

*Parliamentary Standing Committee on Public Works*

## REPORT

relating to the

# CHRISTMAS ISLAND REBUILDING PROGRAM

(Fifth Report of 1992)

The Parliament of the Commonwealth of Australia  
Parliamentary Standing Committee on Public Works

Report Relating

to the

# Christmas Island Rebuilding Program

(Fifth Report of 1992)

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**MEMBERS OF THE PARLIAMENTARY STANDING COMMITTEE  
ON PUBLIC WORKS**

(Thirtieth Committee)

Mr Colin Hollis MP (Chairman)  
Mr William Leonard Taylor MP (Vice-Chairman)

**Senate**

Senator Bryant Robert Burns  
Senator Paul Henry Calvert\*  
Senator John Robert Devereux

**House of Representatives**

Mr Ewen Colin Cameron MP  
Mr Lloyd Reginald O'Neil MP  
Mr Russell Neville Gorman MP  
Mr Bruce Craig Scott MP

\*Appointed on 24.8.90 following the retirement of Senator  
Dr Glenister Sheil

Committee Secretary: Peter Roberts

Secretarial Support: Sue Whalan

EXTRACT FROM THE VOTES AND PROCEEDINGS OF  
THE HOUSE OF REPRESENTATIVES

No. 115 dated Wednesday, 25 March 1992

- 12 PUBLIC WORKS - PARLIAMENTARY STANDING  
COMMITTEE - REFERENCE OF WORK - CHRISTMAS  
ISLAND REBUILDING PROGRAM: Mr Beddall (Minister  
representing the Minister for Administrative Services), 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: Christmas Island  
Rebuilding Program.
- Mr Beddall presented plans in connection with the proposed work.  
Debate ensued.  
Question - put and passed.

**PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS**  
**CHRISTMAS ISLAND REBUILDING PROGRAM**

By resolution on 25 March 1992, the House of Representatives referred to the Parliamentary Standing Committee on Public Works for consideration and report the Christmas Island Rebuilding Program.

**THE REFERENCE**

1. The alignment of conditions on Christmas Island with mainland standards is part of a broader Government policy aimed at the integration of Australia's Indian Ocean Territories within Australia. The rebuilding program will provide for substantial new infrastructure for the Island. At the time of the public hearing the Government had committed \$37m over the next five years for the most urgent of the works subject to the endorsement of the Committee. The most urgent works include:

- . a new and upgraded sewerage system and water supply
- . a new hospital
- . a new police station
- . extensions to the school
- . upgraded housing

2. Extensions to other works are included in the overall rebuilding program referred to the Committee. Possible funding for those other works will be considered by the Government following the Committee's report.

3. The rebuilding program is proposed to be carried out in two stages over a 10-year period, with the first stage planned to commence in 1992/93. Various urgent maintenance works in the areas of communications, sewerage and water supply were implemented in 1991/92. These works are consistent with the rebuilding program. The fuel facilities on the island are to be upgraded under a commercial agreement outside the rebuilding program.



4. The estimated cost of the total rebuilding program when referred to the Committee was \$132m at January 1992 prices. At the public hearing the Committee was provided with an updated cost estimate of \$132.85m.

#### THE COMMITTEE'S INVESTIGATION

5. The Committee received written submissions from the Department of the Arts, Sport, the Environment and Territories (DASET) and Australian Construction Services (ACS) and evidence was taken from both organisations at public hearings on Christmas Island on 14 and 15 May and in Canberra on 25 May. The Committee also took evidence from Western Australian Government agencies in Perth on 11 May and from the following persons and organisations on Christmas Island on 14 May:

- . Administration of the Territory of Christmas Island
- . Christmas Island Assembly
- . Christmas Island Services Corporation (CISC)
- . Australian National Parks & Wildlife Service (ANPWS)
- . Union of Christmas Island Workers (UCIW)
- . Christmas Island Chamber of Commerce
- . Phosphate Resources NL
- . Christmas Island Resort Pty Ltd
- . Mr Hugh Yorkston (represented by Mr Barry Fullard)
- . Christmas Island Islamic Council
- . Australian Heritage Commission (AHC)
- . Mr Chee (private citizen)
- . Mr Hansman (private citizen)
- . Western Australian Government.

6. Evidence was also taken from Senator G Tambling and the Hon W E Snowdon MP in Canberra on 25 May.

7. A number of written submissions relating to the project were also received from other organisations and these are incorporated in the Minutes of Evidence.

8. Prior to the public hearings on 14 and 15 May the Committee inspected existing facilities and the sites for new facilities on 13 May. The Committee also had the opportunity to inspect progress on the construction of the casino project.

9. A list of the witnesses who gave evidence at the public hearings is at Appendix A. The Committees proceedings will be printed as Minutes of Evidence.

## INTRODUCTION

### Location

10. Christmas Island, with an area of 135 square kilometres, is located in the Indian Ocean, at latitude 10 deg. 25' south and longitude 105 deg. 43' east. It is 360 kilometres south of Java Head at the southern entrance to the Sunda Strait - 1312 kilometres from Singapore and 2623 kilometres from Perth. The nearest point of the Australian mainland is Northwest Cape which lies 1408 kilometres to the southeast.

### History

11. Christmas Island was named on Christmas Day 1643 by Captain William Mynors, the master of a passing ship. The first landing was recorded by William Dampier in 1688. For the next two centuries, little interest was shown in the Island due to its rugged coastline.

12. However, following the discovery of phosphate deposits, the Island was annexed by Britain in 1888. By agreement with the United Kingdom, sovereignty was transferred to Australia on 1 October 1958 under the *Christmas Island Act 1958*. Both Singapore and Indonesia have expressed territorial interest in the Island from time to time but at present there are no challenges to Australian sovereignty.

13. A phosphate mining operation was established in 1897. The Australian and New Zealand Governments bought the operation in 1947. The Government-owned mining operation was most recently operated by the Phosphate Mining Corporation of Christmas Island (PMCI) until mining ceased in December 1987.

14. Labour for the operation was imported, principally from Malaysia. Until the mid-1970s working conditions were poor by Australian standards. The Union of Christmas Island Workers (UCIW) was established in 1975 and has been successful in upgrading wages and conditions for its members.

15. A lower scale of mining operation, involving the removal of lower grade phosphate from surface dumps, was recommenced in September 1990 (see paragraph 52).

### Geography

16. Christmas Island is the summit of a submarine mountain. It rises steeply to a central plateau dominated by towering stands of rainforest. The plateau reaches heights of up to 361 metres and consists mainly of limestone interstratified by layers of volcanic rock.

17. The 80 kilometre coastline is an almost continuous sea cliff, ranging in height to 20 metres. In a few places breaks in the cliff give way to shallow bays with small sand and coral shingle beaches. The largest of these bays forms the Island's port at Flying Fish Cove. The distance from the residential/industrial area in the northeast to the extreme tips of the Island is approximately 18-20 kilometres.

18. The Island is surrounded by an encircling coral reef. There is virtually no coastal shelf and the sea plummets to a depth of 5000 metres within 200 metres of the shore.

### Climate

19. Christmas Island has a tropical climate with two distinct seasons. During the wet season, which occurs between December and April, temperatures average 28°C, average relative humidity is around 90%, and rainfall varies between 2000 and 2500 mm. Winds tend to be from the north with speeds of 21-30 knots. Heavy north-westerly sea swells occur during the wet season, often disrupting port operations.

20. During the dry season, from May to November, the average temperature is 22°C with relative humidity of around 80%. Winds tend to be from the south east with speeds of 11-20 knots.

21. Cloud is recorded on an average of 15 days per month throughout the year and may so reduce visibility as to cause the airport to become unusable.

### **The People**

22. The current population is estimated to be approximately 1300 with an ethnic composition of around 66% Chinese, 20% European and 14% Malay. About 30% of adults on Christmas Island are Australian citizens. All residents have permanent resident status and are eligible to apply for citizenship.

23. The main organisations in the Chinese community are the Chinese Literary Association and the Poon Saan Club. These help to organise the major Chinese cultural festivals.

24. The Muslim community mostly live separately in a Kampong (communal village) for religious and dietary reasons. The Malay community has an Islamic Council and the Malay Club.

25. Both the Chinese and Malay communities celebrate festivals related to their traditional cultures.

26. These and other religious celebrations, festivals and customs have become part of the lifestyle of Christmas Island.

### **Status of the Territory and Its Residents**

27. The *Christmas Island Act 1958*, administered by the Minister for the Arts and Territories, provides the legislative basis for the Territory's administrative, legislative and judicial systems.

28. The Act was amended in December 1980 to enable all persons who were residents on Christmas Island when it became an Australian Territory, and who now reside in Australia or a Territory of Australia, to opt for Australian citizenship.

29. The *Migration Act 1958* was extended to apply to Christmas Island from 23 January 1981, conferring Australian resident status on all residents of Christmas Island. Residents who were not eligible to apply under the Christmas Island Act are eligible to apply for Australian citizenship under the Citizenship Act which applies to the Island. The extension of the Migration Act to the Territory has made Christmas Island a first point of entry into Australia.

### Representation

30. In accordance with the *Administration Ordinance 1968* an Administrator, appointed by the Governor-General, administers the Territory on behalf of the Commonwealth. Subject to the direction of the Minister for the Arts and Territories, the Administrator is responsible for law, order and good government, including the provision of functions such as health, education, etc.

31. For the purposes of enrolment and voting in federal elections, Christmas Island was declared an 'Electoral District' of the Commonwealth Division of the Northern Territory.

32. A total of 346 people were enrolled for the Christmas Island Assembly election in December 1990.

### Christmas Island Assembly

33. The Christmas Island Assembly was established under the *Christmas Island Assembly Ordinance 1985*. The Assembly has the power to direct the Christmas Island Services Corporation (CISC), which administers local government-type services, in the performance of its functions. The Government dissolved the Assembly in November 1987 due to its inability to develop a responsible budget for CISC. The Administrator of Christmas Island was appointed to act as the Assembly and to exercise its powers and perform its functions.

34. The Government agreed during discussions with the UCIW in May 1989 that the Christmas Island Assembly would be re-elected in 1990 under an amended Ordinance. As an interim measure an advisory body known as the Christmas Island Local Assembly was established in August 1989.

35. The agreed amendments to the Christmas Island Assembly Ordinance included Australian citizenship requirements and three months (minimum period) residency on Christmas Island.

#### Normalisation

36. In 1984 the Government announced a policy of normalisation for the Island whereby standards of services and rights and responsibilities enjoyed by residents on the mainland were to be extended to the Island.

37. This has included the extension of mainland wages and employment conditions, taxation and social security benefits.

#### Legal Regime

38. In March 1991, following an inquiry into the legal regimes of Australia's External Territories and the Jervis Bay Territory, the House of Representatives Standing Committee on Legal and Constitutional Affairs tabled its report 'Islands in the Sun'. This inquiry exposed the deficiencies of the Singapore-based legal systems of Cocos (Keeling) and Christmas islands.

39. In responding to 'Islands in the Sun' in September 1991, the Government decided that, with effect from 1 July 1992, the current laws of Cocos and Christmas islands would be replaced by application of Western Australian laws in force from time to time and the extension of all Commonwealth laws.

40. The Cocos (Keeling) Islands Council and the Christmas Island Assembly have been consulted and agree with the changes, which are part of a broad reform process for the islands.

41. *The Territories Law Reform Bill 1992* to implement the changes required by the Government's decision was passed by the Parliament in June 1992.

42. Negotiations are progressing with Western Australian agencies for the delivery of their services and performance of functions in the Indian Ocean Territories on behalf of the Commonwealth.

43. A community education program, focussing on the day to day impacts of Western Australian and Commonwealth laws, has been implemented for the residents of Cocos (Keeling) and Christmas islands.

## THE NEED

### Introduction

44. The need for major upgrading of the infrastructure on Christmas Island has been given impetus by the introduction of mainland Australian laws from 1 July 1992. The condition of much of the essential infrastructure on the Island for the delivery of government services is in a run-down condition and does not meet mainland health and safety standards. This includes buildings and other infrastructure for health services, water and sewerage, port and harbour, roads, education, power supply, communications and general administration. The existing infrastructure was built to meet the needs of mining operations and the needs of mine workers. It was generally not designed in accordance with current mandatory regulations. The Committee was advised that in the period when mining operations were running down, the infrastructure of the Island was allowed to deteriorate, with virtually no maintenance being undertaken.

45. Until recently all the buildings and infrastructure on the Island, including all housing, were owned by the Commonwealth. A process of divestment has now begun, whereby land and buildings not required for the delivery of government services are being disposed of to private and commercial owners. This is being achieved principally through public auctions. The Committee was advised that an auction in November 1991 realised \$1.3m for consolidated revenue.

46. DASET advised the Committee that the current run down condition of the infrastructure needs to be understood against the unique geography and social, cultural and political/administrative history of the Island (see paragraphs 10-43).

47. The strategic and defence importance of both Cocos (Keeling) and Christmas islands were recognised by the Government in 1983 when the decision was taken to proceed with normalisation. DASET indicated to the Committee that it will raise with the Department of Defence the possibility of it making a contribution towards the cost of upgrading facilities with defence implications such as airfields.

## Objective of the Rebuilding Program

48. The objective of the Christmas Island rebuilding program is to bring the Commonwealth-owned and managed infrastructure for the delivery of government services up to mainland Australian standards.

49. The alignment of conditions on Christmas Island with mainland standards is part of a broader Government policy aimed at the integration of Australia's Indian Ocean Territories within Australia. This policy was formally expressed in 1983 when the Government decided that:

the objective of the Government's policies be that the Indian Ocean Territories remain permanently Australian Territories and be integrated with Australia.

50. This is now the case politically, with Christmas and Cocos (Keeling) islands residents who are Australian citizens included in the electorate of the Northern Territory.

51. In the case of the Cocos (Keeling) Islands the Government decided that, in pursuing the integration objective, Australia would adhere to United Nations principles, and conduct an Act of Self-Determination. In the lead-up to the self-determination vote the Commonwealth promised that Cocos (Keeling) Islands living standards and its services would be brought to mainland standards no later than 1994.

52. In 1984 the Government approved development of a staged integration package for Christmas Island involving the establishment of local government and the extension of mainland rights and benefits. It endorsed work to bring about the normalisation of Christmas Island with mainland conditions. This normalisation process, which began formally on 1 October 1984, was interrupted due to problems which were associated with the failure of the Government-owned phosphate mining venture in 1987. The Government subsequently agreed to recommencement of mining in order to clear the Island's stockpiles. In 1990 mining activity began again for an anticipated 10 year stockpile clearance program under strict environmental guidelines. Mining is being carried out by a private enterprise consortium which is 100% owned by the Union of Christmas Island Workers.



53. An aspect of the integration objective for Christmas Island has been a commitment to the promotion of the Island's economic growth, with a recognition of the need to diversify its economic base. Tourism is the most promising alternative industry. In 1989 a site lease was signed with Christmas Island Resorts for the construction of a casino. Construction of the casino building is now well advanced and it is scheduled for opening early in 1993. The Committee was advised that the casino will directly create 400 jobs.

54. A major barrier to the integration of the Indian Ocean Territories into Australia has been the Islands' Singapore-based legal system.

55. As discussed in paragraphs 38-43 the Government agreed, in September 1991, to the replacement, from 1 July 1992, of the existing legal regimes of the Cocos (Keeling) Islands and Christmas Island by Western Australian and Commonwealth laws.

56. The introduction of mainland laws has given an urgency to the completion of the normalisation process for Christmas Island. Consistent with the legal regime reforms a Christmas Island Strategic Plan has been prepared and a proposed Package of Changes has been developed. These outline the measures now necessary to extend to the residents of Christmas Island, rights, opportunities and obligations equivalent to comparable mainland communities, including similar local and state-type government structures, taxes and charges. The proposed package of changes and the strategic plan have been developed in consultation with the local community and have received the endorsement of the Christmas Island Assembly. The development of the rebuilding program has been an element in this consultative process, and it is referred to in both the strategic plan and the package of changes.

#### Condition of the Existing Infrastructure

57. The existing infrastructure on Christmas Island was designed and built to meet to meet the requirements and standards of a mining operation. Significant components the Second World War, including the hospital, the police station, the Drumsite school and much of the housing. A period of renewed construction began after the Second World War, but by the mid-1970s new construction activity had tailed off. With the decline in mining profitability and the uncertain future of the Island in the 1980s, there was little incentive to invest in the maintenance of the Island's infrastructure. DASET submitted that, as a result, most of the current infrastructure is

more than 30 years old, is in a poor condition and does not meet current Australian building, health and safety standards. Western Australian Government agencies have made it clear that its present condition is unacceptable for their operations and their staff. For example, the Health Department identified a requirement for \$2.7m of upgrading to existing health service facilities, independent of a new hospital. Following its inspection the Committee can only agree with DASET's assessment that the infrastructure is in an extremely poor condition.

58. The harsh marine and tropical Christmas Island environment has contributed to the decline in the condition of the infrastructure. Building life cycle expectancies are less on Christmas Island than in many other locations due to the tropical climate, with consistently high temperatures and humidity, and salt spray laden air on the lower terraces. Metals are particularly vulnerable. In 1988 a sub-cyclonic tropical storm caused widespread destruction, particularly on the lower terrace. Evidence of its effects is still apparent.

#### **Committee's Conclusion**

59. Much of the essential infrastructure on Christmas Island for the delivery of government services is in a run down condition and does not meet mainland Australian health and safety standards. The Committee agrees that there is a need to bring the Commonwealth-owned and managed infrastructure on Christmas Island for the delivery of government services up to mainland Australian standards as soon as possible. The Committee also agrees that there is a need to align conditions on Christmas Island with mainland Australian standards as part of the broader objective of integrating the Indian Ocean Territories within Australia.

#### **THE PROPOSAL**

##### **Development of the Christmas Island Rebuilding Program**

60. Against the policy background outlined above, ACS was engaged by DASET in September 1991 to carry out a comprehensive examination of the condition of the Island's infrastructure. This examination has led to the development of the proposed Christmas Island rebuilding program. The brief given was to identify the works that would be necessary to bring the condition of the infrastructure up to minimum mainland standards.

Mainland standards were defined as those conditions that would apply in comparable isolated communities on the mainland, with particular reference to Western Australia.

61. Both DASET and ACS strongly rejected suggestions that the standards proposed for the rebuilding program were too lavish. It was pointed out to the Committee that the normalisation policy recognises that Christmas Island is a permanent part of Australia and aims to extend to Christmas Island residents the same rights, opportunities and obligations as comparable mainland communities. Normalisation therefore includes the introduction of a whole range of taxation measures including income and company tax.

62. DASET believes that the rebuilding program should be seen as one of the avenues to achieve parity with the rest of Australia. It also needs to be pointed out that because of freight charges it can cost up to twice as much to build on Christmas Island as in Perth. DASET also pointed out that by using Western Australian agencies to deliver services there will be long term savings in recurrent costs. Current running costs, less revenue and receipts, are expected to fall by about 23% over a five-year period. In 1991/92 running costs for Christmas Island, less revenue and receipts, were \$7.4m. DASET estimates that in 1996/97 this will fall to \$5.7m.

63. The Committee was provided with confidential information which indicates that the operation of the Christmas Island Resort should generate considerable revenue for the Commonwealth.

64. The rebuilding program has been developed through consultations on Christmas Island in conjunction with the strategic plan and the package of changes, and with Western Australian Government agencies. Wherever possible, the standard design provisions for buildings and services used by Western Australian agencies in their own operations have been used. This can readily be seen in plans for the hospital and other proposed new buildings.

65. Because of the extensive nature of the upgrading identified by ACS, it was first necessary to prepare a construction master plan for the rebuilding program. This master plan was developed by ACS at the same time as the development of a draft town plan for the Island. In keeping with the consultative approach to the development of the rebuilding program

the master plan was submitted to the Christmas Island Assembly for endorsement. It was put on public display on the Island, with translations into Chinese and Malay.

66. The initial scope of works for the rebuilding program included fuel supply infrastructure. Consistent with mainland practices, action has been taken to encourage private enterprise operation of these facilities. This has been successful. Following a public tender process, a Memorandum of Understanding has been signed with a private company to take over the operation and upgrading of the fuel facilities to Australian standards. The upgraded facilities will be located at Smith Point, in accordance with the draft town plan.

### Options Considered

67. In developing the rebuilding program, ACS was asked by DASET to consider alternative options. Alternative locations were canvassed as part of the development of the draft town plan. The development of the draft town plan itself was a contributor, in some cases, to recommendations for new construction. The locations proposed for new buildings and facilities in the master plan are the result. In most cases new construction is recommended in view of the age, configuration and condition of the existing infrastructure. However, existing buildings are being retained and upgraded where possible, for example, the Drumsite school and residential housing. The Committee was advised by DASET that information on alternatives considered against each item in the rebuilding program was documented and evaluated in the context of the environmental impact assessment process.

68. As items were included in the rebuilding program they were given a priority assessment against the following categories:

- A health or safety requirement
- B developmental or revenue generating
- C required to achieve specific mainland standards
- D required for efficient and effective delivery of services
- S sequential - controlled by sequence of work.

69. These assessments were used to plan the proposed sequencing of the construction work plan for the rebuilding program.

## **PROGRAM**

### **Priorities**

70. The rebuilding program as proposed by DASET and ACS is in two five year stages, due to the extent of the work involved. Stage 1 involves construction commencing in 1992. It includes work on most of the Category A items. Those Category A items omitted from Stage 1 were judged to involve lesser health or safety risks at this stage of the Island's development. Stage 2 continues works begun in Stage 1. It also includes items less urgent, but still necessary to provide an infrastructure equivalent to that of comparable mainland communities. The proposed design and construction schedules for Stages 1 and 2 are shown in bar chart form at Appendix B. However, Cabinet, when agreeing to refer the project to the Committee, committed \$37m over the next five years for the most urgent of the works subject to the Committee's endorsement. These included:

- . new and upgraded sewerage system and water supply
- . a new hospital
- . a new police station
- . extensions to the school
- . upgraded housing.

71. Other works in Stages 1 and 2 were included in the overall building program referred to the Committee. The Government indicated that possible funding for the remaining works would be considered following the Committee's report.

72. At the public hearing, having had the benefit of a thorough inspection of the existing infrastructure, it became obvious to the Committee that the \$37m committed by the Government did not include all essential items. These were:

- . clearing of aggregate plant from hospital site

- . power and water supply to hospital site
- . new crane
- . wharf and jetty upgrading.

73. The result of this situation is that while the hospital could be built, there are no funds to provide power and water supply to it. Even more serious is the situation regarding the crane and wharf and jetty facilities. The Christmas Island Administration, in its submission, pointed out that the rebuilding program will almost double the usage of the port to some 800 containers per year. The Administration indicated that the infrastructure of the port is inadequate for current usage and will be completely inadequate for the volume proposed. The existing crane has a capacity of 15 tonnes while containers have a capacity of 20 tonnes. In addition, both the wharf and jetty facilities have serious deficiencies. The Administration made the obvious point that the port infrastructure is critical to the success of the rebuilding program and any failure will bring the program to a halt. (See paragraphs 148-151 and 156-159 for details regarding the replacement crane and wharf and jetty refurbishment.)

74. DASET and ACS were requested by the Committee to re-order priorities for inclusion in the \$37m committed by the Government if initial expenditure were to be limited to that amount. It was made clear that this would not be regarded by DASET or ACS as a satisfactory situation but the priorities would be:

- . new hospital
- . removal of sand and aggregate plant from hospital site
- . water and power supply to hospital site
- . water and sewerage works
- . new crane and minor wharf upgrading.

75. The new police station would have to be deferred and some \$700 000 would have to be omitted from works proposed for the school and housing items. It should be stated that the Australian Federal Police have strongly argued for the retention of the police station in Stage 1.

76. Due to the pressure of other inquiries the Committee was not able to table its report before the winter recess. However, the Committee was of the view that its attitude towards the rebuilding program should be made known to the Government so it could be taken into account during budget considerations. On 4 June, in a letter to the Minister for the Arts and Territories, the Chairman indicated that the Committee believed that the priorities determined by the Government for inclusion in the \$37m committed over the next five years did not include all essential items.

77. The Committee recognised that to include all the essential items proposed by DASET and ACS such as a new crane, minor wharf upgrading and the provision of power and water supply to the hospital site within the \$37m, would require the exclusion of some existing items or an increase in the amount committed at this stage. It was the view of the Committee that before any item was excluded from the initial program, the Government should consider increasing the amount to be committed over the first five years. The Committee notes that following budget considerations the amount committed by the Government has now been increased to \$42m to provide for additional items of critical importance, including wharf improvements and a new wharf crane.

78. The Committee also recognises that the Government's commitment to address the immediate infrastructure, health and safety issues may encourage private investment in the future development of Christmas Island. The Committee is therefore of the view that prior to the final commitment to the total ten year rebuilding program, there should be an assessment of the success of the initial funding. This may lead to changes in priorities and/or funding levels.

#### Committee's Recommendation

79. The Committee recommends that prior to the final commitment to the total ten year rebuilding program there should be an assessment of the success of the initial funding program which may lead to changes in priorities and/or funding levels.

#### Master Planning

80. A master planning study has been undertaken by ACS to provide a suitable framework for the rebuilding program, as it affects the existing and new facilities. The designs allow for a population increase from the present

1,500 people to a maximum of 4000 residents and visitors. The elements considered in the study were as follows:

- the draft town plan
- location of all proposed facilities
- existing facilities to be retained for existing or other functions
- facilities that require demolition, with a timing in the upgrade program
- the residential accommodation; whether particular residences are to be retained for the Administration staff allocation or whether they are to be sold/leased or made available for redevelopment
- the identification of facilities that could or should be relocated
- identification of functions which could be re-housed in existing buildings
- facilities which could be sold/leased/redeveloped
- the views of the AHC
- the views of the ANPWS.

81. The study also included the examination of options for tourist development and the town plan's intention to centralise health care and business functions at Poon Saan.

82. The Flying Fish Cove Tourist Precinct was considered in detail to establish the extent of the future development. The Poon Saan area has been planned to form the nucleus of a future central business district. The master planning was undertaken in concert with the development of the draft town plan.



## Committee's Conclusion

83. The Committee agrees that the master plan provides a suitable framework for the rebuilding program and has been developed in conjunction with the draft town plan.

### Construction Period

84. DASET proposes that the rebuilding program be undertaken in two stages the first commencing in the 1992/93 financial year. The expected construction period of each program is five years. However, a number of groups put forward the proposal that the construction period should be reduced from ten to five years. These included the Christmas Island Administration, the Christmas Island Assembly, the Christmas Island Services Corporation, the Union of Christmas Island Workers and the Christmas Island Chamber of Commerce. A reduced construction period was seen as being cheaper as well as having advantages in the continuity of supply, plant, ancillary equipment and the provision of facilities for the work force.

85. ACS informed the Committee that if the rebuilding program were undertaken in five years rather than ten years, there would be a saving of some \$20m. DASET indicated that while it was in favour of a shorter construction period, advice from the Department of Finance indicated that the budgetary implications of a shorter construction period precluded this option.

### Design Control

#### Natural Environment

86. Careful consideration has been given to the relationship between all proposed buildings and the existing Island environment. Landscaping design will integrate all new works with the natural landscape, including imaginative use of indigenous plant material. Engineering infrastructure works will be located, designed and controlled to minimise its impact on the natural environment. The design of buildings will recognise the climate of Christmas Island and will minimise reliance upon mechanical forms of environmental control through the use of passive energy conservation measures.

87. ACS advised that the design wind speed for construction will be 55 metres/sec. Christmas Island is judged to be in a sub-cyclonic area and the incidence of tropical cyclones in the vicinity is apparently very low. Most of the recorded strong winds have been generated by thunderstorms or tropical storms and are of a lower strength than those from a cyclone.

#### Design Criteria

88. ACS advised the Committee that the design of all new and extended buildings will empathise with existing buildings, whilst expressing their own individual form and treatment. The scale will be in harmony with the existing built environment.

89. Materials will be selected to blend with the existing townscape. Their durability and performance in a marine environment, with due regard to cost restraints, will form essential selection criteria. The selection of colours and tones will complement the existing development.

90. Adherence to building controls imposed by the Building Code of Australia and Western Australian Regulations pertaining to building performance, fire safety and health and amenity are prerequisites of all development. Special allowance will be provided for the disabled, in terms of access and toilet facilities.

91. Engineering works will comply with relevant Australian and Western Australian codes and standards whilst addressing the particular requirements of Christmas Island. Shipping costs, local materials availability and other remote area factors have been properly considered.

92. Preliminary design by ACS includes consideration of existing asbestos building materials, fire safety, survey of existing roofing, waste management and pollution control, communications and power supply and distribution.

#### Heritage Considerations

93. The AHC was given advance notice of the proposal for a Christmas Island rebuilding program in September 1991. At that time AHC staff were evaluating Christmas Island material for possible nominations for inclusion in the Register of the National Estate. Close liaison with AHC officers followed and the heritage listings under consideration were taken into

account in the development of the draft town plan and the construction master plan. The AHC was provided with a copy of the master plan and the schedule of works for the rebuilding program.

94. In January 1992 the AHC recommended the listing of a number of historic areas on Christmas Island in the Register of the National Estate. A number of these areas will be affected by the rebuilding program:

- . Lower Terrace industrial and administrative area (wharf etc)
- . Poon Saan area
- . Flying Fish Cove Settlement - residential and services areas
- . Malay Kampong area
- . Drumsite industrial area.

95. In most cases the rebuilding activity can be carried out without adverse impact on heritage aspects. Some of the initial rebuilding plans have been changed to avoid heritage disturbance but there are some items in the rebuilding program where there is no prudent or feasible alternative. These items principally involve roadworks which are proposed for safety reasons. They include demolition of buildings necessary to make the Murray Road intersection safe in the lower terrace industrial and administrative area.

96. The Murray Road demolition work is planned to be carried out so as to retain the old gaol, which is currently incorporated as part of the carpenter's workshop. Other demolition work with heritage implications includes removal of the disused fuel infrastructure on the wharf. It was proposed by ACS that the existing facilities be demolished except the fuel tank with the strafing marks. The tank would be strengthened to withstand severe wind loads in the empty condition. The widening of Gaze Road in the Settlement residential precinct (scheduled for Stage 2), which initially involved the proposed demolition of a number of adjacent houses, is now planned in such a way as to retain these buildings.

97. During the public hearings the Committee queried the need for the retention of the fuel tank as proposed by the AHC. The AHC maintained that the tank is of considerable historic value as physical evidence of the impact of the Second World War on both Australia and Christmas Island is

extremely rare. The AHC believes that demolition of the repaired tanks and the retention of only marked fragments would result in the loss of much of the context of this valuable evidence. If possible, at least the marked fuel tank should be retained.

98. Having had the benefit of inspecting the tank, the Committee is not convinced of the value of its retention and believes that the sections containing the strafing marks should be removed from the tank and displayed in a suitable location with an explanation of their significance. The land occupied by the tank could then be used for recreational purposes.

99. In relation to other matters raised by the AHC, DASET advised the Committee that conditions will be placed on the re-use of vacated buildings to ensure the maintenance of heritage values. DASET also assured the Committee that discussions will be held with the AHC regarding the need for a Conservation and Management Plan and other suggestions concerning the recording and management of the historic fabric of the Island, including funding for these activities.

#### **Committee's Conclusion**

100. The Committee believes that heritage aspects of Christmas Island have been given due regard and protection in the development of the master plan and the rebuilding program. In most cases rebuilding activity can be carried out without adverse impact on heritage aspects. However the Committee does not believe that the retention of the fuel tank containing the strafing marks is justified.

#### **Committee's Recommendation**

101. The Committee recommends that the fuel tank containing the strafing marks be demolished and the section containing the strafing marks should be removed and displayed at a suitable location with an explanation of their historical significance.

#### **Environmental Impact**

102. As indicated earlier in this report the condition and configuration of the existing infrastructure on Christmas Island is environmentally unsound.

The lack of sewage treatment is not acceptable and the condition of the existing hospital and many other buildings and service facilities is a potential environmental hazard.

103. The rebuilding program has been designed to rectify this situation. To ensure the rebuilding program itself is carried out in an environmentally sound manner, ANPWS was engaged by DASET as environmental protection services consultants. Its brief included responsibility for preparing the Notice of Intention required under the *Environment Protection (Impact of Proposals) Act 1974*. The ANPWS was chosen to provide environmental protection advisory services in view of its special knowledge and expertise in relation to the Christmas Island environment. The ANPWS already has an ongoing responsibility for management of the Island's National Park, and maintains a full-time presence on the Island.

104. While elements of the Christmas Island rebuilding program will have a significant effect on the environment, it is the view of ANPWS that the result will be environmentally extremely beneficial. The construction of an effective sewerage system, the development of satisfactory methods for the disposal of toxic and other wastes, proper pollution controls and adequate stormwater systems to prevent soil erosion are but some examples of the benefits to the natural environment which should occur as a result of the rebuilding program. Additionally, the significant health and public safety improvements encompassed by the rebuilding program would result in a considerably better civic and social environment on the Island. These latter improvements would have no significant adverse impact on the natural environment. The close involvement of the AHC has also ensured that the rebuilding program will have no significant adverse effect on the cultural heritage of the Island. (See paragraphs 93-101.)

105. Because of the significant effect of some of the elements of the rebuilding program on the environment a Notice of Intention was submitted to the Environment Assessment Branch of DASET, in accordance with the *Environment Protection (Impact of Proposals) Act 1974*, on 24 January 1992.

106. Following an examination of the rebuilding program by the Commonwealth Environmental Protection Agency, the Minister for Arts, Sport, the Environment and Territories determined that no environmental impact statement or public environment report was required to satisfy the objectives of the Act. This decision was made on the basis that

environmental matters had been properly examined and taken into account and that any impacts would be of a minor nature, provided that adequate environmental protection measures are implemented.

107. DASET advised the Committee at the public hearing that it would comply with the conditions laid down. The Committee notes that one of the conditions was that the Christmas Island Assembly consider methods of reducing the impact of new road arrangements on red crabs during the migration season. The ANPWS suggested to the Committee that tunnels to divert the red crabs under roadways should be trialled to assess their feasibility. The Committee was informed that the cost of such a trial would be between \$100 000 and \$1.6m. DASET undertook to discuss this matter further with the ANPWS.

### Sewerage

108. The existing sewerage system comprises a variety of collection and disposal systems, including large community septic tanks, individual septic tanks, and large and small direct discharges to cliff-face outfalls into the ocean or into the rainforest. These systems are in varying states of disrepair and do not provide a coordinated solution to meet relevant standards. Significantly, the only easily accessible sea recreation area at Flying Fish Cove suffers at times from faecal contamination.

109. The planning includes urgent interim repairs to existing installations using current funds. The provision in the rebuilding program of a new collection, treatment and disposal system will make use of all suitable existing components.

110. A new package sewage treatment plant will be installed at Smith Point. This plant, which could be easily extended, will be sized to cater for present demands, but the trunk mains will be sized to allow for a population of around 4000 people. Re-use of effluent is not viable at this stage and it will therefore be discharged via an underwater sea outfall. Only acceptable industrial wastes will be permitted to be discharged to the sewerage system. Regular monitoring of the ocean condition will ensure that the design and operation of the outfall will not compromise the receiving waters.

111. The package sewage treatment plant will produce secondary effluent of a standard which will ensure the return of swimming waters at Flying Fish Cove to World Health Organisation standards.

## Water Supply

112. The program will ensure that a reliable supply of water is delivered and maintained in sufficient quantities to meet consumption and fire fighting demands of the present and the increased population.

113. The main source of water supply is from springs and underground streams. These sources are dependent to some extent on rainfall which occurs during the wet season from November to April. The trunk delivery mains running from these sources are within the Christmas Island National Park. All new works will therefore be subject to the requirements of the National Parks and Conservation Act.

114. The existing trunk delivery mains comprise above ground asbestos cement pipes which are generally at the end of their economic life. These will be replaced by underground mains sized to accommodate the additional demands of this program and likely future development. Additional water storage on Phosphate Hill will be provided.

115. A new below ground fire hydrant reticulation system will be installed. It will be serviced with adequate flows and pressures compatible with regulation Western Australian Fire Brigade equipment.

## Committee's Conclusion

116. The rebuilding program will have a number of beneficial environmental effects including the provision of an effective sewerage system, the development of satisfactory methods for the disposal of toxic and other wastes, proper pollution controls and adequate stormwater systems to prevent soil erosion.

## Road Works

117. Road works to improve safety and traffic flows will include:

- . new roads at the Murray Road/Irvine Hill Road 'S' bend and in the Drumsite residential area
- . intersection at Murray Road/Gaze Road and Phosphatere design Hill Road/Murray Road
- . reconstruction Smith Point access and the Settlement road layout

·	realignment	Gaze Road between the supermarket and the hospital and Murray Road adjacent to the old phosphate mine driers
·	road sealing	Phosphate Hill Road to the airport and Gaze Road between Seaview Lodge and the golf course
·	general repairs	Centenary Park access and Smith Point utilities service road (from Murray Road)
·	passing lane	uphill on Murray Road
·	traffic islands	in Poon Saan
·	road markings	generally
·	off-road parking	in Poon Saan
·	site preparation	Smith Point sewage treatment site and fuel farm.

118. In its submission, the Christmas Island Resort, the casino operator, expressed concern about the road turnoff from the airport to Waterfall and from the golf course to Waterfall. It pointed out that these roads are soon to become the busiest on the Island and should be sealed. ACS estimated that sealing would cost \$1.2m. DASET indicated that it was not averse to the inclusion of this work in the rebuilding program. Its exclusion was based on an assessment of priorities.

#### **Committee's Recommendation**

119. The Department of the Arts, Sport, the Environment and Territories should include the sealing of the roads from the airport turnoff to Waterfall and from the golf course to Waterfall in the rebuilding program.

#### **Stormwater Drainage**

120. The Christmas Island terrain is characterised by many steep slopes which result in high flow rates of stormwater runoff. The flows from the large catchment area of Silver City, Poon Saan and above are directed towards the old Incline Railway, which has been modified to intercept storm water flows.



121. It is proposed that basins be constructed as part of the Incline stormwater system to control the outflows which are expected to increase with further residential and commercial development in the area.

122. The section of outfall drain between Gaze Road and the sea cliff face was destroyed in the 1988 storm and will be replaced, to an adequate design.

123. Drains in the Kampong area have been blocked by stones and debris from storms and will be cleared and fitted with rock screens to avoid recurrence.

124. Settlement roads will be provided with a piped drainage system discharging at several outlets at the cliff face.

125. Drainage from Drumsite presently discharges onto the cliff face above the Kampong causing erosion to the rainforest floor. These discharges will be collected in a piped system and directed to an erosion control basin south of Drumsite school. From this point, they will discharge directly to the sea via an open drain.

#### **Fuel Facilities**

126. A 25 year lease has been negotiated by the Commonwealth for the provision and operation of petroleum storage and distribution facilities. This work does not form part of the rebuilding program. However, some associated work is included in the program. This includes:

- provision of water, service roads and power supplies essential to the operation of the extended Smith Point fuel farm
- upgrading of the existing fuel storage capacity at the power station
- site preparation at Smith Point.

#### **Power Generation and Distribution**

127. The existing diesel generator power station and distribution system is old and is only capable of serving the Island's current power demands for a limited period. The power generation equipment is no longer considered to be fuel efficient. The reticulation is deficient with respect to safety and efficiency.

128. The existing infrastructure will be modified to meet mainland standards and regulations and to efficiently meet changing community requirements. Included are modifications necessary for safety and compliance with mainland standards as well as modifications required to improve operational efficiency.

129. New generating sets will be sized to meet the forecast base load. The existing units will provide supplementary capacity to meet peak power demands.

130. The distribution system will comprise a new high voltage underground interconnector between the power station and the Poon Saan switching station as well as the modification and replacement of existing lines and sub-stations. New kiosk type sub-stations will be provided for new residential and commercial developments.

131. A new medium voltage distribution system of underground cables serving distribution pillars, or area boards where larger capacity power supplies are required, will also be provided.

132. New street lighting will be provided to re-engineered roads and intersections. Where existing street lighting is inadequate, it will be replaced with energy efficient sodium type lighting. The foreshore pedestrian walkway, footpaths and jetty will all be provided with suitable lighting.

133. Some concern was expressed at the public hearing at the standard of electrical work and services on the Island. The Christmas Island Administration is aware of a serious problem with existing electrical services and pointed out that \$2.4m has been spent since 1988 on the housing upgrade program mostly related to essential electrical rewiring. It also pointed out any dangerous wiring detected is rectified on a priority basis. All electrical work is carried out by SECWA licensed tradesmen to SAA standards. All work is inspected by a SECWA registered inspector.

#### Alternative Power Supplies

134. Consideration was given by ACS to the use of wind and solar energy on the Island. It concluded that such renewable energy sources do not present a viable cost effective alternative for power generation at this time. ACS also rejected a proposal put forward by Mr Hugh Yorkston, a resident of Christmas Island, for a station based on solar power to supply the Island's electricity requirements. ACS concluded from its examination of Mr Yorkston's proposal that there was no cost advantage in providing a

station based on solar power on the Island. However, it concluded that further advances in solar technology may change this situation. ACS also pointed out that the existing diesel generator power station would need to be maintained to provide power at night and during inclement weather.

135. The Committee suggested to DASET and ACS that Christmas Island seemed the ideal location to carry out a demonstration project to test the feasibility of alternative energy systems to augment existing conventional systems in isolated communities. This could not only be of value to similar isolated communities but would be in line with the Government's commitment to energy efficiency.

136. At the public hearing in Canberra on 25 May, ACS reported back to the Committee on its assessment of the solar and wind information required to determine the most viable form of alternative energy for Christmas Island. This information would be collected over a two year period when a recommendation as to the technology suitable for a pilot plant would be made. The design and installation of a pilot plant would occur over a twelve month period followed by a further twenty four month period to monitor the pilot plant and continue the monitoring of solar and wind conditions. At the completion of these studies DASET would then be in a position to decide on a possible base load power plant for Stage 2 of the rebuilding program. Subsequent to the public hearings the Committee was advised by DASET that ACS had recommended that the following approach be adopted for the alternative energy study:

- proceed with the initial analysis by means of a desk study to establish the probable viability of wind and/or solar energy sources

- subject to favourable results from the above, proceed with on site monitoring of solar and wind conditions for a two year period to prove viability.

137. DASET indicated that it had authorised the initial analysis study to proceed but a decision had yet to be made on the appropriate long term monitoring option.

#### Committee's Conclusion

138. The Committee believes that Christmas Island is an ideal location for a demonstration project to test the feasibility of alternative energy systems

to augment existing conventional power generation systems in isolated communities.

#### Committee's Recommendations

139. The Committee recommends that the Department of the Arts, Sport, the Environment and Territories commence the collection of the solar and wind information necessary to determine the most viable form of alternative energy for Christmas Island to augment existing conventional systems.

140. The Committee further recommends that at the end of the information collection period a pilot plant be set up to assess the feasibility of the alternative energy system chosen to augment the existing diesel generator power station.

#### Communications

141. Christmas Island was included in the *Telecommunications Act 1991* as a 'prescribed territory' and as such is now subject to the provisions of the Act and to compliance with regulations and standards for the Australian telephone network issued by the Australian Telecommunications Authority (AUSTEL).

#### Existing Network

142. Current communication between Christmas Island and mainland Australia is via a satellite earth station. The satellite earth station is of modern design and is capable of being upgraded to digital operation.

143. The existing telephone system is not equipped with facilities usually considered necessary for a mainland public telephone exchange, namely International Subscriber Dialling public telephones, and billing information to mainland standards, as well as remote switching unit connections.

144. Most of the cable network was installed by the various operators of the Christmas Island phosphate mine and is seriously deficient in respect of Australian codes of practice and safety standards. In particular, a great deal of subscriber cabling has been installed in association with power supplies using identical cable, thereby producing a serious hazard to service and installation personnel. AUSTEL has indicated the need for a high priority to be given to correcting the existing serious deficiencies.

## Proposed System

145. The upgrading is proposed in Stage 1 under the broad classifications of long term and short term requirements. The long term requirements, all of which are part of the rebuilding program, include:

- upgrading of the Satellite Earth Station to digital operation, and its relocation with the proposed new telephone facility away from the Padang
- replacing the Private Automatic Branch Exchange with a new digital exchange with an initial capacity of 600 lines
- replacing the main cable and customer distribution network to achieve acceptable safety standards. A cellular network is also under consideration.

146. Short term provisions, using existing funds, consist of upgrading and relocating the existing private automatic branch exchange and the installation of a communications link between the casino resort and the existing exchange. This link would require minor reconfiguration when made permanent in the rebuilding program.

## Committee's Recommendation

147. The Committee recommends that the deficiencies in the Christmas Island telecommunications system should be included as a priority item in the remaining works of stage 1 of the rebuilding program.

## Wharf Facilities

148. The existing crane has a capacity of 15 tonnes. This restricts its operating efficiency because the containers it handles have a capacity of 20 tonnes. A new 32 tonne crane will be installed to more efficiently service the future operation of the harbour. The existing crane will then provide useful supplementary capacity and backup in the event of breakdown.

149. The concrete apron to the wharf loading area has deteriorated and requires removal and reconstruction to support the wheel loads of the 25 tonne forklift. The Committee notes that following its recommendation to the Minister for the Arts and Territories additional funding for wharf improvements and a new crane has now been approved - see paragraph 77.

150. Sea erosion has severely undermined the cliff which forms the sea face of the wharf area. Repair work is required to the complete length of the wharf area to a height one metre above high water level. New permanent moorings will be laid to secure unloading tankers at the new fuel farm at Smith Point.

151. Customs and quarantine duties are presently undertaken by the Australian Federal Police on an ad hoc basis without appropriate facilities. Part of the existing dust store on the wharf will be converted to provide customs and quarantine facilities for the Marine Department and the Australian Customs Service. New accommodation will include offices, amenities, toilets and a secure warehouse.

### Marine Building

152. The existing Marine Building is used for the storage and maintenance of barges and other vessels. The office accommodation and amenities within this existing building are inadequate. The dangerous condition of the asbestos cladding dictates its complete removal.

153. The proposed Marine Building will be partially relocated to occupy the site of the present Marine Buoy Facility. This will provide the opportunity to open up and develop the foreshore area to form a tourist/leisure precinct.

The new facility will provide:

- barge and other vessel storage
- harbourmaster's office
- office for 3 management staff
- fitters' workshop/work area/amenities for 22 workers
- dive store
- flammable goods store
- rope and rigging store.

154. The proposed building will be a steel-framed structure reusing steelwork from the original building where possible. This includes the gantry crane. Materials used will include aluminium pre-painted cladding and

roofing with blockwork for internal partitions. Only office areas will be airconditioned, all other areas being naturally ventilated, assisted by fans in workshop areas. The new building will be equipped with appropriate services for its functions.

155. Work on the new Marine Building will be sequenced with the completion of the new Marine Buoy Service Facility to be relocated in the proposed light industrial area.

### **Jetty Refurbishment**

156. The existing jetty was completed in 1958. The structure has not been regularly maintained and consequently elements have seriously deteriorated.

157. The jetty will undergo extensive refurbishment in order to achieve at least a further 20 years of useful life. A regular maintenance program will be implemented to prevent recurrence of the existing conditions.

158. The scope of work for the jetty refurbishment will comprise:

- replacement of several corroded piles, bracings and beams
- replacement of corroded bolts
- sandblasting and protective coating to all steel
- replacement of several sections of timber decking
- replacement of boat trolley rails
- replacement of sections of handrail
- reinstatement of cathodic protection.

159. The refurbished jetty will offer excellent passive leisure facilities to residents and tourists, whilst priority use will be maintained by the Marine Department.

### **Foreshore Development**

160. The existing foreshore at Flying Fish Cove will be redeveloped for combined use as a port and a tourist facility, taking account of its exceptional recreational value to the Island.

161. Improvements will include:

- sea wall
- public boat ramps
- public toilet
- pavements and car parking
- parkland and landscaping.

#### Seawall

162. The Kampong and adjacent areas are subject to storm damage and flooding during the swell season.

163. In order to provide essential additional shore protection from the westerly and north-westerly swells, a substantial rock seawall will be constructed running from the existing jetty north-eastwards to the wharf area. This will provide good storm swell and wave protection to the more exposed areas of the cove. Flood protection of the Kampong will also be enhanced.

164. Steps at intervals will provide easy access from the promenade to the water's edge. The existing beach retaining wall, west of the jetty, will be restored and the beach area will be generally upgraded to provide an attractive leisure facility for both residents and tourists.

#### Public Toilet

165. The existing facility is of a particularly low standard. A new public toilet facility will be provided on a site between the existing restaurant and the proposed car parking area.

#### Boat Ramps

166. The existing public boat ramp will be repaired. However, as this ramp is poorly serviced for parking, an additional boat ramp will be provided at the eastern end of the foreshore.



## **Pavements and Car Parking**

167. Car parking facilities for 100 cars will be provided within the redeveloped foreshore area which will include car and trailer parking immediately adjacent to the new boat ramp. Road access and parking areas within the foreshore area will be finished in coloured blockwork pavers to indicate a requirement for reduced speed. A further car parking facility on the site of the existing fuel farm will serve the new upper level recreation area.

## **Parkland and Landscaping**

168. The foreshore and upper wharf level will be landscaped to include the following:

- a pedestrian walkway to run the full length of the shore edge, with shaded public seating/lookout areas at intervals
- shaded areas, BBQ facilities, children's playgrounds and other recreational facilities
- areas of lawn and additional trees and other planting
- lighting for the walkway and other public areas.

## **New Buildings**

### **Civic Precinct**

169. The Civic Precinct will be located in Poon Saan in accordance with the intent of the town plan. The existing Administration buildings will be sold or leased for other use. The Civic Precinct will comprise the following new buildings:

- Government Services Offices
- Court House
- Assembly Building
- Christmas Island Services Corporation Office
- Community Centre including Library and Daycare Centre

- Police Station
- Fire Station.

170. Set into a steep hillside, the various buildings comprising the Civic Precinct are grouped around two public courtyards and linked by a central pedestrian spine. Main access to the buildings is through the public courtyards which have adjoining car parking facilities. Staff car parking is provided at the rear of the complex. A terraced park area at the eastern end of the Civic Precinct will provide recreational space including shaded public seating areas.

171. All Civic Precinct buildings will be constructed from rendered concrete blockwork with pre-painted aluminium sheet roofing. The pedestrian walkways will have a concrete colonnade with pressed aluminium lattice work sun screens. All buildings will be airconditioned. All normal building services will be provided. The detailed design of all new buildings will properly address all aspects of energy management and conservation.

#### Court House

172. At present, court proceedings are held in the Assembly Building in the Administration area - a location remote from the existing Police Station (and the new Police Station) and the centre of the community. Current facilities are functionally inadequate for a court house.

173. The proposed Court House, at the eastern end of the precinct, will address both the street and a public courtyard. The flexible internal layout will include Magistrate chambers, a 12 member jury area and seating for up to 30 members of the public.

#### Government Services Offices

174. The present Administration facilities are split between the existing Upper and Lower Administration Buildings. Although the buildings are in reasonable condition, they do not satisfy the functional requirements of the Administration and are remote from the community.

175. The new two-storey Government Services offices, fronting onto a public court yard, will provide accommodation suitable for a variety of administrative functions, including offices and amenities for up to 25 staff including staff from state government agencies.

## Assembly Building

176. The Assembly currently meets in a building located adjacent to the Padang in an area remote from the centres of population.

177. The proposed Assembly Building will provide accommodation for the Christmas Island Assembly similar to that of a shire council in mainland Australian communities. It will form a focal point within the Civic Precinct addressing the street and both public court yards.

178. Accommodation will include:

- assembly chamber
- public seating for up to 30 persons
- chairperson's office
- members' office
- members' lounge
- committee rooms.

## Christmas Island Services Corporation Building

179. The existing CISC offices are located in an area remote from the centre of the community. Although the building is in reasonable condition, it does not provide adequate facilities. When vacated, it would be available for other purposes.

180. The proposed CISC building, fronting onto a public court yard, will provide facilities similar to those of a Western Australian shire council office, including offices and amenities for up to 12 staff.

## Community Centre

181. The new two-storey Community Centre, at the western end of the Civic Precinct, will address the street and a public courtyard with a carpark area to the rear. Accommodation will include community meeting rooms, a public library and a daycare centre, facilities which are presently widely scattered. A kitchen will serve both the meeting rooms and the Daycare Centre for 15 infants.

## Police Station

182. The existing two-storey Police Station on Gaze Road is in a dilapidated condition and is remote from population centres.

183. The new Police Station, located on Murray Road, will cater for a range of functions typical of a police station in a Western Australian country town.

184. These will include:

- licensing for vehicles
- State Emergency Service
- CIB Detectives
- holding cells with exercise yards.

185. A crash yard, State Emergency Service store, vehicle inspection area and staff and public car parking will all be provided adjacent to the building.

## Fire Station

186. The existing Fire Station is a steel-framed shed, and is inadequate and ill-equipped for its function. It does not directly access a main road as required for efficient and timely response to alarm calls. When vacated, the building will be available for other purposes.

187. The new Fire Station will be located on Murray Road. The two-storey building as proposed by ACS provided training facilities, drive-through engine house, offices, stores, workshops and on-duty living accommodation and amenities for the officers. External works include a drill yard and a steel-framed tower for ladder practice and hose drying. An area is designated for future expansion. The Committee notes advice from the Western Australian Fire Brigades Board that the provision of living quarters is not considered necessary as it is recommending the provision of a volunteer fire and rescue service. DASET has agreed to the deletion of the on-duty living accommodation.

## Hospital

188. The existing hospital is located in Gaze Road near Rocky Point, which is remote from the majority of the community, in an area subject to storm wave damage.

189. The facility comprises a series of interconnected blocks, evolved on an ad hoc basis over a period of 70 years, to a point where the proper functioning of the hospital is impaired. Although the buildings are generally structurally sound, the services are barely adequate and the finishes are in an advanced state of deterioration. It is a credit to the staff of the hospital that they have continued to provide services in these trying conditions.

190. The new hospital will be on the current site of the sand and gravel plant (to be relocated) and will be accessed from Phosphate Hill Road by a reconstructed roadway.

191. A full range of health care inpatient and outpatient facilities, together with community health programs including child care and health promotion services, will be provided to the population. All facilities will meet the standards and requirements of the Health Department of Western Australia.

192. The buildings will be constructed in rendered concrete blockwork with pitched aluminium pre-painted roofing. Services will include full air conditioning and other services required to perform specialist hospital functions.

193. When vacated, it is likely that the existing hospital buildings will be upgraded and incorporated in a future tourist development.

## Swimming Pool

194. There are two swimming pools. The Settlement foreshore pool was badly damaged by the 1988 storm and is now derelict. Its proximity to the sea makes protection against future storms impractical. The other pool, located near the existing post office, has salt water pumped directly from the ocean. It is badly cracked and requires constant maintenance. Its relocation would free up valuable land for the development of the Padang. Both pools are inadequate in size for current and future requirements, and are located away from the population centres.

195. The new pool will be located in a sporting precinct adjacent to the existing oval. The 25 metre, six lane pool for competitive swimming, diving and water polo will include a wading ramp for disabled access.

196. Accommodation will include:

- change rooms and toilets
- kiosk
- first aid
- control office
- spectator seating for 50 people.

197. The swimming pool will be operated by the CISC.

198. The concrete chlorinated pool will have a ceramic tile finish. The buildings will be constructed from rendered blockwork with aluminium pre-painted roof sheeting.

199. During the public hearing, the Christmas Island Assembly indicated that the proposed location of the swimming pool had been queried by a number of people as it was considered to be too remote from existing population centres. However, it was pointed out that the proposed location is adjacent to a 200 lot housing development which will be the largest population centre on the Island.

200. At the request of the Committee, ACS examined alternative locations for the swimming pool. The Committee was advised that the only viable alternative location is adjacent to the school sports oval. However, while this location is still reasonably remote from the centre of population it would avoid the need to bus children to and from the school.

201. The Committee believes that the location of the swimming pool should be given further consideration by DASET in conjunction with the local community. The Committee also has some concerns about the adequacy of the proposed 25m pool in view of the projected population increase. While noting that a 50m pool would incur additional expenditure of between \$1.18m and \$1.76m depending on location, the Committee believes that the adequacy of the proposed 25m pool should be discussed with the local community.

## **Committee's Recommendation**

202. The Committee recommends that the Department of the Arts, Sport, the Environment and Territories should discuss both the location and size of the proposed swimming pool with the Christmas Island community.

### **Marine Buoy Service Facility**

203. Sand blasting and painting of marine buoys is currently performed in the open, in an area near the Marine Building, adjacent to residential accommodation. The Western Australian Environmental Protection Authority and the Western Australian Health Department prohibit sand blasting in residential areas.

204. The new Marine Buoy Service Facility, housing all sand blasting and painting activities, will be located in a new light industrial area at the southern end of Murray Road.

205. Accommodation will include:

- sandblasting bay
- secure store
- painting bay
- storage for buoys and chains.

206. Buildings will be steel framed with proprietary aluminium pre-painted cladding and roofing. All appropriate services will be provided.

### **Christmas Island Services Corporation Yard**

207. Existing facilities are spread over several unconnected locations throughout the Dog's Head area. Several workshops are scheduled for demolition to accommodate road improvements, whilst others are in a state of disrepair.

208. A new consolidated facility will be located in the proposed light industrial area at the southern end of Murray Road. It will centralise all the functions of the CISC. It will accommodate all materials, plant and equipment required in the execution of both new and maintenance works undertaken by the CISC.

209. The buildings will have a steel-framed structure with proprietary aluminium pre-painted cladding and roofing. The facilities will be serviced as appropriate.

#### Post Office

210. The existing Post Office is located by the Padang, between the existing Upper and Lower Administration buildings in a location remote from the centres of population. The present building has heritage significance and will be retained for other functions.

211. Postal functions will be relocated to Poon Saan. The Administration will provide leased accommodation which will be fitted out under this program of works. The fit-out will be in accordance with Australia Post's current retailing policy.

#### Mechanical Workshop

212. The Mechanical Workshop will be used to repair, maintain and manufacture components for the power generation and reticulation equipment.

213. The building is to be located near the CISC yard and will be steel-framed with metal cladding.

#### Electrical Workshop

214. The electrical workshop will provide facilities for the maintenance and repair of electrical equipment associated with the power house and general reticulation.

215. The building is to be located near the CISC yard and will be steel-framed with metal cladding.

#### Alterations and Additions

##### Drumsite School

216. To minimise travel, improve efficiency and reduce pupil disruption, school facilities are to be centralised.



217. The existing permanent buildings are generally sound, although they require upgrading and extension to achieve the required standards and to accommodate projected increases in pupil numbers.

218. The present school has 320 pupils, many of whom are accommodated in prefabricated units which are at the end of their economic life. The library/resource centre and administration accommodation do not conform to Western Australian Ministry of Education standards.

219. The alterations and additions will include:

- administration block
- industrial arts centre
- canteen
- pre-primary centre
- library resource centre
- additional teaching areas
- airconditioning
- roadworks, parking and paving
- general refurbishment of existing facilities including services and sanitary accommodation.

220. DASET and ACS will have discussions with nearby residents who have expressed some concern about the proposed location of the pre-school. ACS indicated that the children's play area could be resited to overcome the objections.

221. All of the above works will bring the school in line with the Western Australian Ministry of Education standards, providing proper facilities for teaching the standard curriculum.

222. Buildings will be constructed in rendered concrete blockwork with roof sheeting selected to match the existing school roofing. All appropriate services will be provided.

## Central Area Workshop

223. The current ANPWS facilities are scattered in different locations generally remote from the field of operations.

224. The central area workshop, formerly occupied by the Christmas Island Phosphate Company, are to be upgraded to house all the staff and activities of the ANPWS. The upgraded central area workshops will centralise all operations.

225. New accommodation will include:

- offices
- amenities areas
- secure store for consumables
- potting shed
- nursery staff amenities/toilets
- undercover parking.

226. The vacated facilities will be relocated, demolished or retained by the Administration. Funding for this item is not proposed within the rebuilding program.

## Powerhouse Extensions

227. The existing asbestos clad Powerhouse No 2 and its adjacent workshop, are in a state of disrepair. Both buildings are to be extended and refurbished.

228. The powerhouse extensions will house the new generators whilst the workshop will house maintenance equipment and some functions relocated from the wharf area workshops, which are scheduled for demolition to accommodate road improvements.

229. Buildings will be steel framed with proprietary aluminium pre-painted cladding and roofing. All appropriate services will be provided.

230. All existing structures will be upgraded to the SECWA standards.

## Upgrading of Buildings

### Asbestos

231. Asbestos cement products have been used extensively throughout the Island in commercial, industrial and residential development.

232. Based on results of investigations undertaken by the Western Australian Advisory Committee on Hazardous Substances (WAACOHS), ACS advised the Committee that there is negligible health risk on Christmas Island from insitu asbestos cement products. It is important to note that this assessment was based on the WAACOHS investigations and assumed that airborne asbestos fibre concentrations in the Christmas Island environment complied with appropriate standards, as ACS had not carried out air sampling on Christmas Island.

233. However, where materials have deteriorated to an extent that physical safety or structural integrity is of concern, they will be replaced. The extent of this program is limited to buildings occupied by the Commonwealth, its servants and its agents from other authorities. Repairs to privately owned buildings are the responsibility of the owners (however, see paragraph 245).

234. ACS also recommended that an asbestos management plan be implemented to provide a uniform coordinated approach to the control of existing materials containing asbestos.

235. The asbestos management plan would include:

- the maintenance of a register of asbestos products occurring within the fabric of existing buildings
- a program to replace asbestos products with other materials
- a clean-up program to avoid pollution of the general environment
- promulgation of regulations and guidelines relating to asbestos and its removal.

236. During the public hearing on 14 May concerns were expressed by the Christmas Island Assembly, the Malay community and the Christmas Island Chamber of Commerce regarding the health risks to the general population from the widespread use of asbestos on the Island.

237. In response to these concerns the Committee requested ACS to carry out air monitoring surveys on Christmas Island as a matter of urgency to confirm that the assumption of negligible health risk was valid.

238. ACS, with commendable speed, conducted an air monitoring survey on 16 May with measurements being taken at 132 locations and involved sampling of air inside and outside buildings in residential, commercial and industrial areas. The results showed that airborne asbestos fibre concentrations are in most cases less than 0.01 fibres per millilitre and therefore are substantially below the required standard of 0.1 fibres per millilitre. In none of the 132 samples taken was there a measurement above 0.1 fibres per millilitre.

239. ACS advised the Committee that the results of the air monitoring survey show that asbestos fibre concentrations on Christmas Island comply with standards set by the National Occupational Health and Safety Commission and therefore confirm the previous ACS finding that there is negligible health risk on Christmas Island from products containing insitu asbestos products.

#### Housing

240. The Administration's housing stock comprises 44 two and three bedroom residences and 24 one bedroom flats. All this housing is generally in need of extensive repair and maintenance to bring it into line with mainland standards.

241. At the time of the public hearing the upgrading and refurbishment of housing for government employees comprised the following items:

- asbestos cement roof replacement or refixing
- internal and external painting
- insect screening
- replacement of rusted steel windows
- plumbing
- floor treatments
- kitchen cupboards

- curtains and blinds
- electrical rewiring
- air conditioning.

242. Following the public hearing DASET proposed a change to the housing refurbishment program for government employees which would also lead to an increase in the stock of available housing. DASET believes this can be achieved for the same cost as previously estimated by combining the upgrading of some houses and flats with the recommissioning of block 412 in the Kampong (36 two bedroom flats) and building some new houses in a subdivision above the Poon Saan area. The Committee advised DASET that it had no objection to this course being followed.

243. At the public hearings on Christmas Island considerable concern was expressed regarding the condition of housing particularly for non-government employees which was generally regarded to be sub-standard. DASET advised the Committee that in conjunction with the Christmas Island Administration, measures to alleviate the critical housing shortage are currently being investigated. DASET believes this issue has policy implications beyond the Government services infrastructure upgrading proposed in the rebuilding program. The Committee understands that mainland public housing policies will be applied on the Island.

244. Following the public hearing the Committee received a further submission from the Christmas Island Shire Council (the successor to the Christmas Island Assembly) and other community groups urging that the housing shortage on the Island should be addressed as part of the rebuilding program. The Council also drew the Committee's attention to what it believes is a double standard in the provision of accommodation with one standard for Government employees and another lower standard for others. The Council believes that the Commonwealth's obligation to bring health and safety standards on the Island up to mainland standards does not stop at the property boundary. It sees the Commonwealth as having an obligation beyond basic repair and maintenance to ensure that:

- all property is brought to mainland safety standards whereby there is no danger, health nor safety risks to residents
- there is not greater variance created between the standard of government and non-government housing.

245. In its response DASET indicated that it is sympathetic to the issues raised by the Council and other community groups and would not oppose the inclusion of some additional works in the rebuilding program to assist the community in the area of public housing. In relation to health and safety issues DASET does not believe it is the Commonwealth's responsibility to upgrade private property. However to comply with the Commonwealth's duty of care funds could be provided in the rebuilding program to rectify outstanding health and safety defects prior to sale. DASET pointed out, however, that houses of differing standards will still exist within the community.

246. DASET suggested to the Committee that it consider an extension of the rebuilding program as follows to assist the Commonwealth to meet its obligations in relation to the provision of housing:

- the following public housing to be provided:
  - upgrading of Block 412 in the Kampong (36 two bedroom units)
  - upgrading of around 100 houses to mainland public housing standards
  - construction of 10-15 new houses within the broadacre development for which expressions of interest are to be invited shortly
- provision of water supply, sewerage and possibly power reticulation within the broadacre development to ensure its viability
- provision of funds to rectify any outstanding health and safety defects in buildings/units prior to sale.

247. ACS have provided an estimate of approximately \$16m for these items which includes an estimate of approximately \$1m to rectify outstanding health and safety defects prior to sale.

## Committee's Recommendations

248. The Committee recommends that Department of the Arts, Sport, the Environment and Territories and the Christmas Island Administration should as a matter of urgency develop a comprehensive strategy to address the critical housing situation on Christmas Island.

249. The Committee further recommends that the Government consider additional funding of some \$16m to meet the Commonwealth's housing obligations on Christmas Island.

### Administrative Function Buildings and Community Buildings

250. Only those Administration buildings designated as having a continuing interim or long term function will be upgraded. All other Administration buildings, not scheduled for demolition, are expected to be sold or leased for redevelopment by others.

251. Where buildings are of heritage value, existing asbestos roofing will be refixed where practical or removed and replaced with non-asbestos roof sheeting to match existing.

### Playground Equipment

252. Playground equipment will be provided to the newly developed recreation areas in the foreshore and in the park adjacent to the Civic Precinct.

### Unstable Rock Cliff Faces

253. A study has been carried out on the stability of cliff rock faces in Flying Fish Cove and nearby areas. The study has identified one high risk zone and several low to moderate risk zones that need to be addressed. It is proposed to minimise risk in the high risk zone by closing the Boat Club and the restaurant and in other zones by constructing rock fences, rock trenches, tree planting, installing signs, monitoring movement and improving drainage.

## CONSULTATIONS

254. DASET advised the Committee that most of the organisations and parties with a potential interest in the rebuilding program have been involved in consultations during its development. These include:

- . the Christmas Island Assembly
- . Western Australian Government Agencies
- . the ANPWS
- . the AHC

255. While DASET was able to point to extensive consultation with the local community, Mr Peter Goh, Chairman of the Christmas Island Assembly was concerned that people without a good grasp of English should be consulted in their own languages. DASET indicated that it would soon set up a formal process to enable regular consultation with the local community to take place. A Chinese/Malay speaker has now been employed by DASET to assist in the consultation process.

### TRAINING AND LOCAL PARTICIPATION

256. A common theme amongst submissions from groups on Christmas Island was the need for a training program for local workers. The rebuilding program was seen as a once only opportunity to address poor skill levels particularly in trade areas such as plumbing, electrical and carpentry. While current DEET programs are aimed at providing training for possible employment at the Christmas Island Resort, the Christmas Island Administration pointed out that longer term training opportunities will be available through the rebuilding program. Another local theme was the need to maximise local participation, both in terms of labour and materials, in the implementation of the rebuilding program.

257. The Committee was advised by DASET that ACS will explore mechanisms with DEET and with the UCIW to recommend the implementation of a scheme designed to maximise training and apprenticeships for the local population. This type of scheme has been successfully implemented on the Cocos (Keeling) Islands.

258. DASET fully supports the need to maximise the use of local materials and labour in view of the potential cost savings and benefits to the Christmas Island community. It advised that ACS is investigating methods to achieve this and will recommend the implementation of all practical measures. Appropriate clauses will be considered for inclusion in all Conditions of Contracts.



## Committee's Conclusion

259. The Committee believes that the rebuilding program will provide an opportunity to implement training programs for local workers on Christmas Island particularly in trade areas such as plumbing, electrical and carpentry.

## Committee's Recommendations

260. The Committee recommends that the Department of the Arts, Sport, the Environment and Territories in conjunction with the Department of Employment, Education and Training and the Union of Christmas Island Workers implement as a matter of urgency, a scheme to maximise training and apprenticeships for Christmas Island workers during the rebuilding program.

261. The Committee recommends that the Department of the Arts, Sport, the Environment and Territories should ensure the maximum possible use of local labour and materials in the implementation of the rebuilding program.

262. The Committee recommends that the Christmas Island rebuilding program proceed at an estimated cost of \$132.85m subject to an assessment following completion of the initial funding program.

## CONCLUSIONS AND RECOMMENDATIONS

263. The conclusions and recommendations of the Committee and the page in the report to which each refers are set out below:

- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Page |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| 1. Much of the essential infrastructure on Christmas Island for the delivery of government services is in a run down condition and does not meet mainland Australian health and safety standards. The Committee agrees that there is a need to bring the Commonwealth-owned and managed infrastructure on Christmas Island for the delivery of government services up to mainland Australian standards as soon as possible. The Committee also agrees that there is a need to align conditions on Christmas Island with mainland Australian standards as part of the broader objective of integrating the Indian Ocean Territories within Australia. | 11   |
| 2. The Committee recommends that prior to the final commitment to the total ten year rebuilding program there should be an assessment of the success of the initial funding program which may lead to changes in priorities and/or funding levels.                                                                                                                                                                                                                                                                                                                                                                                                   | 16   |
| 3. The Committee agrees that the master plan provides a suitable framework for the rebuilding program and has been developed in conjunction with the draft town plan.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 18   |
| 4. The Committee believes that heritage aspects of Christmas Island have been given due regard and protection in the development of the master plan and the rebuilding program. In most cases rebuilding activity can be carried out without adverse impact on heritage aspects. However the Committee does not believe that the retention of the fuel tank containing the strafing marks is justified.                                                                                                                                                                                                                                              | 21   |
| 5. The Committee recommends that the fuel tank containing the strafing marks be demolished and the section containing the strafing marks should be removed and displayed at a suitable location with an explanation of their historical significance.                                                                                                                                                                                                                                                                                                                                                                                                | 21   |

6. The rebuilding program will have a number of beneficial environmental effects including the provision of an effective sewerage system, the development of satisfactory methods for the disposal of toxic and other wastes, proper pollution controls and adequate stormwater systems to prevent soil erosion. 24
7. The Department of the Arts, Sport, the Environment and Territories should include the sealing of the roads from the airport turnoff to Waterfall and from the golf course to Waterfall in the rebuilding program. 25
8. The Committee believes that Christmas Island is an ideal location for a demonstration project to test the feasibility of alternative energy systems to augment existing conventional power generation systems in isolated communities. 28
9. The Committee recommends that the Department of the Arts, Sport, the Environment and Territories commence the collection of the solar and wind information necessary to determine the most viable form of alternative energy for Christmas Island to augment existing conventional systems. 29
10. The Committee further recommends that at the end of the information collection period a pilot plant be set up to assess the feasibility of the alternative energy system chosen to augment the existing diesel generator power station. 29
11. The Committee recommends that the deficiencies in the Christmas Island telecommunications system should be included as a priority item in the remaining works of stage 1 of the rebuilding program. 30
12. The Committee recommends that the Department of the Arts, Sport, the Environment and Territories should discuss both the location and size of the proposed swimming pool with the Christmas Island community. 40
13. The Committee recommends that Department of the Arts, Sport, the Environment and Territories and the Christmas Island Administration should as a matter of urgency develop a comprehensive strategy to address the critical housing situation on Christmas Island. 48

14. The Committee further recommends that the Government consider additional funding of some \$16m to meet the Commonwealth's housing obligations on Christmas Island. 48
15. The Committee believes that the rebuilding program will provide an opportunity to implement training programs for local workers on Christmas Island particularly in trade areas such as plumbing, electrical and carpentry. 50
16. The Committee recommends that the Department of the Arts, Sport, the Environment and Territories in conjunction with the Department of Employment, Education and Training and the Union of Christmas Island Workers implement as a matter of urgency, a scheme to maximise training and apprenticeships for Christmas Island workers during the rebuilding program. 50
17. The Committee recommends that the Department of the Arts, Sport, the Environment and Territories should ensure the maximum possible use of local labour and materials in the implementation of the rebuilding program. 50
18. The Committee recommends that the Christmas Island rebuilding program proceed at an estimated cost of \$132.85m subject to an assessment following completion of the initial funding program. 50



Colin Hollis  
Chairman

10 September 1992

## APPENDIX A

### WITNESSES

ARGYLE, Mr David Anthony, Managing Director, Phosphate Resources NL, Christmas Island, Indian Ocean, 6798

BEECH, Mr Graeme Keith, Conservator, Australian National Parks and Wildlife Service, PO Box ZZZ, Christmas Island, Indian Ocean, 6798

BOZEN, Mr Ross Gordon, Director, Commercial Development, Administration of the Territory of Christmas Island, Government Offices, Christmas Island, Indian Ocean, 6798

CHEE, Mr Mohammed Kaiwi, Malay Community, Christmas Island, Indian Ocean, 6798

DAWKINS, Mr Jeremy Ernest, Town Planning Adviser, Christmas Island Services Corporation, PO Box 63, Christmas Island, Indian Ocean, 6798

EARLY, Mr Gerard Patrick, Assistant Secretary, Territories Branch, Department of the Arts, Sport, the Environment and Territories, GPO Box 787, Canberra City, Australian Capital Territory, 2601

FULLARD, Mr Barry, Christmas Island, Indian Ocean, Indian Ocean, 6798

GOH, Mr Peter, Chairman, Christmas Island Assembly, Christmas Island, Indian Ocean, 6798

GRIMES, Mr Michael John, Administrator, Administration of the Territory of Christmas Island, Government Offices, Christmas Island, Indian Ocean, 6798

HANSMAN, Mr Kim, Electrical Contractor, Island Electrical Service, Christmas Island, Indian Ocean, 6798

- HARLOW**, Mr Phillip Charles, State Manager, Project Services, Australian Construction Services, Sheraton Court, 207 Adelaide Terrace, Perth, Western Australia, 6000
- HART**, Mr Roger Ian, Nursery Manager, Australian National Parks and Wildlife Service, PO Box ZZZ, Christmas Island, Indian Ocean, 6798
- HUSTON**, Mr Peter Ernest, Director and Legal Adviser, Phosphate Resources NL, Christmas Island, Indian Ocean, 6798
- ISMAIL**, Mr Mahmood, President, Christmas Island Islamic Council, Malay Kampong, PO Box 9, Christmas Island, Indian Ocean, 6798
- LAI**, Mr Ah Hong, President, Union of Christmas Island Workers, PO Box 84, Christmas Island, Indian Ocean, 6798
- MAJID**, Mr Abdul Zainal, Committee Member, Christmas Island Islamic Council, Malay Kampong, PO Box 9, Christmas Island, Indian Ocean, 6798
- McGOVERN**, Captain Neil John, Harbourmaster, Administration of the Territory of Christmas Island, PO MMM, Christmas Island, Indian Ocean, 6798
- MILLIGAN**, Ms Mary Catherine, Director of Nursing, PO HHH, Christmas Island, Indian Ocean, 6798
- MOORE**, Mr Hugh Malcolm, Director-Project Manager, Christmas Island Rebuilding Program, Department of the Arts, Sport, the Environment and Territories, GPO Box 787, Canberra, Australian Capital Territory, 2601
- MULHALL**, Mr Christopher David, State Coordinator, Indian Ocean Territories, Western Australian Public Service Commission, Albert Facey House, 469-489 Wellington Street, Perth, Western Australia, 6000

- OH, Miss Lillian Li Leng, General Secretary, Union of Christmas Island Workers, PO Box 84, Christmas Island, Indian Ocean, 6798
- PAYNE, Mr Russell David, Vice President, Christmas Island Chamber of Commerce (Inc), Christmas Island, Indian Ocean, 6798
- RUMPPF, Dr Holger, Temporary Project Office, Australian National Parks and Wildlife Service, PO Box ZZZ, Christmas Island, Indian Ocean, 6798
- SEET, Ms Choy Lan, Union Liaison Officer, C.I. Community, C/- U.C.I.W., PO Box 84, Christmas Island, Indian Ocean, 6798
- TRESIDDER, Mr Graham Arthur, Project Manager, Project Services, Australian Construction Services, Sheraton Court, 207 Adelaide Terrace, Perth, Western Australia, 6000
- TURNER, Mr Edward, President, Christmas Island Chamber of Commerce (Inc), Christmas Island, Indian Ocean, 6798
- WALKINGTON, Ms Marina Louise, Senior Conservation Officer, Australian Heritage Commission, Westpac Chambers, Blackall Street, Barton, Canberra, Australian Capital Territory, 2600
- WHITE, Mr Terrence John, Clerk, Christmas Island Assembly, Christmas Island, Indian Ocean, 6798
- WOODMORE, Mr Francis Philip, Managing Director, Christmas Island Resort Pty Ltd, 3rd Floor, 9 Bowman Street, South Perth, Western Australia, 6151
- WOODS, Mr Peter, Director, Christmas Island Section, Territories Branch, Department of the Arts, Sport, the Environment and Territories, GPO Box 787, Canberra, Australian Capital Territory, 2601

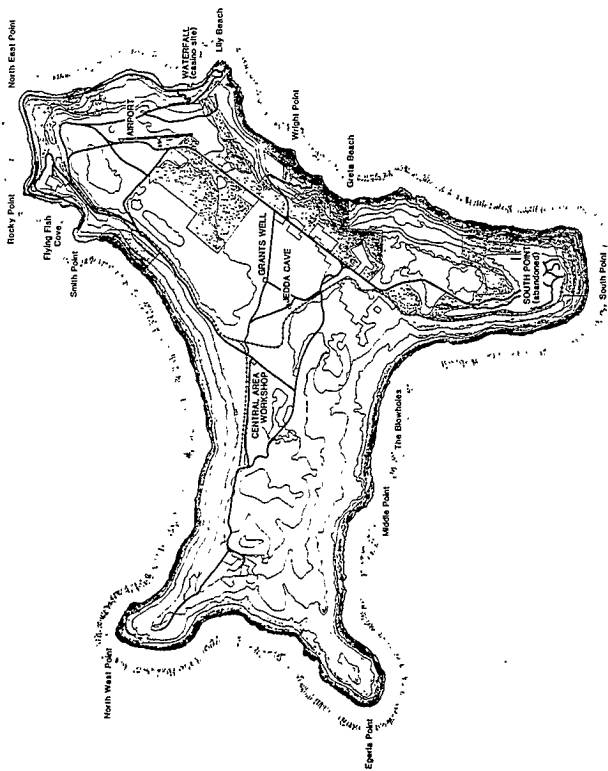


## APPENDIX B

### PROJECT PLANS AND DRAWINGS

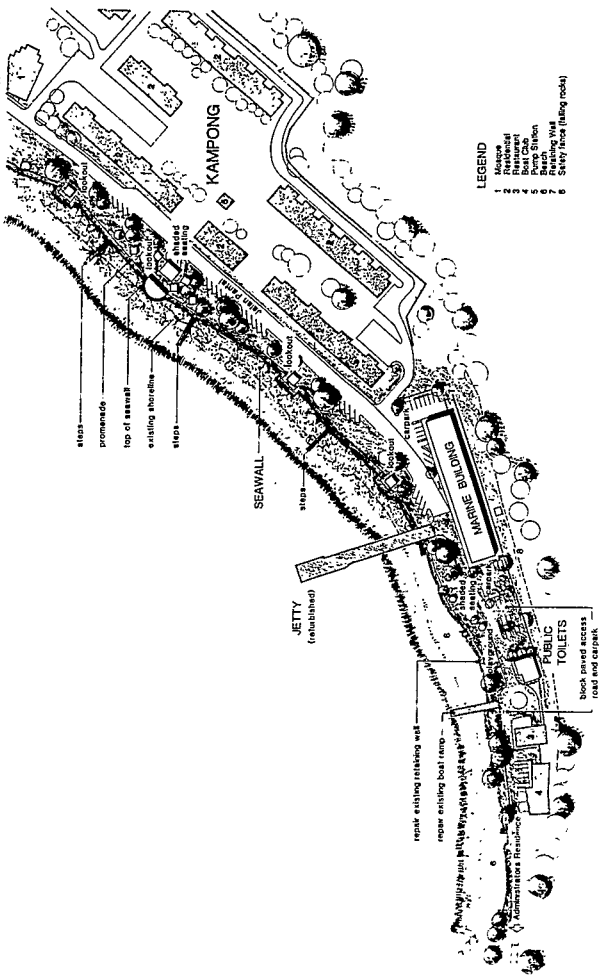
	Page
Location Plan	B - 1
Christmas Island	B - 2
Foreshore Development and Maritime Works - Kampong	B - 3
Foreshore Development and Maritime Works - Padang	B - 4
Hospital	B - 5
Civic Precinct Site Plan	B - 6
Drumsite School - Site Plan	B - 7
Design and Construction Schedule - Stage 1 (for 5 years)	B - 8
Design and Construction Schedule - Stage 2 (for 5 years)	B - 9



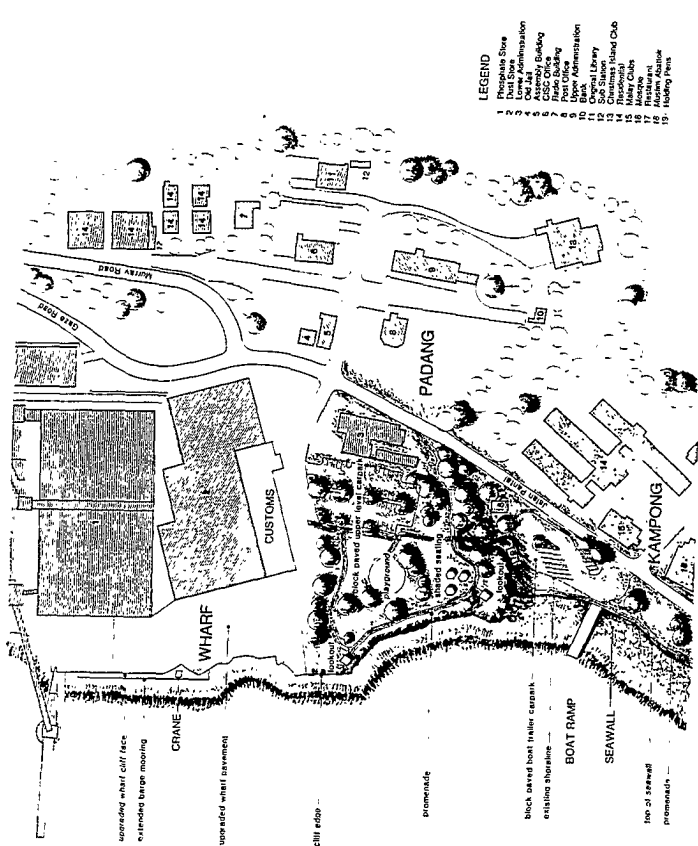


**CHRISTMAS ISLAND**

FOR CONTINUATION SEE SHEET 11



**FORESHORE DEVELOPMENT  
AND MARITIME WORKS**



spreading wharf cill face  
 extended barge mooring

CRANE  
 towards wharf pavement

cill edge

promenade

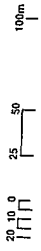
black diked boat trailer carport  
 existing shoreline  
 BOAT RAMP

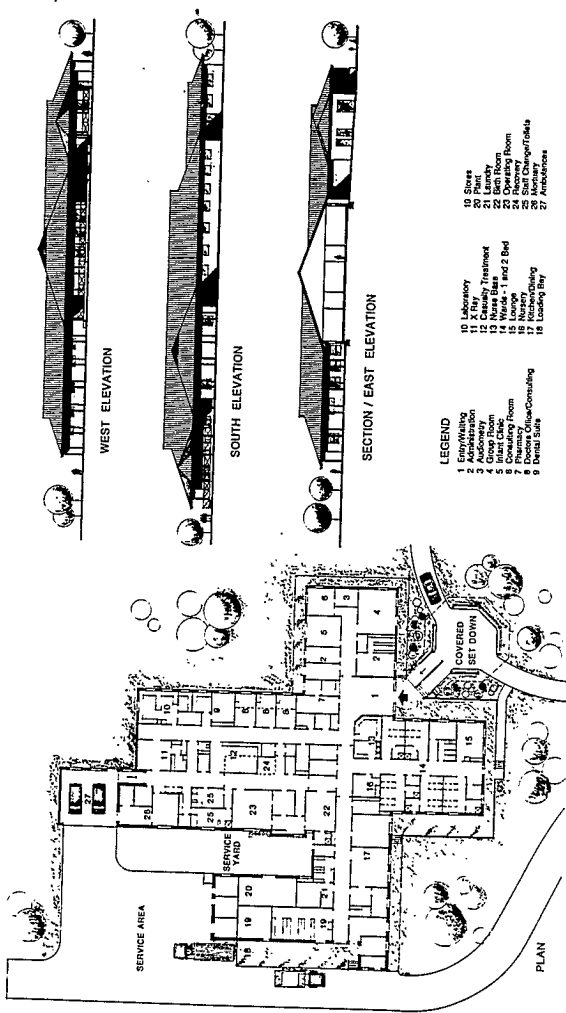
SEAWALL  
 line of seawall  
 promenade

- LEGEND**
- 1. Phosphate Store
  - 2. Boat Store
  - 3. Old Jai Administration
  - 4. Old Jai Administration
  - 5. Jai Building
  - 6. Jai Building
  - 7. Jai Building
  - 8. Jai Building
  - 9. Jai Building
  - 10. Jai Building
  - 11. Jai Building
  - 12. Jai Building
  - 13. Christmas Island Club
  - 14. Military Club
  - 15. Military Club
  - 16. Mosque
  - 17. Mosque
  - 18. Mosque
  - 19. Holding Tank

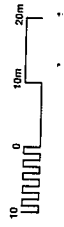


CONTINUATION SEE SHEET 10  
**FORESHORE DEVELOPMENT  
 AND MARITIME WORKS**

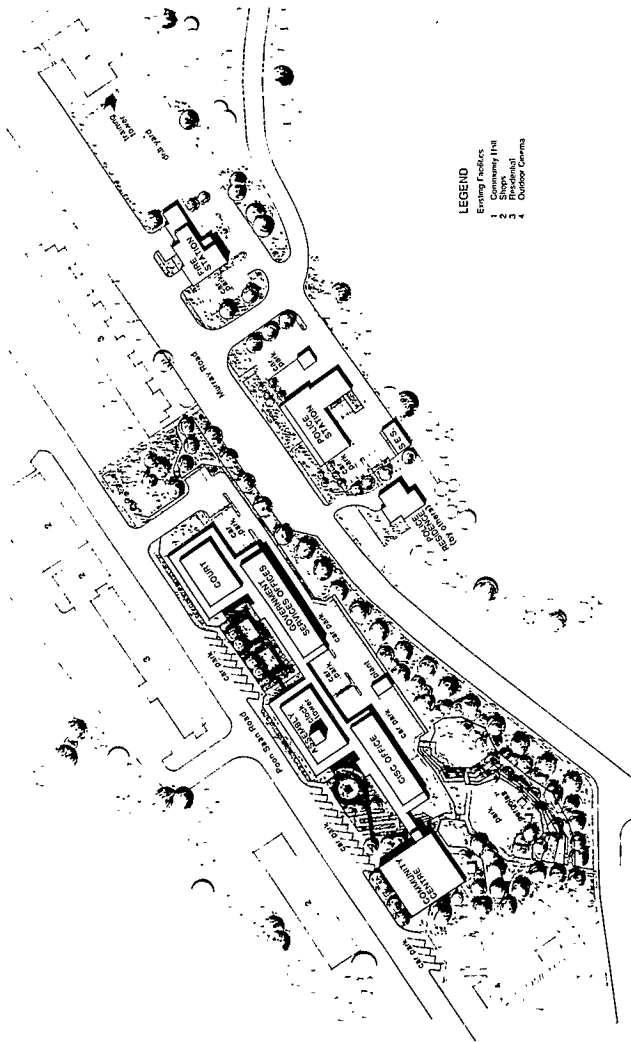




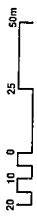
- LEGEND**
- |   |                           |    |                     |
|---|---------------------------|----|---------------------|
| 1 | Entry/Waiting             | 10 | Laboratory          |
| 2 | Admission                 | 11 | X-Ray               |
| 3 | Admission                 | 12 | Ray Treatment       |
| 4 | Group Room                | 13 | Ward B              |
| 5 | Group Room                | 14 | Wards - 1 and 2 Bed |
| 6 | Chart Clerk               | 15 | Nurse               |
| 7 | Pharmacy                  | 16 | Storage             |
| 8 | Pharmacy                  | 17 | Kitchen/Dining      |
| 9 | Doctors Office/Consulting | 18 | Loading Bay         |
|   |                           | 19 | Stairs              |
|   |                           | 20 | Plant               |
|   |                           | 21 | Lobby               |
|   |                           | 22 | Reception           |
|   |                           | 23 | Operating Room      |
|   |                           | 24 | Recovery            |
|   |                           | 25 | Nurse               |
|   |                           | 26 | Reception           |
|   |                           | 27 | Ambulance           |



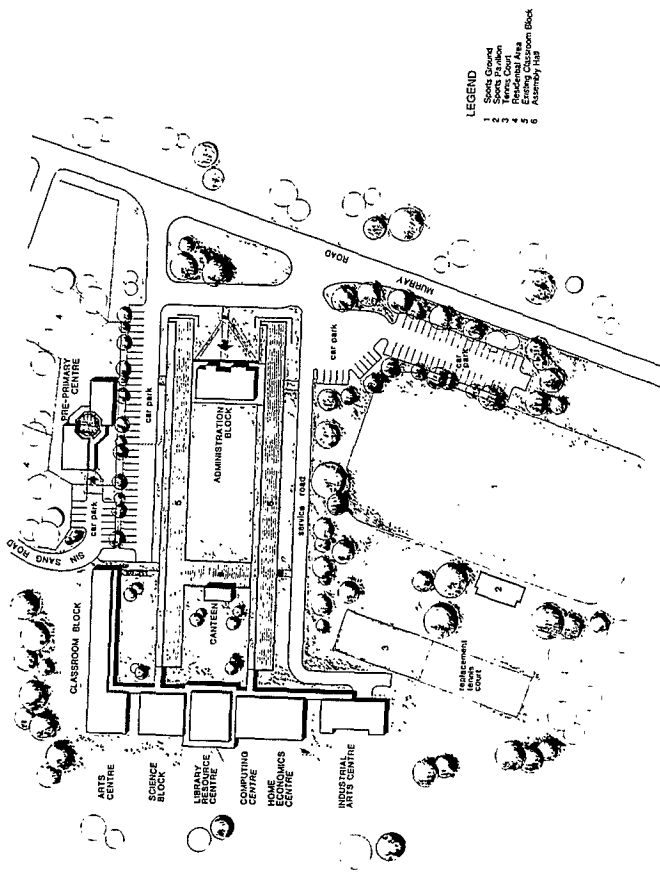
HOSPITAL



LEGEND  
 Existing Facilities  
 Community Hall  
 Shop  
 Restaurant  
 Outdoor Gymnasium



**CIVIC PRECINCT -  
 SITE PLAN**



- LEGEND**
- 1 Sports Ground
  - 2 Sports Pavilion
  - 3 Trees
  - 4 Retaining Wall
  - 5 Existing Classroom Block
  - 6 Assembly Hall

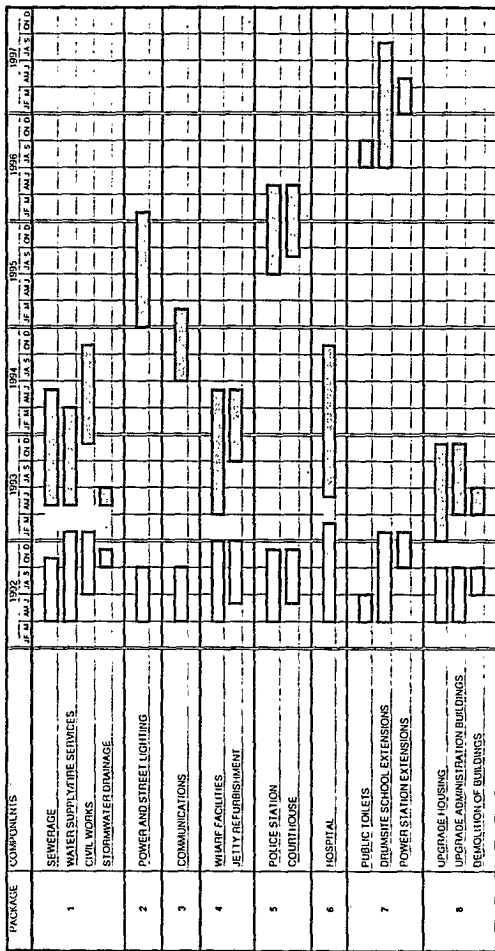


**DRUMSITE SCHOOL  
SITE PLAN**

# CHRISTMAS ISLAND REBUILDING PROGRAM

## DESIGN AND CONSTRUCTION SCHEDULE

### STAGE 1 (for 5 years)






ASSUMPTIONS 1 April 1992 Concurrent documentation approval  
 2 August 1992 Budget Approval

# CHRISTMAS ISLAND REBUILDING PROGRAM

## DESIGN AND CONSTRUCTION SCHEDULE

### STAGE 2 (for 5 years)

PACKAGE	COMPONENTS	1997		1998		1999		2000		2001		2002	
		J	A	J	A	J	A	J	A	J	A	J	A
9	SEWERAGE												
	WATER SUPPLY/FIRE SERVICES												
	CIVIL WORKS												
	STORMWATER DRAINAGE												
10	POWER SUPPLY												
11	FORESHORE WORKS												
12	WHARF FACILITIES												
	MARINE BUILDING												
13	ADMINISTRATION BUILDING												
	FIRE STATION												
	POST OFFICE												
	LIBRARY & COMMUNITY CENTRE												
	ASSEMBLY HALL												
	CISC HEADQUARTERS COURTHOUSE												
14	SWIMMING POOL												
	CISC CIVIL ENGINEERING YARD												
	MARINE BOATY FACILITY												
	DRUMSITE SCHOOL EXTENSIONS POWER STATION EXTENSIONS												
15	UPGRADE HOUSING DEMOLITION OF BUILDINGS												

 DESIGN/DOCUMENTATION  
 TENDER PERIOD  
 CONSTRUCTION