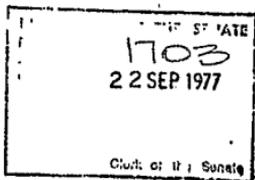


*Submitted 22/9/77*



1977

THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA

*Parliamentary Standing Committee on Public Works*

## REPORT

relating to the proposed construction of a

# NEW COMPLEX FOR THE ANTARCTIC DIVISION HEADQUARTERS

and for the

# HOBART REGIONAL LABORATORY

of the

# AUSTRALIAN GOVERNMENT ANALYTICAL LABORATORIES

Kingston, Tasmania

(NINTH REPORT OF 1977)

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PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

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Australian Government Publishing Service  
Canberra 1977

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PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

NEW COMPLEX FOR THE ANTARCTIC DIVISION HEADQUARTERS  
AND THE HOBART REGIONAL LABORATORY OF THE  
AUSTRALIAN GOVERNMENT ANALYTICAL LABORATORIES  
KINGSTON, TASMANIA

R E P O R T

By resolution on 31 March 1977 the House of Representatives referred to the Parliamentary Standing Committee on Public Works for investigation and report to the Parliament the proposal to construct a new complex for the Antarctic Division Headquarters and the Hobart Regional Laboratory of the Australian Government Analytical Laboratories at Kingston, Tasmania.

The proposal was first referred to the Committee on 8 October 1975 but the reference lapsed on 11 November 1975 with the dissolution of the Twenty-ninth Parliament.

The Committee has the honour to report as follows:

THE REFERENCE

1. The proposal referred to the Committee is for the erection of eight separate structures, seven of which will be occupied by the Antarctic Division and which will provide accommodation for offices, display and conference areas, laboratories, workshops and stores, while the remaining one will contain separate offices and laboratories for the Hobart Regional Laboratory of the Australian Government Analytical Laboratories. The buildings will be of reinforced concrete columns and pre-cast concrete wall panels. The roof will be of galvanised steel decking, suitably insulated and windows will be of tinted glass in aluminium frames. All occupied areas in the laboratories, administrative buildings and instrument workshop will be air conditioned.

2. The estimated cost of the proposal when referred to the Committee was \$7.3 million.

## THE COMMITTEE'S INVESTIGATION

3. The Committee received written submissions and drawings from the Departments of Science and Construction and took evidence from their representatives at public hearings in Melbourne on 23 June and Kingston on 24 June 1977. Prior to these hearings, the Committee inspected the existing facilities of the Antarctic Division in Melbourne and the proposed site at Kingston.
4. Following the June hearings, the Committee was not satisfied that sufficient evidence had been presented to enable it to report to Parliament. The Committee directed that further evidence in specified areas be provided at a public hearing to be reconvened in Hobart. The evidence requested, as well as other supporting evidence, as detailed in this report, was presented on 29 and 30 August 1977 and enabled the Committee to conclude its investigation.
5. In addition to the nominated witnesses from the Departments of Science and Construction, the Committee heard evidence from:
- three members of the Department of Science, appearing in a private capacity, a former head of the Antarctic Division and the Managing Director of a private company closely associated with the Antarctic Division, all of whom appeared before the Committee in Melbourne and who expressed reservations about the proposed transfer to Kingston;
  - a representative of the Kingborough Council, a former Member of the Commonwealth Parliament and two current Members of Parliament appeared before the Committee at Kingston and gave evidence in support of the proposal;
  - representatives of various departments and agencies of the Tasmanian Government, the Hobart Chamber of Commerce, the Union Steamship Company, the University of Tasmania and the Department of Environment, Housing and Community Development provided evidence at Hobart supporting the proposal.
6. At the invitation of the Committee, evidence was given at Hobart by:
- Sir Frederick White, K.B.E., a former Chairman of the C.S.I.R.O., who in 1974, had chaired an Advisory Committee on Antarctic Programs; and

- Professor PeterSchwerdtfeger, School of Physical Sciences, Flinders University, South Australia, a specialist in glaciology and meteorology and a member of the Advisory Committee on Antarctic Programs.

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

#### AUSTRALIAN SCIENTIFIC RESEARCH IN ANTARCTICA

8. By the Australian Antarctic Territory Acceptance Act of 1936, the Australian Government became responsible for an area which comprises about three-sevenths of Antarctica. Australia has been active in this area since 1947 and has maintained a permanent presence since 1954 through the occupancy of research stations by Australian National Antarctic Research Expeditions (A.N.A.R.E.).

9. In December 1959 Australia and eleven other nations signed the Antarctic Treaty which laid down some important principles underlying national and international involvements in scientific research in Antarctica. International collaboration had begun during the International Geophysical Year in 1957 and has continued uninterrupted on the continent itself and through regular consultative meetings of nations adhering to the Treaty.

10. A.N.A.R.E. and the Antarctic Division are located within the Department of Science and have provided outstanding service to Australia over the years through activities on the continent and the sub-Antarctic islands, Macquarie and Heard, and through excellent research in many fields of science.

#### FUNCTIONS OF THE ANTARCTIC DIVISION

11. The Antarctic Division has two main functions:

- general administration and logistic support of A.N.A.R.E. involving the establishment and maintenance of Antarctic and sub-Antarctic stations, the mounting of annual expeditions to the Antarctic and the co-ordination of the relevant activities of the agencies which make up A.N.A.R.E.;
- to conduct approved programs in various fields of scientific research which presently include upper atmosphere physics, cosmic ray physics, glaciology, biology and medical science.

## FUNCTION OF HOBART REGIONAL LABORATORY

12. As with other Australian Government Analytical Laboratories, the regional laboratory is required to carry out analysis and testing of a wide range of goods as a service for Commonwealth Departments and other organisations.

### THE NEED

13. Existing Facilities The Antarctic Division's headquarters are currently located in rented premises as follows:

- 568 St. Kilda Road, Melbourne - houses administrative, engineering and logistics activities, instrumentation workshop and laboratories and the Upper Atmosphere Physics Section. The current lease expires in March 1978, with an option for a further two years. It is hoped that this option can be extended by a further year.
- Baker Medical Research Institute, Commercial Road, Prahran - laboratories, office and storage space are rented within the Institute for the Medical and Biological Sections. The current lease expires in March 1978.
- Melbourne University - accommodates the Glaciology Section with office space and a room for computer terminals, together with a small laboratory, two cold rooms and ground space on which caravans for scientific work in the Antarctic are fitted out. The section's ice cores are located in a commercial ice works at Box Hill.
- Antarctic Division Store, Port Melbourne - this is the main holding store and, although large, is inadequate at peak periods. Large or dangerous stores are held by arrangement at Maribyrnong, Tottenham and at various contractors' premises.
- University of Tasmania - The Cosmic Ray Section has office space and the use of laboratories in the Physics Department.

14. The present accommodation for the Hobart Regional Laboratory of the Australian Government Analytical Laboratories is a single storey brick building adjacent to the Customs House in Davey Street, Hobart.

15. Inadequacy of Existing Facilities The Committee was advised that because staff are located in five different places, day to day communication is hindered thereby impeding the general operations and administration of the Antarctic Division. The St. Kilda Road premises were designed as open space office accommodation and, although adapted to the Division's purposes, they are not satisfactory for scientific research and engineering. Certain sections have insufficient space to function satisfactorily and at the crucial peak period when expeditions come on strength, overcrowding occurs and this, together with the lack of specialised facilities, obstructs essential training and preparation. Apart from the administrative support areas, the activities of the Division are specialised in laboratories, workshops, research facilities and specialised stores areas. The high cost of outfitting makes leasing of premises a less than attractive proposition and has in the past contributed to the diversification of locations. The proposal seeks to overcome these difficulties.

16. The Hobart Regional Laboratory has been examined by a C.S.I.R.O. Laboratory Design Team and by an officer of the Department of Construction concerned with fire and safety protection assessment. Adverse reports resulted from these inspections. Demand for analytical services has increased markedly in recent years. In 1970, the total laboratory staff was three; presently it is eight. In consequence, the laboratory is now overcrowded and it is impossible to operate it efficiently.

17. Committee's Conclusion There is a need for a centralised complex to replace the present fragmented and unsatisfactory accommodation of the Antarctic Division. The existing premises of the Hobart Regional Laboratory of the Australian Government Analytical Laboratories are unsatisfactory and should also be replaced.

#### THE PROPOSAL

18. The original proposal to transfer the Antarctic Division to Tasmania was first considered in 1973. It was confirmed by the previous Government in January 1974 and again, by the present Government, in March 1977. The objectives of this proposal are, therefore, to:

- comply with the Government's decision to bring all groups together at a new headquarters to be located in Hobart;
- provide new premises for the Hobart Regional Laboratory.

19. Decentralisation Aspects At the Hobart hearing a representative of the Department of Environment, Housing and Community Development explained the Department's role with respect to the location of Government employment and its responsibilities to advise and implement the Commonwealth's policies and programs for decentralisation. The Department fully supports the proposal.

20. Cost Penalties The Committee was told that there would be cost penalties involved in operating the Antarctic Division from Kingston; it was estimated these extra costs would range between \$250 000 to \$370 000 per annum. However, it is probable that the cost penalty will decrease as the Antarctic Division becomes more established in its new location.

21. The Department of Environment, Housing and Community Development pointed out that the beneficial effects on the local economy in terms of increased employment and demand for goods and services would outweigh any cost penalties.

22. Committee's Conclusion The Committee recognises that the proposed transfer of the Antarctic Division from Melbourne to Kingston is based on decentralisation grounds.

23. Staffing Aspects The staff to be accommodated is currently 96 which is the total of approved permanent positions in the Antarctic Division. This is estimated to rise to around 120 on moving to Hobart. In the main, the increase will be attributable to additional support staff for the workshops and facilities to be provided for the first time in this centralised complex. Other increases may result from examination of the structure of the Division prior to the move.

24. The permanent staff is augmented at the headquarters by expeditions. The maximum total population at the headquarters may be in excess of 200 for short periods and is expected to be normally in the order of 180 for the peak months of September to January, and in the quietest months to reduce to approximately 150.

25. A recent assessment of permanent staff indicated that approximately one-third desired to transfer to Kingston, one third declined and one-third were undecided. This does not necessarily imply that the same results would be obtained when staff finally have to make up their minds about the transfer. The shortfall in staff will, no doubt, allow some local recruitment especially at the clerical and technical support level.

26. The present staff of the Hobart Regional Laboratory is eight. There will be an added workload brought about by increased environmental and pollution monitoring. The laboratory carries out some work for the Baseline Air Pollution Station recently set up at Cape Grim in the far north-west of Tasmania. An increase in staff arising from these activities can be foreseen and will be provided for in the proposed complex.

#### EVIDENCE REQUESTED BY THE COMMITTEE

27. Subsequent to the public hearings of 23 and 24 June, the Committee formed the view that on the evidence received to that time it was not in a position to make a recommendation to the Parliament on this proposal. The Committee therefore decided to continue the inquiry and to seek further evidence from particular witnesses on a number of matters which had arisen at the previous hearings. In particular the Committee sought clarification on the following matters.

28. The White Paper on Australia's Antarctic Activities The Committee was concerned that a complex had been designed to perform particular functions in the absence of a decision on Australia's future role in Antarctica and which may have required a different complex from that designed.

29. Scientific Research Evidence had been given to the Committee at the Melbourne hearing that the scientific sections of the Antarctic Division should not be centralised at Kingston but would benefit scientifically by being attached to various universities. This point was made with particular reference to the Glaciology Section.

30. Logistics and Technical Support It had been claimed at the Melbourne hearing that severe logistic problems would be encountered in the supplying of Antarctic expeditions from Hobart. It was further claimed that Hobart did not possess the necessary technical support facilities to adequately service Australian National Antarctic Research Expeditions. The Director of the Antarctic Division, Dr. R.I. Garrod, stated in evidence that in his opinion there would be problems in operating from Hobart but believed that they could be overcome.

#### EVIDENCE PROVIDED TO THE COMMITTEE

31. White Paper and Design Flexibility Following further evidence from the Departments of Science and Construction, the Committee is now satisfied that there is sufficient design flexibility for the complex,

particularly the laboratory facilities, to successfully adapt to changing requirements. The Committee understands that the Government has now made a firm commitment to the release of the White Paper on Australia's Antarctic activities.

32. Committee's Conclusion The design of the complex should be sufficiently flexible to enable it to adapt to possible changing requirements.

33. Scientific Research During the public hearing in Melbourne on 23 June 1977 a strong case was put to the Committee by Dr. W.F. Budd, Head of the Glaciology Section of the Antarctic Division and Dr. U. Radok of the Meteorology Department, University of Melbourne, that the Glaciology Section should remain in its present location at the University of Melbourne. It was claimed that the glaciology research of the Antarctic Division had been greatly advantaged by the close co-operation which had developed with the Meteorology Department of the University of Melbourne. The two groups had been able to share staff resources, equipment etc to mount a scientific program of world repute. Dr. Budd and Dr. Radok argued that the relocation of the Glaciology Section in the proposed centralised complex at Kingston would effectively put an end to the joint research program.

34. In response, Dr. Garrod, Director of the Antarctic Division, recognised that it would be extremely difficult for the Glaciology Section to maintain its close contacts with the Meteorology Department of the University of Melbourne from Kingston. However, he also stressed the managerial and administrative problems which would arise if the Glaciology Section was to remain in Melbourne while the remainder of the Antarctic Division moved to Kingston.

35. It was also argued by Dr. P.G. Law, a former Director of the Antarctic Division, that none of the scientific sections of the Antarctic Division should be centralised at Kingston but would be more effectively placed at various universities.

36. Following a request by the Committee, the Department of Science presented additional evidence on the matter of scientific research.

37. The Department of Science is firmly opposed to the transfer of the scientific research function of the Antarctic Division to the universities. However, the Department would welcome a situation in which the Antarctic Division, other government agencies and the universities would collaborate in Antarctic research on some mutually agreed basis.

38. As previously stated, Australia is a signatory to the Antarctic Treaty and, as scientific research is a highlight of the Treaty, is committed to sponsoring a program of research in the Antarctic that will command the respect of other Treaty nations. It is through its scientific work that Australia gives tangible evidence of its presence in Antarctica and maintains an occupancy of the Territory over which sovereignty is claimed.

39. As universities are autonomous institutions they can not be directed by the Government to undertake scientific programs in the Antarctic. The Department of Science regards it as essential that the Government must have direct control over a substantial research program which in itself would command the international interest and respect desired.

40. However, the Department will now be approaching the Government for approval to change the Antarctic Division's scientific program. If the Government was to agree, the Antarctic Division in the immediate future would aim to improve and enlarge its capabilities in biology, marine science and Antarctic engineering and technology.

41. The Antarctic Division would seek to encourage the universities and other appropriate bodies to undertake a greater commitment and responsibility in glaciology, upper atmosphere physics, cosmic ray physics, meteorology and climatology.

42. If the Government was to agree to these changes, the way would be open for discussions with the Tertiary Education Commission and interested universities for the transfer of research in glaciology, cosmic ray physics and upper atmosphere physics from the Antarctic Division.

43. Committee's Conclusion The Committee agrees that the Antarctic Division should maintain a scientific research program. There should be greater co-ordination between the Antarctic Division and the universities in Antarctic scientific research. The Committee urges the Government to agree to the changes in the Antarctic Division's scientific program proposed by the Department of Science. The Committee is convinced that any disruption of the relationship between the Glaciology Section and the Meteorology Department of the University of Melbourne would not be in the best interests of science. The Committee believes that the Glaciology Section should not be transferred to Kingston.

44. Logistics and Technical Support At the hearings in Hobart on 29 and 30 August 1977, the Committee received further evidence on logistic and technical support matters from the Department of Science, a number of Tasmanian Government Departments and instrumentalities, the University of Tasmania, the Hobart Chamber of Commerce and the Union Steamship Company.

45. The Committee believes that the evidence given regarding the logistic support and engineering facilities available within Tasmania will be of great benefit to the Division when it commences operations at Kingston. Offers of technical support were forthcoming from the Hydro-Electric Commission with regard to its workshop facilities at Moonah, the Science Centre of the Department of Education and the workshops of the University of Tasmania with regard to the manufacture of specialised instruments and the Computer Services Branch of the Treasury.

46. The Committee was impressed by the willingness of the Tasmanian Government to assist the Antarctic Division in this area. Information sought by the Committee from the Commonwealth Department of Transport indicated that regular shipping and air freight services are available between the mainland and Tasmania and the evidence indicates that the capacity exists between the two transport modes to cater adequately for the needs of the Antarctic Division.

47. The Hobart Chamber of Commerce stressed the importance of the freight equalisation scheme introduced in 1976 in solving many of the problems which formerly were associated with mainland to Tasmania shipping services, particularly the unreliability of services and their cost.

48. The Hobart Chamber of Commerce also pointed out the Australian Council of Trade Unions recognised the importance of transport services to the Tasmanian economy. It is A.C.T.U. policy that consideration will be given to causing the least disruption possible with regard to industrial disputes involving transport services.

49. Committee's Conclusion The Antarctic Division can operate satisfactorily from Kingston. While the transfer to Kingston will present some initial operational problems the Committee believes these can be overcome.

## DESCRIPTION OF THE COMPLEX

50. The proposed complex comprises eight separate structures - seven being for the Antarctic Division and one for the Analytical Laboratory. The seven buildings for the Antarctic Division comprise three two-storey, interconnected buildings for administration, museum and conference facilities, and operations and development, two two-storey buildings for laboratories, one large rectangular building with ground and mezzanine levels for the store and workshops and one ice tower building. The single building for the Hobart Regional Laboratory will also be two-storey. A site plan of the complex, providing more detail, is at the end of this report.

51. Design Considerations. Generally, the design of this project is most effected by the diverse work groups and functions maintained by the Antarctic Division, the sloping site, its semi-rural surroundings and the climate.

52. A single massive structure to house all the functions of the Antarctic Division was considered and rejected in favour of a number of individual buildings. This will allow each functional group its own identity and for each to be housed with facilities and services appropriate for its needs and in accommodation suitable for its particular activities. Potentially fire hazardous functions can be isolated from other functions, substantially reducing fire spread risks. Generally the building design is sufficiently flexible to tolerate future internal re-arrangements to suit functional or organisational changes:

53. The design maintains a two-storey height limit and further reduces scale by partially cutting the building into the site. The placement of the bulky stores building on the lower level, well shielded from view, is considered desirable for compatibility with future adjacent residential development.

54. Two vehicular access points to the site are provided from the Channel Highway. On the construction of the proposed Algona Road, the complex could benefit further by the introduction of additional access along the south boundary.

55. Entry for staff and visitors will be direct from the car park via ramps. Circulation between the buildings generally will be provided by covered pedestrian ways at ground and first floor levels. Provision will also be made for vehicular access to the buildings.

56. Museum and Conference Facilities Placed prominently at the south-west corner of the complex, this block will form a focal point at the main entrance to the administration building. It will contain the museum, conference room, library, reception and miscellaneous functions. During the hearing we were informed that the space for the museum will be utilised for general exhibitions rather than strictly for museum purposes.
57. Administration Building This will accommodate administrative functions at first floor level. The gymnasium, kitchen, canteen, toilets and change rooms will be at ground floor level.
58. Operations and Development This building will be designed as a separate unit linked to the administration building and house engineers, technical officers and expeditions conveniently near the workshops, clothing store, gymnasium and canteen. Provision will be made for two additional bays if required in the future.
59. Proposed Laboratories The building design as submitted to the Committee included two separate but similar laboratory buildings to cater for the scientific research functions of the Antarctic Division. The buildings will allow efficient grouping of the various scientific disciplines and services required including the Instrumentation Section which supports the scientific disciplines by the design, development, construction and modification of specialised scientific equipment for use in the Antarctic.
60. Laboratory No. 1, adjacent to the main entrance, was designed for biology, medicine, photography and glaciology. Laboratory No. 2 was designed to house the physics and instrumentation laboratories. Each building has offices along its north side with the laboratories on the south taking advantage of more even natural illumination. Sufficient space has been provided to the north of Laboratory No. 2 for an additional laboratory block if required in the future.
61. As mentioned earlier in this report, the Department of Science desires the Antarctic Division to concentrate on biology, marine science and Antarctic engineering and technology and will be approaching the Government for its approval for the new scientific program.
62. Build-Up in Antarctic Operations The Committee notes that the Minister for Science has recently announced plans for a major build-up of programs and facilities in support of Australia's activities in the Antarctic including a rebuilding program at the Antarctic stations and an

increase of 15 in the staff of the Antarctic Division. The precise allocation of the additional numbers is yet to be determined but part of the increase will be required to support the first phase of the major program of maintenance and rebuilding of Antarctic stations and some extra scientists will also be appointed to provide additional support to the scientific program.

63. The first steps will also be taken to extend Australia's scientific program into the marine areas around Australia. Two staff will be employed during 1977/78 and will initially concentrate their efforts on encouraging and developing marine science programs which might be undertaken by government and non-government agencies, laying the foundations in marine biology and physical oceanography to be undertaken by the Antarctic Division and co-ordinating participation in industrial marine scientific programs and the programs of other countries.

64. While the Committee agrees with the Department of Science that the glaciology and cosmic ray physics research efforts should remain with the Universities of Melbourne and Tasmania respectively and that upper atmosphere physics could be effectively transferred to the Mawson Institute or Latrobe University, it is concerned at the effect this will have on the provision of laboratory space in the proposed complex. In effect, the Department of Science is proposing the removal of three of the four scientific functions on which the need for the two laboratory buildings at the new complex has been based.

65. Having considered the additional evidence placed before it, the Committee is not convinced that the Department of Science can quantify its need for laboratory facilities. The Committee believes that the need for laboratory facilities should be re-examined after the Government has made a firm decision as to the specific tasks to be undertaken by the Antarctic Division at Kingston. This could be done without seriously affecting the building program as outlined by the Department of Construction.

66. Committee's Conclusion The provision of laboratory facilities for the Antarctic Division should be re-examined when a firm decision is made by the Government as to the specific scientific tasks to be undertaken by the Antarctic Division at Kingston.

67. Stores and Workshops This building will house engineering and instrument workshops, a store for specific and bulk items and mechanical plant.

68. The workshop will occupy the south-east corner of the building, close to the operations and development block. Miscellaneous stores will occupy the area adjoining the west wall and a mezzanine level and a two-storey clothing store will be along the south wall.

69. The location of mechanical plant, cooling towers, electrical substation, switch room and generator in the south-west corner will minimise reticulation of services to the other buildings. The design of this building allows for future extensions up to 20 per cent.

70. The Ice Tower This requirement is related to glaciology and may therefore not be needed. It consists of a vertical cold room designed to house a 10 metre high column of ice one metre in diameter and would enable development and testing of thermal probe and ice sampling equipment.

71. Australian Government Analytical Laboratory The Hobart Regional Laboratory is a separate functional entity to the Antarctic Division and will therefore require separate administrative staff and reception facilities to complement its laboratory functions. Amenities such as the canteen will be shared as will back-up areas such as office services and reproduction facilities.

#### THE SITE

72. The site, which was acquired in 1974, is approximately 6 hectares in area and is set amid undulating land on the outskirts of Kingston, south of Hobart, on the Channel Highway. It is generally grassed with a few trees confined to the banks of a creek which cuts across the site north to south.

73. The major part of the site lies between the creek and the Channel Highway on the western boundary. It has good access and is suitable for building purposes. The smaller portion east of the creek will be used for field exercises.

74. Strategic planning of the Kingborough Council envisages that the area around the site will be eventually developed for residential purposes.

75. The selection of the site at Kingston took into account the various criteria laid down for a suitable site. Although it is 12 kms from the wharves at Hobart, road access over most of the distance is by expressway

without transit through the main streets of the city. There is a short part of the Channel Highway to traverse at the Kingston end. This road, although adequate, is planned to be upgraded to expressway standard. The University of Tasmania lies between the site and Hobart.

76. Reviews in 1976 and 1977 confirmed the Kingston site as the best available without prohibitive financial penalties. State and local government authorities have indicated their support for the proposal.

77. The proposal of the Hydro-Electric Commission of Tasmania to erect an electrical substation about 800 metres from the site may result in some radio frequency interference but this should not exceed that which can be expected from the future residential development adjoining the site. Should this present a problem it can be overcome by establishing a remote radio receiving station and test site and by installing a screened room at an estimated additional cost of \$30 000.

78. Committee's Conclusion The site selected is suitable.

#### CONSTRUCTION

79. Foundations Tests show that the site provides a firm sandy clay foundation providing satisfactory support for a conventional footing design to be adopted.

80. Structure The stores and workshops will have a steel frame with pre-cast concrete wall panels and concrete floor. All other buildings will be reinforced concrete framed with concrete floors, ramps and stairs.

81. External Materials and finishes generally will be chosen to reduce maintenance consistent with economic and functional requirements. Walls are to be constructed of concrete blockwork together with aluminium framed tinted glass windows. Areas of exposed structure such as columns, ramps and in some cases stairwells, will be appropriately finished in off-form concrete. Where used, asbestos fascias will be finished consistent with the other external materials. Precast panelling will have an aggregate finish.

82. Internal Materials will be generally selected to suit aesthetic and functional needs.

83. Engineering Services Refrigeration equipment and hot water boilers will be provided in the central plant room from which both chilled and hot water will be reticulated to the various air handling plants in each building.

84. Air conditioning will be provided to all occupied areas in the laboratories, administrative buildings and instrument workshop by air handling plants located in each building with separate plant serving various zones as necessary.
85. The Committee sought additional information on the provision of air conditioning in the administrative areas. The Committee is satisfied that air conditioning is justified, as proposed, having taken into account factors such as flexibility of space, established community practice and the relatively small capital and running cost penalty.
86. Ventilation systems will be provided for toilets, kitchen, plant rooms, gymnasium, substation and selected areas within the stores building.
87. Laboratory buildings will be provided with normal laboratory facilities including fume cupboards, gas, compressed air, vacuum, special gases and hot water.
88. Other mechanical services include cold rooms, domestic hot and cold water, kitchen equipment and hoisting facilities in the workshop.
89. Electrical Services Electricity will be purchased from the Hydro Electric Commission of Tasmania and supplied through an internal transformer substation.
90. The electrical installation will be complete with all necessary lighting, power outlet and public address system. A burglar alarm system will be installed and car park external flood lighting will be provided to assist security and permit night operation. Provision will also be made for a PABX system.
91. A 150 kVA auto-start emergency diesel generator will be provided for the air conditioning system and for lighting for the security and alarm systems.
92. Fire Protection The separation of the complex into a number of buildings provides basic fire isolation of different functions. Workshops will be fire isolated from the warehouse area.
93. Early warning and thermal detector fire alarms will be provided in the laboratory and administrative buildings and a wet pipe sprinkler system will be provided in the stores building complete with primary mains supply and secondary tank water storage facilities.

94. A fire hydrant service will be provided incorporating hose reel units strategically located around the complex and supplemented by portable fire extinguishers.

95. Hydraulic Services Water will be drawn from the municipal mains with distribution via a ring main within the site. A sewerage pumping station including a holding pit will be provided to pump sewage to the town system. Stormwater will be discharged into an existing water course on the site, after being treated in accordance with procedures set out in the Environmental Impact Statement.

96. Landscaping The boundaries of the site will be landscaped with a dense buffer of Tasmanian native trees and shrubs to ensure that the complex will integrate with the present rural landscape and to protect the complex from prevailing winter winds.

97. Car parking areas will be screened by mounding and shrub planting along the Channel Highway. Post and wire fencing will be provided to the site as required. A security fence will enclose the north and east sides of the storesbuilding to form a store yard.

98. Access and Car Park Vehicle access to the complex will be by two entrances off Channel Highway. The northern entrance is for staff and service vehicles as well as an entry to the Australian Government Analytical Laboratory. The main entrance adjacent to the museum will be defined by a change in character of the landscape. The entrance approach will consist of a pedestrian path and vehicle drive flanked by trees. The path will open onto a paved forecourt which can be used as an exhibition space. Car parking will be provided for 164 vehicles to cater for staff and visitors.

99. Environmental Aspects An environmental impact statement on the proposal was made public in February 1975 and comments regarding noise, landscaping and effluent neutralisation have been taken into account in the preparation of building designs.

100. Committee's Conclusion Subject to the reservations expressed in paragraphs 43 and 66 above the Committee recommends the construction of the work in this reference.

ESTIMATE OF COST

101. The estimated cost of the proposal when referred to the Committee was \$7.3 million at March 1977 prices and is made up as follows:

	\$
Building	2 420 000
Structural	2 150 000
Mechanical	1 370 000
Electrical	580 000
Hydraulics	240 000
Civil	460 000
Landscaping	80 000
	<hr/>
	7 300 000

102. The estimated cost of the two laboratory buildings and associated services proposed for the Antarctic Division is as follows:

	\$	
No. 1 Laboratory	625 000	
No. 2 Laboratory	645 000	
	<hr/>	
	1 270 000	at March 1977 prices.

PROGRAM

103. It is estimated that following approval to proceed with documentation the following program can be achieved:

Documentation	8 months
Tenders	3 months
Construction	30 months
	<hr/>
Total	41 months

104. The Antarctic Division has stated a requirement to take up occupancy of the facilities in the first half of 1981. The project will therefore have to be committed very early in the 1978/79 financial year.

## RECOMMENDATIONS AND CONCLUSIONS

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

	<u>Paragraph</u>
1. THERE IS A NEED FOR A CENTRALISED COMPLEX TO REPLACE THE PRESENT FRAGMENTED AND UNSATISFACTORY ACCOMMODATION OF THE ANTARCTIC DIVISION.	17
2. THE EXISTING PREMISES OF THE HOBART REGIONAL LABORATORY OF THE AUSTRALIAN GOVERNMENT ANALYTICAL LABORATORIES ARE UNSATISFACTORY AND SHOULD BE REPLACED.	17
3. THE COMMITTEE RECOGNISES THAT THE PROPOSED TRANSFER OF THE ANTARCTIC DIVISION FROM MELBOURNE TO KINGSTON IS BASED ON DECENTRALISATION GROUNDS.	22
4. THE DESIGN OF THE COMPLEX SHOULD BE SUFFICIENTLY FLEXIBLE TO ENABLE IT TO ADAPT TO POSSIBLE CHANGING REQUIREMENTS.	32
5. THE COMMITTEE AGREES THAT THE ANTARCTIC DIVISION SHOULD MAINTAIN A SCIENTIFIC RESEARCH PROGRAM.	43
6. THERE SHOULD BE GREATER CO-ORDINATION BETWEEN THE ANTARCTIC DIVISION AND THE UNIVERSITIES IN ANTARCTIC SCIENTIFIC RESEARCH.	43
7. THE COMMITTEE URGES THE GOVERNMENT TO AGREE TO THE CHANGES IN THE ANTARCTIC DIVISION'S SCIENTIFIC PROGRAM PROPOSED BY THE DEPARTMENT OF SCIENCE.	43
8. THE COMMITTEE IS CONVINCED THAT ANY DISRUPTION OF THE RELATIONSHIP BETWEEN THE GLACIOLOGY SECTION AND THE METEOROLOGY DEPARTMENT OF THE UNIVERSITY OF MELBOURNE WOULD NOT BE IN THE BEST INTERESTS OF SCIENCE.	43
9. THE COMMITTEE BELIEVES THAT THE GLACIOLOGY SECTION SHOULD NOT BE TRANSFERRED TO KINGSTON.	43
10. THE ANTARCTIC DIVISION CAN OPERATE SATISFACTORILY FROM KINGSTON.	49

Paragraph

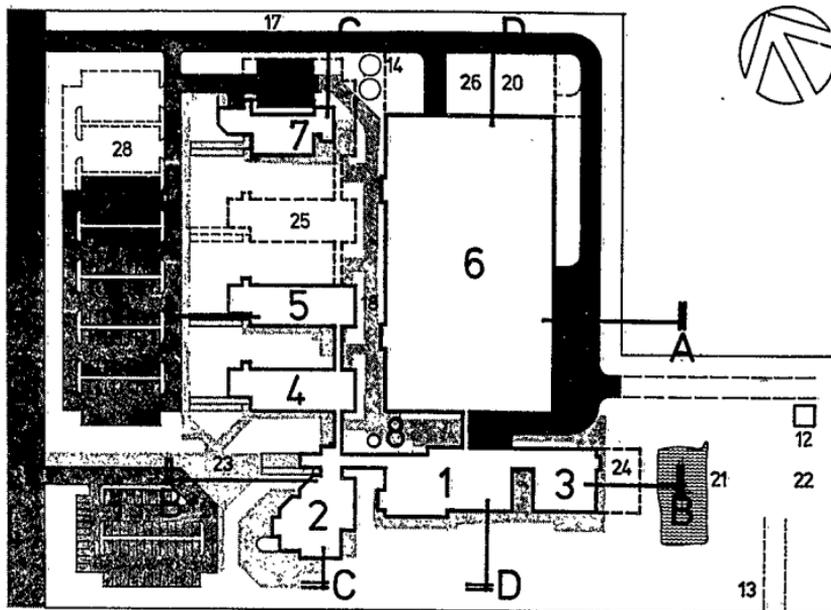
11. WHILE THE TRANSFER TO KINGSTON WILL PRESENT SOME INITIAL OPERATIONAL PROBLEMS THE COMMITTEE BELIEVES THESE CAN BE OVERCOME. 49
12. THE PROVISION OF LABORATORY FACILITIES FOR THE ANTARCTIC DIVISION SHOULD BE RE-EXAMINED WHEN A FIRM DECISION IS MADE BY THE GOVERNMENT AS TO THE SPECIFIC SCIENTIFIC TASKS TO BE UNDERTAKEN BY THE ANTARCTIC DIVISION AT KINGSTON. 66
13. THE SITE SELECTED IS SUITABLE. 78
14. SUBJECT TO THE RESERVATIONS EXPRESSED IN CONCLUSIONS 9 AND 12 ABOVE, THE COMMITTEE RECOMMENDS THE CONSTRUCTION OF THE WORK IN THIS REFERENCE. 100
15. THE ESTIMATED COST OF THE PROPOSAL WHEN REFERRED TO THE COMMITTEE WAS \$7.3 MILLION AT MARCH 1977 PRICES. 101



(L.K. JOHNSON)  
Vice-Chairman

Parliamentary Standing Committee on Public Works,  
Parliament House,  
CANBERRA, A.C.T.

15 September 1977.



- 1 ADMINISTRATION  
 2 MUSEUM - CONFERENCE  
 3 OPERATIONS - DEVELOPMENT  
 4 LABORATORY 1  
 5 LABORATORY 2 } See paragraphs 59-66 of Report.  
 6 STORE - WORKSHOP  
 7 AUST. GOVT. ANALYTICAL LAB.  
 8 ICE TOWER - See paragraph 70 of Report.
- 9 VISITOR/SNR. STAFF CAR PARK  
 10 GENERAL STAFF CAR PARK  
 11 A.G.A.L. CAR PARK  
 12 INFLAMMABLE LIQUIDS STORE  
 13 FUTURE ACCESS TO ALGONA RD  
 14 SPRINKLER TANKS  
 15 MAIN ENTRY  
 16 STORE ENTRY  
 17 STORE/WORKSHOP ACCESS ROAD  
 18 FIRE VEHICLE ACCESS  
 19 WORKSHOP HARDSTANDING  
 20 EQUIPMENT ERECTION AREA  
 21 EXISTING POND  
 22 FUTURE USE  
 23 ENTRY FORECOURT  
 24 FUTURE OFFICE SPACE EXTENSION
- 25 FUTURE LABORATORY BUILDING  
 26 FUTURE STORE EXTENSION  
 27 FUTURE A.G.A.L. EXTENSION  
 28 FUTURE CAR PARK EXTENSION

SITE PLAN

0 10 20 40 80m. DRG.

