

Parliamentary Standing Committee on Public Works

REPORT

relating to

C.S.I.R.O. MARINE LABORATORIES

at

HOBART, TASMANIA

(Fourth Report of 1981)

THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA
1981

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PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

R E P O R T

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C.S.I.R.O. MARINE LABORATORIES

at

Hobart,
Tasmania

(Fourth Report of 1981)

MEMBERS OF THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS
(Twenty-sixth Committee)

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- 1 Retired 30 June 1981.
- 2 Ceased to be member on election as
President of the Senate on 18 August 1981.
- 3 Appointed 25 August 1981.
- 4 Appointed 25 August 1981.
- 5 Appointed Vice-Chairman 27 August 1981.

EXTRACT FROM
THE VOTES AND PROCEEDINGS OF THE HOUSE OF REPRESENTATIVES,
NO. 22 DATED 7 APRIL 1981

- 9 PUBLIC WORKS COMMITTEE - REFERENCE OF WORK - C.S.I.R.O. MARINE
LABORATORIES, HOBART, TAS: Mr McVeigh (Minister for
Housing and Construction), pursuant to notice, moved -
That, in accordance with the provisions of the Public
Works Committee Act 1969, the following proposed work
be referred to the Parliamentary Standing Committee on
Public Works for consideration and report: C.S.I.R.O.
Marine Laboratories, Hobart, Tas.

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PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

CSIRO MARINE LABORATORIES,
HOBART, TASMANIA

R E P O R T

By resolution on 7 April 1981, the House of Representatives referred to the Parliamentary Standing Committee on Public Works for investigation and report to Parliament the proposal for the construction of Marine Laboratories for the Commonwealth Scientific and Research Organisation (CSIRO) at Hobart, Tasmania.

The Committee has the honour to report as follows:

THE REFERENCE

1. The proposed works comprise:
 - fisheries and oceanography research laboratories;
 - offices, workshops and stores;
 - conference rooms, a lecture theatre and staff amenities; and
 - servicing facilities for research vessels.
2. The estimated cost of the proposal when referred to the Committee was \$10.75 million at February 1981 prices.

THE COMMITTEE'S INVESTIGATION

3. The Committee received written submissions and drawings from the CSIRO, the Department of Administrative Services and the Department of Housing and Construction and took evidence from

their representatives at public hearings in Hobart on 21 and 22 May 1981 and in Sydney on 9 July 1981.

4. The Committee also received written submissions and took evidence from the Chairman of Council, Australian Institute of Marine Science (AIMS); the Hon. W.M. Hodgman, MP, Member for Denison and Minister for the Capital Territory; the University of Tasmania; the Government of Tasmania; Imbros Pty Ltd; the Tasmanian Fisheries Development Authority; the Sullivans Cove Development Authority; the Hobart Architectural Cooperative; representatives of the CSIRO Officers' Association and Cronulla Staff of the CSIRO Divisions of Fisheries Research and Oceanography, Cronulla NSW; and the Tasmanian Branch of the Australian Marine Sciences Association.

5. Written submissions were also received from the Marine Laboratories technicians at Cronulla, NSW; the CSIRO Technical Association; Mr George Cresswell; Muriel Ann Baxter; the Geelong Regional Commission; the University of Sydney; the University of New South Wales; Macquarie University; the Marine Studies Centre, University of Sydney; the President of the Australian Marine Sciences Association; the NSW Branch of the Australian Marine Sciences Association; the Department of the Environment, Tasmania; and the Antarctic Research Policy Advisory Committee.

6. On 12 May 1981, the Committee inspected the existing facilities of the CSIRO Marine Laboratories at Cronulla and prior to the hearing in Hobart on 21 May, an inspection was made of the Tarooma Marine Laboratory of the Tasmanian Fisheries Development Authority and the site for the proposed laboratories at Castray Esplanade, Hobart.

7. The Committee's proceedings will be printed as Minutes of Evidence.

BACKGROUND

8. Responsibilities for marine science research are shared by several Commonwealth Government bodies, the major ones being the CSIRO and the AIMS. It appears to the Committee that the charters of these major bodies in relation to marine science are similar and overlap. AIMS obviously restricts its research activities to only part of the broad responsibilities conferred on it in the Australian Marine Science Act 1972.

9. Whilst AIMS is required to carry out research in marine science, to cooperate with and provide facilities for other institutions carrying out research, to collect and disseminate information, and to publish reports and papers, it restricts its research to the Coral Sea, the Great Barrier Reef and the coast and adjacent waters of North Queensland. CSIRO research programs recognise the specialisation of AIMS and attempt to avoid duplication of programs in this area. There has been limited cooperation between CSIRO and AIMS and the Committee has reservations about the extent of coordination of research activities between the two bodies.

10. The Senate Standing Committee on Science and the Environment in its report on Australian Marine Science (June 1981), drew the attention of the Government to the need to rationalise or define responsibilities in marine science, and to provide coordinating machinery for the marine research programs of the various authorities involved.

11. The Committee supports the recommendations of the Senate Committee and points out the need for action on these matters.

12. In the fisheries research area there is considerable research undertaken by State Governments and to some extent by the Fisheries Division of the Department of Primary Industry. With the expansion of the Australian Fishing Zone and the historical commitment of the Commonwealth Government to fisheries research, there do not appear to be any significant factors indicating a likely reduction in CSIRO fisheries research.

13. The Antarctic Division of the Department of Science and Technology, located near Hobart, has assumed responsibilities for conducting fisheries and oceanographic research in the Southern Ocean. The Division has been taking part in an international collaborative research venture, to last several years, aimed at investigating the extent of biological resources in the Southern Ocean. This will complement the overall Australian marine science research effort.

14. So far as this reference is concerned, the Committee is satisfied that there will be no diminution of the oceanographic and fisheries research effort required of the CSIRO by the Government. Advice has been received from the Chairman of the Senate Standing Committee on Science and the Environment that the proposal before the Committee in no way cuts across the recommendations contained in the Report of that Committee.

15. The CSIRO has been involved in marine science since 1936 when the Division of Fisheries was established. The Division was located on land leased from the NSW Government at Cronulla with its primary task being to undertake exploratory fishing to assess available resources.

16. In 1956, the Division was renamed the Division of Fisheries and Oceanography, to reflect an increased interest in oceanography. Between 1956 and 1965, the CSIRO played an important role in an international collaborative study in the Indian Ocean. The CSIRO also undertook a number of projects of direct importance to the fishing industry, amongst the best known of which were the studies of the Western Australian rock lobster and the southern blue fin tuna. To accommodate additional staff at Cronulla to support this research, further laboratories, workshops and store buildings were constructed and, in 1965, the site of the laboratory complex was expanded by taking in an adjacent area of surplus Commonwealth property.

17. Over the period to 1965, an increasing requirement for an oceanographic research vessel arose. As a result, a number of vessels were chartered and several submissions were made to the Government seeking approval to construct a vessel.

18. The lack of wharves and large volume storage space was overcome by berthing chartered research vessels at commercial wharves in Sydney Harbour and leasing a building with an additional 900 square metres at Shell Point, some 9 kms from Cronulla, to store gear used on research vessels and provide workshop areas.

19. The declaration of the 200 nautical mile (NM) Australian Fishing Zone in November 1979 placed a greater emphasis on the need for comprehensive fisheries data to support the development of management strategies and practices by the Department of Primary Industry.

20. In February 1980, two Divisions, the Division of Fisheries Research and the Division of Oceanography, were formed from the existing Division of Fisheries Research and Oceanography located at Cronulla.

THE NEED

21. The existing Cronulla site consists of 2.7 hectares of which 1.5 hectares is Commonwealth land used by the CSIRO since 1965 and contains most of the more recently constructed buildings, and 1.2 hectares leased from the NSW Government. The size of the Commonwealth portion has been reduced recently by the delineation of pedestrian ways for public access to foreshore areas.

22. The uneven topography of the site, the rocky terrain and building height restrictions give limited scope for further construction of laboratory buildings, workshops and storage areas.

23. The existing buildings are generally considered to be substandard for high quality scientific work. One building, built in 1900, houses a store and temporary laboratory. Other buildings date from 1939 to 1980 with the older buildings being generally of brick construction which have been remodelled over the years but still lack adequate services required for modern laboratories and buildings. The more recently constructed buildings are of weatherboard and asbestos cement, perhaps reflecting financial stringencies on construction and the lack of long term guaranteed permanence for CSIRO on the site.

24. There is no public transport to the site and topographic constraints on further development are compounded by a requirement for on-site car parking which takes up scarce level building sites. Vehicular access between buildings is also restricted because of the nature of the site.

25. Another factor mitigating against further investment in facilities is the lack of guaranteed long term tenure. The original lease of the State land will expire in 2002. The presence of some Aboriginal middens on the site could also place additional constraints on future development.

26. The Government has identified marine science, particularly oceanography, as a high priority area and CSIRO has indicated that the staff of the Divisions are expected to increase. Already in the ten-year period beginning 1971 the staff, both professional and technical, has increased from 103 to 146, the more significant increase having occurred since the end of 1977. The CSIRO considers that more staff will be required to service the planned level of research. It has been estimated that the Cronulla site could accommodate a maximum of 180 staff. This staffing level would require the provision of undercroft car parking at substantial cost and would result in further overcrowding in laboratories and workshops.

27. The CSIRO is currently evaluating tenders for a research vessel. Ideally, with increased activity, greater staff numbers and the commissioning of a research vessel it would be desirable to have berthing facilities in closer proximity to the research facilities than the Sydney Harbour commercial wharves. Based on overseas practice the CSIRO believes this closer proximity would lead to more effective pre-cruise outfitting, instrument testing, equipment modification and improved turn-around for loading and unloading.

28. The CSIRO pursues high quality research into oceanography and fisheries. It is beneficial that there should be two Divisions carrying out this research but they should continue to operate in a closely integrated manner. One solution to overcoming the inadequacies of the Cronulla site might be to relocate one Division to an alternative site. This would significantly lessen the capacity for close collaboration between scientists, the sharing of common administrative and technical staff, and the use of common facilities such as research vessels, electron microscopes and technical support services. For the research to continue, the CSIRO needs modern marine laboratories in the one location to meet the requirements of both Divisions.

29. Committee's Conclusions There are substantial administrative savings and scientific benefits in the collocation of the Division of Fisheries Research and Division of Oceanography. Present facilities at Cronulla are inadequate to service existing and future levels of scientific research for both the Division of Fisheries Research and the Division of Oceanography. Site constraints at Cronulla preclude the construction of additional facilities there. There is a need for new facilities elsewhere to accommodate at least one of the Divisions.

PROPOSED LOCATION

30. Background The decision to relocate the marine laboratories to Hobart was made in 1980. The CSIRO had been considering for some time the need to relocate the Division of Fisheries and Oceanography from its Cronulla site due to overcrowding, lack of space for further development, uncertain tenure and lack of berthing facilities for larger research vessels. Sites in Tasmania as well as New South Wales and Victoria were considered as potential locations.

31. The decision to relocate to Hobart was preceded by consultations over three years between Government departments, the declaration of the 200 NM Australian Fishing Zone and the decision by the CSIRO to devote additional resources to marine science. In addition, there were two reviews by outside experts one on physical oceanography and the other on the organisational structure, research objectives and the future use of the resources of the then single Division.

32. In November 1977, the Government considered the report of the Enquiry into the Structure of Industry and Employment Situation in Tasmania (the Callaghan Report) and referred the responsibility for investigating and reporting on Commonwealth activities to be transferred to Tasmania to the Interdepartmental Committee on Location of Australian Government Employment (LAGE) in June 1978.

33. Before the question of relocating the marine laboratories was first raised, the CSIRO asked Professor H. Charnock to review work on physical oceanography in Australia. His report, dated March 1979, recommended the establishment of an Oceanographic Research Centre in the south-eastern part of Australia removed from the existing marine laboratories at Cronulla. The report also reiterated the need for a research vessel.

34. Following the Charnock Report, the CSIRO formed an Ocean Sciences Review Committee in June 1979 to review the future role of the CSIRO in marine science including the adequacy of the Division's organisational structure, its research objectives, staff numbers and the use of resources. In September 1979, the Committee's terms of reference were extended at the request of the LAGE Committee to include consideration of Hobart as a possible location for new Headquarters and to identify research activities which could be relocated to Tasmania. The Ocean Sciences Review Committee recommended that the Division of Fisheries Research and Oceanography be split into two distinct research groups. As a result of this recommendation, two Divisions, the Division of Fisheries Research and the Division of Oceanography were created in February 1980. The report also addressed the question of existing facilities at Cronulla and the possibility of relocating some elements to Tasmania.

35. Both the Charnock Report and the Ocean Sciences Review Committee Report were considered by the Australian Marine Sciences and Technologies Advisory Committee (AMSTAC) which is a Standing Committee of the Australian Science and Technology Council (ASTEC). AMSTAC was formed in 1979 to conduct the necessary studies and provide advice to the Government on the needs of research programs. Since then AMSTAC has presented two reports dealing with the immediate issues and priorities for additional research and development of marine science and technologies in Australia. These reports reinforced the need for CSIRO to have an ocean-going research vessel, and identified Bass Strait and adjacent areas off Tasmania, Victoria and South Australia as high priority areas for research.

36. This background, the lack of capacity to expand research facilities at Cronulla, the requirement for a purpose built research vessel and the requirement to devote additional resources to marine science led the CSIRO to approach the Government in April 1980 for approval to establish a marine laboratories complex in Hobart and to construct an oceanographic research vessel.

37. Alternative Locations Prior to selecting Hobart as the most suitable area for the marine laboratories, the CSIRO investigated a number of alternative sites and locations in Queensland, New south Wales, Victoria and Western Australia. Potential sites were examined in terms of their ability to be developed to fulfil the functional requirements of the CSIRO which were:

- a site in close proximity to the ocean which has or would permit the construction of wharf facilities for vessels with a draught of up to 6 metres;
- a site which would be large enough to permit the construction of laboratories, workshops and stores buildings for the two Divisions, preferably contiguous to the wharf;
- ready access to service industries;
- close proximity to tertiary institutions;
- a location which would be attractive to scientific research staff; and
- ready access to an airport.

38. Queensland The CSIRO owns a site of sufficient size to meet the needs of a Headquarters establishment at Cleveland. The site does not have berthing capacity for research vessels and would require dredging. Townsville was considered acceptable but because of the location of the Australian Institute of Marine Science near Townsville the CSIRO decided the marine laboratories should preferably be located in the south-east of Australia.

39. New South Wales The CSIRO undertook site investigations in the Sydney region during 1979 and identified two suitable sites in Sydney Harbour, at Balmain and Woolwich. The Balmain site was vacated by the Australian National Line and subsequently taken over by the Department of Defence. The Woolwich site, at present occupied by the Department of Defence, was not considered further after it was established it would continue to be used by Defence for an indefinite period. Jervis Bay and Eden were both considered to be too remote from capital cities.

40. Victoria Sites on Port Phillip Bay in close proximity to Melbourne, were difficult to identify. The site of the Animal Health Laboratories at Geelong was considered, however it lacks deep water for berthing vessels and is remote from a university with a marine science discipline. Point Nepean and Western Port Bay were considered to be too remote. Uncertainty of suitable berthing facilities in the Somers area made this site also unattractive.

41. Western Australia The CSIRO has a regional laboratory at Marmion but this lacks deep water wharves. Additionally, both the Charnock Report and the Ocean Sciences Review Committee identified the south-east corner of Australia as more suitable for scientific reasons.

42. Tasmania In Tasmania, the desirable site attributes, mentioned in paragraph 37, particularly relating to service industries and proximity to a tertiary institution, limited the scope of site selection to areas around Hobart, although a possible site at Triabunna was examined. Relocation to Hobart also has the advantage of facilitating oceanographic studies in Bass Strait and the Great Australian Bight. The Castray Esplanade site has sufficient size and the attribute of a deep water berth which was lacking in all other sites considered in the Hobart area.

43. Committee's Conclusion The relocation of the CSIRO Divisions of Fisheries Research and Oceanography from Cronulla to a site in Hobart is supported.

THE SITE

44. The Department of Administrative Services identified a number of possible sites around Hobart, all of which, apart from the Castray Esplanade site, lacked an existing deepwater berth. This largely prompted a decision to develop a proposal for the marine laboratories to be located at the Castray Esplanade. Of

the other sites examined, Dowsings Point is currently required for access to a temporary Bailey Bridge; a site at Margate, 20 kms from Hobart, would require the provision of services; a site at Droughty Point lacks road access and essential services; Selfs Point has uses incompatible with marine laboratories; and a site at Howdon lacks easy access and has topographic constraints.

45. The Castray Esplanade site best meets the functional requirement outlined in paragraph 37. The site is level and includes Castray Point and Princes Wharves Nos. 3 and 4. It is bounded by the Castray Esplanade along the southern and western sides, a vacant area of land to the south and Sullivan's Cove and the Derwent River to the north and east.

46. Existing Facilities A number of buildings and other facilities located on the site were formerly leased to the Australian National Line (ANL) and used as a terminal for the Sydney to Hobart car and passenger ferry until it was discontinued in 1976. These are:

- Princes Wharves Nos. 3 and 4, which are of concrete construction. Wharf No. 3, 90 metres long, has a minimum water depth of about 9 metres; wharf No. 4 is 130 metres long, has a water depth of 7.6 metres and a roll on/roll off ramp. These depths are well within the maximum draught of the proposed research vessel as well as Antarctic Division resupply vessels. In evidence, the Department of Housing and Construction stated the wharves had been investigated and were found to be in good condition. The mooring system to both wharves will require some upgrading;
- shed No. 3, which is mainly of concrete construction with a floor area of 2500 square metres and is suitable for conversion to a store and workshops;
- the former ANL Terminal, a two-storey building;
- a cargo storage shed with a floor area of 1050 square metres;

- two disused brick buildings near the southern boundary; and
- a fixed crane with a 22-tonne capacity and a stern ramp for the loading of vessels.

Other buildings include a gatehouse and the Judges Box for the Sydney to Hobart Yacht Race.

47. Ownership of Land The Marine Board of Hobart owns 1.88 hectares and the balance is State Crown land; both bodies have agreed in principle to the sale of the land to the Commonwealth and purchase formalities are proceeding. The Commonwealth has a ten-year option from the Marine Board to purchase Princes Wharves 1 and 2 and associated sheds which are adjacent to the site. The site is zoned for mixed use and subject to a number of planning guidelines, this permits light industrial development of the type required by the CSIRO.

48. Committee's Conclusion The site selected in Hobart on the Castray Esplanade is suitable.

THE PROPOSAL

49. The proposal is to construct new marine laboratories for the CSIRO Divisions of Fisheries Research and Oceanography at the Castray Esplanade, Hobart.

50. Building Requirements Six activities, relating directly to research and associated support services require accommodation. These are:

- research facilities - laboratories for oceanography and fisheries research groups;
- administrative support services - including offices, library and canteen, lecture facilities, conference rooms and radio communications;
- technical services - including areas for computers, satellite data processing, photography, instrument making and calibration;

- storage areas - for laboratory chemicals, equipment and materials used in workshops; and
- services - including the reticulation of cold and hot water, air conditioning plant and ventilation, fume exhaust facilities and vacuum and compressed air.

51. Planning Considerations Although there are no buildings of historic value on the site, it comes within an area included on the Register of the National Estate in 1980. A number of historic buildings are located along the south-eastern side of Castray Esplanade, opposite the site. The site is also overlooked from nearby tourist walks and residential properties and is subject to the Battery Point Planning Scheme which establishes guidelines for sympathetic forms of development for protecting the historic environment and townscape. The Sullivan's Cove Development Authority has also produced a study which affects the extent of site development. It seeks low profile development and designs compatible with the historic buildings and townscape.

52. Design Concept The design of the proposed new buildings will comply with local planning requirements while meeting the functional criteria of the CSIRO. Design parameters identified include a need for compatibility with surrounding historic buildings, building height, aesthetics such as form, materials, colour and landscaping. The overall planning proceeded on the basis that certain features, such as Shed No. 3 and the fixed crane, would remain while the other buildings on the site would be demolished. New buildings are low rise and oriented to preserve important vistas and corridors as much as possible. The external finish of the buildings will match sandstone colour and texture. The Committee explored the possibility of using local sandstone with the Department of Housing and Construction and was advised sources of stone were becoming scarce and its cost would be considerably above the estimates already proposed for external cladding.

53. Shed No. 3 The refurbishment of this building will comprise re-roofing, steam cleaning, insulation and the addition of a reinforced concrete first floor over a portion of the ground floor. New windows will be provided along the southern side.

54. Storage and heavy workshop areas will be on the ground floor and on the western end an area with full ceiling height will be serviced by a 2-tonne capacity gantry crane. This area will also house part of the large scale experiment area. The proposed new first floor at the western end will be used for lightweight workshops, the photographic laboratory, chartroom and radio room. Access to the large scale experiment area will be by existing roller doorways.

55. The buoys and net stores, machine and carpenter shops and ocean sciences area will be on the northern side of the building to permit ready access to and from the wharf through existing roller doorways.

56. Two radio masts and aerials will be erected on the northern side of the building.

57. The main entry point is on the eastern end and loading and unloading will be facilitated by an entry lobby with access to ground floor areas as well as to the first floor which will be serviced by a goods/passenger lift located in the lobby.

58. New Buildings The laboratories, administrative and service areas will be located in four two-storey buildings, located along the western side of the site and will consist of an administrative/amenities wing and three basically identical laboratory wings.

59. Administrative and Amenities Wing This will be centrally located between Shed No. 3 to the west and the laboratory buildings to the east. A lecture theatre with a seating capacity of 130, a conference room to seat 30, a light

meal canteen, staff amenities area and a general office will be located on the ground floor. The main entrance will have a two-storey foyer to be used as a reception area and as space for exhibitions. The first floor will have offices for the Chiefs of the two Divisions, a second conference room, the marine laboratories library, toilets and plant rooms. Access to the laboratory wings will be by a glazed walkway at first floor levels.

60. Laboratory Wings These are basically identical and are linked together by a glazed walkway at first floor level. A lift in the centre wing will service the first floors of the four buildings. Each building will have its own service core of mechanical plant rooms, toilets, store rooms, freezers and fire isolated stairs at the western (land) end.

61. The laboratory wings have been designed internally for flexibility to permit offices and laboratories to be rearranged to meet changes in demands. The three wings will be allocated as follows:

- North Wing: chemical oceanography and physical oceanography laboratories and isotope suite;
- Centre Wing: biological oceanography laboratory and offices, electron microscope, plankton and vertebrate archives;
- South Wing: fisheries research laboratories and offices.

62. Facilities for Handicapped Persons The Committee is pleased to note the complex has been designed to be fully accessible to handicapped persons. Access to all entrances from cars and car parks will be graded and surfaced with upper levels accessible by ramp or lift.

63. Vibration and Noise The Committee is concerned that no tests to determine the extent of vibrations to the site from

traffic and ships had been carried out. Vibration tests will be undertaken prior to the completion of structural design. The Committee believes attention should have been given to vibration testing prior to the hearing.

64. Criticism of Design The Hobart Architectural Co-operative submitted that the design is out of form with the historic buildings and townscape of the Battery Point area, that the design and location of the administrative wing significantly intrudes into view corridors of the Derwent River, and laboratory wings create a large area of flat metal decking when viewed from Princes Park.

65. The Hobart Architectural Co-operative suggested that consideration should be given to a multi-storey building located where view corridors would be least interrupted. It was also suggested that the historic nature of the Battery Point area is justification for the design of the laboratories to have been the subject of an architectural competition. With regard to the latter, the Committee agrees that the design of buildings of national importance could be the subject of competitions but in this particular instance a competition is not warranted. The Department of Housing and Construction stated in evidence that their experience is that entrants in such a competition have little commitment to a cost envelope and would not be looking at a functional solution but rather an innovative solution involving the use of untried and untested methods of construction with added cost penalties, and a competition would require the preparation of considerable documentation.

66. With regard to the suggestion that a single, multi-storey building be constructed the Department of Housing and Construction advised that this possibility was rejected early in the design process for reasons of cost, compliance with planning guidelines, functionality and capacity for expansion. The Committee agrees that a single, multi-storey design solution is undesirable. The Committee is, however, concerned that the

Commonwealth did not pursue the alternative of constructing two, three-storey laboratory wings with more vigour. Such an alternative would reduce construction costs by \$300,000 and make for a more compact laboratory complex.

67. Committee's Conclusion Further discussions should be held between Commonwealth, State and local government authorities on the acceptability and viability of an alternative design of two, three-storey laboratory wings because of the possible cost savings. The proposal is satisfactory subject to the completion of these discussions.

CONSULTATIONS WITH STAFF

68. The CSIRO management first broached the possibility of the marine laboratories being relocated to Tasmania with the staff in October 1979, about six months before the Government's final decision. Further meetings with staff associations were held in February 1980 and since then more discussions about the conditions and arrangements that would apply to staff moving to Hobart or deciding to stay in Sydney have been held. Staff were also consulted on the proposed layout and design of the buildings. A consolidated statement of their views on the proposed relocation was then provided for inclusion with the submission to the Government which led to the decision to relocate the marine laboratories to Hobart.

69. Relocation Entitlements To alleviate disruption to family life and to ensure that staff intending to relocate are not excessively out of pocket, the CSIRO has indicated a number of entitlements available to staff, including familiarisation visits to Hobart for families, payment of transfer fares, removal of personal effects, reimbursement of legal expenses associated with sale and purchase of homes, temporary rental assistance, and assistance with education costs.

70. The CSIRO will attempt to redeploy staff who decide not to relocate within the organisation in Sydney and if appropriate positions are not available, the assistance of the Public Service Board will be sought. If all redeployment efforts are unsuccessful staff will be accorded redundancy benefits; redundant officers will be entitled to employment with full pay and/or income maintenance payments for six or twelve months depending on age and length of service.

71. Survey of Staff The CSIRO carried out two surveys of staff attitudes to relocation to Hobart in February and June 1981 and the results are given below:

	<u>February 1981</u>	<u>June 1981</u>
Will relocate to Hobart	43	28
Will not relocate to Hobart	32	25
Undecided	<u>14</u>	<u>60</u>
	<u>89</u>	<u>113</u>

72. The CSIRO believes the reasons for staff indicating they will not relocate to Hobart are in the main related to anxieties about schooling, separation from family and Sydney and employment opportunities in Hobart.

73. The CSIRO identified 18 officers with families which by mid-1984, will include children in the 15-21 years age class whose education or employment may be an important factor in deciding on relocation. Of these, 15 are undecided about their intentions.

74. The Committee believes, given the difference in sample sizes, that the results generally reflect a "wait and see" attitude and the majority of those undecided will relocate.

75. Housing The Department of Administrative Services indicated that: its officers would assist CSIRO staff to find suitable housing; there are adequate numbers of serviced housing

blocks available in the Hobart area for those wishing to build new houses; and the housing market in Hobart is relatively more attractive to buyers than in Sydney.

76. Staffing The CSIRO will recruit replacement staff locally or advertise internationally. The effect of disruptions to scientific programs caused by staff resigning now in anticipation of the relocation or by staff choosing to remain in Sydney are likely to be short term. The Committee believes that because the relocation will be staggered every attempt should be made to recruit the necessary staff on completion of appropriate facilities in Hobart. This would avoid staff recruited from interstate or overseas being required to settle in Sydney for a short period prior to moving to Hobart.

77. Committee's Conclusion Relocation to Hobart could cause difficulties for some staff members and their families. These difficulties should be overcome through consultation with staff, by relocation entitlements and through help to be given by relevant government agencies to those moving.

OTHER OBSERVATIONS

78. Suitability of Hobart During the public hearing considerable emphasis was placed on the need for a site with a contiguous deep water berth capable of accommodating research vessels. Compared with the Castray Esplanade site all other sites lack this feature and a large shed which could be converted for use as a store and workshop. Some witnesses felt the criterion of a deepwater berth transcended those related to a need to be near a major university and other areas of potential scientific collaboration such as museums and State departments. The relocation would therefore be at the expense of regular contacts and collaborative undertakings established over many years between CSIRO scientists and research and teaching institutions in the Sydney area. If the relocation went ahead, the contacts would cease. Other opponents of the relocation

expressed doubts about the capability of firms in Hobart of providing comprehensive technical support. Again, they cited the present situation at Cronulla where over many years suppliers and service agencies of complex specialised equipment had been providing services. Finally, other critics questioned the scientific basis of selecting Hobart, that the need for a deepwater berth transcended the need to be near the area of operations.

79. Whilst the relocation may lead to a diminution in some contact between CSIRO and other Sydney-based scientists, the presence of the Antarctic Division in Hobart, the establishment in Hobart of the Commission for the Convention on Antarctic Marine Living Resources, the Tasmanian Fisheries Development Authority and the University of Tasmania will attract visiting scientists and offer the basis for collaboration and support.

80. Further, evidence suggests that at present collaboration with scientists is not limited to Sydney-based institutions. It extends to Queensland, South Australia, Western Australia and a number of overseas countries. There is no evidence to suggest that distances from Cronulla to other research institutions limit collaboration; proximity to another institution is no guarantee that collaboration will take place.

81. The Tasmanian Government and a firm specialising in the supply of scientific equipment believe there is adequate capability in Hobart-based commercial enterprises to supply essential service backup for computing and other scientific equipment needed in marine research. The Tasmanian Government canvassed computer equipment suppliers and backup services offered as well as scientific supply houses in Hobart. Whilst the list of suppliers may not be as extensive as in other major capital cities the present absence of backup or the lack of a supplier in Hobart are not insurmountable difficulties. Any initial problems in establishing local sources or national servicing would be only temporary.

82. With regard to the criticism that the laboratories should be near the area of operations the decision to relocate to Hobart was based on a number of factors not least of which were the Charnock Report and the report of the Ocean Sciences Review Committee. The CSIRO had identified Bass Strait, the Great Australian Bight and the North-West Shelf as areas for research and the latter would be relatively remote from any location on the eastern seaboard, the former are reasonably close to Hobart.

83. Site Master Planning The Castray Esplanade site is irregular in shape. The northern part of the site, encompassing Shed No. 3 will be used for stores, workshop and ship-related activities. The new buildings will occupy the central portion and a car park on the southern portion. The space occupied by the car park could be resumed for an extra laboratory wing should the need arise. The cost and planning implications of constructing another wing on the car park site do not appear to have been adequately assessed. The Committee believes more attention should have been given to site master planning.

84. Aquarium In evidence some uncertainty concerning an experimental tank or aquarium became apparent. The Committee believes further discussions should be held between the Antarctic Division, the University of Tasmania and the CSIRO aimed at deciding upon, the need to provide and the location for, a common large scale aquarium installation.

85. Water Quality A number of witnesses pointed out that the water near the Castray Esplanade is polluted and would not be acceptable for use in aquariums or other research. The laboratories will require sea water for algae culture. This will be obtained at sea by a small vessel as is presently the case at Cronulla. Water for the culture of commercially important molluscs and for the long term culture of fish will be obtained from inshore. The CSIRO stated these practices are acceptable and the pollution problems can be overcome by filtration where necessary.

86. Subsequent Use of the Cronulla Site The CSIRO will vacate the Cronulla site on completion of the facilities at Hobart. The Cronulla site, consisting of Commonwealth and State land, will in the first instance be offered to other Commonwealth users. If no Commonwealth use can be found, the leased portion will revert to the State and the Commonwealth portion will be offered for sale to the State.

87. A number of universities in the Sydney area expressed an interest in the site and facilities being made available for use as a regional research and teaching centre for marine science.

88. The Senate Standing Committee on Science and the Environment also recommended that the Cronulla laboratories be retained to serve as a focus for research in New South Wales.

89. Committee's Conclusion The Commonwealth should carefully examine the future use of the Cronulla laboratories, including recognition of any joint proposals submitted by universities in the Sydney area with interests in marine science teaching and research.

90. Staff Numbers In addition to functional requirements the proposal is also based on a need for 210 staff with provision for expansion. At present the staff at Cronulla comprise 68 in fisheries research, 25 in oceanography and 51 common services support personnel; a total of 144. Sixty additional positions, will be created by the redeployment of 30 positions from within CSIRO and the creation of 30 new positions. When added to the 144 permanent staff this gives a total of 204 staff who will be linked to oceanographic research.

91. Given the high priority of fisheries and oceanographic research, the Committee believes that on completion of the marine laboratories, every attempt should be made to fill the additional positions as soon as possible to achieve full utilisation.

92. Research vessel The research vessel is an integral part of the proposal and without it there is no doubt that the effectiveness of the research laboratories would be diminished. In July 1981 the Minister for Science, the Hon. David Thomson stated the Government was considering letting a contract to build the research vessel. It is proposed that the vessel will be operated by the CSIRO as a national facility. The need for a research vessel has been recognised for a number of years and the Committee believes its acquisition should proceed concurrently with the construction of the works in this reference.

CONSULTATIONS

93. The proposal has the general acceptance of State and local authorities and groups. The proposal has the support of the Sullivan's Cove Development Authority, a body responsible for overseeing planning and development in the Battery Point area. The Committee notes, however, that the Hobart City Council has yet to receive a formal application for planning approval and that the City Planning Committee is unable to indicate whether approval will be given.

ENVIRONMENTAL CONSIDERATIONS

94. The CSIRO lodged a notice of intent, required under the provisions of the Environmental Protection (Impact of Proposals) Act 1974, with the Department of Home Affairs and the Environment in July 1980. Following correspondence and discussions between appropriate planning and environmental protection agencies, the Department of Home Affairs concluded that, subject to the implementation of the environmental protection measures outlined in the Notice of Intention and adherence to agreements reached with the Tasmanian Department of the Environment, an Environmental Impact Statement would not be required for the proposed facility. The agreements referred to concern building height, the external finishes and materials, walkways, public access along the waterfront, fencing and car parking. The

Committee was advised that the design of the complex complies with these conditions. Nevertheless, as stated in paragraph 67 further discussions should be held concerning the acceptability of two, three-storey laboratory wings.

LIMIT OF COST

95. The limit of cost estimate for the proposal is \$10.75 million at February 1981 prices.

PROGRAM

96. The preparation of documentation for calling tenders will take nine months from the date of approval by Parliament. The tender and evaluation period will take three months and construction will take 24 months.

97. Committee's Conclusion Subject to the outcome of discussions mentioned in paragraph 67, the Committee recommends the construction of the works in this reference.

RECOMMENDATIONS AND CONCLUSIONS

98. The summary of recommendations and conclusions of the Committee and the paragraph in the report to which each refers is set out below.

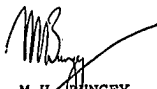
Paragraph

1. THERE ARE SUBSTANTIAL ADMINISTRATIVE SAVINGS AND SCIENTIFIC BENEFITS IN THE COLLOCATION OF THE DIVISION OF FISHERIES RESEARCH AND DIVISION OF OCEANOGRAPHY.

29

2. PRESENT FACILITIES AT CRONULLA ARE INADEQUATE TO SERVICE EXISTING AND FUTURE LEVELS OF SCIENTIFIC RESEARCH FOR BOTH THE DIVISION OF FISHERIES RESEARCH AND THE DIVISION OF OCEANOGRAPHY. SITE CONSTRAINTS AT CRONULLA PRECLUDE THE CONSTRUCTION OF ADDITIONAL FACILITIES THERE. 29
3. THERE IS A NEED FOR NEW FACILITIES ELSEWHERE TO ACCOMMODATE AT LEAST ONE OF THE DIVISIONS. 29
4. THE RELOCATION OF THE CSIRO DIVISIONS OF FISHERIES RESEARCH AND OCEANOGRAPHY FROM CRONULLA TO A SITE IN HOBART IS SUPPORTED. 43
5. THE SITE SELECTED IN HOBART ON THE CASTRAY ESPLANADE IS SUITABLE. 48
6. FURTHER DISCUSSIONS SHOULD BE HELD BETWEEN COMMONWEALTH, STATE AND LOCAL GOVERNMENT AUTHORITIES ON THE ACCEPTABILITY AND VIABILITY OF AN ALTERNATIVE DESIGN OF TWO, THREE-STOREY LABORATORY WINGS BECAUSE OF THE POSSIBLE COST SAVINGS. THIS PROPOSAL IS SATISFACTORY SUBJECT TO THE COMPLETION OF THESE DISCUSSIONS. 67
7. RELOCATION TO HOBART COULD CAUSE DIFFICULTIES FOR SOME STAFF MEMBERS AND THEIR FAMILIES. THESE DIFFICULTIES SHOULD BE OVERCOME THROUGH CONSULTATION WITH STAFF, BY RELOCATION ENTITLEMENTS AND THROUGH HELP TO BE GIVEN BY RELEVANT GOVERNMENT AGENCIES TO THOSE MOVING. 77

8. THE COMMONWEALTH SHOULD CAREFULLY EXAMINE THE
FUTURE USE OF THE CRONULLA LABORATORIES,
INCLUDING RECOGNITION OF ANY JOINT PROPOSAL
SUBMITTED BY UNIVERSITIES IN THE SYDNEY
AREA WITH INTERESTS IN MARINE SCIENCE
TEACHING AND RESEARCH. 89
9. THE LIMIT OF COST ESTIMATE FOR THE PROPOSAL
IS \$10.75 MILLION AT FEBRUARY 1981 PRICES. 95
10. SUBJECT TO THE OUTCOME OF DISCUSSIONS
MENTIONED IN PARAGRAPH 67, THE COMMITTEE
RECOMMENDS THE CONSTRUCTION OF THE WORKS IN
THIS REFERENCE. 97


M.H. GUNGEY
Chairman

Parliamentary Standing Committee on Public Works
Parliament House,
CANBERRA ACT
10 September 1981

CONSTRUCTION

99. Structure The four new buildings will be supported on concrete piles driven through the fill to bed rock up to 15 metres in depth. The superstructure will consist of reinforced concrete columns, beams and floor slabs designed for a load of 7.5 kPa in the laboratory wings and 5 kPa in the administration and amenities wing.

100. Service cores to the laboratory wings will be structurally isolated to prevent vibration transfer. Steel beams, which will span reinforced concrete columns, will support the first floor ceiling, mechanical duct work and the roof.

101. External Finishes The buildings will be finished externally to match sandstone colour and texture. Windows will be in anodised aluminium frames and will be tinted to reduce glare. Roofing will be pre-coated insulated metal deck.

102. Internal Finishes Internal walls will be painted plasterboard in laboratory areas, concrete in plant rooms and service areas, concrete block in workshops and stores, demountable partitions in administration areas and ceramic tiles in toilet areas. Stores, workshops and plant rooms will have off-form concrete ceilings. All other areas will have suspended acoustic ceilings.

103. Floors will be welded sheet vinyl in laboratory areas, carpet in administration areas, theatre, conference room and the library, ceramic tiles in toilets and trowelled concrete finish in stores and plant rooms.

104. Mechanical Services Air conditioning will be provided to special purpose laboratories, conference rooms, library and lecture theatre; heating and ventilation will be provided to all other areas. Radiant heating will be used for the workshop, stores and large-scale experiment area in Shed No. 3. Each laboratory wing will have its own plant room to provide air conditioning, heating or ventilation as required.

105. Laboratory services comprising vacuum, compressed air, purified water, nitrogen and domestic hot water will be reticulated from plant rooms in laboratory wings.

106. Other mechanical equipment will include cold rooms, freezer rooms, a gantry crane, spray paint booth, fume cupboards and fume exhaust hoods.

107. Solvents required for day to day use will be stored in specially designed cabinets in each laboratory; backup supplies will be stored in a solvent store in a service core and the bulk storage of chemicals will be in fire isolated stores in Shed No. 3.

108. Fire Protection In addition to the isolation of flammable solvents, liquids and chemicals, fire hazard will be reduced by the separation of buildings, and the provision of automatic fire sprinklers. In addition, smoke removal and control in the laboratory wings, amenities wing and laboratories in Shed No. 3 will be through a smoke exhaust system and the pressurisation of corridors. All fire safety and protection measures proposed will be in accordance with the requirements of the Commonwealth Fire Board.

109. Electrical Services Power supply will be reticulated from substations located to suit electrical loads. Power, for use by ships, will be maintained to existing wharf berthing outlets. Lighting will generally be fluorescent and emergency lighting will also be provided. External lighting for

security and safe access will be provided around the buildings, car park and wharf areas.

110. A central monitoring system for major plant equipment, critical environment conditions, fire and security will be installed.

111. An automatic switchboard and telephone outlets will be provided.

112. An emergency diesel generator to provide power to areas where mains failure could jeopardise the safety of personnel and equipment and laboratory areas where continuity of power is essential will also be provided.

113. A building security system to detect unauthorised entry will be installed and connected to the central monitoring system.

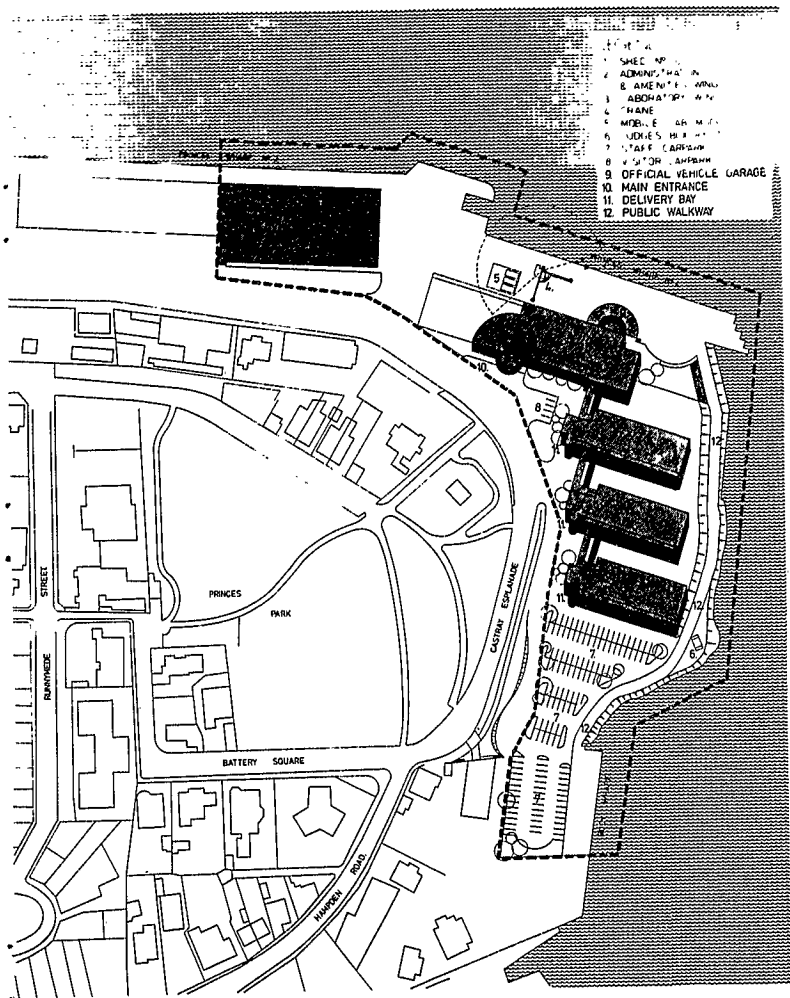
114. Lift Services Two passenger/goods lifts, of 2-tonne capacity, will be provided to serve the first floor in Shed No. 3 and the first floor of the laboratories and administration wings. The latter lift will be located in the central laboratory wing.

115. Hydraulic Services All sewage will be discharged to council mains. Existing water mains servicing the site are adequate for domestic flow. Water for fire fighting will be pumped from the Derwent River. Stormwater will be discharged through underground drainage to the river.

116. Disposal of Wastes Laboratory, canteen, ship and general waste will be treated as necessary and either removed from the site or discharged into the existing sewerage system in accordance with the requirements of local authorities.

117. Roads and Car Parking The existing road network to the site is structurally adequate for the demands of the project. Car parking will be in the southern portion of the site. Visitors will be provided with five parking spaces near the main entrance and secure garaging for five official vehicles will be under the canteen terrace in the administration wing.

118. Landscaping The site will be landscaped to visually integrate with Princes Park, to provide shade to the car park area and outdoor recreation area associated with staff amenities area.



SITE PLAN
PROPOSED

0 10 20 30



A.

PERSPECTIVE
FROM RIVER.



B.

THE SENATE

ROLL

15-9-81

SENATORS—

1. [REDACTED]	33. [REDACTED]
2. [REDACTED]	34. [REDACTED]
3. [REDACTED]	35. [REDACTED]
4. [REDACTED]	36. [REDACTED]
5. [REDACTED]	X 37. MACGIBBON X
6. [REDACTED]	38. [REDACTED]
7. [REDACTED]	39. [REDACTED]
8. [REDACTED]	40. [REDACTED]
9. [REDACTED]	X 41. MARTIN X
X 10. CHIPP X	42. [REDACTED]
11. [REDACTED]	43. [REDACTED]
12. [REDACTED]	44. [REDACTED]
13. [REDACTED]	45. [REDACTED]
14. [REDACTED]	46. [REDACTED]
15. [REDACTED]	47. [REDACTED]
16. [REDACTED]	48. [REDACTED]
17. [REDACTED]	49. [REDACTED]
18. [REDACTED]	50. [REDACTED]
19. [REDACTED]	51. [REDACTED]
20. [REDACTED]	52. [REDACTED]
21. [REDACTED]	53. [REDACTED]
22. [REDACTED]	54. [REDACTED]
23. [REDACTED]	55. [REDACTED]
24. [REDACTED] Margaret	X 56. TATE X
25. [REDACTED]	57. [REDACTED]
26. [REDACTED]	58. [REDACTED]
27. HARRADINE X	59. [REDACTED]
28. [REDACTED]	60. [REDACTED]
29. [REDACTED]	X 61. WALTERS X
30. [REDACTED]	62. [REDACTED]
31. [REDACTED]	63. [REDACTED]
X 32. KEEFFE X	64. [REDACTED]



THE SENATE

ROLL

15-9-81

SENATORS—

- | | |
|---|----------------------------|
| 1. ARCHER | 33. KILGARIFF |
| 2. BAUME | 34. LAJOVIC |
| 3. BYELKE-PETERSEN | 35. LEWIS |
| 4. BOLKUS | 36. MCLELLAND |
| 5. BONNER | 37. MacGIBBON X |
| 6. BUTTON | 38. McINTOSH |
| 7. CARRICK | 39. McLAREN |
| 8. CHANEY | 40. MACLIN |
| 9. CHILDS | 41. MARTIN X |
| X10. CHIPP X | 42. MARTIN |
| 11. COATES | 43. MASON |
| 12. COLEMAN | 44. MESSNER |
| 13. GOLLARD | 45. MISSEN |
| 14. GOLSTON | 46. MULVHILL |
| 15. CRICHTON-BROWNE | 47. PRIMMER |
| 16. DURACK | 48. RAE, Peter |
| 17. ELSTON | 49. RAY, Robert |
| 18. EVANS | 50. REID |
| 19. FOREMAN | 51. ROBERTSON |
| 20. GEORGES | 52. RYAN |
| 21. GIETZELT | 53. SCOTT |
| 22. GILES | 54. SIDRA |
| 23. GRIMES | 55. SIDDONS |
| 24. GUILFOYLE, Dame Margaret | X56. TATE X |
| 25. HAINES | 57. TEAGUE |
| 26. HAMER | 58. THOMAS |
| 27. HARRADINE | 59. TOWNLEY |
| 28. HEARN | 60. WALSH |
| 29. HILL | X61. WALTERS X |
| 30. JESSOP | 62. WATSON |
| 31. JONES | 63. WITHERS |
| X32. KEEFFE X | 64. YOUNG |

THE SENATE

ROLL

15-9-81

SENATORS—

1. ARCHER	22. KELGARIFF
2. BAUMS	23. LAYONIS
3. BELKE-PETERSEN	24. LEWIS
4. BOLKUS	25. MACLELLAND
5. BONNER	X37. MacGIBBON X
6. BUTTON	38. McINTOSH
7. CARRICK	39. McLAREN
8. CHANEY	40. MACKLIN
9. CHILDS	X41. MARTIN X
X10. CHIPP X	42. MARTIN
11. COATES	43. MASON
12. COLEMAN	44. MESSNER
13. COLLARD	45. MCGEN
14. COLSTON	46. MULVHILL
15. CRICKFORD-BROWNE	47. PRIMMER
16. DURACK	48. RAE, Peter
17. EUSTON	49. RAY, Robert
18. EVANS	50. RYD
19. FOREMAN	51. ROBERTSON
20. GEORGES	52. RYAN
21. GRETZELT	53. SCOTT
22. GILES	54. SHERRA
23. GRIMES	55. SIDDONS
24. GUILFOTTE, Dame Margaret	X56. TATE X
25. HAINES	57. TEAGUE
26. HAMMER	58. THOMAS
27. HARRADINE	59. TOWMEY
28. HEARN	60. WALSH
29. HILL	X61. WALTERS X
30. JESSOP	62. WATSON
31. JONES	63. WITHERS
X32. KEEFFE X	64. YOUNG