Brisbane Water National Park, almost in pristine condition, carrying a heavy fringe of mangroves. To the south its beauty is enhanced by the natural condition of Spectacle Island.

On the western side, and on the southern end, Mooney Mooney Creek and the Hawkesbury River are separated by a narrow neck of land over which extensive development has taken place - i.e. -
the two road bridges and approaches
the Department of Public Works Depot
the Mooney Mooney Workers Club
the existing six occupations by oyster growers
the residential development of Mooney Mooney

There already exists an oyster depot on the southern end of the area proposed for the nine additional sites, to be surrendered by Phillips and included in the area.

The foreshore of the proposed additional area is fronted by a healthy mangrove fringe. However, due to the rapid proliferation of mangroves along the foreshores of Mooney Mooney Creek over recent years, the destruction of the short section of the fringe proposed will have only an insignificant adverse effect on estuarine productivity.

Site Description -

The land falls gently over an extensive rock shelf to tidal mud flats carrying a heavy fringe of healthy mangroves. The high ground has a coverage of scrub, medium gum and thick lantana.

The area is fronted by the shallow waters of Mooney Mooney Creek, navigable by shallow draft craft - oyster punts etc., during periods of high water.

The rock shelf provides solid foundation for building construction and access. Reclamation of some tidal mud flats will be necessary, the reclamation being retained by a tipped stone wall to P.W.D. specifications.

A shallow access channel will be dredged fronting the wall for approximately 150 metres. The material gained by the dredging will be accommodated within the area to be reclaimed.
ABOVE - Mangrove fringe fronting the nine (9) additional sites

LEFT - The existing rock shelf

BELOW - The area behind the mangroves.
Visual Impact

The location selected for the nine (9) additional depots could be accepted as a discreet waterfront area for the purpose proposed.

To the north and east it is completely screened by the Brisbane Water National Park; to the south by Spectacle Island.

It is probable that there will be objections from residents on Mooney Mooney Point, whose aspect faces southerly towards the existing oyster growers occupations. The new sub-division will increase the visual impact on the foreshore in real terms of about 20 metres wide of mangrove foreshore from the Point. To minimise this impact, it is proposed that agreement of development of this site be that the mangroves are not destroyed on the waterside of Lot 9. [Letter - Mooney/Cheero Progress Association - Appendix (5)].

To the west, a sufficient buffer zone is to be retained between the proposed subdivision and the established Health Commission cottages. A condition would be that the occupants improve the screening with additional planting of indigenous vegetation.

Neither the existing occupations nor the proposed additional nine (9) sites are visible from the adjacent Pacific Highway and the Expressway.

Buildings will be built of colortone materials and constructed to the requirements of Gosford Council and the Health Commission.

The initiated action to gain long term tenure by way of special lease over the six (6) existing occupations is already having the desired effect with regard to tidyness. A general clean-up has taken place. Materials have been neatly stacked, work areas have been levelled and covered with road base material. The area is rapidly reaching an acceptable level of neatness and maintained in this condition, it is comparable with most other waterfront industries, i.e. boat building etc. (Photographs attached).
MOONEY MOONEY DEPOTS -

ABOVE -
Cold tar dipping

LEFT -
A tidy processing shed

BELOW -
Materials neatly stacked.
Traffic

Road access from the Pacific Highway is provided via Kowan Street for a distance of some 300 metres. Road opening action providing legal access to the two areas is to be initiated by the Lands Department.

The establishment of the additional nine (9) depots will have a very minor effect on traffic volume. Two of the existing occupants are producers of spat. This phase of the industry involves the importation of large quantities of timber and materials associated with the industry and the delivery of young oysters to both the northern and southern rivers of the State and Southern Queensland. Semi-trailers are involved, and a large depot area is essential.

In the case of the additional nine (9) depots, the areas to be allocated are very restricted in size and are completely unsuitable for the purpose of spat production.

Kowan Street is at present carrying traffic to the Mooney Mooney Workers Club on weekdays, weekends and late evening hours and traffic generated by the additional nine (9) depots will be insignificant.

Noise

The use of sound level meters in this case would be misleading as any noise emitted will be at very infrequent intervals.

The average small grower shares transport costs and it is usual for growers to combine loads when materials are to be delivered by trailer. 4 - 6 deliveries annually would be a generous estimate with regard to the nine (9) additional depots. In any case, this material is already being trucked into the Brooklyn area with different terminals.

The use of mobile cranes is also intermittent and more frequent during harvesting than at other times. The noise emitted is the equivalent to the operation of a small truck.

Noise emitted by the use of small outboard motors driving oyster punts is far below the levels of normal river traffic.
The processing of oysters is a quiet operation, enabling operators to speak in normal tones. Noise emitted from a purification plant will not be heard outside the confines of its housing.

Air Quality -

The use of hot tar for the preservation of timbers by the oyster growers has, in the past, attracted a number of complaints due to the odour emitted. This method is now redundant and will not be used. Material to be preserved is now dipped in either a tank or a pit of cold mix with the use of a mobile crane. The operation is silent (apart from the crane), odourless and without smoke. [Photograph attached.]

Under the new N.S.W. Fisheries Act of 1979, the burning of refuse, old sticks etc. on a depot site is prohibited.

No dust will be caused by the operation. The potential source of air pollution will be from the exhausts of vehicles, with little significance.

Effects on the Aquatic Flora and Fauna -

The area under consideration comprises a substantial stand of grey mangroves [Avicennia sp.] of approximately 2000 m² and up to 8 metres in height. The mangroves extend to a rock shelf which is above high water mark and devoid of marine fauna, with the exception of that part on Sites 1 and 2 already occupied by the depot previously mentioned, which is subject to tidal inundation, and does support some sparse mollusc fauna, mainly Bembicium sp. Amongst the mangrove phematophores, there are numerous crab holes and decapod crabs, mainly Sesarma sp. are present in small numbers. The area does not support either a diverse or abundant invertebrate fauna.

Due to the silted nature of the foreshore, seagrass beds are non-existent.

The construction of the proposed wall and reclamation will result in the destruction of approximately 120 metres in length of the mangrove foreshore fringe. The mangrove stand fronting Site 9 will remain undisturbed.
Whilst the location of the oyster growers' depots at the site proposed will result in mangrove loss; owing to the nature of the operation a waterfront location is essential to the industry, and in view of the total acreage of the existing mangrove stands within the Hawkesbury River estuary, the loss will be negligible and will have no significant effect on the marine productivity of the waterway. Recent studies within Port Hacking, Georges River and areas of the Hawkesbury River have indicated a marked proliferation in mangrove distribution.

The waterways supporting substantial areas of oyster culture, mangroves are normally widely distributed along the inter-tidal foreshores, and it has been stated that mangroves are extremely valuable for the survival of the larval stages of the commercial oyster.

The best growing areas are generally in close proximity to mangrove swamps. For this reason the depots need to be in this type of locality and the establishment of depots in most cases will result in some mangrove destruction. In many areas throughout New South Wales, to permit the establishment of depots, mangrove destruction has been unavoidable. [Appendix (6). Figs. 5 - 6 - 7]

Oyster culture and processing is a water-orientated industry and an absolute waterfrontage is essential.

The proposed additional nine (9) sites represents an extension to an existing site of primary importance that has been occupied for the past twelve years without any obvious adverse effect on the aquatic environment.

The protection of mangroves fronting the extensive lengths of foreshores under the control of National Parks within the Estuary will ensure preservation permanently. The natural proliferation of these stands due to siltation from upland run-off and other areas of Crown Lands should result in a future increase in both abundance and distribution.

**Water Quality** -

The processing of oysters does not produce additional contaminates or add to estuaring pollution. No chemicals are used.

The circulating water through the purification plants will be returned to the waterway in a sterile condition.
The return water, after the washing down of processing areas, will carry some discoloration by dissolved soluble river silt. No suspended sediments will result, and it will conform with the Clean Waters Act.

**Purification**

Laboratory tests have established that the large oyster pumps from four to eight gallons of water per hour, extracting the microorganisms for food.

To cleanse the oyster of bacterial contamination, the oysters are laid out in trays over which filtered and temperature controlled sea water is circulated for a period of 48 hours. During each cycle the water passes through an ultra violet steriliser neutralising any bacteria expelled by the oyster.

Diagrams of the process are attached [Appendix (7)].

**Dredging**

The material proposed to be dredged, to form an access channel to the nine (9) additional sites, comprise soft sandy silt and will be contained behind the tipped stone wall. The depth of dredging will be restricted to within the photic zone (2 metres) and any temporary loss of benthic fauna should rapidly recolonise.

It is possible to phase the development with the mangroves by the retention of scattered trees along the channel, thus reducing the hard line difference in the finished foreshore.

**Utility Services**

Water and power are connected to the six (6) existing occupations and are available to the proposed additional nine (9) sites.

The Brooklyn area is unsewered, both the pan system and septic tanks are used.

On the nine (9) additional sites it is proposed to erect a communal amenities building, containing showers and a septic system.
Assessment of Environmental Factors

The proposed reclamation will, if completed, result in the destruction of approximately 2000 m² of mangroves. It is possible to phase the development with the mangroves by the retention of the stand fronting Site 9 and retaining some scattered trees fronting the retaining wall and along the channel.

The foreshores of the waterways supporting substantial areas of oyster culture are normally fronted by mangrove fringes, and the best growing areas are generally in close proximity to this type of locality.

Oyster culture and processing is a water-orientated industry and an absolute waterfrontage is essential.

The dredging of the access channel will be restricted to within the photic zone, and will partly compensate for the insignificant reduction in the tidal prism by the reclamation.

No seagrass beds are present, and fauna is sparse.

The development will not affect any endangered species or the habitat for wading, sea or land birds.
APPENDIX

(1) Health Commission of New South Wales.

(2) Extract from:
"Report from the Select Committee of the Legislative Assembly upon the Fishing Industry, 1975-76."

(3) Advice to the Oyster Industry from Crown Lands Office.

(4) Diagram of the proposal.

(5) Advice from Mooney-Cheero Progress Association.

(6) Typical Depuration Sites.

(7) Diagrams of an Oyster Purification Plant.
New South Wales Oyster Purification Programme.

You will remember the widespread outbreak of gastroenteritis in New South Wales in June and July 1978 which was associated with the consumption of oysters. Apart from its immediate effect on the health of many people in this State and some people in other States, this outbreak seriously affected the livelihood of many oyster growers.

As a result of this episode, the New South Wales State Fisheries sought funds from the State Government for a research programme to be carried out jointly by that Department and the Health Commission to:

1. survey oyster growing areas, particularly during periods of heavy rain, and classify them on a health risk basis;
2. obtain a clearer understanding of the causative organisms responsible for gastroenteritis after consumption of Sydney rock oysters;
3. develop purification techniques to remove the causative organisms from oysters;
4. conduct physiological studies on oysters to try and ensure that purification does not result in loss of oyster quality.

Progress in the research programme was reviewed earlier this year, and a legislative and administrative programme developed by the Health Commission in consultation with New South Wales State Fisheries to minimise the risk of further outbreaks of gastroenteritis due to oyster contamination.

The programme involves the introduction of the compulsory use of purification tanks for oysters harvested from New South Wales estuaries in three stages. Oysters from highly contaminated areas will be required from 1 May 1981 to go through approved purification tanks. Oysters from areas of intermediate contamination will be required to go through approved purification tanks from 1 May 1982. Oysters from all other areas will be required to go through approved purification tanks from 1 May 1983. Any oysters coming into New South Wales from interstate after 1 May 1983 will also be expected to have gone through an approved purification process.
A system of approval of purification plants, similar to the system already operating in Great Britain, will be introduced. Plants will be inspected for conformity with construction guidelines by Health Commission Food Inspectors, and the operator of each plant will be required to sign an approval agreement which describes the significant features of the plant and the procedures to be followed in its operation.

The classification of estuaries into groups of high, medium and low contamination is being made on the basis of a sampling and testing programme which is still proceeding. Several estuaries have already been classified, as follows:

Group 1 (Approved purification required from 1 May 1981)
- Georges River
- Brisbane Water
- Macleay River
- Brunswick River
- Wooli River
- Camden Haven
- Tweed River
- Manning River

Group 2 (Approved purification required from 1 May 1982)
- Nambucca River
- Shoalhaven - Crookhaven Rivers
- Hastings River

Group 3 (Approved purification required from 1 May 1983)
- Evans River
- Merimbula Lake

These estuaries not listed above will be placed in either Group 2 or Group 3 when sufficient testing has been carried out. This should be completed before the end of 1980. If your estuary is listed, you should be making arrangements to have your oysters purified in an approved tank by the date indicated. If your estuary is not listed, it may be wise to assume that purification will be required from 1 May 1982, unless you are notified otherwise. It is emphasised that all oysters offered for sale in New South Wales after 1 May 1983 will be required to have undergone an approved purification process, regardless of their source.

The New South Wales Oyster Farmers' Association has been consulted on these requirements and their implementation, and further meetings will be held with Association representatives as the purification programme proceeds. These meetings will provide a forum at which problems arising from the programme can be discussed. It is suggested that any such problems be raised with your Association representative in the first instance.

Enclosed for your information is a list of Health Commission Food Inspectors who may be contacted for advice on the requirements for purification plants, for inspection and approval of plants and other matters relating to the requirements for oysters offered for sale.

Also enclosed is a set of operator instructions for oyster purification plants. An undertaking to abide by these instructions will be a condition of the issue of an approval of a purification plant.

Yours faithfully,

R. M. DASH,
for Secretary.

Enclosed.
10. The Committee received few objections to the present 15-year term for oyster leases granted by State Fisheries. It is essential that these long-term leases continue to be granted, to enable the efficient planning and development of the oyster industry. Furthermore, oyster-farmers will find it difficult to obtain finance from lending institutions to develop their businesses unless they have security of tenure over a reasonable period.

11. The provision of leases for shore depots is a matter of concern in most oyster-farming areas. These depots are essential for storing oyster punts and equipment and for packing and processing oysters. At present, the Department of Lands grants permissive occupancies of Crown land for oyster-farming depots on a year-to-year basis. The Committee noted that oyster-farmers are reluctant to build substantial and attractive shore depots under such short-term tenure and observed that many depots have been constructed with little regard to planning and in areas with poor access from water and land. It is also apparent that lending institutions do not view these short-term occupancies as a sound measure of security. The Committee considers that the provision of special leases for shore base depots, with a term of 15 years, would substantially assist oyster-farmers to improve their businesses and make it a proposition to erect structures more acceptable to councils and the community generally.

12. In a number of areas, flooding, currents, and wave action have caused the siltation of oyster-leases. At one location in Port Stephens, local oyster-farmers have negotiated with State Fisheries to have damaged leases cancelled and new leases allocated in areas not subject to siltation. An inspection of these areas by the Committee demonstrated the success of the relocations, and it is apparent that similar projects have continued to attract shore. The Committee supposes the amendment contained in clause 9 of the Fisheries and Oyster Farms (Amendment) Bill, which would make it a condition of all leases that the area leased be maintained in a tidy condition.

13. The Committee agrees with the views expressed by the oyster industry that State Fisheries should continue to take all steps necessary to prevent the over-cultivation of leases. Leases closed to oyster-farming should not be reopened until a detailed study is undertaken by State Fisheries, in co-operation with local oyster-farmers, to determine the effects of further oyster-farming.

14. The Committee appreciates the efforts made by the oyster-farmers' associations in recent years to improve the appearance of oyster leases and shore base depots; indeed, in areas such as Forster/Tuncurry, some oyster-farms have been developed into valuable and successful tourist attractions. Nevertheless, a number of oyster-farmers are not co-operating. Under the existing law, a clause requiring leases to be kept in a tidy condition is included in leases only when they are due for renewal. The Committee supports the amendment contained in clause 9 (d) of the Fisheries and Oyster Farms (Amendment) Bill, which would make it a condition of all leases that the area leased be maintained in a tidy condition.

15. Evidence was received strongly supporting the right to fence oyster-leases, a practice not permitted under existing legislation. The Committee noted that wave action may cause damage to leases used for tray cultivation of oysters and that a fence affords some protection as a form of breakwater. In stick cultivation of oysters, fish attack young oysters on new sticks, and it was submitted that early in the growing season protection in the form of fencing of leases would be beneficial. Fencing would also give greater protection against theft of the product.

16. Evidence indicated that oyster-farmers are dissatisfied with procedures for settling disputes with State Fisheries over the closure and dredging of oyster-leases. The Committee believes that provision should be made in legislation for these disputes to be determined by an independent tribunal.

17. Your Committee recommends:

1. That State Fisheries continue to grant oyster-leases for terms of 15 years, with an option of further terms of 15 years.

2. That the Department of Lands grant special leases to oyster-farmers for shore bases and that the terms of the leases be for 15 years, with an option of succeeding terms of 15 years.

3. That the Department of Lands make every effort to grant shore-base leases in centralized areas, with reasonable access from water and land.

4. That oyster-leases and shore-base leases be granted concurrently and be subject to the same terms and, where appropriate, conditions of issue.

5. That State Fisheries, in consultation with oyster-farmers, endeavour to grant new leases to those oyster farmers who suffer damage to their leases by flooding, current or wave action.

6. That areas and leases closed to oyster-farming be not reopened until a detailed study is undertaken by State Fisheries, in co-operation with local oyster-farmers, to determine the effects of further oyster-farming.
(7) That the option to fence leases be granted to oyster-farmers, provided that the fencing complies with standards determined from time to time by State Fisheries.

(8) That disputes relating to the closure and dredging of oyster-leases be determined by local land boards.

Local Government Rates

18. An estimated $80,000 is collected annually by councils as rates on oyster-leases. Although the industry has submitted that revenue from rates on oyster-leases is not used to benefit the oyster-farmer, it is obvious that oyster-farmers rely at least on roads provided by councils to transport their product to market and to reach land-base depots. Also portion of rate revenue may be devoted to planning by councils, for the benefit and protection of all people in an area, including those engaged in the oyster industry.

19. Councils have been rating oyster-leases under varying formulas for many years. Some councils aggregate leases for rating purposes, while others rate on each individual lease held by an oyster-farmer. These anomalies are a matter of concern, and the Committee favours the introduction of a more consistent and equitable policy for rating oyster-leases.

20. Your Committee recommends—

(1) That where more than one lease is held by an oyster-farmer within a council’s boundaries the rate assessment be based on an aggregation of the leases held.

(2) That local government should be encouraged to adopt differential rating in oyster-producing areas.

Planning and Development in Oyster-farming Areas

21. As already mentioned, commercial oyster-farming has now reached saturation point in many estuaries and the industry is under considerable pressure from residential and industrial development, reclamation projects, and the increasing use of waters for recreation. In some areas, particularly at Port Stephens, where 60 per cent of the State’s spats—i.e., the young of the oyster after settlement—is caught, the approval of development applications would have grave consequences for the whole oyster industry.

22. The Committee considers that, in view of the oyster industry’s value to the State, it should receive greater consideration in town and country planning, and the local government and other authorities should fully consider the needs of oyster-farmers. For example, convincing evidence was given that in the planning of Botany Bay as a major shipping port, early action must be taken to ensure the protection of oyster-leases in Botany Bay and Georges River. The Committee was pleased to note that in areas such as the Hastings River Valley, councils are preparing strategic development plans, in consultation with fishermen and oyster-farmers, incorporating features that afford protection to the oyster and fishing industries.

23. The Committee found that oyster-farmers were very concerned with the effects of pollution on oyster quality. It was claimed in evidence that some growers have suffered losses as high as $40,000 in one year as a result of pollution. Here again, adequate planning will, in the long term, help to alleviate pollution problems. Action already taken by the State Pollution Control Commission has resulted in an improvement in a number of the State’s waterways. The same could be said in relation to the State’s water storages, where advance advice on water releases could assist oyster-farmers to take action to protect their leases.

24. Your Committee recommends:

(1) That the New South Wales Planning and Environment Commission, which is responsible for promoting and co-ordinating town and country planning and securing the orderly and economic development and use of land, devise policies to assist the protection and long-term development of the oyster industry.

(2) That the commission encourage councils to apply its oyster-farming policies in the planning of local government areas.

(3) That where the New South Wales Planning and Environment Commission considers that industrial, residential, or other development may interfere with oyster-farming, it should arrange for a survey into the effects of the proposed development.
Consultants,
10/31 Gladston Street,
NEWPORT. N.S.W. 2106.

Dear Sirs,

I am now in a position to invite Special Lease applications for sites in the proposed oyster depuration depot subdivision at Mooney Mooney. The relevant application forms are attached.

It will facilitate processing if these forms can be lodged in one batch. The forms should be lodged with the Crown Land Agent, Court House, Gosford. Each application should be accompanied by the relevant fee of $44.00. Each application should also be accompanied by a letter either from your firm or the local Oyster Farmers' Association, certifying that the applicant is a bona fide oyster grower with leases in the Hawkesbury River locality and without an alternative site for depuration depot purposes.

Yours sincerely,

H. R. Philip,
Officer-in-Charge.
Mr. W. E. Dowell,
Secretary,
The Australian Oyster Farmers and
Producers' Association,
P.O. Box 232,
NEWPORT BEACH. 2106

Dear Sir,

PROVISION OF DEPURATION SITES FOR OYSTER FARMERS

Further reference is made to your Association's request for the provision of areas of Crown foreshore lands for the purpose of establishing depuration plants.

It has been decided that:

1. the title to depuration sites above and below mean high water mark will be by way of special lease for initial terms not exceeding 20 years;

2. illegal reclamation of oyster shells shall not be condoned and conditions of the lease will provide for the removal of all waste material (including old sticks etc.) from the site and will specifically prohibit the burning of waste material at the depot;

3. the existing policy in regard to reappraisement of annual rentals shall apply:
   i.e. 10 year reappraisement periods if rent is $100 or less;
   5 year of 10 year reappraisement periods if rent is over $100, having regard to trends in land values and the benefits that may be gained by all parties from shorter periods.

The guidelines set out hereunder shall be adopted to the extent possible:

a. Depuration plants shall be grouped together and a single building will be erected;

b. Water frontages will be limited by the use of a communal landing;

c. Foreshore activity will be screened from the waterway;

d. Area of depot including depuration sites shall not exceed 1000 square metres per operator;

e. Area of culling shed, depuration plant and parking area where separate from a depot shall not exceed 250 square metres per operator;
f. Where waterfronts are limited to say 10 - 15 metres, the effectiveness of the site shall be increased by culling etc., operations being extended over the water;

g. Islands will be used for depots where this is more aesthetically acceptable within the use of the main shoreline;

h. Where desirable sites are held by other authorities, concurrence in action under Section 25A, Crown Lands Consolidation Act, 1913, shall be sought;

i. Where withdrawal from existing oyster leases is necessary to provide access, such access should be arranged prior to inviting site application. It will be the responsibility of the proposed applicant growers to negotiate compensation and to accept liability to meet such payments;

j. Applications for sites should be encouraged through the Australian Oyster Farmers and Producers' Association.

The Director, Department of Environment and Planning has been advised of the requirement for depuration sites and approval has been sought to proceed with the preparation of regional plans in respect of areas that are not appropriately zoned.

All coastal Land Board Offices have been informed in terms of the above and requested to identify suitable sites and initiate action as far as possible pending advice from the Department of Environment and Planning.

You will be informed of developments.

Yours sincerely,

W. P. KELLY
Director.
Mr. W. S. CUMBERT,
16 ASHBY AVENUE
CARLISLE, RHODESIA

I feel that the plans are acceptable, and I am in agreement with the
committee's decision to proceed with the construction.

Yours faithfully,

[Signature: George Courtenay]
TYPICAL GROUP
OF DEPURATION PLANTS
IN RECLAIMED AREA
TYPICAL GROUP
OF DEPURATION PLANTS
FRONTING DEEP WATER
High density tray units. Plastic tubs shown can be stacked directly upon each other. Approximately 7 tubs are required per bag.

Plumbing system suspended from ceiling not attached to units.

Use of mobile tray units for mechanized handling and large-scale purification.
High density separate feed unit. Each tank holds three 3' x 3' plastic trays (about 1½ bags). Fibreglass tanks are commercially available.

Example of "open pool" type.

PLAN

ELEVATION

Length determined by flow requirements and oxygen limitations along length of tank. Probably about 20' useful max. figure.
Typical "split" pool type. Fibreglass tanks of approximate size shown are commercially available. Each tank comfortably holds about 3 bags of oysters.

**ELEVATION**

- **WEIR OR COLLECTION AND TRANSFER PIPE.**
- **FLOW DIRECTION.**
- **DELIVERY.**
- **FILTER OPTION.**
- **SUCTION.**
- **PUMP.**
- **TRAY SUPPORTS MOULDED INTO TANK.**
- **DRAINAGE PLUGS.**
- **BASKETS CONTAINING OYSTERS.**

**PLAN**

- **COLLECTION.**
- **TRAY SUPPORTS.**
- **DELIVERY.**

3'8" 13' 6"