

PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA

LIGHTHOUSES : Do We Keep The Keepers?

Report from the House of Representatives
Standing Committee on Expenditure

Volume 1 : Report
Volume 2 : Profiles of Manned Lightstations

DECEMBER 1983

Australian Government Publishing Service
Canberra 1984

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ISBN 0 644 03021 6

Cover drawing : Cape Bruny Lighthouse, Tasmania

Printed by C J Thompson, Commonwealth Government Printer,
Canberra

MEMBERS OF THE COMMITTEE

Chairman: Mr L.B. McLeay, M.P.
Deputy Chairman: Mr S.A. Lusher, M.P.

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Mr R.J. Brown, M.P.
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Mr C.W. Tuckey, M.P.
Hon I.B.C. Wilson, M.P.

Secretary: Mr M.E. Aldons

1. The nominee of the Chairman of the Joint Committee of Public Accounts who, in accordance with Clause (2) of the Resolution of Appointment, is a member of the Expenditure Committee.

MEMBERS OF THE SUB-COMMITTEE:

Chairman: Mr L.B. McLeay, M.P.

Members: Mr P.J. Baldwin, M.P.
Mr R.J. Brown, M.P.
Mr R.V. Free, M.P.
Mr B.J. Goodluck, M.P.
Mr S.A. Lusher, M.P.
Mr A.A. Morris, M.P.
Mr J.C. Mountford, M.P.
Mr C.W. Tuckey, M.P.
Hon I.B.C. Wilson, M.P.

Secretary: Mr M.E. Aldons

Assistant Secretary: Mr B.D. Bailey

2. On 24 May 1983 the Committee appointed a Sub-committee comprising the above Members and Mr I.M.D. Cameron to authorise publication of submissions, take evidence and conduct inspections of lightstations. The Sub-committee which membership is listed above was appointed on 2 November 1983 by the Committee to prepare a report for the Committee.

MEMORANDUM

TO : THE PRESIDENT

FROM : THE SECRETARY OF STATE

SUBJECT: [Illegible]

[Illegible]

[Illegible]

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CONTENTS

Volume 1 : Report

FOREWORD	xiii
FINDINGS AND RECOMMENDATIONS	xv
I: INTRODUCTION	1
The Inquiry	1
The Report	2
II: BACKGROUND	6
Introduction	6
Provision of Navigational Aids in Australia	6
Commonwealth and State Responsibilities	8
International Obligations	9
Departmental Organisation	9
III: DEVELOPMENT OF UNMANNING	11
Introduction	11
Unmanning (1915 - 1983)	11
Reaction to Unmanning	12
IV: APPROACH TO ISSUES	15
Terms of Reference	15
Report Objectives	15
V: AUTOMATION AND UNMANNING	17
Introduction	17
The Role of Lights	17
Definition of Manned and Unmanned Stations	18
Automation and Unmanning	19
Reliability and Range of Automated Lights	20

VI:	THE NEED FOR CONTINUED MANNING	23
	Introduction	23
	The Duties of the Lightkeeper	23
	Methodology	27
	The Case for Continued Manning	29
	- Cost Savings of Unmanning	29
	- Benefits of Contined Manning :	
	Sea Based Functions of Keepers	
	Coastal Surveillance	30
	Search and Rescue	32
	Weather Information	34
	- Benefits of Continued Manning :	
	Land Based Functions of Keepers	
	Cultural Environment	37
	Natural Environment	40
	The Case for Continued Manning : Conclusions	44
VII:	LEVELS FOR CONTINUED MANNING	51
	Introduction	51
	The Lightkeeper Service	51
	Manning at Isolated Stations	51
	Manning at Other Stations	52
VIII:	PAYMENT FOR CONTINUED MANNING	57
	Introduction	57
	Cost Recovery and Commercial Shipping	57
	Cost Recovery and Commonwealth Departments	60
IX:	POLICY AND THE DECISION-MAKING MECHANISM	63
	Introduction	63
	Policy for Continued Manning	63
	Decision-Making Mechanism	65
X:	OTHER ISSUES	71
	Introduction	71
	Relevance of Overseas Experience	71
	Cost Information	73
XI:	CONCLUSIONS	76
	Summary	76
	Preliminary Conclusions	77
	Recommendations	77

TABLES

1. Growth in Navigational Aids (1974 - 1983)	7
2. Number of Lightstations Unmanned (1915 - 1983)	11
3. Summary of Profiles of Manned Lightstations	48
4. Case for Continued Manning	50
5. Committee Conclusions on Need For Continued Manning	56
6. Unmanning of Lightstations in Other Countries	72

APPENDICES

1. Lightstations Used by Bureau of Meteorology for Making Meteorological Observations	81
2. Details of Lightstations on the Register of the National Estate	82
3. Lightstations Where Manned Presence Required to Protect Cultural Environment	86
4. Categorisation of the Lightstations in Terms of Need for Continued Manning	87
5. Witnesses, Exhibits, Evidence and Submissions	88

CONTENTS

Volume 2 : Profiles of Manned Lightstations

	<u>Page</u>
Introduction	102
New South Wales	
1. Cape Byron	105
2. Green Cape	108
3. Montagu Island	111
4. Norah Head	116
5. Point Perpendicular	118
6. Smoky Cape	121
7. Sugarloaf Point	124
Victoria	
8. Cape Nelson	129
9. Cape Otway	132
10. Cape Schanck	135
11. Gabo Island	137
12. Point Hicks	140
13. Wilsons Promontory	142
Queensland	
14. Booby Island	147
15. Bustard Head	150
16. Cape Capricorn	152
17. Cape Cleveland	155
18. Cape Moreton	157
19. Dent Island	159
20. Double Island Point	162
21. Fitzroy Island	165
22. Lady Elliott Island	167
23. Low Isles	171
24. Pine Islet	173
25. Sandy Cape	175
South Australia	
26. Althorpe Island	182
27. Cape Borda	185
28. Cape Willoughby	188
29. South Neptune Island	190

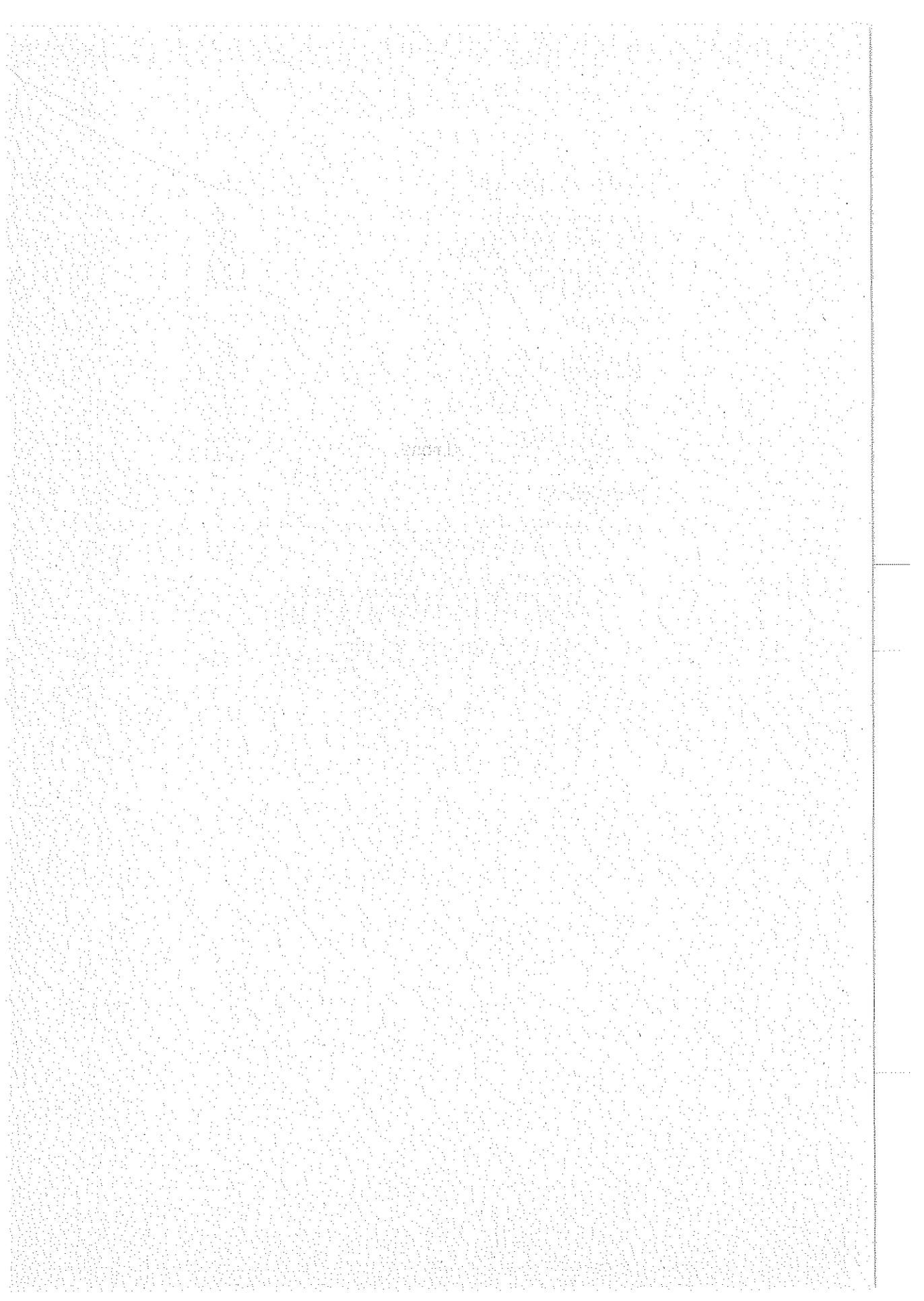
Western Australia	<u>Page</u>
30. Cape Leeuwin	195
31. Cape Leveque	198
32. Cape Naturaliste	200
33. Moore Point	202
34. Rottneest Island	204

Tasmania

35. Cape Bruny	209
36. Currie Harbour	212
37. Deal Island	214
38. Eddystone Point	218
39. Low Head	221
40. Maatsuyker Island	224
41. Swan Island	228

ATTACHMENTS

1.(a) Indicative Costs Associated with Manned Lightstations	233
(b) Indicative Listing of Lightstation Unmanning Ranked According to Financial Savings	236
2. Map: Location of Manned Lightstations as at July 1983	238



REPORT

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FOREWORD

The House of Representatives Standing Committee on Expenditure Inquiry into Lightstations was undertaken at the request of the Minister for Transport. He felt that the Inquiry would improve public understanding and assist in the formulation of policy. We have achieved both aims.

Unmanning of lightstations is a complex social problem which is of great concern to large numbers of the Australian community. This is evidenced by the huge response the Committee received when it advertised its terms of reference; particularly the response from private citizens.

Because of this public concern in particular, the Committee gave special attention to making its Inquiry both public and participatory. At various stages of our Inquiry we kept those who had made contributions informed of the progress of the Inquiry.

On behalf of the Expenditure Committee, I wish to thank all those who assisted the Inquiry by providing it with submissions and oral evidence. The information we received was of great assistance and it is in recognition of this assistance that we have compiled as the second volume of our Report, Profiles of Manned Stations. Our special thanks are extended to the Department of Transport which never failed to meet the numerous and detailed requests for information that we asked of it and the Australian Lighthouse Association for the constant stream of advice it offered the Committee.

During our inspections the lightkeepers and their families were always helpful and hospitable. They were interesting people doing a job that many of us would consider romantic. However when the isolation and hard work is taken into account it seems far less romantic but has bred a unique group of people.

I also wish to thank my colleagues, fellow Committee Members, who found the time despite busy Parliamentary and electoral schedules to go on inspections, examine submissions, participate at public hearings and offer constructive suggestions in the preparation of the various stages of our Report.

As a Committee we are also grateful to the staff of the Expenditure Committee Secretariat for their assistance at all stages of the Inquiry.

The title of the Report captures its essence: Do We Keep the Keepers. Without dwelling for too long at this point on the Report I point out that we have placed great emphasis on the need for effective decision-making mechanism which would permit consultation at the ministerial levels, both Commonwealth and State, allow for greater community participation and, help in the examination of alternatives to unmanning if the Commonwealth decision is that there is no need for a Commonwealth presence at particular lightstations.

An alternative title which would have captured the atmosphere of the Inquiry could well have been: The Resolution of Conflict. The Expenditure Committee has provided the mechanism by which this conflict can be resolved. It is now up to those who participated in our Inquiry and who will need to participate more closely with one another if our mechanism is accepted to provide the wherewithall by which conflict can be resolved.

Leo McLeay MP
Chairman

FINDINGS AND RECOMMENDATIONS

Findings

Development of Unmanning

1. The majority of lights constructed since 1915 have been constructed and operated as unattended lights.
(Paragraph 3.12)
2. The unmanning of manned lights was virtually dormant in the 1940's, 1950's and 1960's but accelerated in the 1970's and continued into the 1980's in the wake of the 1974 Summers report.
(Paragraph 3.12)
3. The reaction to the policy of unmanning has been the establishment of a number of organisations and representations by private citizens, all opposed to unmanning.
(Paragraph 3.12)

Automation and Unmanning

The Role of Lights

4. Although modern technology has reduced the reliance of lights as navigational aids for commercial shipping, both the industry and particularly other users see lights as a necessary if not essential navigational aid.
(Paragraph 5.5)

Definition of Manned and Unmanned Stations

5. An unmanned lightstation should be defined as one at which there is no human presence.
(Paragraph 5.10)
6. Manned lightstations should be defined as those where:
 - (a) Transport lightkeepers tend the navigational aid, or
 - (b) the light is fully automated and the human presence, not necessarily a Commonwealth employee, carries out the ancillary functions of the lightkeeper.
(Paragraph 5.10)

Automation and Unmanning

7. Automation and unmanning are separate issues. Confusion about these matters is linked to the absence of clear and unambiguous definitions of manned and unmanned lightstations and to the lack of clear policy guidelines on the matter of continued manning of lightstations.

(Paragraph 5.13)

Reliability and Range of Automated Lights

8. The question of the adverse effects on users of the reliability and range of automated lights should be taken into consideration in the decision-making process of lightstation unmanning.

(Paragraph 5.19)

9. However, the economic benefits of manned lights should be given a zero value if the users who oppose unmanning or the State Governments which support them are not prepared to pay for the additional benefits.

(Paragraph 5.19)

The Need for Continued Manning

The Duties of the Lightkeeper

10. In recent times the primary and historical duty of the lightkeeper, i.e. the maintenance of the integrity of the navigational aid, has declined sharply in importance.

(Paragraph 6.19)

11. Lightkeepers now have several ancillary duties many of which are assigned by the Department of Transport under the Standing Orders for Personnel at Marine Navigational Aids and some voluntary assumed duties as well.

(Paragraph 6.19)

12. The fact that keepers have assigned ancillary duties does not, by itself, mean that these duties are essential or have to be performed by Department of Transport lightkeepers.

(Paragraph 6.19)

Methodology

13. Given the difficulties and the costs of collecting information to measure some of the benefits of the manned presence and the problems associated with the quantification of other benefits, it is not practicable to use a formal evaluation technique such as cost-benefit analysis to determine whether continued manning of a particular lightstation is economically viable.

(Paragraph 6.30)

14. The approach of the Committee described at paragraph 6.20 is to take into account all the relevant costs and benefits.

(Paragraph 6.30)

The Case for Continued Manning

Cost Savings of Unmanning

15. The indicative financial benefits of unmanning calculated by Transport are benefits that purport to accrue to Transport and not to the Commonwealth because they do not allow for the additional costs that would be incurred by other Commonwealth agencies if unmanning were to proceed.

(Paragraph 6.30)

Benefits of Continued Manning: Sea-based Functions of Keepers Coastal Surveillance

16. There are no significant benefits for coastal surveillance that derive from a human presence at any of the 41 manned lightstations.

(Paragraph 6.44)

Search and Rescue

17. There are significant benefits for search and rescue that derive from a human presence at the following 11 lightstations:

Deal Island	Maatsuyker Island
Gabo Island	Montagu Island
Green Cape	Point Perpendicular
Eddystone Point	Smoky Cape
Lady Elliott Island	South Neptune Island

(Paragraph 6.59)

18. The search and rescue function of lightkeepers is therefore relevant in considering the need for continued manning and should not be discounted if it is considered that SAR is a State responsibility.

(Paragraph 6.59)

19. This latter question should be considered in the context of whether a station should be manned by a Department of Transport lightkeeper, or someone else and who should pay for the manning.

(Paragraph 6.59)

Weather Information

20. There are significant benefits for weather information required by the Bureau of Meteorology that derive from a human presence at the following 16 lightstations:

Cape Borda	Eddystone Point*
Cape Byron	Gabo Island
Cape Don	Lady Elliott Island
Cape Leeuwin	Low Isles
Cape Moreton	Maatsuyker Island
Cape Otway	Montagu Island
Cape Willoughby	Point Perpendicular
Double Island Point	Smoky Cape
	Wilson's Promontory
	(Paragraph 6.70)

*or Swan Island

21. There are significant benefits for weather information, i.e. current state of the weather particularly for the fishing industry, that derive from a human presence at the following 14 lightstations:

Althorpe Island	Double Island Point
Cape Borda	Eddystone Point
Cape Bruny	Green Cape
Cape Leveque	Maatsuyker Island
Cape Naturaliste	Montagu Island
Cape Willoughby	South Neptune Island
Deal Island	Swan Island
	(Paragraph 6.70)

22. Findings 17, 18, 20 and 21 do not answer questions on the level of manning, the organisation that provides the manning or who pays for the manned presence.
(Paragraph 6.70)

Benefits of Continued Manning: Land-based Functions of Keepers Cultural Environment

23. The Committee accepts the Department of Transport view that vandalism has not been a serious problem in Australia, but points out that what has to be taken into consideration is the probability of vandalism at stations with heritage significance and public access.
(Paragraph 6.82)

24. There are significant benefits for the cultural environment that derive from a human presence at the following 24 lightstations:

Cape Borda*	Green Cape
Cape Bruny	Lady Elliott Island*
Cape Byron	Low Head
Cape Leeuwin	Low Isles*
Cape Moreton*	Montagu Island
Cape Naturaliste	Norah Head

Cape Nelson
Cape Otway
Cape Schanck
Cape Willoughby*
Double Island Point
Fitzroy Island*

Point Hicks
Point Perpendicular*
Rottnest Island
Sandy Cape
Smoky Cape
Sugarloaf Point

(Paragraph 6.82)

25. The above list contains the 17 stations nominated by Transport and 7 other stations (denoted by *) that meet the Transport criteria of low operating costs, heritage value, accessibility to the public and popularity with visitors.

(Paragraph 6.82)

Natural Environment

26. There are significant benefits for the natural environment that derive from a human presence at the following 21 lightstations:

Althorpe Island
Booby Island
Cape Bruny
Cape Moreton
Cape Nelson
Cape Schanck
Currie Harbour
Deal Island
Eddystone Point
Green Cape

Gabo Island
Lady Elliott Island
Low Isles
Maatsuyker Island
Montagu Island
Norah Head
Point Perpendicular
Rottnest Island
Sandy Cape
South Neptune Island
Wilsons Promontory

(Paragraph 6.101)

27. There are useful benefits for the natural environment (bushfire protection) that derive from a human presence at several lightstations, particularly those in Victoria and South Australia.

(Paragraph 6.101)

The Case for Continued Manning: Conclusions

28. It appears to the Committee that the cost savings of automation and unmanning are greater than the benefits of continued manning for the following 8 stations: Bustard Head, Cape Capricorn, Cape Cleveland, Cape Leveque, Dent Island, Moore Point, Pine Islet and Swan Island.

(Paragraph 6.107)

29. For the remaining 33 lightstations the Committee is of the opinion that the benefits that derive from the human presence are greater than the cost savings of automation and unmanning.

(Paragraph 6.107)

30. The last finding does not imply that current manning levels at these stations are appropriate.
(Paragraph 6.107)

Levels for Continued Manning

The Lightkeeper Service

31. All reasonable efforts should be made to ensure that lightstations are manned by Department of Transport lightkeepers if the decision is in favour of continued manning.
(Paragraph 7.3)

Manning at Isolated Stations

32. For personnel safety reasons remote stations should be operated by two persons. Therefore, out of the 33 stations the Committee said should continue to be manned the following 7 stations should be operated by two persons: Althorpe Island, Booby Island, Deal Island, Gabo Island, Maatsuyker Island, South Neptune Island and Wilsons Promontory.
(Paragraph 7.5)
33. Given continued two-person operations at these lightstations, then the lights should not be automated unless the light mechanisms are reaching the end of their economic lives.
(Paragraph 7.5)

Manning at Other Stations

34. The issue of unmanning should not be allowed to impede the transfer of the lightstation reserves at Montagu Island, Smoky Cape, Green Cape and Sugarloaf Point to the New South Wales State Government.
(Paragraph 7.7)
35. The Commonwealth should, however, take necessary steps to ensure that the heritage value of these stations is preserved after the land transfers.
(Paragraph 7.7)
36. The Commonwealth should draw to the attention of the State Government the benefits lightkeepers have provided in respect of search and rescue work and local weather reports at these stations. A condition of the land transfer at Green Cape and Montagu Island should be the retention of the manned presence.
(Paragraph 7.7)

37. The manning level at lightstations where the sole function of the keeper is the protection of the cultural or the natural environment be reduced to 1. These lightstations are: Fitzroy Island and Point Hicks.
(Paragraph 7.8)
38. As a pre-requisite to the reduction in the level of manning, the lights at these stations should be automated.
(Paragraph 7.8)
39. The level of manning required for stations where the functions of the keeper include the protection of the cultural and natural environment be the subject of joint study by the Department of Transport and the Department of Home Affairs and Environment. These lightstations are: Cape Bruny, Cape Moreton, Cape Nelson, Cape Schanck, Lady Elliott Island, Low Isles, Norah Head and Sandy Cape.
(Paragraph 7.9)
40. The existing level of manning should be maintained at Cape Naturaliste, Currie Harbour, Low Head and Rottnest Island.
(Paragraph 7.10)
41. Stations where the keeper either protects the cultural or natural environment and in addition performs other functions such as observations for the Bureau of Meteorology, assistance in search and rescue and provision of local weather reports, should be manned by 1 person unless the Bureau or State governments pay for the costs of the second person or unless other means can be found for providing for a second person. These stations are: Althorpe Island, Cape Borda, Cape Byron, Cape Leeuwin, Cape Otway, Cape Willoughby, Double Island Point, Eddystone Point, Point Perpendicular and South Neptune Island.
(Paragraph 7.17)
42. This above finding would also apply to several stations in Finding 39 if the joint study showed the need for manning by 1 person at these stations.
(Paragraph 7.17)
43. If unmanning or a reduction in the level of manning will cause a serious diminution in the quality of weather forecast provided by the Bureau of Meteorology, then the remedy lies with the Bureau itself. The Bureau can seek additional funds, rearrange its expenditure priorities or find other ways to continue to obtain meteorological observations from lightstations.
(Paragraph 7.17)

Payment for Continued Manning

44. Subject to the next finding commercial shipping, the only group that pays light dues, should not be required to pay for the continued manning at lightstations because this is a service commercial shipping does not need.

(Paragraph 8.11)

45. The timing for discontinuing charging commercial shipping should coincide with the time when a particular lightstation would have been unmanned based only on Transport portfolio responsibilities; this would allow discussions between the industry and the department on both the reasonableness of the timing and the need for it to contribute towards the cost of retaining the manned presence for other reasons.

46. Where the reason or reasons for the maintenance of the manned presence is for the protection of the cultural environment, the natural environment or both, the Minister for Transport, the Minister for Home Affairs and Environment and the Minister for Finance examine the possibility of developing a formula which would minimise the need for the Department of Transport to pay for functions outside the Transport portfolio.

47. Where the reasons for the maintenance of the manned presence are the protection of the cultural or natural environment, and, other reasons such as meteorological observations, current weather information or search and rescue, the costs of any additional manning should be paid by others.

(Paragraph 8.17)

Policy and Policy Mechanisms

48. The policy should be changed from one of unmanning to one on the need for continued manning and the appropriate level of that manning.

(Paragraph 9.7)

49. The policy on the need for continued manning should have the following features:

(a) an assessment of the cost savings of unmanning against all the benefits of retaining a manned presence, including those benefits pertaining to the cultural and natural environment, benefits that accrue to local communities and other benefits;

(b) an acknowledgement that where there is no Commonwealth need for the manned presence there will be consultation with the States;

- (c) a recognition that in this process of consultation all reasonable measures will be taken to continue manning if others are prepared to pay for the costs or prepared to install a voluntary presence at the station in question;
- (d) a continued acceptance of the policy that commercial shipping should not be asked to pay for a service it does not need subject to the recognition that the timing of the discontinuation for charging would be based on Transport portfolio responsibilities.
- (e) An acknowledgement that the the rate of unmanning lightstations for which the cost savings are greater than the benefits of continued manning, or for stations where a reduction in the level of manning is warranted should be appropriate to the employment security to those in the lightkeeper service and without forced retrenchments.

(Paragraph 9.7)

- 50. After taking into consideration State Government and community reaction to the Expenditure Committee Report, the Minister for Transport should develop and announce in the House a Program for the unmanning of the 8 lightstations listed in Finding 28 and the 4 lightstation reserves to be transferred to the State Government of New South Wales as identified in Findings 34 to 36.

(Paragraph 9.23)

- 51. In the course of developing this Program the Minister should confirm the principle espoused in the 1974 Summers Report and reflected in Finding 31 on employment security for those in the lighthouse service.

(Paragraph 9.23)

- 52. The Minister should guarantee that wherever practicable unmanning will be preceded by the installation of a safety radio telephone in the vicinity of the station that is to be unmanned.

(Paragraph 9.23)

- 53. In the process of developing this Program the Minister for Transport offer relevant State Governments ownership of the lightstation reserves subject to Commonwealth requirements for the operation of the navigational aid.

(Paragraph 9.23)

54. The Program should be developed by adding on lightstations to take the place of those unmanned or those transferred to the State Government of New South Wales. The stations added would not be those earmarked for unmanning but rather those identified for a reduction in the level of manning - i.e. those mentioned in Findings 37, 39 and 41.

(Paragraph 9.13)

55. In the development of the Program the following decision-making mechanism be employed:

(a) Consultation between Commonwealth Departments and agencies (departments of Transport, Home Affairs and Environment, Administrative Services, Bureau of Meteorology) to determine the initial Commonwealth parameters;

(b) referral of that position to a committee comprising relevant Commonwealth Departments and State Government agencies and other organisations such as the Australian Lighthouse Association. The committee would take the initial Commonwealth position as given and explore alternatives for continued manning;

(c) referral of the committee report for initial decision by the Minister for Transport who could accept the alternatives or place the particular lightstation on an Interim List and then inform his State counterpart of this decision;

(d) following completion of this consultation the Minister for Transport would make a final decision by either deleting the lightstation from the Interim List or transferring it to the Program.

(Paragraph 9.23)

56. Where the Minister decides it is necessary for the costs and benefits of manning a lightstation be reassessed, the social audit approach be used, the work be assigned to the Bureau of Transport Economics and the results of this work be fed into the first stage [55(a)] of the proposed decision-making mechanism.

(Paragraph 9.23)

Recommendations

The Committee recommends that:

1. The 8 lightstations listed in Finding 28 be unmanned.

2. The 4 lightstations referred to in Findings 34-36 be transferred to the New South Wales State Government and that the matter of payment be finalised before the reserves are handed over.
[Paragraph 11.9]
3. The level of manning at the 2 lightstations listed in Finding 37 be reduced to one person and as a prerequisite to the reduction to this level the lights at the stations be automated.
4. The level of manning of the stations listed in Finding 39 be subject to a joint study by the Department of Transport and the Department of Home Affairs and Environment.
5. The existing level of manning be maintained at the stations listed in Findings 32 and 40.
6. The commercial shipping industry not be required to pay for a service it does not need provided that the timing for the discontinuation for charging the shipping industry for the manned presence should coincide with the timing when a particular lightstation would have been unmanned based only on the responsibilities of the Transport portfolio.
7. Where the reason or reasons for the maintenance of the manned presence is for the protection of the cultural environment, the natural environment or both, the Minister for Transport, the Minister for Home Affairs and Environment and the Minister for Finance examine the possibility of developing a formula which would minimise the need for the Department of Transport to pay for functions outside the Transport portfolio.
(Paragraph 11.11)
8. The rate of unmanning or reduction in the level of manning of lightstations be appropriate to the employment security of those in the lightkeeper's service and without forced retrenchment.
9. After taking into consideration State Government and community reaction to the Expenditure Committee Report, the Minister for Transport develop and announce in the House a Program for the unmanning of the 8 lightstations listed in Finding 28 and the 4 lightstation reserves to be transferred to the State Government of New South Wales as identified in Findings 34 to 36.
10. The Minister should guarantee that wherever practicable unmanning will be preceded by the installation of a safety radio telephone in the vicinity of the station that is to be unmanned.

11. In the process of developing this Program the Minister for Transport offer relevant State Governments ownership of the lightstation reserves subject to Commonwealth requirements for the operation of the navigational aid.

(Paragraph 11.11)

12. The Program should be developed by adding on lightstations to take the place of those unmanned or those transferred to the State Government of New South Wales. The stations added would not be those earmarked for unmanning but rather those identified for a reduction in the level of manning - i.e. those mentioned in Findings, 37, 39 and 41.

13. In the development of the Program the following decision-making mechanism be employed:

- (a) consultation between Commonwealth Departments and agencies (Department of Transport, Home Affairs and Environment, Administrative Services, Bureau of Meteorology) to determine the initial Commonwealth parameters;
- (b) referral of that position to a committee comprising relevant Commonwealth departments and State Government agencies and other organisations such as the Australian Lighthouse Association. The committee would take the initial Commonwealth position as given and explore alternatives for continued manning;
- (c) referral of the committee report for initial decision by the Minister for Transport who could accept the alternatives or place the particular lightstation on an Interim List and then inform his State counterpart of this decision;
- (d) following completion of this consultation the Minister for Transport would make a final decision by either deleting the lightstation from the Interim List or transferring it to the Program.

14. Where the Minister decides it is necessary for the costs and benefits of manning a lightstation be reassessed, the social audit approach be used, the work be assigned to the Bureau of Transport Economics and the results of this work be fed into the first stage of the proposed decision-making mechanism.

(Paragraph 11.12)

I: INTRODUCTION

The Inquiry

1.0 Five words in the title of the Report from the House of Representatives Standing Committee on Expenditure sum up the essence of the inquiry into lightstations: Do We Keep the Keepers? After the terms of reference are stripped to their bare minimum, after the methodology of the inquiry is explained and applied and after the information collected by the Committee is sifted and weighed, we still come back to this basic question: Do We Keep the Keepers?

1.1 In answering this and related questions the Committee has undertaken a comprehensive inquiry in which public participation has been encouraged actively. Following a request from the Minister for Transport the Committee resolved on 17 May 1983 to inquire into lightstations. On 19 May the Chairman wrote to the State Premiers and the Chief Minister of the Northern Territory informing them of the inquiry and its terms of reference, and inviting them to make submissions.

1.2 On 24 May 1983 the Committee appointed a Sub-committee to authorise publication of submissions, take evidence and conduct inspections of lightstations. In the months of June, July and August the Sub-Committee inspected 10 manned lightstations and the unmanned light at Cape Don in the Northern Territory. The stations visited were in New South Wales (3), Tasmania (4), Western Australia (1) and Queensland (2). Some of these inspections were combined with a schedule of inspections and hearings on the inquiry into Sport and Recreation.

1.3 In the course of the inspections Members had discussions with the keepers at these stations. We wish to place on public record our appreciation of the courtesy extended to us by the members on the lightkeeper service, and in particular the hospitality of their families. The Sub-committee also had discussions with community groups in Eden and Narooma (14 June), Launceston (22 June) and Hobart (23 June).

1.4 The terms of reference of the inquiry were advertised in the national press on 1 and 3 June 1983 and the public was invited to make submissions to the inquiry. Well over a 100 submissions were received and were promptly authorised for publication so that key participants would have an opportunity to study the information the Committee was receiving.

1.5 While in Brisbane for the inquiry into Sport and Recreation the Sub-committee took evidence on 22 July 1983 from persons in Queensland who had made submissions on the lightstations inquiry. Prior to this the State Government of

Queensland was informed that early receipt of its submission would allow evidence on the submission to be taken when the Committee was in Brisbane.

1.6 Because of the late receipt of some key submissions the Sub-committee revised its schedule of hearings and took evidence on 12, 13, 14 and 21 September 1983. The evidence was authorised for publication. The witnesses who gave evidence represented a broad spectrum of interests in the inquiry - Commonwealth Government departments, officials representing the State Government of Tasmania, representatives from the commercial shipping industry, the fishing industry, yachtmen, conservationists, the association representing lighthouses or the keepers and private citizens.

1.7 To give interested persons a clear indication of the Committee's approach to the inquiry the Chairman made a fairly detailed opening statement at the 12 September 1983 hearing. This statement was circulated to all those who made submissions but did not give evidence.

1.8 After assessing the information contained in the submissions and obtained at the public hearings the Committee constructed a set of Preliminary Conclusions which were sent on a confidential basis to certain organisations - the 6 State governments, the Departments of Transport and Home Affairs and Environment, the Bureau of Meteorology, the Australian Chamber of Shipping and the Australian Lighthouse Association. The feed-back on these conclusions has been taken into account in the preparation of our report.

The Report

1.9 The Report is in two parts. Volume 1 is the report itself and Volume 2 is the Profiles of Manned Lightstations. In his opening address of 12 September 1983 the Chairman said the Committee would attempt to construct such profiles for each of the 41 lightstations referred to in the Minister's letter. These profiles provide the bulk of the information on which our analysis is based.

1.10 Volume 1 contains this Introduction which is followed by general information contained in a chapter on Background. We next describe the development of unmanning of lightstations in Chapter 3, noting that unmanning was virtually dormant in the 1940's, 1950's and 1960's but resumed in the 1970's. The reaction to this resumption was the establishment of various organisations to oppose unmanning. It is against this background that the Minister for Transport has asked the Committee to inquire into unmanning of lightstations - to increase public understanding and to assist the Government to develop a policy on the issue.

1.11 In the very short fourth chapter, the Committee discusses its approach to the inquiry and develops a 5 part sequential analysis to handle the advertised terms of reference and issues that flowed from the submissions and evidence.

1.12 Chapter 5 examines the first issue, i.e. whether lights should be automated. Chapter 6, the largest chapter by far in the Report is central to the inquiry because it examines the need for continued manning. This examination is preceded by a discussion of the duties of the lightkeeper. Quite important to the chapter is the selection of a methodology and its application. This application is based on the information contained in the Profiles and is related to a detailed examination of the benefits that derive from a human presence at the 41 manned lightstations. From such analysis conclusions are reached on the identified benefits of the human presence at each of the 41 manned lightstations.

1.13 On the basis of such conclusions, overall conclusions are made on the need for continued manning. Briefly, these overall conclusions are that:

- . for 8 lightstations it appears that the cost savings of automation and unmanning are greater than the benefits of continued manning
- for the majority of these stations the benefits appear to be insignificant
- . for the remaining 33 stations the benefits that derive from the human presence are greater than the cost savings of automation and unmanning.

1.14 The next step in the analysis is the discussion of the levels of manning at the 33 stations. Chapter 7 discusses the tradition of the lightkeeper service, manning at isolated stations and other stations. Conclusions are reached on levels of manning and these are summarised at Table 5.

1.15 Given these levels we next discuss the question of who should pay for continued manning. The Committee believes commercial shipping, which is the only payer of light dues should not pay for a service it does not need; but that the timing for discounting charging shipping should coincide with the time when a particular lightstation would have been unmanned based only on the responsibilities of the Transport portfolio. Because continued manning does not have any relationship with this portfolio we have suggested that the Ministers for Transport, Home Affairs and Environment and Finance examine the possibility of developing a formula which would minimise the need for Transport to pay for functions outside the Transport portfolio. Other than this, our view is that if manning or additional manning is required for other reasons, then those who benefit from that manning should pay.

1.16 Chapter 9 is fundamental to the entire issue of continued manning. In it we suggest what the policy should be and what decision-making mechanism should be employed. Given changing circumstances over time, and our objection to a continuing public inquiry process, it is important to put in place an effective decision-making mechanism which will permit consultation between the Commonwealth and the States, will allow for wider community participation and for opportunities to explore alternatives to the removal or reduction of the Commonwealth presence.

1.17 Chapter 10 examines other issues and the last chapter of the report presents the recommendations of the Committee. The appendices which appear at the back of the report and the findings and recommendations which appear at the front complete Volume 1.

1.18 As mentioned previously the information on which this report has been based is written submissions and oral evidence. Where the Committee has considered it relevant, or where there have been specific requests made, some of this evidence has been tested. The remainder has not and its relevance or accuracy is therefore the responsibility of the Committee.

1.19 The line that we have adopted is to seek for or use hard evidence. Thus, if evidence is general or if the reference is to the potential benefits of the human presence at particular lightstations we have tended to discount this evidence. Thus, given that coastal surveillance is the prime responsibility of the Australian Coastal Surveillance Centre and the absence of hard evidence on what the lightkeeper does in respect of this function, the Committee has concluded that there are no significant benefits for coastal surveillance that derive from a human presence at any of the 41 manned lightstations.

1.20 The availability of some hard evidence means that we have reached different conclusions on the search and rescue function of lightkeepers. Where the Committee has been told that the lightkeeper has saved lives or has played a significant part in search and rescue operations conducted by local police, volunteer coastal patrols or the ACSC, we have accepted this evidence. For stations where such evidence has been put forward to us we have concluded that the search and rescue function is significant.

1.21 Similarly we have accepted, though after some analysis of our own, the Transport view on the need for continued manning at 17 lightstations to protect the cultural environment. We have also accepted the views of the Department of HA&E as being the views of expert witnesses that if there was to be complete demanning the likely portfolio requirements of that department would be for a full-time residential management presence at 21 lightstations.

1.22 As with all committee inquiries or other types of investigations the quality of our report depends, in part at least, on the information given to us, our ability to test this information and require additional information and our ability to assess and analyse the information. It is by such means that we have been able to produce schedules which detail the benefits of manning at each of the 41 lightstations. It is by such means that we have been able to produce a schedule of stations suitable for unmanning and other lists which specify the level of manning for particular stations, or which specify the organisation that should pay for continued manning at particular stations.

1.23 This listing is not only a practical possibility but also something that was required by us if we were to give effect to our terms of reference which were suggested to us in the first instance by the Minister for Transport. Thus, it is not only practical for us to prepare these lists but also necessary. The point that should be noted, however, is that notwithstanding these comments the decision-making process that we have suggested will give interested persons and organisations the opportunity to influence the decision of the Minister, both in the immediate and distant future.

1.24 At some stage in any inquiry, in any decision-making process, information gathering has to end. At some stage decisions have to be taken. Neither the Committee nor, we suspect, the Minister can wait until information is collected by organisations which is favourable to the attitudes and views of those organisations. The issue of unmanning has been given a very large amount of public exposure, particularly through the Committee's inquiry. Organisations that are opposed to the policy of unmanning have been given ample opportunities to put forward their points of view and to comment on contrary points of view put forward by others. The unfortunate aspect of the issue of unmanning is the vehemence of the opposition to unmanning and the translation of this vehemence into personality conflicts. The time has come for reasonable people to cast aside personal differences and to sit down and work out suitable alternatives to the retention of the Commonwealth presence if this presence is not required as determined by Ministers. Our inquiry, our report, our recommendations and particularly those which deal with the decision-making mechanism, give people these opportunities. It is to be hoped that these opportunities are used wisely and not squandered.

II: BACKGROUND

Introduction

2.0 Lights and lighthouses have been used for well over 2 000 years to assist navigation of ships at sea. Originally they were towers of rock with open wood fires at the summit. In the last couple of hundred years oil, gas, electricity and now solar batteries have in turn been adapted to power lights on light towers, lenses have extended the visibility of the light and the science of optics has increased light intensity. Of more recent origin is the introduction of electronic aids.

2.1 The original purposes of navigational aids were to mark hazards and to assist the mariner to know where he was, the object being safety, the prevention of loss of life and avoidance of shipwreck. The main users were the captains of numerous small vessels which did not have any sophisticated navigational aid equipment.

2.2 In recent years there has been a large increase in the size and speed of ships serving the world's trade routes. Such ships are expensive to build and operate. Because of this the purpose of navigational aids has been extended to enable ships to reach their destinations by the shortest, fastest, safest route.

Provision of Navigational Aids in Australia

2.3 Lighthouses were an integral part of the early activities in Australia's settlement and trade, some being built in the early part of the 19th century, and reflecting the country's dependence on sea transport. Shipping is vital to Australia's trade with other countries which in turn is so important to economic growth that the provision of numerous reliable navigational aids is a key factor in safe, efficient, economical shipping operations.¹

2.4 At September 1974 there were some 334 navigational aids on Australia's coastline under the control of the Department of Transport. By 30 June 1983 this had increased to 376. The growth in the number and type of navigational aids can be seen from Table 1.

TABLE 1
GROWTH IN NAVIGATIONAL AIDS
(1974-1983)

TYPE OF AID	1974 ¹	1978 ²	1982 ³	1983 ⁴
Manned Lightstations	48	45	42	41
Unattended Lightstations	217	223	244	249
Light vessels	2	2	3	3
Lighted buoys	31	33	38	38
Unlighted beacons	23	24	21	20
Radio beacons	10	10	11	11
Decca Navigational chains	2	2	2	2
Automatic tide gauges	1	1	1	2
Radar transponders	-	-	5	9
Omega transmitters	-	-	-	1
TOTAL	334	340	367	376

Sources: 1. Summers Report
 2. Department of Transport Annual Report, 30 June 1978
 3. Department of Transport Annual Report, 30 June 1982
 4. Department of Transport Submission (30 June 1983)
 2.5 A description of some of the navigational aids in the table is as follows:

Buoys

An anchored floating device with or without a light, marking hazards or channels.

Lights

A tower with a light, used to mark hazards or as a means of position fixing. The beam may be flashing or rotating. They are also used as daytime beacons.

Radio Beacons

A radio transmitting station of whose transmissions a ship may take its bearing.

Decca Navigational Chain

A Decca Chain radio navigation aid system consisting of a chain of master stations along the shore sending out signals, guiding in the vessel through channels.

Automatic Tide Gauge

Tide gauges transmit tidal situation for use by vessels about to proceed through straits.

Radar Transponders

A beacon which emits a characteristic signal when triggered by the emission of ships' radar sets.

Omega Transmitters

Omega, like Decca, assists shipping in making an accurate position fix. The Australian Omega facility is one of eight stations giving worldwide coverage. The Omega transmitters send out signals at set intervals; these are picked up by the shipboard receiver and by using the specially prepared Omega lattice chart, and interpreting two or three other Omega signals, the vessel can pinpoint its position with great accuracy.

Commonwealth and State Responsibilities

2.6 The basis for Commonwealth interest in navigational aids stems from Section 51(vii) of the Constitution which states, inter alia, that 'The Parliament shall ... have power to make laws ... with respect to ... Lighthouses, lightships, beacons and buoys'. Sections 69, 84 and 85 relate to the transfer of lights and staff to the Commonwealth.

2.7 It was not until 1 July 1915 that the Commonwealth assumed the powers vested under the Constitution and took over from the States a total of 167 lights, including 103 manned lights.

2.8 The division of responsibility between the Commonwealth and the States for marine navigational aids was not formally set down until 1934. In that year the Lighthouse Advisory Committee framed a definition of respective responsibilities which was adopted through exchange of correspondence between the Prime Minister and the Premiers. In essence, the agreement provided for the Commonwealth to accept 'the responsibility for the efficient marking of the coastal shipping tracks (apart from their termini) and ocean highways, in Australian waters, used by vessels making or navigating the coast of Australia'. The agreement provided that 'the provision of port, river and inner aids to navigation is entirely a matter for the State Governments or local Authorities concerned'.²

2.9 More recently, there have been several agreements between the Commonwealth and the States which specify that the Commonwealth will accept responsibility for ships or foreign fishing vessels in distress at sea and the States will be responsible for search and rescue for pleasure boats and fishing vessels within a part of the State or at sea.³

International Obligations

2.10 The International Maritime Organisation's Convention for the Safety of Life at Sea, 1974 requires contracting governments (including Australia) to '... undertake to arrange for the establishment and maintenance of such aids to navigation, including radio beacons and electronic aids as, in their opinion, the volume of traffic justifies and the degree of risk requires, and to arrange for information relating to these aids to be made available to all concerned'. Information on aids is contained in the Marine Information Manual published by the Department, and in the Notices to Mariners published by the RAN Hydrographer. Also, information is conveyed to overseas hydrographic authorities by the RAN Hydrographer.

2.11 Australia, through the Department of Transport, is a member of the International Association of Lighthouse Authorities (IALA). IALA is a non-governmental organisation of lighthouse authorities. Its main aim, as stated in its Constitution, is 'to encourage the continued improvement of aids to navigation, through any appropriate technical means, for the safe and expeditious movement of vessels'. Although none of the standards or recommendations developed by IALA are legally binding, Australia has derived benefit from various studies undertaken, and documents produced, by IALA. In 1982 the Department of Transport became a signatory to an agreement for the adoption of the IALA Maritime Buoyage System.⁴

Departmental Organisation

2.12 The organisation units within the Department of Transport which are directly involved in the management and operation of the marine navigational aids network, are the Coastal Safety Services Branch in Central Office and the Navigational Aids Section in each of the five Regional Offices.

2.13 The responsibilities of the Coastal Safety Services Branch include:

- . general oversight of efficiency of operation of navigational aids;
- . specification, procurement, development and evaluation of navigational aids equipment;
- . planning of improvements, extensions and amendments to navigational aids network, having regard (among other things) to needs of commercial shipping industry and resources available to Regional Offices.

2.14 Each of the Regional Offices is responsible for the operation, maintenance and installation of navigational aids within that Region. The operation of manned lightstations is thus the responsibility of the Regions, subject to the overall

policy and technical direction of Central Office. The Queensland Region is also responsible for departmental vessel operations, to meet the navigational aids work requirements of all Regions, subject to the overall direction of Central Office.

2.15 At 30 June 1983 the total number of staff positions fully assigned to marine navigational aid activities within Central and Regional Offices was 516 positions - 467 at regional and 49 at central office. The majority of these positions were technical categories and vessel crew, the majority of them being at the regional level.

2.16 The actual number of positions occupied is less than the above number due to the timing and difficulties involved in filling vacant positions. In addition to the above positions, other departmental staff are involved in providing support services in areas such as personnel, purchasing and finance. Most of the support staff are engaged part-time on work related to marine navigational aids. The costs of support staff services are also included in the costs recoverable from the shipping industry through the payment of light dues.

2.17 The Department operates three Cape Class vessels (Moreton, Don and Pillar), each of 2 100 gross tonnes, M.V. Lumen of 264 gross tons, and the 11 metre launch 'Candela'. Largely due to increased use of helicopters, the Department declared one of the Cape Class vessels surplus to its requirements in 1980. Since then the surplus vessel has been used on charter work for other government agencies. The remaining vessels, together with chartered helicopters, fixed-wing aircraft, and launches provide the logistic support for the Commonwealth's navigational aid system.⁵

ENDNOTES

1. Paragraphs 2.0 to 2.3 based primarily on the Summers Report; Australia, Parliament, Report on Navigational Aid Systems, November 1974, Parl. Paper No. 319/1974.
2. Paragraphs 2.6 to 2.8 based on Submission, Vol.2, pp.169-171.
3. Evidence, pp.241-242.
4. Submissions Vol. 2, p.172.
5. Submissions Vol. 2, pp.173-175.

III: DEVELOPMENT OF UNMANNING

Introduction

3.0 Although the Constitution vested the Commonwealth with powers with respect to lighthouses it was not until 1 July 1915 that the Commonwealth assumed these powers and took over from the States a total of 167 lights, including 103 manned lights. Since that date the number of unmanned lights has increased significantly so that today (1983) there are 249 unmanned and 41 manned lights.

3.1 Unattended lights can be classified into two types. The first type is those lights which were constructed and operated as unattended lights. Since 1915 the majority of new lights have been of this type. The second type is where the light has been automated and the manned presence removed.⁶

Unmanning (1915 - 1983)

3.2 The number of lights unmanned (the second type) from 1915 to date is shown in Table 2.

TABLE 2
NUMBER OF LIGHTSTATIONS UNMANNED
(1915 - 1983)

<u>Decade</u>	<u>No. Unmanned During Decade</u>
1910's	15
1920's	23
1930's	7
1940's	1
1950's	2
1960's	0
1970's	11
1980's	3
	<hr/>
	62

Note: 1. Up to 30 June 1983.

Source: Derived from Attachment 2, Department of Transport submission, Submissions Vol.2, pp.205-209.

3.3 Although unmanning resumed in the early 1970's, the impetus for the acceleration of unmanning of lightstations in the 1970's appears to have come from the 1974 'Summers' Report on Navigational Aids. The report said that unmanning without adverse consequences for the men in this service, should be possible at a fairly rapid rate.⁷

3.4 After considering this report, the previous administration agreed in 1977 that a 5 year plan (1979/80 - 1983/84) be prepared for the modernisation of the navigational aid system. In May 1979 the plan which included proposals for unmanning 17 lightstations was endorsed in principle by that administration.

3.5 A 1980 revision of the plan resulted in 2 stations being taken off the unmanning list. In November 1980 the then government decided not to proceed with the proposal to unman Maatsuyker Island. In July 1982 Montagu Island was added to the list. In the 1980's three stations were unmanned - Cape Northumberland [1980], Troubridge Shoal [1981], and Cape Don [1983]. Thus, at time of writing, there are 12 manned lightstations on the unmanning list.

3.6 Transport states that the 'prime motivation for the program has been the significant savings in operational and capital expenditure' (Submissions Vol.2, p.167). The costs of operating the navigational aids are borne by the commercial shipping industry through the payment of light dues. In evidence, the Department said that unmanning will result in substantial cost savings which would lessen the burden on the commercial shipping industry.⁸ The unmanning of Troubridge Shoal has resulted in cost savings of \$132,000 a year.⁹

Reaction to Unmanning

3.7 The reaction to the unmanning of lightstations in the 1970's and proposals for further unmanning have led to the establishment of organisations and representations by private citizens and others to oppose the unmanning of lightstations.

3.8 The Tasmanian State Advisory Committee on Lightstations was formed in April 1979. Presumably, its main function was to advise the State Government on unmanning proposals for lightstations in Tasmania. On 30 May 1979 the Committee put forward a submission on Maatsuyker Island which was to be the basis for a submission to the then Prime Minister on the future of the island. In February 1982 the State Advisory Committee on Lightstations made a submission to the State Government on the Swan and Deal Island lightstations. These submissions were later transmitted to the then Commonwealth Minister for Transport.¹⁰ The Tasmanian State Government submission to the Expenditure Committee was prepared by the Lightstations Committee.

3.9 The Australian Lighthouse Association (ALA) was established in Melbourne as a national body in 1980. Its formation was spurred initially by information supplied through the Department of Transport that there were long-range plans for the unmanning of all existing manned lightstations on the Australian coast. Although the activities of the ALA have been biased towards the consideration of the implications of proposed unmannings, the ALA has much broader purposes such as research and drawing to the public attention the traditions and work of navigational aid bodies in Australia. In July 1982 the ALA presented to the then Minister for Transport an interim report on the demanning of Australian lightstations. Apart from consideration of issues and recommendations on continued manning, the interim report contained information on 12 lightstations that were manned at that time.¹¹

3.10 The interest of the Tasmanian Conservation Trust (TCT) in Maatsuyker Island goes back to the mid 1970's when members were alarmed at proposals to automate and deman the Maatsuyker Island light. This led to the formation of a sub-committee of the TCT to arouse public awareness and lobby for the retention of the keepers. As part of that campaign in 1979 the Trust published a booklet 'Maatsuyker Island - Most Southerly Light'.

3.11 Interest in unmanning has also been expressed in the Federal Parliament. Private citizens, municipalities such as the City of Port Lincoln (South Australia), and branches of the National Trust of Australia have written to ministers for transport, past and present, about unmanning. The issue has been featured in 'The Bulletin', in 1982 (December 7 and December 21/28) and in 1983 (10 August). The issue of unmanning was also featured on the current affairs television program '60 Minutes' on 5 September 1982. The 20 minute documentary on unmanning was called 'On the Blink'. Further, the national daily newspapers have also carried feature articles on unmanning. For example, 'The Australian' of 17 August 1983 carried an article, 'Lighthouse Men' in shadow of automation.

3.12 It is against this background of increasing community concern on the policy of unmanning lightstations that the present Minister for Transport, the Hon. P.F. Morris, asked the House of Representatives Standing Committee on Expenditure to examine the question of lightstation unmanning. He said that examination and report by the Committee 'would increase public understanding and assist the Government decide future arrangements in relation to the manning of lightstations'. Suggested terms of reference were attached to his letter.¹²

Findings

1. The majority of lights constructed since 1915 have been constructed and operated as unattended lights.

2. The unmanning of manned lights was virtually dormant in the 1940's, 1950's and 1960's but accelerated in the 1970's and continued into the 1980's in the wake of the 1974 Summers report.
3. The reaction to the policy of unmanning has been the establishment of a number of organisations and representations by private citizens, all opposed to unmanning.

ENDNOTES

6. Submissions, Vol. 2, pp.169,170
7. Australia, Parliament, Commission of Inquiry into the Maritime Industry Report on Navigational Aids Systems, November 1974; 1974 - Parliamentary Paper No. 319, p.9, Canberra
8. Evidence, p.178.
9. Submissions Vol.2, p.187.
10. Submissions Vol.3, pp.397, 433).
11. Submissions Vol.4, p.556.
12. Evidence, pp.58-60.

IV: APPROACH TO ISSUES

Terms of Reference

4.0 The Committee's terms of reference of the inquiry, advertised in the daily national newspapers on 1 and 3 June 1983 and reproduced at page 47 of the 12 September 1983 transcript, were similar to those suggested by the Minister. The major difference was that the Minister said 'the Committee is to have regard for the present policy which requires the commercial shipping industry to meet the full cost of erection, maintenance and operation of such aids and that the costs to the industry would be minimised by the installation of unattended aids at a number of these lightstations'.¹³

4.1 This Ministerial view, which implicitly asks the question why commercial shipping should pay for a service it does not require, can be accommodated under term of reference (b).

4.2 The Committee's terms of reference are to determine in respect of manned lightstations -

- (a) whether these lightstations should continue to be manned, taking into account relative costs of manned and unmanned lightstations and the social benefits that would accrue from the retention of a manned presence;
- (b) if the conclusion is in favour of manning, who should bear the costs; and
- (c) the scope for the manned presence, if required, to be provided other than by Commonwealth Department of Transport lightkeepers.

Report Objectives

4.3 In response to the newspaper advertisements the Committee received well over 100 submissions. We also took oral evidence from a representative group of those who made submissions. From all this information it is possible to refine the terms of reference by constructing a logical sequence of the issues that have to be addressed. These issues are put in the following way:

- (a) should lights be automated?
- (b) if so, should some lightstations continue to be manned?

- (c) if some stations should be manned at what level should the manning be?
- (d) given these levels, who should pay for the costs of continued manning?
- (e) what is the appropriate policy and mechanism for decision-making in respect of (a) to (d)?

4.4 The issues listed above extend the terms of reference. The questions of automation and decision-making mechanisms flow from a consideration of the submissions and oral evidence, while the issues, (b), (c) and (d), reflect and can be fitted into the Committee's terms of reference.

4.5 During the course of the inquiry several other matters were raised. Where these matters can be fitted logically into the report structure this will be done. Otherwise, matters which do not, in our opinion, impinge on the central issues will be discussed in a chapter entitled 'Other Issues'. These matters will include overseas experience and cost recovery and light dues. The ALA was concerned that what it regarded as one of the most significant sections of its submission, Department of Transport costings, could be overlooked. Examination of the quality of the ALA arguments will accommodate the Association on that score.

ENDNOTES

- 13. Evidence, p. 59.

V: AUTOMATION AND UNMANNING

Introduction

5.0 The first of our 5 part sequential analysis leads us to answer the question:

shoulda lights be automated?

5.1 As a prelude it is useful to examine the role of lights. More importantly it is necessary to define what is meant by manned or unmanned lightstations because the current meaning is unclear and clarity would give Committee recommendations an unambiguous meaning. Next comes examination of the connection between automation and unmanning and this is followed by a consideration of the reliability and range of automated lights, i.e. the question of whether lights should be automated.

The Role of Lights

5.2 As can be seen from Chapter I, lights are an aid to navigation: no more and no less. As such they promote safety at sea and efficiency in the movements of commercial shipping.

5.3 In the course of its inquiry the Committee sought to ascertain whether the current role of the light had changed. Transport said that lights have stood the test of time and are still used extensively as one of the primary methods of coastal navigation. However, because commercial shipping now uses electronic systems which could allow a vessel to be navigated safely around Australia's coastline without depending on the lights, the traditional light is used as a back-up system.¹⁴ The Australian Chamber of Shipping (ACS) said lightstations are very much like signposts: the mariner is reassured that everything he has done and worked out is correct. Modern equipment has nevertheless resulted in less reliance being placed on the light for navigation.¹⁵

5.4 The Professional Fishermen's Association of Tasmania (PFAT) was more emphatic on the need for lights. The Association said fishermen depend very much on the lights because they work during the day and travel at night.¹⁶

5.5 Although modern technology has reduced the reliance on lights as navigational aids to commercial shipping, the industry still needs the traditional aid. To other craft such as fishing boats lights remain an essential aid to navigation. Thus it can be seen that over all, the purpose and role of lights has remained unchanged.

Findings

4. Although modern technology has reduced the reliance on lights as navigational aids for commercial shipping, both the industry and particularly other users see lights as a necessary if not essential navigational aid.

Definition of Manned and Unmanned Lightstations

5.6 The Committee has been asked by the Minister for Transport to adjudicate on the matter of continued manning of Commonwealth operated lightstations. It is necessary to define what is meant by a manned or unmanned lightstation not only because the terms mean different things to different people but also because Committee recommendations on continued manning or unmanning will have a clear and unambiguous meaning.

5.7 The Department of Transport describes Cape Don as an unmanned lightstation.¹⁷ In July 1983 the departmental lightkeepers were replaced by Northern Territory Conservation Commission rangers. Previous to this the light was automated. In evidence Transport was not certain as to whether Cape Don was manned or not, stating that the answer to that question depended on the terminology used.¹⁸

5.8 The Tasmanian State Government proposed two types of manned lightstations. In the first which covered stations such as Maatsuyker Island manning should be by Transport lightkeepers, whereas in the second type such as Cape Bruny there would be a joint manning by the Commonwealth and State Governments.¹⁹

5.9 The Australian Lighthouse Association said the term demanning can be used to refer to the removal of all human presence at the lightstation. The ALA felt that in most cases stations should be manned by lightkeepers. The fallback position of the Association was that in the long run it was not terribly important who mans outpost stations as long as they are manned by somebody.²⁰

5.10 Given in particular community concern over unmanning proposals and the emotions aroused by the issue, the Committee believes that terms such as unmanning and manning should be clear and unambiguous. This is not the current position. We are of the opinion that an unmanned lightstation should be defined as one where there is no human presence. At such stations the lights would be automated. Manned lightstations then fall into two categories. The first are those manned by Transport lightkeepers whose duties would include the servicing of the navigational aid. In short, the lights at these stations would not be fully automated. The second category of manned lightstations would be those where the lights are fully

automated and therefore unattended yet there would be a human presence to carry out the ancillary functions of keepers. These persons would not necessarily be employed by Transport or other Commonwealth organisations.

Findings

5. An unmanned lightstation should be defined as one at which there is no human presence.
6. Manned lightstations should be defined as those where:
 - (a) Transport lightkeepers tend the navigational aid; or
 - (b) the light is fully automated and the human presence, not necessarily a Commonwealth employee, carries out the ancillary functions of the lightkeeper.

Automation and Unmanning

5.11 Associated with the need for clear definitions of manned and unmanned lightstations is the question of whether automation and unmanning are separate issues. The Tasmanian State Government does not see them as separate issues and says that every case has to be looked at on its merits.²¹ The ALA sees automation and demanning as virtually identical procedures, hypothetically different but in practice the same.²² The ALA evidence is, however, ambiguous. In response to questioning on the relevance of United States experience for the Committee inquiry, the ALA, after referring to the relevance of an earlier comment on the need for a human presence says that '(y)ou must make this distinction between automation and demanning'.²³

5.12 Transport says automation is distinct from unmanning. Although fully automatic operation is a prerequisite to unmanning, the conversion of a manned light to automatic operation may be desirable in the absence of a proposal to unman the light in question.²⁴ The New Zealand Report also found that 'the issues of automation and demanning are distinct'.²⁵

5.13 Confusion over the issue of automation and unmanning should be linked to the absence of clear and unambiguous definitions of manned and unmanned lightstations and to the lack of clear policy guidelines on the matter of continued manning of lightstations. As is apparent from our comments in the previous section, the Committee sees automation and unmanning as separate issues. In short, it is possible and perhaps even necessary to have a human presence at a lightstation where the light itself is unattended, i.e. fully automated. The Committee notes that there are at present 7 manned lightstations at which the light is fully automated.

Findings

7. Automation and unmanning are separate issues. Confusion about these matters is linked to the absence of clear and unambiguous definitions of manned and unmanned lightstations and to the lack of clear policy guidelines on the matter of continued manning of lightstations.

Reliability and Range of Automated Lights

5.14 One issue in the continued manning of lightstations relates to the reduced reliability and reduced range of automated lights. The argument put forward is that the reduction in reliability affects adversely certain users of the lights, namely fishermen and operators of small craft and pleasure boats.

5.15 Transport makes a distinction between 'reliability' and 'availability'. It says that reliability refers to the possibility of a failure occurring and doubts whether in this sense there is any difference between a manned and unmanned light, i.e. partially automated versus fully automated light. Availability of the light is the proportion of time that an aid is functioning correctly and thus depends not only on the reliability of the equipment but also on the time taken to restore the aid to correct operation. Manned lights have a better availability than unmanned lights but the difference is small. Because of this small difference Transport considers that it should not be taken into consideration in the decision-making process²⁶, and that 'the question of equipment reliability should not be considered to be a significant factor in assessing the need for manning at a lightstation'.²⁷

5.16 The commercial shipping industry pays for the use of navigational aids by means of light dues. Other users such as fishermen and users of pleasure craft do not pay light dues. The body which represents commercial shipping, ACS, said that as long as the light is reliable there would be no concern about whether it was manned or unmanned. The ACS has not heard of complaints about the reliability of lights from ship masters and considers that automated lights would meet the requirements of commercial shipping.²⁸

5.17 The Tasmanian State Government, the Australian Yachting Federation (AYF) and the ALA refer to the reduced reliability and range of automated lights. The State Government says automation of the light at Maatsuyker Island would affect reliability because of difficulties of access and consequential delays in repairing faults.²⁹ Both the State Government and the ALA say reduction of the intensity of the light will reduce

safety³⁰ or disadvantage fishermen (ALA, Green Cape, Submissions Vol. 4, p. 549). The AYF comments refer to lightstations in general.³¹

5.18 In both a conceptual and practical sense any approach to the issue of the reliability and range of automated lights, be it included under cost-benefit analysis or social audit, must take into consideration the effects of automation on all users whether or not they pay light dues. It is conceivable that the economic and social loss to users who do not pay could be greater than the benefits of automation. Therefore, the Committee believes that matters relating to the availability of the light and the range of the light should be taken into consideration in the decision-making process.

5.19 However, any discussion along these lines soon leads to the question of who should bear the costs of the manning of non-automated lights which meet user requirements of reliability and range. Commercial shipping does not require this additional reliability or extra range and should not be expected to pay for the extra costs. If users such as fishermen and pleasurecraft owners or the State Governments which support their cause are not prepared to pay, then the Committee must assume that the economic value placed on these benefits by the parties is zero; or that alternatively a Commonwealth subsidy is being sought by users.

Findings

8. The question of the adverse effects on users of the reliability and range of automated lights should be taken into consideration in the decision-making process of lightstation unmanning.
9. However, the economic benefits of manned lights should be given a zero value if the users who oppose manning or the State Governments which support them are not prepared to pay for the additional benefits.

ENDNOTES

14. Evidence, pp.143, 144.
15. Evidence, pp.334, 335.
16. Evidence, p.298.
17. Submissions Vol.2, p.209.
18. Evidence, p.150.
19. Evidence, p.244.
20. Evidence, p.81.

1. Evidence, p.243.
22. Submissions Vol.2, p.248 and Evidence, p.78.
23. Evidence, p.86.
24. Submissions Vol.2, p.173.
25. The New Zealand Maritime Advisory Committee Report on the Automation and Demanning of Lighthouses, Wellington, July 1981, p.44.
26. Evidence, pp.141, 142.
27. Submissions Vol.2, p.175.
28. Evidence, pp.325-327, 331, 332.
29. Submissions Vol.3, pp.376-378.
30. TSG, Swan Island, Submissions Vol.3, p.378.
31. Evidence, p.336.

VI: THE NEED FOR CONTINUED MANNING

Introduction

6.0 The second issue the Committee will discuss is, given that lights should be automated -

. should some lightstations continue to be manned

6.1 This issue is covered by term of reference (a), and is central to the inquiry which had its origins in continuing community concern over the policy of unmanning.

6.2 The issue of continued manning is related intimately to the functions performed by the human presence at the lightstation and the need for those functions. In short, the issue of unmanning turns on the ancillary duties of the lightkeeper because these duties now can be separated from what was in the past the primary duty: the maintenance of the integrity of the light.

6.3 Discussion on the functions of the lightkeeper is thus a prerequisite for consideration of the issue of manning. Similarly, although on a different plane, it is necessary to describe and discuss the method of analysis used. We can then proceed to examine the case for continued manning. In doing this, use will be made of the profiles the Committee has constructed of the 41 manned lightstations (Volume 2 of Report). The application of the methodology to the information contained in the Profiles will result in conclusions being reached as to which lightstations should be automated and unmanned and which should remain manned. However, the analysis does not end there. For those lightstations that should continue to be manned consideration has to be given to the level of manning and to the question of who pays. These matters are left to the later chapters.

The Duties of the Lightkeeper

6.4 The New Zealand report stated that with the advent of electricity the duties of lightkeepers have expanded, partly as a result of assigned ancillary duties and partly as a result of voluntary assumed duties. The latter appear to have arisen in New Zealand contemporaneously with the changing pattern of light users; that is the fishing vessels and small craft that operate in the vicinity of the lights.

6.5 That report concludes that the 'role of lighthouse keepers has in fact changed from being almost solely keepers of the lights to being partly keepers of the lights, and partly lay meteorologists, seismologists, coast-watchers, radio operators, wardens and public relation officers'.³²

6.6 It appears to the Committee that in Australia as well, the advent of electricity and other technological developments have resulted in a changing pattern of lightkeepers duties over time.

6.7 Of the 41 manned Australian lightstations in only one, Pine Islet in Queensland, do the keepers have extensive duties associated with maintaining the integrity of the light. This light is powered by vaporised kerosene and the pressure tanks have to be pumped at regular intervals during the night to produce the vaporised kerosene. The station is attended by 3 lightkeepers.

6.8 At the other end of the scale are 7 fully automated stations where the lightkeepers either have no responsibilities associated with the operation of the light or where the only associated duty is to clean the lenses.

6.9 Between these extremes are the semi-automatic lights. The majority of manned lightstations, the remaining 33, fit into this category. The lightkeepers duties vary according to the degree of automation at the station but may include drawing the lens curtains, cleaning the lens, turning the light on and off, starting the diesel generating plant and attending to the light in the event of an alarm sounding.³³

6.10 In addition to the duties connected with maintaining the light there are duties associated with the efficient operation and management of the station on a daily basis. Transport has enumerated these duties of the lightkeeper and they include routine minor maintenance of the aid, servicing and assistance in maintenance of power generation and care and general maintenance of all station property.³⁴

6.11 A large number of submissions referred to other functions of keepers and it was on the basis of the keeper carrying out such functions that cases were made for the retention of manning. These functions were coastal surveillance, search and rescue, provision of weather information and protection of what we call the cultural environment and natural environment (including protection against vandalism). A relevant question is whether these functions are official or assumed by keepers as civic minded citizens; or, to borrow the terminology of the New Zealand report, whether these are 'assigned ancillary duties' or 'voluntary assumed duties'.

6.12 In the generality of the discussion on the functions of keepers the following exchange took place between Transport and the Chairman:

Mr Eccles: They are not watchkeepers; at no lights whatsoever do we have watchkeepers 24 hours a day at the moment. They are not keeping a look out to sea. They do not have the facilities to

participate in, for example, search and rescue. Rather they are maintainers of the system ... Unless something just happens to come to their notice while they are walking around looking out to sea there is not a great deal of input of what is happening out there that they could pass back to the Coastal Surveillance Centre.

Chairman: So that is not part of their duty statement?

Mr Eccles: That is certainly not part of their duty statement.....

[Evidence, p.176]

6.13 The above comments would lead the reader to assume that the ancillary duties of lightkeepers are voluntary assumed duties. This is not the case.

6.14 The Committee obtained the Standing Orders for Personnel at Marine Navigational Aids (July 1983) issued by the Department of Transport.³⁵ Later we received from the ALA extracts from the Standing Orders issued in 1968-1974 and 1983. There is no doubt, from an examination of the July 1983 Standing Orders that a large number of the ancillary duties of keepers are assigned ancillary duties, assigned by the Department of Transport and not voluntary assumed duties.

6.15 Standing Order 1.5 is on Reports of Sightings and states that, inter alia, 'observations of sightings to 'seaward' are of civil coastal surveillance significance' and 'should be reported as soon as practicable to the Australian Coastal Surveillance Centre (ACSC) COASTWATCH'. The section goes on to list the types of matters for report and they include possibility of unauthorised landings, foreign fishing vessels, indication of anything being dropped into the sea from a vessel of overseas origin and rendezvous at sea between an Australian craft and a vessel of overseas origin. The section also details the matters that have to be covered in the reports. The section also states that '(a)s a general rule observations of sightings to 'landward', for example, bushfires, damage to fauna and flora, vandalism, disturbances, etc., should be referred to the local police'.

6.16 The Standing Orders also specify the official purposes for which departmental radio equipment, if provided, is to be used. These include the relay of messages to ACSC in respect of sightings to seaward (S.O. 1.5) and for emergency situations in accordance with S.O. 7.5. This S.O. is entitled 'Communications with Vessels in Emergency Situations' and says the keepers 'shall' take action in marine emergency situations. These include wrecks or other casualties, ship or aircraft in distress and distress signals. The action consists mostly of informing ACSC.

6.17 The Standing Orders say that work undertaken for the Bureau of Meteorology is additional to departmental duties. Meteorological observations are made at 37 lightstations and the keepers are paid for this work. The rates of payment are worked out by the Bureau and approved by the Public Service Board. In two states, Victoria and South Australia, the Bureau makes the payment to the Department of Transport regional office which in turn pays the keepers.³⁶ All this makes the work of meteorological observations an assigned ancillary duty as well.

6.18 There are other duties such as weather reports for local residents and assistance for the police and volunteer coastal patrols in rescue work which are not referred to in the Standing Orders. These should be classified as voluntary assumed duties. To sum up, however, the bulk of the ancillary duties are assigned by the Department of Transport, although keepers also perform some voluntary assumed duties.

6.19 However, the fact that lightkeepers have several assigned ancillary duties does not, by itself, mean that these duties are essential or have to be performed by Transport lightkeepers. In a situation where the task of keepers maintaining the integrity of the light has been reduced greatly, the Committee would expect Transport to encourage the keepers to take on duties they can perform. Inclusion of these duties in the Standing Orders helps to clarify and codify the duties given particularly that seafaring experience is not a requirement for appointment as a keeper.

Findings

10. In recent times the primary and historical duty of the lightkeeper, i.e. the maintenance of the integrity of the navigational aid, has declined sharply in importance.
11. Lightkeepers now have several ancillary duties many of which are assigned by the Department of Transport under the Standing Orders for Personnel at Marine Navigational Aids and some voluntary assumed duties as well.
12. The fact that keepers have assigned ancillary duties does not, by itself, mean that these duties are essential or have to be performed by Department of Transport lightkeepers.

Methodology

6.20 The last finding begs the question as to whether the existing manned lightstations should continue to be manned. Transport states that the prime motivation for unmanned has been the significant savings in operational and capital expenditure. The many who oppose unmanned refer to the benefits of the manned presence. Therefore, the thrust of the method of analysis suggests itself. What the decision-maker has to do is to ascertain:

whether, for each of the 41 manned lightstations under consideration the cost savings of automation and unmanned are greater than or less than the benefits of continued manning.

6.21 The question is whether the above approach can be assisted by use of formal evaluation techniques. Transport says that in the evaluation of transport projects, use is made of a 'social audit' approach in which costs and benefits are based on full consideration of economic, environmental, social, defence and resource allocation criteria. The ALA recommends that the Committee adopt 'a total social cost-benefit approach to decision-making as against the limited cost-effectiveness approach employed by the Department of Transport'.³⁷

6.22 Cost-benefit analysis (CBA) is said to be one of the basic techniques used to evaluate programs of public expenditure. The technique asks whether society as a whole will be made better off or worse off by undertaking a particular project rather than not undertaking it or by taking on instead a number of other projects. CBA purports to measure in money terms all the benefits and all the costs expected to be incurred over the future of a specified project and to admit the project as economically viable if the sum of the benefits exceeds the sum of the costs. Since the benefits and costs have to be measured over a number of years it is necessary to produce a single figure for benefits and a single figure for costs so that the benefits and costs can be compared. CBA uses a method called discounted cash flow which calculates benefits and costs as present day values. The present day values are shown either as a ratio of benefits to costs or as a ratio of net benefits to costs.

6.23 Where for example some costs or benefits cannot be quantified the analyst is expected to state them clearly. Then he or the decision-maker has to judge whether the unquantifiable costs and benefits alter or reinforce the economic viability of the project which has been based up to that point on quantifiable costs and benefits.

6.24 Like all evaluation techniques CBA is an aid to decision-making. It requires reliable data which are often not readily available and considerable professional expertise. At the outset the analyst has to decide whether it is necessary to

use CBA given the difficulties of data collection, the fact that investigations themselves are not cost free and more importantly that those who make decisions, particularly at the political level, may decide that the lead time required for CBA is a price they cannot afford to pay.

6.25 In such instances a decision should be made as to whether in the circumstances of the case there are other tests that can be applied to find out if a particular project can be proceeded with or not. Moreover, it must be realised that the viability of a project does not resolve the question of how it should be financed.³⁸

6.26 The Committee pursued the matter of the quantification of benefits with the ALA which had suggested the adoption of a total social cost-benefit approach. The ALA referred to a study commissioned by Trinity House, London, which had used probability analyses to predict the probability of collisions and the probability of the loss of life. We would accept that it is possible to do similar analyses on the loss of production to the fishing industry resulting from the loss of local weather information if a particular station was unmanned. The ALA, in supporting the case for quantification of benefits referred to the Deal Island keepers saving two fishing boats worth \$100 000 each.³⁹

6.27 Not all benefits can be quantified. The ALA evidence, however, was ambivalent on this matter. At different places in the evidence the Association said both that it was not possible or that it was possible to quantify all the benefits.⁴⁰

6.28 Quantification of benefits of the manned presence at lightstations in respect of the natural and cultural environment may present problems. If the natural environment is unique (priceless) the benefits would be infinite so that the benefits would exceed the costs, whatever the costs.

6.29 Given the difficulties and the costs of collecting information to measure some of the benefits of the manned presence and the problems associated with the quantification of other benefits, the Committee concludes that it is not practicable for formal CBA to be used in the Report.

6.30 It may be, however, that what ALA was asking the Committee to do was to take into consideration all the relevant benefits of the manned presence at lightstations and not just what Transport perceives as benefits. In the case of the unmanning of the Troubridge Shoal lightstation the Association alleges that the added cost to the Bureau of Meteorology of collecting meteorological information was not taken into consideration.⁴¹ The Committee's approach is to take into consideration all the relevant benefits of manning as indicated at paragraph 6.20.

Findings

13. Given the difficulties and the costs of collecting information to measure some of the benefits of the manned presence and the problems associated with the quantification of other benefits, it is not practicable to use a formal evaluation technique such as cost-benefit analysis to determine whether continued manning of a particular lightstation is economically viable.
14. The approach of the Committee described at paragraph 6.20 is to take into account all the relevant costs and benefits.

The Case for Continued Manning

6.31 In considering the case for continued manning the Committee will rely heavily on the Profiles of Manned Lightstations constructed from the submissions, transcripts of evidence and exhibits - Volume 2 of Report. A summary of the Profiles is shown in Table 3. It must be recognised that neither the profiles nor the summary reflect Committee acceptance or rejection of the arguments put forward. It is to a consideration of these arguments that we now turn.

- Cost Savings of Unmanning -

6.32 Cost savings of unmanning are the major reason for the removal of lightkeepers. Transport provided the Committee with two lists of cost savings. The first list was the indicative benefits of unmanning. These benefits represent for each lightstation the net present value of the difference in total costs over the next 20 years between manned and unmanned operations. The financial information used to calculate the benefits for each of the 41 stations is annual operating cost of station as manned, annual operation cost of station as unmanned, cost of conversion to unmanned operation and capital repair and maintenance expenditure over next 5 years that would be avoided if the station was unmanned.

6.33 The indicative financial benefits of unmanning calculated over 20 years for the 41 lightstations total \$31.55 m. The largest benefit is for the unmanning of Maatsuyker Island (\$2.02 m.) and the smallest for Moore Point (\$0.26 m.).⁴²

6.34 These financial benefits purport to accrue to Transport and not the Commonwealth. The Department of Home Affairs and Environment submission said that if lightstations were unmanned the portfolio requirements would be for a full-time residential management presence at 21 stations, a part-time residential management presence at 5 stations and a

part-time non-residential presence at 8 stations. Similarly, the Bureau of Meteorology referred to the need of installing Automatic Weather Stations at a cost of \$22 000 a unit if stations were unmanned.⁴³

6.35 Further, the last column of figures in the Transport submission (Attachment 8) contains estimates of capital and maintenance expenditure over the next 5 years that would be avoided if the stations were unmanned. In evidence Transport said that this last column includes the cost of maintaining residences on the Register of the National Estate. The assumption made was that, as was the case of Cape Don, the costs of maintaining residences would not be borne by Transport.⁴⁴

6.36 Another difficulty of using net present value figures is that of comparing savings with unquantified or unquantifiable benefits. It was because of this reason that Transport was asked to provide annual cost savings and these are used in Table 3. These figures do not include the capital and maintenance expenditure estimates used by Transport in its calculations of net present values.

Findings

15. The indicative financial benefits of unmanning calculated by Transport are benefits that purport to accrue to Transport and not to the Commonwealth because they do not allow for the additional costs that would be incurred by other Commonwealth agencies if unmanning were to proceed.

- Benefits of Continued Manning: Sea-based functions of keepers - Coastal Surveillance

6.37 The functions of the keeper in respect of coastal surveillance, search and rescue and local weather reporting can overlap because all three can be said to promote safety at sea. Coastal surveillance and local weather reporting can be separated from search and rescue and given separate meanings. Thus coastal surveillance is described as work done in the detection of smuggling, drug trafficking, illegal fishing and illegal immigration.

6.38 The organisation with primary responsibility for such surveillance is the Australian Coastal Surveillance (ACSO). The ACSO consists of the Commonwealth departments of Health, Primary Industry (Fisheries Division), Immigration and Ethnic Affairs as well as the Australian Customs Service and the Australian Federal Police. The Department of Transport has a co-ordinating role.

6.39 The centre operates under the title, COASTWATCH, all year round 24 hours a day 365 days a year, co-ordinating the activities of all military and civil aircraft and vessels used in the civil coastal surveillance program. Coastwatch activities are aimed at helping to prevent the introduction of dangerous animal and plant diseases from overseas as well as combating smuggling, unauthorised landings on our coast, illegal foreign fisheries activities and other matters of concern around our coastline.

6.40 Each day a number of aircraft under charter by the Department of Transport patrol the coastline between the north Western Australia coast and Cairns in Queensland. Aerial surveillance is backed up by Royal Australian Navy patrol boats which are available for surface surveillance, response and enforcement work.

6.41 Members of the public living in remote areas, ships, masters, fishermen, pleasure boaters, pilots and others are encouraged to help the civil coastal surveillance organisation by reporting to ACSO the matters referred to earlier. The Centre relays reports from aircraft, vessels and members of the public to the appropriate authorities for follow-up action.⁴⁵

6.42 Information on the coastal surveillance function of keepers contained in the Profiles is limited. What there is refers to the potential of the function, particularly in deserted areas of coastline. The Tasmanian State Government submission rates the function as extremely important for several Tasmanian stations but in evidence the Committee was told the assessments, not just for the coastal surveillance function but for other functions as well, were very arbitrary.⁴⁶ The only specific reference we have been able to locate is a 1980 reporting of a United States naval vessel by the keeper at Swan Island.

6.43 Transport says that neither the Department of Defence nor the Standing Committee on Coastal Surveillance which have responsibility for the military and civil coastal surveillance see a need for lightkeepers to be retained to perform the function.⁴⁷

6.44 The Committee accepts this view given in particular the primary role of the Australian Coastal Surveillance Centre and the generality of the information put before it.

Findings

16. There are no significant benefits for coastal surveillance that derive from a human presence at any of the 41 manned lightstations.

- Search and Rescue -

6.45 The search and rescue function of keepers is described as the provision of direct assistance by radio or telephone to organisations such as the ACSO, volunteer coastal patrols and local police; or direct assistance including physical assistance to individuals. The keepers thus assist in the provision of safety at sea or the rescue of vessels or persons who may be in difficulties at sea.

6.46 An examination of the Profiles shows that there is little information or very general information on SAR for a large number of the 41 manned lightstations. For the remainder the information is specific.

6.47 The information on these stations falls into two types. The first is the support for the SAR function based on the general case made by the volunteer coastal patrols. The general case refers to the lightkeeper speeding up the rescue at sea (Montagu Island), the value of his availability (Dent Island, Double Island Point, Lady Elliott Island and Sandy Cape) or being instrumental in saving lives at a location near a major fishing port (South Neptune Island).

6.48 The second type of information is specific, refers to instances of lives and vessels being saved and it is worth detailing. In respect of Green Cape the Royal Volunteer Coastal Patrol says there is evidence of lives being saved because of the manned presence. The ALA states that in the past two years (to July 1982) two trawlers were lost and in one case all the lives aboard one of the trawlers were saved because radio communication by the keeper assisted the rescue. The Association adds that radio watch at Green Cape saved the lives of two policemen.

6.49 The Narooma Police say that without the assistance of the keeper at Montagu Island in 1983 there was the distinct possibility that a vessel might have been lost at sea.

6.50 The Committee has received information of radio and direct assistance given by the keepers at Green Cape and Point Perpendicular to persons in distress. Mr J. Snow, MP, Federal Member for Eden-Monaro told the Committee that between 1976 and 1978 the keepers at Smoky Cape recorded 162 call-outs and that on one occasion Smoky Cape was the only station that picked up a particular May Day call and was instrumental in saving a yacht worth thousands of dollars.

6.51 The ALA recounted the case where the life of the lone yachtsman aboard the 'Gypsy Moth' was saved by the keeper on Gabo Island and added that in 1982 four people were rescued at Gabo Island.

6.52 The Association also gave 4 cases of SAR work at Lady Elliott Island. In the 1980 Brisbane-Gladstone race the yacht 'Appollo' got into difficulties and the keepers put out to sea and played a crucial part in saving the crew. The ALA also gave 3 other cases of SAR work at Lady Elliott - in 1975, 1980 and 1983.

6.53 The Tasmanian State Government submission refers to a 1981 letter from the First Assistant Secretary, Coastal Services Division, Department of Transport which instances 8 occasions in the period 1977-81 in which the keepers at Deal Island assisted in marine emergencies. The ALA adds that in these instances lives have been saved, cases of serious injury handled and ships and property in peril have been safeguarded.

6.54 The 1981 Transport letter also states that lightkeepers assisted in marine emergency situations on 4 occasions at Eddystone Point, 11 occasions at Maatsuyker Island and 2 occasions at Swan Island in the period 1977-81.

6.55 Some submissions have attempted to demonstrate the benefit of the SAR function of keepers by quantifying the benefits in money terms. The Tasmanian State Government has put a money value on the loss of life at sea. The Committee is not prepared to cost a human life. We point out that if such figures are accepted it may be necessary for us to recommend a 24 hour coastal watch for the whole of Australia. This we are not prepared to do. Moreover, those who consider the SAR benefits of keepers to be very significant, including State governments, should be prepared to accept that the users of the lightkeeper service rather than the general taxpayer should pay for such benefits.

6.56 Analysis of the information in the profiles shows that the lightkeepers play a valuable part in SAR work, at least in respect of 10 lightstations which are identified in Finding 17. The view of the Department of Transport is different. Transport says that lightkeepers have occasionally become involved in marine search and rescue incidents but lightstations are not part of the overall SAR system; neither are keepers trained in these matters. Thus the involvement of keepers in SAR incidents would normally be similar to that of other responsible persons in emergency situations. The Department concludes that the SAR work of the keeper is not significant in determining whether a station would continue to be manned.⁴⁸

6.57 In evidence Transport relaxed the position it took in its submission. Although it did not believe the other submissions received by the Committee had brought further new evidence on the subject Transport had 'no doubt the lightkeepers do a most valuable job at Montagu Island in their voluntary capacity, as indeed they do at Green Cape ...'.⁴⁹ The Department added that there are 'occasions on record when lightkeepers have been invaluable in assisting people when it just so happened that a person has got into difficulties

immediately in the location of the lighthouse'. If lighthouses were unmanned Transport considered that this facility would not be available.⁵⁰

6.58 The submission and evidence of Transport show that its attitude to SAR work of keepers is influenced by its belief that at the Commonwealth level SAR work is done primarily by the Australian Coastal Surveillance Centre. Transport also believes that SAR work of keepers is a State responsibility under the Commonwealth-State agreement for the division of responsibility for marine search and rescue.⁵¹

6.59 While all this may be so, it must be remembered that the Committee is examining the need for continued manning, and the relevance of the SAR work of the keeper in this context. If the function is relevant it should be counted as a benefit irrespective of whose responsibility it is to provide the function. That question can be examined in the context of whether a station should be manned by Transport lightkeepers or someone else and who should pay for the manned presence.

Findings

17. There are significant benefits for search and rescue that derive from a human presence at the following 11 lightstations:

Deal Island	Maatsuyker Island
Eddystone Point	Montagu Island
Gabo Island	Point Perpendicular
Green Cape	Smoky Cape
Lady Elliott Island	South Neptune Island

18. The search and rescue function of lightkeepers is therefore relevant in considering the need for continued manning and should not be discounted if it is considered that SAR is a State responsibility.

19. This latter question should be considered in the context of whether a station should be manned by a Department of Transport lightkeeper, or someone else and who should pay for the manning.

- Weather Information -

6.60 The function of the lightkeeper in providing weather information falls into two parts. The first is meteorological observations from lightstations for the Bureau of Meteorology. The forecasting and warning services of the Bureau promote safety at sea. The second is provision of information on current weather.

6.61 Observers at lightstations are part of a network of part-time co-operative observers. The Bureau has about 400 stations with such observers and 37 of them are lightstations. The list of the lightstations is at Appendix 1. There are 17 lightstations that make 7 observations a day throughout the year and these are considered to be key lightstations. They occupy a gap or geographic position in Australia which would otherwise be a gap in the network of surface observation stations [Submissions, Vol.2, p.232 and Evidence, pp.199-201].

6.62 The Bureau pays the keepers for the observations they make. The annual payment for 7 observations a day at a lightstation without constant watchkeeping would be about \$18 000.

6.63 The observations from lightstations are seen to be very important to the working of the Bureau:

Observations from lightstations are a key input to the synoptic analysis and prognosis operations which form the basis for providing general forecasts, particularly coastal waters and ocean forecasts ... The coastal water forecasts are important for fishermen and yachtsmen, particularly those operating in difficult and dangerous waters such as the south and west coasts of Tasmania, and for abalone divers. However, Australian coastal waters can all be dangerous at certain times in certain atmospheric conditions [Submission, Vol.2, p.233].

6.64 The loss of observations by lightkeepers can be compensated for, to a certain extent, by the installation of automatic weather stations (AWS). The Bureau said that currently available AWS cannot make several important measurements or estimations that a human observer can. These include cloud type, amount and height, present weather, visibility and sea state which are very important for some purposes such as forecasting and advice to fishermen and small boat users.⁵²

6.65 When the Bureau gave evidence the Committee asked it to provide a priority listing of lightstations according to the need for human observations. In response the Bureau classified the 37 manned lightstations that make meteorological observations into three classes of priority. These classes and the stations that come under each class are at Appendix 1.

6.66 The second function of the keeper in respect of weather information is the provision of reports on the current state of the weather by radio or telephone to those who contact him. This information assists people, particularly fishermen, to decide whether to put out to sea.

6.67 Examination of the Profiles shows that local weather reports are used by several types of users. The manned lightstations in South Australia provide sea state data for the South Australian Department of Fisheries.

6.68 Information on local weather is considered to be important for the local fishing industry on the southern coast of New South Wales, South Australia, Western Australia and Tasmania. In a reference to Montagu Island which could apply to other lightstations as well, Mr J Snow says that without a staffed presence at Montagu Island fishermen may not venture out in marginal weather conditions with consequential loss of fishing days and job opportunities. The Tasmanian State Government says that 20% of that State's abalone catch and 10% of the rock lobster catch are taken within sight of Maatsuyker Island and, in a reference to the Swan Island keepers that almost 11% of the State's rock lobster catch is taken in the waters between Flinders Island and the north-east mainland. The Professional Fishermen's Association of Tasmania says that without the local weather reports from the lightstation keeper, fishermen could waste a lot of fuel and time away from home in putting out to sea and then returning to shore because of lack of knowledge of sea conditions.⁵³

6.69 There were also references to the value of keepers providing information on local weather to small ships particularly from Deal Island. The Tasmanian State Government considers Deal to be an important weather reporting station particularly because the weather in Central Bass Strait is often different from that on the Victorian or Tasmanian coasts.

6.70 The lightkeepers at particular stations provide a valuable service in making meteorological observations for the Bureau of Meteorology and in providing information on local weather which benefit the local fishing industry. Nevertheless, the Committee points out that this conclusion leaves unanswered, for the time being at any rate, questions on the level of manning, the organisation that provides the manning and the question of who pays for the manning.

Findings

20. There are significant benefits for weather information required by the Bureau of Meteorology that derive from a human presence at the following 16 lightstations:

Cape Borda	Gabo Island
Cape Byron	Lady Elliott Island
Cape Leeuwin	Low Isles
Cape Moreton	Maatsuyker Island
Cape Otway	Montagu Island
Cape Willoughby	Point Perpendicular
Double Island Point	Smoky Cape
Eddystone Point	Wilson's Promontory

21. There are significant benefits for weather information, i.e. current state of the weather particularly for the fishing industry, that derive from a human presence at the following 15 lightstations:

Althorpe Island	Eddystone Pt
Cape Borda	Green Cape
Cape Bruny	Maatsuyker Island
Cape Leveque	Montagu Island
Cape Naturaliste	Sandy Cape
Cape Willoughby	South Neptune Island
Deal Island	Swan Island
Double Island Point	

22. Findings 17, 18, 20 and 21 do not answer questions on the level of manning the organisation that provides the manning or who pays for the manned presence.

- Benefits of Continued Manning: Land-Based Functions of
Keepers -
Cultural Environment

6.71 The land-based functions of keepers encompass preservation of the cultural and natural environment. The cultural environment, as described by the Australian Heritage Commission covers significant examples of the main stages of Australia's architectural and building history.⁵⁴

6.72 Mr D. Walker, architect and author of 'Beacons of Hope', a book which deals with the history of the landfall lights of Cape Otway and King Island in Bass Strait says that:

The great majority of the lighthouses and associated quarters were built prior to Federation ... These buildings are of primary historical importance associated as they are with the whole settlement of we immigrant people. Not only are the stations architectural time capsules, but they have been very often associated with or been built in response to the greatest tragedies and acts of heroism Australia has known [Submissions, Vol.1, pp.102, 103].

6.73 The Australian Heritage Commission maintains the Register of the National Estate. Of the 41 manned lightstations, 28 are listed on the Register, 2 are on the Interim list and 2 have been nominated for inclusion. Relevant details are at Appendix 2. Once a place is on the Register each Commonwealth Minister is required to ensure under Section 30 of the Australian Heritage Commission Act, that his or her department does not take any action that would affect adversely the

heritage significance of that place. The only exception available to the Minister concerned is if there is no feasible and prudent alternative to the proposed action.

6.74 Thus if relevant the benefits of the manned presence have to be assessed in terms of Commonwealth legislation because, to quote from the submission of the South Australian State Government, the 'Commonwealth Government has responsibility for the care and conservation of heritage items such as lightstations under its care and control'.⁵⁵

6.75 Examination of the Profiles shows that one of the benefits claimed to be provided by the keeper is protection against vandalism. The National Trust (New South Wales) implies that unmanning will place at risk the historic value of the 7 manned lightstations in New South Wales because of damage by vandalism.⁵⁶ The South Australian State Government submission states that 'demanning of lightstations has been a significant factor in accelerating acts of vandalism and natural decay, with subsequent escalation of maintenance costs'.⁵⁷

6.76 The Department of Home Affairs and Environment said there is considerable historical evidence in the Great Barrier Reef region to show that if a station is not manned the buildings are rapidly destroyed by vandalism. If Lady Elliott Island is unmanned, there would be a rapid destruction by vandalism of the other buildings on Lady Elliott and the loss of their use to the Commonwealth for purposes other than the operation of the navigational aid.⁵⁸

6.77 The Department of Transport, after providing cost information which shows that from 1 January 1980 the cost of repairing equipment damaged by vandalism totalled \$11 000 concludes that 'vandalism has not been a serious problem in Australia and has occurred at both manned and unmanned stations'.⁵⁹

6.78 Vandalism is something that can be monitored and corrective action taken if required. Without disputing the relevance of the Transport information the Committee points out that what has to be taken into consideration in this matter is the probability of vandalism at stations with heritage significance and public access. If, as Transport suggests, such stations should continue to be manned because of heritage considerations, then the benefit of the keeper protecting the cultural environment against acts of vandalism would be a by-product of continued manning.

6.79 The Department of Transport has acknowledged implicitly the benefits of a manned presence for the preservation of the cultural environment. The total rationale as advanced by Transport for continued manning of 17 stations is that operations are low cost, the stations are of heritage interest or part of Australia's heritage, are accessible to the public and are popular with visitors.⁶⁰

6.80 It appears to the Committee that the determining factor for the retention of a manned presence at lightstations with the characteristics described by Transport is the effects of pressure from visitors. Thus at stations that are visited in large numbers the presence of the keeper would be a deterrent to vandalism, the keeper would undertake the day to day maintenance made necessary by the popularity of the station and would also perform an educational role by explaining the links that the lightstation has with Australia's history. As an example of the need for a human presence at these lightstations, the Committee notes that the station at Cape Byron is visited by about 240 000 persons a year.

6.81 The Committee endorses the Transport view on the need to man lightstations that are visited regularly and are of heritage interest and observes that the manned presence would protect the heritage value of these stations. We note, however, that there are 7 other stations that meet the Transport criteria for continued manning detailed at paragraph 6.76. The criteria 'access to the public' and 'popularity with visitors' are very similar and can be treated as one and the same thing. The heritage value is taken to be an entry on the Register of the National Estate of the tower or residences.

6.82 The 7 stations referred to all have annual operating costs which fall within the cost range of the 17 stations nominated by Transport (\$55 000 - \$137 000 a year). They are all said to be popular or very popular with tourists. Some of their structures are on the Register of the National Estate and their popularity reflects their accessibility. Cape Borda is one of these 7 stations. The tower is entered on the Register, the station is very popular with tourists according to Transport and Home Affairs and Environment and its operating costs are lower than all but two of the 17 stations nominated by Transport. Relevant information on these stations is at Appendix 3.

Findings

23. The Committee accepts the Department of Transport view that vandalism has not been a serious problem in Australia, but points out that what has to be taken into consideration is the probability of vandalism at stations with heritage significance and public access.
24. There are significant benefits for the cultural environment that derive from a human presence at the following 24 lightstations:

Cape Borda*	Green Cape
Cape Bruny	Lady Elliott Island*
Cape Byron	Low Head
Cape Leeuwin	Low Isles*
Cape Moreton*	Montagu Island
Cape Naturaliste	Norah Head
Cape Nelson	Point Hicks
Cape Otway	Point Perpendicular*
Cape Schanck	Rottneest Island
Cape Willoughby*	Sandy Cape
Double Island Pt	Smoky Cape
Fitzroy Island*	Sugarloaf Point

25. The above list contains the 17 stations nominated by Transport and 6 other stations (denoted by the *) that meet the Transport criteria of low operating costs, heritage value, accessibility to the public and popularity with visitors.

- Natural Environment -

6.83 As described by the Australian Heritage Commission the natural environment includes rare or typical natural phenomena including landscapes and seascapes, habitats of distinctive species of plants and animals and wildernesses, forests and selected habitats which, being readily accessible to populated areas, are as valuable as the rarer but less accessible places in the same categories.⁶¹

6.84 The submissions from the Department of Home Affairs and Environment cover legislation administered by the portfolio relating to the manned lightstations. The interest of the Australian Heritage Commission in lightstations is not only in the historic sites aspects but also in the stations as significant natural environment areas. Of the 41 manned lightstations the adjoining natural areas of 23 of them are on the Register of the National Estate. The department gave examples of lightstation reserves which have significant environmental and natural wildlife conservation significance. The examples were Deal Island (at least two endemic species of plants and a scientifically recognised rich marine environment), South Neptune Island (seal and sea lion colony) and Cape Nelson (only occurrence of the soap mallee in Victoria). The areas adjacent to the lightstations of South Neptune and Cape Nelson are on the Register of the National Estate.

6.85 Under Sub-Section 30(I) of the Australian Heritage Commission Act 1975 a Minister has to be satisfied that he does not take any action that adversely affects a place on the Register unless he is satisfied there is no prudent or feasible alternative.

6.86 The Australian National Parks and Wildlife Service (ANPWS) is the principal adviser to the Commonwealth Government on national nature conservation and wildlife policies and administers the National Parks and Wildlife Act 1975. ANPWS has a particular interest in the reserves surrounding lightstations because many contain or are close to significant seabird rookeries, seal colonies and undisturbed flora. The birds use the reserves and the surrounding areas as rookeries or resting places during migration. Many birds found in these areas are listed in the Annex to the Agreement between the Government of Japan and the Government of Australia for the Protection of Migratory Birds and Birds in Danger of Extinction and their Environment.

6.87 The Great Barrier Reef Marine Park Authority (GBRMPA) administers the Great Barrier Reef Marine Park Act 1975. The Act makes provision for the establishment, control, care and development of a marine park in the Great Barrier Reef region. Commonwealth-owned islands can form part of the Marine Park. For example Lady Elliott Island and Low Isles, both of which presently have manned lightstations are part of the Capricornia and the Cairns sections of the respective sections of the Marine Park.

6.88 The Department of Home Affairs and Environment said there are 4 main conservation benefits derived from the manning of lightstations -

- . protection of wildlife populations and areas of heritage value
- . prevention and reporting of bushfires and deliberate acts of vandalism
- . provision of wildlife observations
- . maintenance of structures that are of national significance.

6.89 The Department of HA&E says that lightkeepers have no formal responsibilities to protect the environment; their involvement has been purely voluntary. Nevertheless, the keepers have played a significant role in protection of the environment, often having the same effect as National Park Rangers or Wildlife Protection Officers. Keepers assist in controlling outbreaks of wildfire and have acted often as guardians of island flora and have prevented unauthorised landings by persons on islands.

6.90 The presence of lightkeepers is of benefit to the management of the Great Barrier Reef Region. Keepers can be a deterrent to vandalism and other illegal acts.

6.91 In a later submission HA&E said the likely supervision requirements of the portfolio if lightstations were unmanned was for a full-time residential management presence at 21 stations, a part-time residential management presence at 5 stations, a part-time non-residential management presence at 8 stations and an occasional management presence at 3 stations. There was insufficient information for assessment at 4 stations. All the stations were listed in their categories by HA&E.⁶²

6.92 The department explained that a full-time management presence can be achieved in three ways. First where a lightstation has particular nature conservation values and its location precludes State or Territory officers from working there, or if there is unwillingness for State officers to work there, then the management presence could be filled by a Commonwealth officer. A second alternative is for the management presence to be provided by a State or Territory officer. The third alternative is for the buildings to be leased to an institution, voluntary organisation or individual.⁶³

6.93 The Department of HA&E rated the supervision requirements for the 41 lightstations. The ratings were based on the biological and cultural significance of the area and buildings, and the assessed vulnerability of the site. On this basis HA&E concluded that the likely supervision requirements of the portfolio, if stations were unmanned were for a full-time management presence at 21 lightstations. The Committee accepts these conclusions. Put in another way, they reflect the significant benefit for the maintenance of the natural environment that derives from the human presence at specific lightstations.

6.94 Information from the Profiles is both general and specific information on the assistance given by keepers during bushfires or during the bushfire season. The general information was the assistance given by keepers in the form of observation and communication during the bushfire season; and applied to the lightstations in Victoria. The ALA evidence referred to the valuable assistance given by keepers at Green Cape in the bushfires of 1972 and 1980 and the assistance given by the keepers at Gabo Island and Point Hicks in the 1982 bushfires. The Country Fire Services Board of South Australia said the lightstations at Cape Borda, Cape Willoughby and Neptune Island had provided weather information during the tragic fires of 16 February 1983 which was 'of extreme importance to [the] Services fire operations'.⁶⁴

6.95 The Committee has no doubt that lightkeepers play a useful role of observation and communication during the bushfire season. However, because they are part of a very large system of firefighting and also because it is difficult to distinguish the lightkeeper role, as is possible in the areas of search and rescue, weather and protection of the environment, the Committee is not able to conclude that the bushfire prevention role is significant.

6.96 For several lightstations HA&E said the area is environmentally vulnerable. These stations require a full-time management presence according to the department. The function of the keeper in protecting the natural environment was also expressed in both a general and specific way in the submissions. In a reference that includes Cape Byron, Montagu Island and Smoky Cape, the New South Wales Government Department of Environment and Planning says that 'many manned lightstations also serve to protect surrounding natural environments by virtue of a human presence in isolated areas where vandalism and other illegal activities may threaten important flora, fauna and/or geological features.⁶⁵

6.97 The environmental significance of Fraser Island is based on its renown as a National Park. The Australian Conservation Foundation identifies the Sandy Cape lightstation on Fraser Island with the National Park and rates Sandy Cape as No 3 out of 12 in decreasing importance in a list of stations where environmental factors should be considered in any assessment for unmanning.⁶⁶

6.98 Perhaps the most comprehensive case put forward on the benefits of the human presence for the preservation of the natural environment was in respect of Maatsuyker Island.

6.99 The submission from the Tasmanian Conservation Trust (TCT) states that the presence of lightkeepers for almost a century has ensured that the fauna and flora of Maatsuyker Island, unlike that of most other islands on the south-west coast, has not been subject to damage from deliberately lit fires, the introduction of alien land animals or vandalism. The isolation and relatively undisturbed conditions make Maatsuyker Island an excellent place for the study of relationships between island size, remoteness and the biology.

6.100 The TCT says that adjacent to the island and within view from the keeper's quarters is the largest colony of Tasmanian fur seals in southern Tasmania. The elephant seal, exterminated in Tasmanian waters by about 1810 have now reappeared and a small colony of elephant seals and their pups live in an inlet of Maatsuyker Island. The Tasmanian State Government says that the keepers by their oversight provide some protection against seal slaughter by some fishermen and that the keepers have informed the Tasmanian authorities of the killing of seals.⁶⁷

6.101 The Department of HA&E says that the TCT's 'arguments in favour of a continued manned presence, perhaps though it could necessarily be at a lower level than in the past at Maatsuyker Island are definitely endorsed' [Evidence, p.232]. The department includes Maatsuyker Island as one of the 21 stations which would require a full-time residential presence if the station were to be unmanned (See Vol.II, p.176).

Findings

26. There are significant benefits for the natural environment that derive from a human presence at the following 21 lightstations:

Althorpe Island	Gabo Island
Booby Island	Lady Elliott Island
Cape Bruny	Low Isles
Cape Moreton	Maatsuyker Island
Cape Nelson	Montagu Island
Cape Schanck	Norah Head
Currie Harbour	Point Perpendicular
Deal Island	Rottnest Island
Eddystone Point	Sandy Cape
Green Cape	South Neptune Island
	Wilson's Promontory

27. There are useful benefits for the natural environment (bushfire protection) that derive from a human presence at several lightstations, particularly those in Victoria and South Australia.

The Case for Continued Manning : Conclusions

6.102 Paragraphs 6.32 to 6.101 have discussed the cost savings from unmanning and the benefits of continued manning for the 41 manned lightstations. In drawing together the salient points it is useful to reiterate what we said at paragraph 6.20 about what the decision-maker has to do; i.e. to ascertain:

whether, for each of the 41 manned lightstations under consideration the cost savings of automation and unmanning are greater than or less than the benefits of continued manning

6.103 Table 4 represents a summary assessment by the Committee of the various benefits of the manned presence as contained in the submissions and evidence. Close examination of the table shows that the strongest cases for continued manning are, in descending order of importance, Montagu Island, Lady Elliott Island, Maatsuyker Island and Green Cape followed by 29 other stations.

6.104 It appears to the Committee that for 8 lightstations the cost savings of automation and unmanning are greater than the benefits of continued manning. For the majority of these stations the benefits appear to be insignificant. The 8 lightstations are:

Bustard Head, Cape Capricorn, Cape Cleveland, Cape Leveque, Dent Island, Moore Point, Pine Islet and Swan Island.

6.105 In a later chapter the Committee will suggest a mechanism by which these 8 stations can be unmanned.

6.106 For the remaining 33 lightstations the Committee is of the opinion that the benefits that derive from the human presence are greater than the cost savings of automation and unmanned. In reaching this conclusion we have been influenced by the submissions and evidence from the Department of Transport and the Department of Home Affairs and Environment, on the need to retain a human presence to protect the cultural and natural environment. Transport nominated 17 lightstations at which it felt there should be an authoritative human presence and HA&E said there were 21 stations at which the portfolio requirements would be for a full-time residential management presence. Removal of the overlap leaves us with 30 lightstations at which Commonwealth Departments agree there should be a human presence. These stations include 15 of the 17 considered by the Bureau of Meteorology to be key stations for meteorological observations. Of the 33 lightstations we believe should continue to be manned, the structures of 31 of them are entered on the Register of the National Estate as are the adjoining natural areas of 23 of these lightstations.

6.107 The 33 lightstations can be categorised in the following way. There are 8 lightstations the continued manning of which is supported by both Transport and HA&E. The second category of stations is the 13 stations which HA&E consider should have a manned presence. The third category of stations is the 9 at which Transport says there should be a manned presence. Finally there is a category of stations which the Committee considers meet the Transport criteria for continued manning, i.e. low operating costs, heritage value, accessibility to the public and popularity with visitors. All these stations are detailed in Appendix 4.

Findings

28. It appears to the Committee that the cost savings of automation and unmanned are greater than the benefits of continued manning for the following 8 stations:

Bustard Head, Cape Capricorn, Cape Cleveland, Cape Leveque, Dent Island, Moore Point, Pine Islet and Swan Island.

29. For the remaining 33 lightstations the Committee is of the opinion that the benefits that derive from the human presence are greater than the cost savings of automation and unmanned.

30. The last finding does not imply that current manning levels at these stations are appropriate.

ENDNOTES

32. The New Zealand Maritime Advisory Committee Report on the Automation and Demanning of Lighthouses, p.21.
33. Submissions, Vol.2, pp.180, 181.
34. *ibid.* p.179.
35. Exhibit 6.
36. Evidence, p.200.
37. Submissions, Vol.2, pp.167, 264, 265.
38. Paragraphs 6.22 to 6.24 based mainly from a Treasury submission to the Expenditure Committee, Sub-committee on Accommodation for Married Servicemen, Transcript of 18 April 1977.
39. Evidence, pp.98-100.
40. Evidence, pp.98, 120, 121.
41. Evidence, p.98.
42. Submissions, Vol.2, pp.219, 220.
43. Submissions, Vol.4, p.602 and Vol.2, p.236].
44. Evidence, pp.164, 165.
45. Paragraphs 6.37 to 6.40 based on material published by ACSO.
46. Evidence, p.250].
47. Evidence, p.175].
48. Submissions, Vol.2, pp.192, 200.
49. Evidence, p.180].
50. *ibid.*, p.182.
51. Evidence, pp.174, 180, 182 and 241, 242.
52. Submissions, Vol. 2, p. 233.

53. Evidence, p. 298.
54. Australia, Parliament, Australian Heritage Commission, First Annual Report, 1976-77, Parliament Paper No 238/1977, Canberra 1977].
55. Submissions, Vol.2, p.334].
56. Submissions Vol. 1, p.18.
57. Submissions, Vol.2, p.333.
58. Evidence, pp.227, 231, 232.
59. Submissions, Vol. 2, pp.192,221,222.
60. Evidence, p.185 and Submission, Vol.2, p.201.
61. Australian Heritage Commission, First Annual Report, p.9.
62. Submissions, Vol.4, pp.602, 603.
63. Submissions, Vol.6, p.601.
64. Submissions, Vol.1, p.101.
65. Submissions, Vol.2, p.311.
66. Submissions, Vol.3, p.489.
67. Submissions, Vol.2, pp.289, 290 and Vol.3, pp.376-378].

TABLE 3
SUMMARY OF PROFILES OF MANNED LIGHTSTATIONS

Lightstation	Cost savings from Unmanning \$/s/year	Benefits of Continued Manning					General		Popular with Tourists ⁶	
		Sea-based functions of keeper		Land-based functions of keeper			On Heritage Register			
		Coastal Surveillance	Search and Rescue	Weather Data		CE: Prevention of Vandalism ²	NE: Protection of fauna, flora bushfire assistance ³	Structures		Adjoining National area ⁴
				Bureau ¹	Local					
<u>NEW SOUTH WALES</u>										
1. Cape Byron	63 000	✓	✓	A	-	✓	✓	✓	✓	✓
2. Green Cape	73 000	✓	✓	A	✓	✓	✓	✓	✓	✓
3. Montagu Island	84 000	✓	✓	A	✓	✓	✓	✓	✓	✓
4. Norah Head	61 000	-	-	B	-	✓	✓	✓	✓	✓
5. Pt Perpendicular	67 000	✓	✓	A	-	✓	✓	✓	✓	✓
6. Smoky Cape	62 200	✓	✓	A	-	✓	✓	✓	✓	✓
7. Sugarloaf Point	63 200	-	-	-	-	✓	✓	✓	✓	✓
<u>VICTORIA</u>										
8. Cape Nelson	63 200	✓	✓	C	✓	✓	✓	✓	✓	✓
9. Cape Otway	77 000	✓	✓	A	✓	✓	✓	✓	✓	✓
10. Cape Schanck	74 000	✓	✓	C	✓	✓	✓	✓	✓	✓
11. Gabo Island	119 000	✓	✓	A	✓	✓	✓	✓	✓	✓
12. Point Hicks	81 000	✓	✓	C	✓	✓	✓	✓	✓	✓
13. Wilsons Prom'try	127 000	✓	✓	A	✓	✓	✓	✓	✓	✓
<u>QUEENSLAND</u>										
14. Booby Island	83 000	-	✓	C	-	✓	✓	✓	✓	✓
15. Bustard Head	111 000	-	-	B	-	✓	✓	✓	✓	✓
16. Cape Capricorn	39 000	-	-	C	-	✓	✓	✓	✓	✓
17. Cape Cleveland	46 000	-	-	A	-	✓	✓	✓	✓	✓
18. Cape Moreton	49 000	-	✓	C	-	✓	✓	✓	✓	✓
19. Dent Island	108 200	-	✓	-	-	✓	✓	✓	✓	✓
20. Double Is Point	26 000	✓	✓	A	✓	✓	✓	✓	✓	✓
21. Fitzroy Island	34 000	-	✓	B	-	✓	✓	✓	✓	✓
22. Lady Elliott Is	65 000	-	✓	A	✓	✓	✓	✓	✓	✓
23. Low Isles	46 000	-	-	A	-	✓	✓	✓	✓	✓
24. Pine Islet	136 000	-	-	C	-	✓	✓	✓	✓	✓
25. Sandy Cape	40 000	-	✓	B	✓	✓	✓	✓	✓	✓
<u>SOUTH AUSTRALIA</u>										
26. Althorpe Island	92 000	✓	✓	-	✓	✓	✓	✓	✓	✓
27. Cape Borda	61 000	✓	✓	A	✓	✓	✓	✓	✓	✓
28. Cape Willoughby	60 000	✓	✓	A	✓	✓	✓	✓	✓	✓
29. Sth Neptune Is	91 000	✓	✓	B	✓	✓	✓	✓	✓	✓
<u>WESTERN AUSTRALIA</u>										
30. Cape Leeuwin	100 000	-	-	A	-	✓	✓	✓	✓	✓
31. Cape Leveque	116 000	-	-	B	✓	✓	✓	✓	✓	✓
32. Cape Naturaliste	41 600	-	-	B	-	✓	✓	✓	✓	✓
33. Moore Point	20 200	-	-	-	-	✓	✓	✓	✓	✓
34. Rottneest Is	39 000	✓	-	C	-	✓	✓	✓	✓	✓
<u>TASMANIA</u>										
35. Cape Bruny	66 000	✓	✓	B	✓	✓	✓	✓	✓	✓
36. Currie Harbour	46 000	-	-	-	✓	✓	✓	✓	✓	✓
37. Deal Island	136 000	✓	✓	B	✓	✓	✓	✓	✓	✓
38. Eddystone Point	82 000	✓	✓	A	✓	✓	✓	✓	✓	✓
39. Low Head	42 000	-	-	B	-	✓	✓	✓	✓	✓
40. Maatsuyker Is	202 000	✓	✓	A	✓	✓	✓	✓	✓	✓
41. Swan Island	85 000	✓	✓	A	✓	✓	✓	✓	✓	✓

NOTES:

1. The symbols A, B and C are used by the Bureau of Meteorology to represent:

A - Very important stations with no satisfactory alternatives such that closure would cause a serious diminution in service;

B - Closure would cause a significant loss of service; and

C - The loss would be tolerated or acceptable alternatives are available.

* - The Bureau classifies Eddystone Point and Swan Island as 'A' alternatives. If a manned preserve is obtained at either one the classification for the other becomes 'C'.

2. CE is referred to as Cultural Environment in the Profiles of Manned Lightstations.

3. NE is referred to as Natural Environment in the Profiles of Manned Lightstations.

4. Register of the national Estate Maintained by the Australian Heritage Commission.

5. Refers to a Station national park or sanctuary

GBRMP - Great Barrier Reef Marine Park

SWNP - South West National Park

Montagu Island area is popular with tourists but visitors are not allowed on the island itself without the joint consent of the National Trust and the Department of Transport.

6. Information on popularity with tourists taken from Department of Transport submission, Submissions, Vol. 5, pp.707-709

SOURCES:

1. Based mostly on Profiles of Manned Lightstations (Vol. 2 of Report)

TABLE 4
CASE FOR CONTINUED MANNING

Lightstation	Cost savings from Unmanning \$'s/year	Benefits of Continued Manning						Continued Manning supported by		
		Sea-based functions of keeper		Land-based functions of keeper						
		Coastal Surveillance	Search and Rescue	Weather Data		CF: Prevention of Vandalism	NE: Protection of fauna, flora bushfire assistance		Transport	H&E
				Bureau	Local					
<u>NEW SOUTH WALES</u>										
1. Cape Byron	63 000	-	-	<	<	-	<	-	<	-
2. Green Cape	75 000	-	-	<	-	-	<	-	<	-
3. Montagu Island	84 000	-	-	<	<	-	<	-	<	-
4. Norah Head	61 000	-	-	<	-	-	<	-	<	-
5. Pt Perpendicular	67 000	-	-	<	-	-	<	-	<	-
6. Smoky Cape	62 200	-	-	<	<	-	<	-	<	-
7. Sugarloaf Point	63 200	-	-	<	-	-	<	-	<	-
<u>VICTORIA</u>										
8. Cape Nelson	63 200	-	-	-	-	-	<	-	<	-
9. Cape Otway	77 000	-	-	-	-	-	<	-	<	-
10. Cape Schanck	74 000	-	-	-	-	-	<	-	<	-
11. Gabo Island	119 000	-	-	<	<	-	<	-	<	-
12. Point Hicks	81 000	-	-	<	<	-	<	-	<	-
13. Wilsons Prom'ry	127 000	-	-	<	<	-	<	-	<	-
<u>QUEENSLAND</u>										
14. Booby Island	83 000	-	-	-	-	-	<	-	<	-
15. Bustard Head	111 000	-	-	-	-	-	<	-	<	-
16. Cape Capricorn	39 000	-	-	-	-	-	<	-	<	-
17. Cape Cleveland	46 000	-	-	-	-	-	<	-	<	-
18. Cape Moreton	49 000	-	-	<	-	-	<	-	<	-
19. Dent Island	108 200	-	-	-	-	-	<	-	<	-
20. Double Is Point	26 000	-	-	-	<	-	<	-	<	-
21. Fitzroy Island	34 000	-	-	-	<	-	<	-	<	-
22. Lady Elliott Is	65 000	-	-	<	-	-	<	-	<	-
23. Low Isles	46 000	-	-	<	<	-	<	-	<	-
24. Pine Islet	136 000	-	-	-	-	-	<	-	<	-
25. Sandy Cape	40 000	-	-	-	-	-	<	-	<	-
<u>SOUTH AUSTRALIA</u>										
26. Althorpe Island	92 000	-	-	-	<	-	<	-	<	-
27. Cape Borda	61 000	-	-	<	<	-	<	-	<	-
28. Cape Willoughby	60 000	-	-	-	<	-	<	-	<	-
29. Sth Neptune Is	91 000	-	-	<	<	-	<	-	<	-
<u>WESTERN AUSTRALIA</u>										
30. Cape Leeuwin	100 000	-	-	<	<	-	<	-	<	-
31. Cape Leveque	116 000	-	-	-	<	-	<	-	<	-
32. Cape Naturaliste	41 600	-	-	-	<	-	<	-	<	-
33. Moore Point	20 200	-	-	-	<	-	<	-	<	-
34. Rottnest Is	39 000	-	-	-	<	-	<	-	<	-
<u>TASMANIA</u>										
35. Cape Bruny	66 000	-	-	-	<	-	<	-	<	-
36. Currie Harbour	46 000	-	-	-	<	-	<	-	<	-
37. Deal Island	136 000	-	-	<	<	-	<	-	<	-
38. Eddystone Point	82 000	-	-	<	<	-	<	-	<	-
39. Low Head	42 000	-	-	-	<	-	<	-	<	-
40. Maatsuyker Is	202 000	-	-	<	<	-	<	-	<	-
41. Swan Island	85 000	-	-	<	<	-	<	-	<	-

VII: LEVELS FOR CONTINUED MANNING

Introduction

7.0 In this chapter the Committee discusses the third of the 5 part sequential analysis, namely, that if lightstations should continue to be manned -

- . what are the levels for continued manning?

7.1 A discussion of this matter should include the level of manning and the organisation that provides the manning for the 33 stations for which the benefits of the human presence exceed the cost savings of automation and unmanned. But before we proceed to such discussion, it is worthwhile considering the need to continue the lightkeeper service.

The Lightkeeper Service

7.2 The Committee is of the opinion that when it is considered that the benefits of the human presence are greater than the cost savings of unmanned, then reasonable efforts should be made to ensure that the manning is by a Department of Transport lightkeeper.

7.3 There are two reasons for this. First, we accept the Transport argument that the department is best placed to provide the required manning, because it has the experience, expertise and organisation to manage lightstations.⁶⁸ Second, as ALA states the lighthouse service has a proud tradition and history, the keepers and their families have provided over 150 years of service and have a strong tradition of dedication.⁶⁹ In short the lighthouse keeper can be considered to be an occupational group, part of the heritage of a maritime nation with one of the longest coastlines in the world.

Findings

31. All reasonable efforts should be made to ensure that lightstations are manned by Department of Transport lightkeepers if the decision is in favour of continued manning.

Manning at Isolated Stations

7.4 Transport states that for personnel safety reasons one-man operations are not considered appropriate at remote stations.⁷⁰ There are then 4 of the 33 lightstations that should continue to have two-man operations for personnel safety reasons - Althorpe Island, Booby Island, Deal Island, Gabo Island, Maatsuyker Island, South Neptune Island and Wilsons Promontory.

7.5 Given this conclusion there is no need for these lights to be automated, unless the light mechanisms are reaching the end of their economic lives. In short, these 4 stations should be manned and operated in the same way as they are manned and operated at present.

Findings

32. For personnel safety reasons remote stations should be operated by two persons. Therefore, out of the 33 stations the Committee said should continue to be manned the following 4 stations should be operated by two persons: Althorpe Island, Booby Island, Deal Island, Gabo Island, Maatsuyker Island, South Neptune Island and Wilsons Promontory.
33. Given two person operations at these lightstations, the lights should not be automated unless the light mechanisms are reaching the end of their economic lives.

Manning at Other Stations

7.6 These stations can be grouped under 5 categories. In the first category would be the 3 lightstations in New South Wales where action is in hand to transfer the lightstation reserves of Montagu Island, Smoky Cape and Sugarloaf Point to the New South Wales State Government. To this list the Committee adds Green Cape. Transport has said that, in respect of Montagu Island, the Commonwealth would retain title to the navigational aid and the facilities required to maintain it.⁷¹

7.7 The Committee does not see any impediment to the transfer of land titles of the lightstation reserves at Green Cape, Montagu Island, Smoky Cape and Sugarloaf Point to the State Government. However, the Commonwealth should ensure that the heritage value of the lightstations is preserved and should also draw the attention of the State Government to the benefits the human presence provides in respect of search and rescue and local weather reports at these stations. The question of payment should be finalised before the reserves are handed over.

Findings

34. The issue of unmanning should not be allowed to impede the transfer of the lightstation reserves at Green Cape, Montagu Island, Smoky Cape and Sugarloaf Point to the New South Wales State Government.

35. The Commonwealth should, however, take necessary steps to ensure that the heritage value of these stations is preserved after the land transfers.
36. The Commonwealth should draw to the attention of the State Government the benefits lightkeepers have provided in respect of search and rescue work and local weather reports at these stations. A condition of the land transfer at Green Cape and Montagu Island should be the retention of the manned presence.

7.8 The second category of manned station is the one where the human presence is retained solely for the protection afforded to the cultural environment, or, the natural environment. In respect of the former, Transport has argued that following automation of the navigational aid the manning level should be reduced from two to one.⁷² A two man presence was required previously as a safety measure connected with the power source. With automation which removes the need for duties associated with the light it should be possible to reduce the manning level and if necessary provide for necessary station maintenance by the quarterly visits to lightstations by the Cape Class vessels. A similar argument for reducing the manning level from 2 to 1 would apply to those stations where the sole reason for continued manning is protection of the natural environment.

Findings

37. The manning level at lightstations where the sole function of the keeper is the protection of the cultural or the natural environment be reduced to 1. These lightstations are: Fitzroy Island and Point Hicks.
38. As a prerequisite to the reduction in the level of manning the lights at these stations should be automated.

7.9 The third category of stations are those at which the functions of the keepers are the protection of the cultural and the natural environment. The Committee has not examined the level of manning required for these stations. This work should be undertaken by joint study by the Department of Transport and the Department of Home Affairs and Environment.

Findings

39. The level of manning required for stations where the functions of the keeper include the protection of the cultural and natural

environment be the subject of joint study by the Department of Transport and the Department of Home Affairs and Environment. These lightstations are: Cape Bruny, Cape Moreton, Cape Nelson, Cape Schanck, Lady Elliott Island, Low Isles, Norah Head and Sandy Cape.

7.10 The fourth category is the three stations where at present the lights are automated and the station is operated by one person. The keepers at these stations protect the cultural environment and, in the case of Cape Naturaliste, supply local weather reports as well.

Findings

40. The existing level of manning should be maintained at Cape Naturaliste, Currie Harbour, Low Head and Rottneest Island.

7.11 The remaining stations are those at which the human presence protects the cultural or natural environment and in addition provides meteorological observations for the Bureau of Meteorology or local weather reports or assistance in search and rescue; or some combination of all three. Since the 10 stations require a human presence to protect the cultural or natural environment the relevant question is whether there should be a two person referred to.

7.12 The Bureau has made a strong case for the retention of the human presence at 16 key lightstations - very important stations with no satisfactory alternative such that closure would cause a serious diminution of service. The Committee has accepted that there are significant benefits for weather information required by the Bureau that derive from the human presence at these stations.

7.13 Be this as it may the Committee is convinced that the responsibility for paying for and using data for weather forecasts issued by the Bureau must lie with the Bureau itself. If unmanning or a reduction in the level of manning will cause a serious diminution in the quality of service provided by the Bureau, this is a matter for that organisation and that organisation alone to tackle. The Bureau faces several choices. First it can seek additional funds in the annual budget. Second it can assess its use of resources to find out whether it can put additional resources into this area, or third, the Bureau can examine least cost ways of continuing to receive meteorological observations from lightstations.

7.14 The Bureau has said that the observing program which can be undertaken by only one lightkeeper will be limited. In evidence the Bureau qualified this statement when it said in

respect of Low Head that 'it seems that observations have been made by the wife of the head keeper ... (so that there has been) no reduction in the service provided at Low Head with the one keeper for that reason'.⁷³

7.15 The search and rescue work provided by lightkeepers is a State responsibility. There are Commonwealth-State agreements which specify that the Commonwealth will accept responsibility for ships or foreign fishing vessels in distress at sea and the States will be responsible for search and rescue for pleasure boats and fishing vessels in distress within a part of the State or at sea.⁷⁴ The SAR work of keepers recorded in the Profiles is work undertaken quite indirectly on behalf of the States.

7.16 The Committee concludes that SAR work at certain lightstations and local weather reports are not Commonwealth responsibilities and that if one-person operations are insufficient to provide these services, then they should be provided by the States or by other means.

7.17 The ALA, Transport (at our request) and others have put forward a variety of options for the funding of or maintenance of the human presence. The ALA suggestions include joint funding by the Commonwealth and States, the appointment of caretakers and the leasing of premises.⁷⁵ Suggestions by Transport include the use of State Park rangers, local police or local council employees, private enterprise for stations with commercial potential or private citizens. Some of these suggestions indicate that there may be scope for the second person at certain lightstations to be provided by a variety of means.

Findings

41. Stations where the keeper either protects the cultural or natural environment and in addition performs other functions such as observations, for the Bureau of Meteorology, assistance in search and rescue and provision of local weather reports, should be manned by 1 person unless the Bureau or State governments pay for the costs of the second person or unless other means can be found for providing for a second person. These stations are: Cape Borda, Cape Byron, Cape Leeuwin, Cape Otway, Cape Willoughby, Double Island Point, Eddystone Point and Point Perpendicular.
42. This above finding would also apply to several stations in Finding 39 if the joint study showed the need for manning by 1 person at these stations.

43. If unmanning or a reduction in the level of manning will cause a serious diminution in the quality of weather forecasts provided by the Bureau of Meteorology, then the remedy lies with the Bureau itself. The Bureau can seek additional funds, rearrange its expenditure priorities or find other ways to continue to obtain meteorological observations from lightstations.

7.18 Term (a) of the Committee's terms of reference deals with the need for the continued manning of the 41 lightstations that are currently manned. Our findings on this matter are brought together and summarised in Table 6.

TABLE 6
COMMITTEE CONCLUSIONS ON
NEED FOR CONTINUED MANNING

<u>Description</u>	<u>No of Lightstations</u>
Unman	8
Reduce to 1 man operation	2
Reduce to 1 man operation, unless others pay for 2 man*	8
Transfer to NSW Government	4
Joint Study to Decide Level of Manning	8
Retain 2 man operations	7
Retain 1 man operations	<u>4</u>
	<u>41</u>

*Payment by Bureau of Meteorology, State Governments or others for the additional person.

ENDNOTES

- 68. Submissions, Vol.2, p.201.
- 69. Submissions, Vol.6, p.903.
- 70. Submissions, Vol.2, p.187.
- 71. Submissions, Vol.1, pp.156, 163, Vol.2, p.193.
- 72. Submissions, Vol.2, p.201.
- 73. Evidence, p.209.
- 74. Evidence, pp.241, 242.
- 75. Submissions, Vol.2, p.259.

VIII: PAYMENT FOR CONTINUED MANNING

Introduction

8.0 Table 4 summarises the position reached on the continued manning of the 41 lightstations. The next question that has to be answered is:

. who should pay for the continued manning?

8.1 Although users of navigational aids include commercial shipping, fishing vessels, Defence vessels and pleasure craft, it is only commercial shipping which pays for the use of these aids. In accordance with the policies of previous governments, Transport has aimed since 1973 at recovering all the costs of operating the Commonwealth's marine navigational aid system. These costs are recovered through the collection of light dues which are charged on the net registered tonnage of a vessel. Light dues have been charged from 1915 when the Commonwealth took over the responsibility for coastal navigational aids. From 1915 to 1973 the policy was to recover 80% of costs. In 1973 the decision taken was for full-cost recovery. The current rate is 49 cents a net registered ton paid on a quarterly basis.⁷⁶

8.2 Transport supplied the Committee with Financial Statements on Commonwealth Navigational Aids (1978-79 to 1982-83). These statements showed the revenue and expenditure for the period and the excess of revenue over expenditure or vice versa for each of the years. These variations are explained by the fact that there is uncertainty in predicting future tonnage movements so that it is not possible to set a light due rate which will recover precisely 100% of costs in any given year.⁷⁷

8.3 The only current exception to full-cost recovery is in respect of the additional costs incurred in retaining Maatsuyker Island as a manned lightstation. This was a policy decision that commercial shipping should not be charged the additional costs of manning when that manning was not required for the efficient operation of the navigational aid.⁷⁸

Cost Recovery and Commercial Shipping

8.4 The basic ACS argument reflects the position reached in respect of Maatsuyker. In evidence the Chamber said there are no lightstations in Australia that require a manned presence for the efficient operation of the navigational aid.⁷⁹ The former view was shared by the Department of Transport.

8.5 The ALA, on the other hand, believes that since commercial shipping receives a subsidy from the taxpayer '(a)ny argument that we should demand lightstations in order to lighten the burden on the shipping lines is therefore more than questionable'. The Committee has to examine closely the ALA argument given in particular that organisation's concern that its arguments could be ignored.⁸⁰

8.6 Part of the ALA argument is that the costs of operating the lighthouse service have not been recovered in light dues. The Association states that when revenue is compared with total cash costs (includes capital and operating costs) in the period 1961-1972 the Australian taxpayer has contributed \$10.6m to the operation of the lighthouse service.⁸¹

8.7 Transport says that the use of cash costs is contrary to accepted accounting principles and that the shortcoming of cash cost comparisons is recognised by ALA itself. The limitations of using cash costs is, as Transport shows, the lack of recognition that some cash outlays have benefits that accrue over a number of years so that it is necessary to include such costs through annual, non-cash depreciation charges. In short, there is no substance to the ALA claim that, based on comparisons of revenue and cash costs, the Australian taxpayer is subsidising the operator of the lighthouse service.

8.8 The ALA also claims that despite commercial accounting practice the commercial shipping industry is clearly not compensating the government for the cost of operating the lighthouse service. This conclusion is based on comparisons of revenue with commercial operating costs in the period 1967-1982.⁸²

8.9 The policy of full-cost recovery was introduced in 1973. Examination of the ALA figures (Table 2 of submission) shows that from 1973 to 1983 inclusive, aid taken as a whole, revenue exceeded commercial costs. Department of Transport figures (1973-74 to 1982-83) produce the same result.⁸³ In short the ALA subsidy claim appears to be inaccurate. If the contention is that figures of earlier years show a revenue shortfall one can question the rationale of full-cost recovery from commercial shipping pursued by successive governments when it is recognised that other users of navigational aids do not make any contribution to the costs of operation of the aids.

8.10 The Committee pursued with ALA the question of why commercial shipping should pay for a service it does not require. The Association conceded a large part of this question but added that if commercial shipping does not want the lights (presumably the lightkeeper service) which is needed for other users then some other means must be found to pay for them.⁸⁴

8.11 The Committee does not want to give the impression that a changed method of levying light dues should be introduced overnight. The timing for discontinuing charging shipping for

the manned presence should coincide with the time when a particular lightstation would have been unmanned based only on Transport portfolio responsibilities. This would allow discussions between the industry and the department on several matters.

Findings

44. Subject to the next finding, commercial shipping, the only group that pays light dues, should not be required to pay for the continued manning of lightstations because this is a service commercial shipping does not need.
45. The timing for discontinuing charging commercial shipping should coincide with the time when a particular lightstation would have been unmanned based only on Transport portfolio responsibilities; this would allow discussions between the industry and the department on both the reasonableness of the timing and the need for it to contribute towards the cost of retaining the manned presence for other reasons.

8.12 The ALA submission also refer to other aspects of cost recovery and light dues - subsidised interest rates and depreciation rates, absence of a real rate of return reflected in the light dues and the inconsequential impact of rate reductions. The last factor has been dealt with in paragraph 8.10. The matter of the valuation of assets has been dealt with adequately by the Department of Transport.⁸⁵

8.13 The Committee notes that the report of the Senate Select Committee on Statutory Authority Financing has examined the question of real rates of return and has recommended that real rates of return before interest, using replacement cost depreciation be shown in annual reports of statutory authorities. This recommendation is based on the view that in order to determine the allocation of resources among authorities on a rational basis it is necessary to know the comparable real rates of return on assets employed by these authorities.⁸⁶

8.14 The Committee notes that there is no statutory authority that administers navigational aids and has not examined the need for such an authority. We note also the Transport statement on the constitutional validity of light dues containing an element of profit. Advice from the Crown Solicitor's Office to the Department of Transport states that all revenues collected for light dues may have be expended on maring navigational aids. Otherwise, a person engaged in interstate trade could challenge the collection of the revenue on the grounds that the collection contravenes Section 92 of the

Constitution because the revenue is not being spent on providing a reasonable service for shipping engaged in interstate trade.⁸⁷

8.15 However, even if the constitutional hurdle can be overcome there is the question of the rationale of full cost recovery.

8.16 In respect of interest rates Transport says interest charges are calculated by applying to the value of the asset the long-term bond rate that prevailed when the asset was purchased. This practice is similar to that which existed in 1979 in respect of monies borrowed by the Defence Service Homes Corporation. In response to a recommendation in that Committee report the then Minister for Finance said the government would adopt a determination whereby the long-term bond rate is applied to that part of the initial capital of the Corporation equivalent to principal repayments from borrowers in the previous financial year. The Committee has asked the Department of Finance to comment on the relevance of the application of this method to the calculation of the interest rate component in light dues.

Cost Recovery and Commonwealth Departments

8.17 The Committee has endorsed the Transport view on the need for authoritative manned presence at stations that have a heritage significance (protection of the cultural environment). We have accepted the view of the Department of Home Affairs and Environment that there are also stations that require a human presence to protect the natural environment. This raises the question as to whether these stations should be paid for out of monies appropriated by the Parliament for the Department of Transport when the function of the manned presence would not be related to the Transport portfolio.

8.18 The Committee recognises that where the case for continued manning is based in part or whole on the need to protect the natural environment the Minister for Transport could not withstanding Section 30(i) of the Australian Heritage Commission Act declare parts of the lightstation reserve surplus to requirements and thus remove from his portfolio any responsibility for maintaining a human presence at these stations.

8.19 The question that we have to address is whether good budgetary practices are being transgressed if Transport has to pay for retaining the human presence on the basis of reasons that do not to the Transport portfolio. A principle of sound budgetary practice is that organisations that have responsibility for taking decisions should meet the costs of those decisions. The application of this principle has the effect of requiring those organisations to decide, within the

context of their expenditure priorities, what they can afford to spend on the decisions they make or want to make. We have applied this principle to the Bureau of Meteorology. [See Finding 43].

8.20 However, this budgetary discipline does not appear to apply fully to the Australian Heritage Commission. The responsibility for determining what buildings, structures and so forth should be placed on the Register of the National Estate lies with the Commission yet the Commission does not have to meet the costs of these decisions out of its own budget in respect of register items controlled by Commonwealth departments and agencies.

8.21 We do not have sufficient information to comment further on this issue. We note that other departments such as the Department of Defence and instrumentalities such as Australia Post pay for maintaining historic buildings on the register.

8.22 The Committee can do no more than point out what is an apparent anomaly in budgetary practices and suggest that the Minister for Transport, Home Affairs and Environment and Finance examine the possibility of working out a formula on this matter.

Findings

46. Where the reason or reasons for the maintenance of the manned presence is for the protection of the cultural environment, the natural environment or both, the Minister for Transport, the Minister for Home Affairs and Environment and the Minister for Finance examine the possibility of developing a formula which would minimise the need for the Department of Transport to pay for functions outside the Transport portfolio.
47. Where the reasons for the maintenance of the manned presence are the protection of the cultural or natural environment, and, other reasons such as meteorological observations, current weather information or search and rescue, the costs of any additional manning should be paid by others.

ENDNOTES

76. Submission, Vol.2, p.183.
77. Submissions, Vol.2, pp.184, 215.

78. Evidence, p.171].
79. Submission, Vol.1, p.134, Evidence, p.331
80. Submissions, Vol.2, pp.266-275, Evidence, p.66.
81. Submissions, Vol.2, p.269.
82. Submissions, Vol.2, p.270.
83. Submissions, Vol.5, p.697.
84. Evidence, pp.108, 109.
85. Submissions, Vol.6, pp.896, 897.
86. Australia, Parliament, Senate Select Committee on Statutory Authority Financing, Statutory Authorities of the Commonwealth, Financing; Volume 1 - Report, Canberra 1983.
87. Submission, Vol.6, p.784.

IX: POLICY AND THE DECISION-MAKING MECHANISM

Introduction

9.0 The last of our 5 part sequential analysis relates to:

- the appropriate policy and decision-making mechanism which would cover the issues raised in the other parts of the analysis.

9.1 This chapter is probably the most important part of the analysis. Implementation of the recommendations in this Report will take place over several years if not decades. Thus changing circumstances will catch up with and overtake the Report. For example the construction of a road to Wilsons Promontory could reduce the isolation of that station and open up the question of the need for a reduction in the level of manning. A review of expenditure priorities could lead to the examination of the need to man stations for the protection of the natural environment. We do not expect and cannot support continuing public inquiries whenever government has to take decisions on the need for continued manning at a particular station. Thus it is important to put in place an effective decision-making mechanism.

Policy for Continued Manning

9.2 The policy for unmanning of lightstations was developed from the 1974 Summers Report, endorsed by government and continued up to the present. The only apparent condition to the rate of unmanning in this report was consideration for the men in the service, i.e. the lightkeepers. However, there have been significant changes in the policy of unmanning since the early 1970's.

9.3 The first change came with the reversal of the decision to unman Maatsuyker Island. In explaining the new decision the then Minister said 'the heritage and social consequences of unmanning Maatsuyker were more important than the economic and operational advantages' (of unmanning). The keepers could thus continue to perform a number of extraneous tasks such as fire-spotting, weather reporting, and flora and fauna conservation. The ministerial statement concluded by saying that although the program of unmanning selected lightstations would continue, the Commonwealth will 'continue to take into account any significant factors relating to each case before decisions were finalised'.⁸⁸

9.4 Continuation of the program of unmanning was endorsed by the Review of Commonwealth Functions.⁸⁹ At about the same time (April 1981) there was another major change in policy when the then government decided that where a manned presence is

retained at a lightstation for reasons other than the efficient operation of the navigational aid, the additional costs should not be borne by commercial shipping. In the case of Maatsuyker Island the additional costs are being met by the Commonwealth.⁹⁰

9.5 Transport states that the above change was a major change in policy and that the decision to give detailed consideration to all aspects associated with continued manning was a clearer directive and gave firmer guidelines for the department to do what it had already started to do in a total analysis.⁹¹

9.6 Despite what Transport calls a clearer directive the Committee is of the opinion that it is imperative for the policy to be redefined. First, the emphasis must be changed. Much of the preceding analysis suggests that the policy should be concerned with the need for continued manning and the appropriate level for that manning rather than one of unmanning. This change of emphasis leaves the question open; unmanning carries with it the connotation of a predetermined position.

9.7 The policy on the need for continued manning should have the four features: First, there should be an assessment of the cost savings of unmanning against all the benefits of retaining a manned presence, including those benefits pertaining to the cultural and natural environment, benefits that accrue to local communities and other benefits. Second, there should be an acknowledgement that where there is no Commonwealth need for the manned presence there will be consultation with the States. Third, a recognition is required that in this process of consultation all reasonable measures will be taken to continue manning if others are prepared to pay for the costs or prepared to install a voluntary presence at the station in question. Finally, the policy should acknowledge a continued acceptance of the policy that commercial shipping should not be asked to pay for a service it does not need subject to the recognition that the timing of the discontinuation for charging would be based on Transport portfolio responsibilities.

Findings

48. The policy should be changed from one of unmanning to one on the need for continued manning and the appropriate level of that manning.
49. The policy on the need for continued manning should have the following features:
 - (a) an assessment of the cost savings of unmanning against all the benefits of retaining a manned presence, including those benefits pertaining to the

cultural and natural environment, benefits that accrue to local communities and other benefits;

- (b) an acknowledgement that where there is no Commonwealth need for the manned presence there will be consultation with the States;
- (c) a recognition that in this process of consultation all reasonable measures will be taken to continue manning if others are prepared to pay for the costs or prepared to install a voluntary presence at the station in question;
- (d) a continued acceptance of the policy that commercial shipping should not be asked to pay for a service it does not need subject to the recognition that the timing of the discontinuation for charging would be based on Transport portfolio responsibilities;
- (e) an acknowledgement that the rate of unmanning lightstations for which the cost savings are greater than the benefits of continued manning, or for stations where a reduction in the level of manning is warranted should be appropriate to the employment security to those in the lightkeeper service and without forced retrenchments.

Decision-Making Mechanism

9.8 In examining the need for an effective decision-making mechanism it is necessary to comment on the adequacy of what exists. The prime formal consultation between Transport and the shipping industry is the Maritime Services Advisory Committee [Navigational Safety] (MSAC) which normally meets twice a year. Industry representatives of the Committee include three members of the Australian Chamber of Shipping, one from the Australian National Line and one from Broken Hill Proprietary Limited. Other members of the Committee are from Transport and the Department of Defence.

9.9 In assessing the need for and priority of new or upgraded navigational aids Transport keeps in close consultation with MSAC. The 5 Year Rolling Plan project implementation schedule has been periodically updated since 1979 after consultation with the shipping industry represented on MSAC.⁹²

9.10 The MSAC has been part of the decision-making process on unmannning. Since April 1981 Transport has also sought from Commonwealth departments and through them from their State counterparts, details of the benefits of the manned presence. Part of this information-gathering process has been to ask the various agencies to make a contribution to the costs of maintaining a manned presence if the organisation saw a need for continued manning.⁹³ Presumably the views of Transport on these matters were filtered through the MSAC to the then minister after which a particular lightstation entered the unmannning list.

9.11 It would have been out of such a decision-making process that in July 1982 Montagu Island was added to the unmannning list. The Committee is mystified by this decision because on the basis of our analysis Montagu Island has the strongest case for continued manning [see paragraph 6.103].

9.12 We do not think MSAC is an adequate body to advise the Minister for Transport on the need for continued manning. Commercial shipping is concerned understandably with the safety of navigational aids and the costs of paying for the service it receives. However, commercial shipping or ACS does not have the expertise on other matters. This is quite apparent in the ACS submission and in the evidence that organisation gave. The submission included comments such as that the other duties of lightkeepers do not provide valid reasons for the retention of the manned presence and that there is no justification for the Commonwealth subsidising the fishing industry. The evidence contained the view that automatic weather stations can make the meteorological observations a human can.⁹⁴

9.13 The present decision-making mechanism is also deficient in that it precludes consultation with the States at the ministerial level, does not provide for the examination of options for continued manning outside Commonwealth-State relationships and restricts the consultation process to Commonwealth and State Government officials.

9.14 In developing a new decision-making mechanism the Committee takes as its starting point the position that responsibility must rest firmly and squarely at the ministerial level so that Ministers are seen to make or not to make decisions for which they are accountable to the Parliament.

9.15 Initially the Committee is of the opinion that the Minister for Transport should do four things. First, after taking into consideration State Government and community reaction to our Report, he should develop and announce in the House a Program for unmannning the 8 lightstations listed in Finding 28 and for transferring to the State Government of New South Wales the four lightstation reserves referred to in Findings 34 to 36. Second, the Minister should confirm the principle espoused in the Summers Report and reflected in Preliminary Conclusion 31 that the rate of unmannning or a

reduction in the level of manning should be appropriate to the employment security of those in the lightkeeper service and without forced retrenchments. Third, he should guarantee that wherever practicable unmanning will be preceded by installation of a safety radio-telephone in the vicinity of the lighthouse that is unmanned. Finally, in the process of developing this Program the Minister should offer relevant State governments ownership of the lightstation reserve subject to Commonwealth requirements for the operation of the navigational aid.

9.16 These changes do not require the establishment of a new decision-making mechanism. It is at the next stage that the new decision-making mechanism should be used.

9.17 The Program should be developed by adding on lightstations to take the place of those unmanned or those transferred to the State Government of New South Wales. The stations added would not be those earmarked for unmanning or transfer but rather those identified for a reduction in the level of manning. In short, these stations would be those mentioned in Findings 37 (2 stations), 41 (8 stations) and 39 (8 stations). The remaining eleven stations are those where we have said the existing level of manning should be retained (Findings 32 and 40).

9.18 In developing the new mechanism the Committee recognises that changing circumstances over time could require a reassessment of the need for continued manning at specific lightstations. The mechanism which consists of 5 stages seeks to correct the deficiencies identified in the current decision-making process.

9.19 The first stage consists of consultation between Commonwealth departments and agencies - the departments of Transport, Home Affairs and Environment, Administrative Services and the Bureau of Meteorology though this list is not meant to be exhaustive. In part, the necessity for consultation stems from legal obligations imposed on Ministers and their departments, arising from the Commonwealth's own heritage and natural environment protection legislation. The purpose of this step is to determine the initial Commonwealth position. If the conclusion reached is that the Commonwealth presence should be reduced to one person (or removal of that presence) then that decision would be passed on to the next stage.

9.20 The second stage is the referral of the initial Commonwealth position to a committee consisting of Transport, relevant Commonwealth organisations, relevant State government bodies and others such as the Australian Lighthouse Association which could be the umbrella group to represent other interests - e.g. yachting. There is no need for commercial shipping to be represented because subject to timing considerations the industry is not being asked to pay for the costs of continued manning. This committee should take Commonwealth requirements as

given and explore other avenues such as transfer to the States, local council interests for stations with tourist potential, manning by private citizens as options for continued manning.

9.21 In the third stage Transport would report the committee's views and Commonwealth department views to the Minister for Transport. It is conceivable that the options developed by the committee would be satisfactory to the Minister, in which case the existing manning level would be retained.

9.22 If this is not the case, in the fourth stage the Minister for Transport would write to his counterpart in the relevant State stating that the particular lightstation has been placed on an Interim List for a reduction in the level of manning.

9.23 Following completion of this stage of the process the Minister will decide whether to take that lightstation off the Interim List or to move that lightstation onto the Program.

9.24 This decision-making process removes the deficiencies of the present mechanism. The proposal offers scope for consultation at the Ministerial level, opportunities for the development of options and wider consultation. Above all responsibility for decisions is located at the position of the Minister.

9.25 Over time it may be necessary to reassess the costs and benefits of continued manning at particular lightstations. If this is necessary it is our view that the social audit approach be used and that this work be undertaken by the Bureau of Transport Economics. We see this work being part of the first stage described in paragraph 9.17 and not something which is additional to the other stages.

Findings

50. After taking into consideration State government and community reaction to the Expenditure Committee Report, the Minister for Transport should develop and announce in the House a Program for the unmanning of the 8 lightstations listed in Finding 28 and the 3 lightstation reserves to be transferred to the State Government of New South Wales as identified in Findings 34 to 36.
51. In the course of developing this Program the Minister should confirm the principle espoused in the 1974 Summers Report and reflected in Finding 31 on employment security for those in the lighthouse service.

52. The Minister should guarantee that wherever practicable unmanning will be preceded by the installation of a safety radio telephone in the vicinity of the station that is to be unmanned.
53. In the process of developing this Program the Minister for Transport offer relevant State governments ownership of the lightstation reserves subject to Commonwealth requirements for the operation of the navigational aid.
54. The Program should be developed by adding on lightstations to take the place of those unmanned or those transferred to the State Government of New South Wales. The stations added would not be those earmarked for unmanning but rather those identified for a reduction in the level of manning - i.e. those mentioned in Findings 37, 39 and 41.
55. In the development of the Program the following decision-making mechanism be employed:
 - (a) consultation between Commonwealth departments and agencies (departments of Transport, Home Affairs and Environment, Administrative Services, Bureau of Meteorology) to determine the initial Commonwealth parameters;
 - (b) referral of that position to a committee comprising relevant Commonwealth departments and State government agencies and other organisations such as the Australian Lighthouse Association. The committee would take the initial Commonwealth position as given and explore alternatives for continued manning;
 - (c) referral of the committee report for initial decision by the Minister for Transport who could accept the alternatives or place the particular lightstation on an Interim List and then inform his State counterpart of this decision;
 - (d) following completion of this consultation the Minister for Transport would make a final decision by either deleting the lightstation from the Interim List or transferring it to the Program.

56. Where the Minister decides it is necessary for the costs and benefits of manning a lightstation to be reassessed, the social audit approach be used, the work be assigned to the Bureau of Transport Economics and the results of this work be fed into the first stage [55(a)] of the proposed decision-making mechanism.

ENDNOTES

88. November 1980 ministerial statement by the then Minister for Transport, the Hon. R.J. Hunt, M.P. quoted in New Zealand Report, pp.144, 145.
89. Ministerial Statement Review of Commonwealth Functions, April 1981, p.40.
90. Submission, Vol.2, p.183.
91. Evidence, p.171.
92. Submissions, Vol.2, pp.171, 175, 191.
93. Evidence, pp.146, 173.
94. Submissions, Vol.1, pp.131, 133 and Evidence, p.330.

X: OTHER ISSUES

Introduction

10.0 During the course of the inquiry a variety of matters were raised and some of them have not been discussed so far in our report. These matters are of peripheral relevance to the terms of reference and do not impinge on the central issues that have been covered in the 5 part sequential analysis.

10.1 Two of these matters are discussed in the succeeding paragraphs. The first is the relevance of overseas experience on unmanning to the Committee inquiry. The second is Transport costing and the ALA evidence. The Association was concerned that what it considered was one of the most significant sections of its July 1983 submission, its findings on costings which differed substantially from those of Transport, could be ignored by the Committee. In commenting on such matters it is also necessary, for the achievement of balance, to comment on the quality of the ALA submissions and evidence.

Relevance of Overseas Experience

10.2 This section examines the evidence available to the Committee on the approaches adopted in other countries to the issue of unmanning of lightstations. The issue examined is the relevance of overseas experience for continued manning of Australian lightstations.

10.3 The Australian Lighthouse Association says that it has received evidence from a number of overseas countries that shows the automation and demanning have been accompanied by greater problems than originally foreseen, and that decisions taken in these countries have been regretted.⁹⁵ The ALA says that in Sweden there have been political difficulties arising from large scale demanning, as many tasks previously performed by lightkeepers in remote areas are now neglected.

10.4 The ALA notes that the United Kingdom authorities are proceeding more cautiously and that the Northern Lighthouse Board has adopted the view that there will always be stations which will remain manned. The ALA finds the American experience of particular interest and in addition draws the attention of the Committee to the recent report and findings of the New Zealand Marine Advisory Committee on The Automation and Demanning of Lighthouses.

10.5 Transport says that the '... general trend over the last few decades in many countries has been to substantially reduce the number of manned lightstations' [Submission, Vol.2, p.195]. The Australian Lighthouse Association notes the

existence of a trend in unmanning in other countries but submits that in all of these countries '... the number of manned lights per mile of coastline is very much better than in Australia'.⁹⁶ Table 6 gives the relevant information on unmanning in selected countries:

TABLE 6

UNMANNING OF LIGHTSTATIONS IN OTHER COUNTRIES

Country	Year	Manned Lightstations	Reduction
Canada	1969	265	
	1979	<u>239</u>	26
England/Wales	1971	52	
	1981	<u>40</u>	12
Ireland	N/A	34	
	1982	<u>21</u>	13
New Zealand	1972	23	
	1980	<u>16(a)</u>	7
Norway	1960	125	
	1982	<u>97</u>	28
South Africa	1960	21	
	1982	<u>10</u>	11
United States	1939	502	
	1981	<u>52</u>	450

Note:

(a) Under a current reduction program this number will be reduced from 16 to 10.

Sources: Submissions, Vol.2, pp.195-197.

10.6 An examination of the above table shows that the most extensive program of unmanning of lightstations has occurred in the United States of America. A brief explanation of the reasons for this program was stated in a letter from Admiral Hayes, Commandant of the US Coast Guard; the letter was included in the submission from the Tasmanian State Government.⁹⁷ In the United States electrification of lightstations allowed many easily accessible and less important lights to be converted to unmanned operation. From 1968 technological advances, in terms of the automation of lights, allowed further unmanning. The approach adopted in the United States to the remaining 52 manned lightstations is to 'modernise' the lights. This process means that the lights will be automated but a resident caretaker will be assigned to prevent structural damage caused by vandalism.

10.7 The US experience with its extensive unmanning program indicates that the reliability of the automatic light system has proven to be successful but that there has been a deterioration of some lighthouse property and buildings due to unforeseen levels of vandalism and administrative inattention. To combat this trend, the US Coast Guard has now assigned caretaker responsibilities to Coast Guardsmen where they are employed nearby. In other cases, lightstations have been leased to tenants, or to licensees who maintain the structures for historical, scientific or recreational purposes.

10.8 The ALA argues that the US Coast Guard is effectively remanning stations by 'relocating lightkeepers'.⁹⁸ The Committee's view is that the ALA may have exaggerated the remanning policy in the USA. The US Coast Guard is reinstating a 'manned presence' at those lightstations where vandalism is a problem but the Coast Guard is not reinstating lightkeepers. The USA experience is of relevance, if Australia has similar problems. We note the Transport evidence on vandalism at lightstations and question the relevance of USA experience even if the reinstatement of the 'manned presence' in that country is significant.

10.9 The Committee has examined what evidence was placed before it on the experience of other countries in the area of unmanning of lightstations. While overseas trends are worth noting their problems and our problems may differ. These differences may be in the the social, cultural, historical and economic considerations which need to be carefully examined. We are not aware of such factors overseas but have been informed and these factors in Australia. Consequently, the overseas experience is noted but not considered relevant for this inquiry.

Cost Information

10.10 The ALA makes a number of criticisms of Transport cost information and draws several conclusions on related matters. The Association says that unmanning has been accompanied by remarkable increases in staffing. The Association would 'expect this to continue if demanning progresses'. Further, after saying that the operating costs of the lighthouse service have increased by \$12 m. or 9 per cent a year, the Association concludes that despite the inevitable toll of inflation, it 'would have expected a less disappointing result if the Department's arguments relating to the economic advantages of automation and demanning are to be taken seriously'.⁹⁹

10.11 It is difficult to know what to make of these ALA arguments because they are non-sequiturs. If both staff numbers have increased and manned lightstations have fallen in a particular period, it does not follow that the one has been caused by the other. Similarly, if operating costs have risen at

a rate greater than the rate of inflation, by itself this says nothing about unmanned. In short, the ALA has failed to establish a casual relationship between the sets of facts it has mentioned.

10.12 A more serious ALA claim is that in the case of Troubridge Shoal, a light that was unmanned, the cost of maintaining a manned light is around 50 per cent less than the cost of the demanned alternative. This conclusion is the opposite to the Transport view that unmanned of Troubridge Shoal has resulted in cost savings of \$132 000 a year. The Association provided a detailed estimate of the various costs for manned and demanned with accompanying explanatory notes.¹⁰⁰

10.13 Transport has reponded to the ALA claim, but the Committee does not propose to describe or adjudicate on all the disputes over individual cost estimates.¹⁰¹ We will, however, examine one ALA figure because it is crucial to the ALA conclusion. The Association estimates that demanning Troubridge Shoal will result in an administrative overhead of \$129 000 - because ALA estimates that the manned station cost \$90 000 compared with the unmanned cost of \$172 000. It is apparent that the figure on administrative overhead is crucial.

10.14 In making its calculations the ALA has attributed all the staff increases since 1964 (excluding radio staff at the Decca installations) to unmanned because unmanned lights require more technicians and unmanned requires the construction of additional lights so that the whole system grows. Transport says the reasons for the increase in staff numbers are the changing responsibilities and functions associated with operating the navigational aid network, coupled with the need for improvements and upgrading programs and increases in the number of new aids.¹⁰²

10.15 Given the seriousness of the ALA claim the Committee is disappointed that the Transport response is so general. Nevertheless, the ALA estimate on administrative overheads is based on unsubstantial assertions, and it is because of this reason and others that the Committee is unable to accept the conclusions the Association draws in respect of Troubridge Shoal.

10.16 The ALA views on cost recovery have been covered in Chapter 8. The disturbing part of the Association's approach to the inquiry is its tactic of making accusations against the Department of Transport and then expecting the department to respond to these accusations; or expecting the Committee to require Transport to respond.

ENDNOTES

95. Submissions, Vol.2, p.253.
96. Submissions, Vol.4, p.596.
97. Submissions, Vol.3, pp.373-483 at pp.468-469.
98. Submissions, Vol.4, p.596 and Evidence, p.82.
99. Submissions, Vol.2, pp.261, 262.
100. Submissions, Vol.4, pp.584-592.
101. Submission, Vol.6, pp.899-901.
102. Submissions, Vol.4, pp.590, 591 and Vol.6, p.901.

XI: CONCLUSIONS

Summary

11.0 In this the concluding chapter of our report, the Committee summarises the salient findings before proceeding to make recommendations. In this summary we return to and take up again the approach to the inquiry discussed in Chapter IV.

11.1 On the central issue of the need for continued manning the Committee has concluded that:

- . for 8 lightstations it appears that the cost savings of automation and unmanning are greater than the benefits of continued manning; particularly because the benefits at the majority of these stations appear to be insignificant;
- . for the remaining 33 stations the benefits that derive from the human presence are greater than the cost savings of unmanning.

11.2 This latter conclusion does not say anything about the desired level of manning or who should pay for that level. More importantly, it must be recognised that the need for continued manning in situations where the user (the private citizen) does not pay has to be determined in the context of resource allocation in the public sector. Ministers have to decide on expenditure priorities within their portfolios. It is the task of Ministers to explain and justify these priorities.

11.3 The desired level of manning has been discussed in Chapter VII. This discussion has covered unmanning of 8 lightstations, transfer of 3 lightstation reserves to New South Wales, reduction of the level of manning of 3 and perhaps a further 10, and a joint study to determine the level of 9 and the maintenance of existing levels (2 or 1 man as the case may be) of 8.

11.4 However, the longer one reflects on this inquiry the more one sees the need to answer the question: why has the policy of unmanning become a problem and stirred up so much community antagonism?

11.5 There are several reasons. One is the concern on reduced safety at sea. The other is the thorny matter in public expenditure policy - the difficulties governments encounter in removing or reducing benefits. Some people might also believe the problem has been kept alive by selective publicity and constant, if sometimes inaccurate, criticism of the Department of Transport.

11.6 The Committee is in no doubt that one, perhaps a major reason, for the problem is the lack of clarity of the policy and the absence of an effective decision-making mechanism. Given changing circumstances over time and our objection to a continuing public inquiry process, it is necessary to put into place an effective decision-making mechanism which will permit consultation between the Commonwealth and the States at the ministerial level, allow for wider community participation and allow for opportunities to explore alternatives to the removal or reduction of the Commonwealth presence. This we have done.

Preliminary Conclusions

11.7 The Preliminary Conclusions procedure was described briefly in Chapter I at paragraph 1.8. We have received responses from some organisations and these have been taken into account in the preparation of the report. It must be emphasised that these conclusions were preliminary and their purpose was to give organisations an opportunity to react to the Committee's emerging views and the Committee the chance to assess these reactions. Where responses will, in the opinion of the Committee, improve the quality of the final report these have been accepted. The Committee does not propose to discuss in this Report responses with which it disagrees.

Recommendations

11.8 The Committee recommends that:

- (a) the 8 lightstations listed in Finding 28 be unmanned;
- (b) the 4 lightstations reserves referred to in Findings 34-36 be transferred to the New South Wales State Government and that the matter of payment be finalised before the reserves are handed over;
- (c) the level of manning at the 3 lightstations listed in Finding 37 be reduced to one person and, as a prerequisite to the reduction to this level, the lights at the stations be automated;
- (d) the level of manning of the stations listed in Finding 39 be subject to a joint study by the Department of Transport and the Department of Home Affairs and Environment;
- (e) the existing level of manning be maintained at the stations listed in Findings 32 and 40.

11.9 The Committee further recommends that:

- (a) the commercial shipping industry not be required to pay for a service it does not need provided that the timing for the discontinuation for charging the shipping industry for the manned presence should coincide with the timing when a particular lightstation would have been unmanned based only on the responsibilities of the Transport portfolio.
- (b) Where the only reason for the maintenance of the manned presence is for the protection of the cultural environment, the natural environment or both, the Minister for Transport, the Minister for Home Affairs and Environment and the Minister for Finance examine the possibility of developing a formula which would minimise the need for the Department of Transport to pay for functions outside the Transport portfolio.

11.10 The Committee also recommends that:

- (a) the rate of unmanning or reduction in the level of manning of lightstations be appropriate to the employment security of those in the lightkeeper's service and without forced retrenchment;
- (b) after taking into consideration State government and community reaction to the Expenditure Committee Report, the Minister for Transport develop and announce in the House a Program for the unmanning of the 8 lightstations listed in Finding 28 and the 3 lightstation reserves to be transferred to the State Government of New South Wales as identified in Findings 34 to 36;
- (c) the Minister should guarantee that wherever practicable unmanning will be preceded by the installation of a safety radio telephone in the vicinity of the station that is to be unmanned;
- (d) in the process of developing this Program the Minister for Transport offer relevant State governments ownership of the lightstation reserves subject to Commonwealth requirements for the operation of the navigational aid.

11.11 The Committee also recommends that:

- (a) the Program should be developed by adding on lightstations to take the place of those unmanned or those transferred to the State Government of New South Wales. The stations added would not be

those earmarked for unmanning but rather those identified for a reduction in the level of manning - i.e. those mentioned in Findings 37, 39 and 41;

(b) in the development of the Program the following decision-making mechanism be employed:

(i) consultation between Commonwealth departments and agencies (Departments of Transport, Home Affairs and Environment, Administrative Services, Bureau of Meteorology) to determine the initial Commonwealth parameters;

(ii) referral of that position to a committee comprising relevant Commonwealth departments and State government agencies and other organisations such as the Australian Lighthouse Association. The committee would take the initial Commonwealth position as given and explore alternatives for continued manning;

(iii) referral of the committee report for initial decision by the Minister for Transport who could accept the alternatives or place the particular lightstation on an Interim List and then inform his State counterpart of this decision;

(iv) following completion of this consultation the Minister for Transport would make a final decision by either deleting the lightstation from the Interim List or transferring it to the Program;

(c) where the Minister decides it is necessary for the costs and benefits of manning a lightstation to be reassessed, the social audit approach be used, the work be assigned to the Bureau of Transport Economics and the results of this work be fed into the first stage of the proposed decision-making mechanism.

11.12 The Committee emphasises that the recommendations it makes on continued manning will have to be interpreted in the context of expenditure priorities for the various Commonwealth or even State portfolios that are concerned with the issue. This position will persist unless the individual citizens who benefit from the manned presence, for example, yachtsmen and fishermen, are prepared to make their contributions towards the costs of the service.

11.13 The unmanning of lightstations is an issue that has aroused significant community interest and unnecessary vehemence which has spilled over into personality conflicts. The decision-making mechanism we offer should provide reasonable persons with the opportunity to look for rational solutions. It is our fervent hope that these opportunities will be used and not squandered.

7 November 1983

Leo McLeay
Chairman

APPENDIX 1

LIGHTSTATIONS USED BY BUREAU
OF METEOROLOGY FOR MAKING
METEOROLOGICAL OBSERVATIONS

Category A: Very important stations with no satisfactory alternative such that closure would cause a serious diminution in service:

Cape Borda	Eddystone Point or Swan Island
Cape Byron	Lady Elliott Island*
Cape Don	Low Isles
Cape Leeuwin	Maatsuyker Island
Cape Moreton	Montagu Island
Cape Otway	Point Perpendicular
Cape Willoughby	Smoky Cape
Double Island Pt	Wilsons Promontory
Gabo Island	

[*Possibility the Great Barrier Reef Marine Park Ranger could make observations for the Bureau; in which case Lady Elliott would become Category C]

Category B: Closure would cause a significant diminution of service:

Bustard Head	Fitzroy Island
Cape Bruny	Low Head
Cape Leveque	Neptune Island
Cape Naturaliste	Norah Head
Deal Island	Sandy Cape

Category C: The loss could be tolerated or acceptable alternatives are available:

Booby Island	Eddystone Point or Swan Island
Cape Capricorn	Green Cape
Cape Cleveland	Pine Islet
Cape Nelson	Point Hicks
Cape Schanck	Rottnest Island

[Submissions, Vol 5, pp.672-675]

DETAILS OF LIGHTSTATIONS ON THE
REGISTER OF THE NATIONAL ESTATE

Lightstation	State	<u>Cultural Environment</u>			<u>Natural Environment</u>	
		Light- station	light- keepers cottages	Other buildings and structures	Adjoining Natural Area	Name of Registered Area
Point Perpendicular	NSW	R	R	R	R	Beecroft Peninsula Area
Montagu Island	NSW	R	R	R	R	Montagu Island flora & fauna reserve
Smoky Cape	NSW	R	R	R	R	Hat Head National Park
Cape Byron	NSW	R	R			
Green Cape	NSW	R	R	R	R	Ben Boyd National Park
Norah Head	NSW	R	R	R		
Sugarloaf Point	NSW	R	R	R	R	Myall Lakes National Park
Gabo Island	VIC	R			R	Offshore from Croajingalong National Park
Point Hicks	VIC	R	R		R	Croajingalong National Park
Cape Schanck	VIC	R	R		R	Cape Schanck Coastal Park
Cape Nelson	VIC	R	R	R	R	Cape Nelson National Park
Wilson's Promontory	VIC	*	*		R	Wilson's Promontory National Park
Cape Otway	VIC	R	R	R	R	Parker River Catchment
Eddystone Point	TAS	R	R	R	R	Mt. William National Park
Maatsuyker Island	TAS	R	R	R	R	South West Tasmania ¹

88

APPENDIX 2

Lightstation	State	Cultural Environment			Natural Environment	
		Light-station	light-keepers cottages	Other buildings and structures	Adjoining Natural Area	Name of Registered Area
Low Head	TAS	R	R	R		
Swan Island	TAS	R				
Cape Bruny	TAS	*	*			
Currie Harbour	TAS	*	* ²			
Althorpe Island	SA	R	R		*	(Althorpe Islands Conservation Reserve)
Cape Willoughby	SA	R	N			
Cape Borda	SA	R	N	N		
South Neptune Island	SA	R	R	R	R	South Neptune Island Conservation Park
Cape Moreton	QLD	R	R+	R	R	Moreton Island ³
Low Isles	QLD	R	R+	R	R	Great Barrier Reef
Bustard Head	QLD	R	R+	R	R	Bustard Bay-Deepwater ⁴ Holding Area
Lady Elliot Island	QLD	R	R	R	R	Great Barrier Reef
Pine Islet	QLD	R	R+	R	R	Great Barrier Reef
Dent Island	QLD	R	R+	R	R	Great Barrier Reef
Cape Cleveland	QLD	* *				

Lightstation	State	Cultural Environment			Natural Environment	
		Light-station	light-keepers cottages	Other buildings and structures	Adjoining Natural Area	Name of Registered Area
Fitzroy Island	QLD	R+	R+	R+	R	Malbon-Thompson Range Area
Sandy Cape	QLD	R	R+	R	R	Fraser Island ⁵
Double Island Point	QLD	R	R+	R	R	Cooloola Area ⁶
Eooby Island	QLD	*	+			
Cape Capricorn	QLD	+	+	+		
Cape Leeuwin	WA	*	R			Leeuwin-Naturaliste Ridge ⁷
Cape Naturaliste	WA	*	*			Leeuwin-Naturaliste Ridge ⁸
Rottneest Island	WA	*	*			
Moore Point	WA	*	*			
Cape Leveque	WA	*	+			
Deal Island	TAS	R	R	R	R	Deal Island Wildlife Sanctuary ⁹

Code

- R Listed in Register
- N Nominated for Register
- * Not in Register; but considered by AHC to be worthy of further study
- + Considered by AHC to have little National Estate significance. Some of these are lightstations and cottages existing in large areas of natural environment significance. The Commission believe they are not worthy of highlighting in their own right, nor warrant exclusion from the natural area.

Notes

1. Offshore from South West National Park. Only island of the De Witt group not included in the World Heritage Area.
2. 1879 Residence only.
3. An enlarged national park on Moreton Island is proposed by the Queensland Government. However, this is dependent on the future of sandmining on the island.
4. Lightstation adjoins Eurimbula National Park.
5. Lightstation adjoins Great Sandy National Park.
6. Lightstation adjoins Cooloola National Park.
7. Lightstation adjoins Leeuwin National Park.
8. Lightstation surrounded by Parkland and recreation reserve, and close to Yallingup National Park.
9. The listing for Deal Island did not appear on the information provided by the Department of Home Affairs and Environment. The Committee Secretariat confirmed the listing for Deal Island.

Source: Department of HA&E Submission

[Submissions Vol 6, pp.748-751]

APPENDIX 3

LIGHTSTATIONS WHERE MANNED
PRESENCE REQUIRED TO PROTECT
CULTURAL ENVIRONMENT

Lightstation	Annual Operating Cost	HERITAGE		Popularity With Tourists	Manning Proposed
		Structures	Adjoins Natural Area		
	\$				
<u>NEW SOUTH WALES</u>					
Cape Byron	80 000	R	-	Yes	/
Green Cape	101 000	R	R	Yes	/
Montagu Island	137 000	R	R	Yes O	/
Norah Head	78 000	R	-	Yes	/
Pt Perpendicular	95 000	R	R	Yes	*
Smoky Cape	80 000	R	R	Yes	/
Sugarloaf Point	81 000	R	R	Yes	/
<u>VICTORIA</u>					
Cape Nelson	81 000	R	R	Yes	/
Cape Otway	95 000	R	R	Yes	/
Cape Scanck	92 000	R	R	Yes	/
Point Hicks	109 000	R	R	No	/
<u>QUEENSLAND</u>					
Cape Moreton	121 000	R	R	Yes	*
Double Island Pt	98 000	R	R	Yes	/
Fitzroy Island	107 000	R	R	Yes	*
Lady Elliott Isl	105 000	R	R	Yes	*
Low Isles	118 000	R	R	Yes	*
Sandy Cape	112 000	R	R	Yes	/
<u>SOUTH AUSTRALIA</u>					
Cape Borca	79 000	R	-	Yes	*
Cape Willoughby	74 000	R	-	Yes	*
<u>WESTERN AUSTRALIA</u>					
Cape Leeuwin	115 000	R	-	Yes	/
Cape Naturaliste	55 000	-	-	Yes	/
Rottneest Island	55 000	-	-	Yes	/
<u>TASMANIA</u>					
Cape Bruny	94 000	-	-	Yes	/
Low Head	74 000	R	-	Yes	/

NOTES:

- R - Listed in the Register of the National Estate
- / - Nominated by Transport
- * - Stations not nominated by Transport but which meet the Transport criteria.
- O - Montagu Island area is popular but visitors are not normally allowed on Island itself.

SOURCES:

Submissions, Vol 2, pp.213,214 (Col 4), p.201 (Col 5), p.216-218 (Col 1); Vol 6, pp.748-751 (Cols 2,3) and Vol.3, pp.516-518 (Col 4).

APPENDIX 4

CATEGORISATION OF THE LIGHTSTATIONS
IN TERMS OF NEED FOR CONTINUED MANNING

Automate and Unman (8)

Bustard Head, Cape Capricorn, Cape Cleveland, Cape Leveque*,
Dent Island*, Moore Point, Pine Islet and Swan Island.

*Automated

Continued Manning Supported by Transport and HA&E (8)

Cape Bruny, Cape Nelson, Cape Schanck, Green Cape, Norah
Head, Montagu Island, Sandy Cape and Rottneest Island.

Continued Manning Supported by HA&E (13)

Althorpe Island, Booby Island, Cape Moreton, Currie Harbour,
Deal Island, Eddystone Point, Gabo Island, Lady Elliott
Island, Low Isles, Maatsuyker Island, Point Perpendicular,
South Neptune Island and Wilsons Promontory.

Continued Manning Supported by Transport (9)

Cape Byron, Cape Leeuwin, Cape Naturaliste, Cape Otway,
Double Island Point, Low Head, Point Hicks, Smoky Cape and
Sugarloaf Point.

Stations Which Meet Transport Criteria (3)

Cape Borda, Cape Willoughby and Fitzroy Island.

APPENDIX 5

WITNESSES, EXHIBITS, EVIDENCE AND SUBMISSIONS

Witnesses

COMMONWEALTH GOVERNMENT

Bureau of Meteorology

Shaw, Mr P J R, Superintendent, Observations and Traffic Section

Department of Transport

Eccles, Mr P B, First Assistant Secretary, Marine Operations Division

Davidson, Mr C D, Assistant Secretary, Finance and Services Branch

Langford, Mr D T A, Acting Assistant Secretary, Coastal Safety Services Branch

Portfolio of Home Affairs and Environment

Hinchey, Mr M, Park Management Section, Australian National Parks and Wildlife Service

Kelleher, Mr G, Chairman, Great Barrier Reef Marine Park Authority

Nicholls, Dr W, Acting Director, Australian Heritage Commission

Thompson, Mr K E, First Assistant Secretary, Environment Division

Townsend, Ms R, Clerk, Environmental Section

STATE GOVERNMENT OF TASMANIA

Blackwood, Mr G G, Chairman, Tasmanian Advisory Committee on Lightstations

Bosworth, Mr P K, Investigations Officer, Acting Chairman, Tasmanian National Parks and Wildlife Service

OTHER ORGANISATIONS

Australian Chamber of Shipping

Taylor, Mr J E, Member

Australian Lighthouse Association

Forfar, Dr K R, Past President

Komesaroff, Mr M B, Council Member

Murray-Smith, Dr S, President

Australian Yachting Federation

Pullar, Captain I S, National Coaching Director

Fraser Island Defenders Organisation Limited

Sinclair, Mr J, Senior Honorary Project Officer

Professional Fishermens Association of Tasmania

Cowrie, Mr I E, Council Member

Queensland Commercial Fishermen's Organisation
Conaty, Mr P, Deputy Chairman
Tasmanian Conservation Trust
Brown, Mrs D E, Vice-President

PRIVATE CITIZENS

Snow, Mr J H, MP, Federal Member for Eden-Monaro
Strohfeldt, Mr M, Toowoomba, Queensland.

Exhibits

Exhibit No

- 1 Lighthouses Act 1911 - 1973
Commonwealth of Australia
- 2 Lighthouses Amendment Act 1979
- 3 Lighthouses and light Dues
Regulations (up to 30 December 1980)
- 4 Lighthouses and light Dues
Regulations (Amendment)
23 September 1982
- 5 Department of Shipping and Transport
Australian Coastal Navigational Symposium
December 1971
- 6 Department of Transport Standing Orders
for Personnel at Marine Navigational
Aids
- 7 Department of Transport
Report on Historical Classifications
of Lightstations
(prepared by David Nash) 18 May 1979
- 8 Report of Inter-Departmental Committee
Maritime Safety Communications
(1980) Vol 1 and Vol 2
- 9 Marine Advisory Committee Report
on the Inquiry into the Automation
and Demanning of Lighthouses
July 1981 Wellington, New Zealand
- 10 Tasmanian State Advisory Committee on
Lightstations Submission on Deal
Island and Swan Island Lightstations
(to Minister for National Parks and
Wildlife) February 1982
- 11 Department of Transport and
Construction Annual Report 1981-82

- 12 Information on Lightstations provided by Department of Transport for inspections by Committee in June/July 1983
- 13 M Bell, Assistant Lighthouse Keeper Point Perpendicular Lightstation Record of Radio and Direct Assistance Given at Green Cape and Point Perpendicular Lightstations
- 14 Maatsuyker Island Most Southerly Light A booklet prepared by the Tasmanian Conservation Trust
- 15 Department of Transport Forward Plan for Marine Navigational Aids July 1979 - June 1984 Volume 1
- 16 Department of Transport and Construction Marine Navigational Aids Five year Rolling Plan March 1983
- 17 Attachments to I White Submission (No 37)
- 18 Attachments to D Walker Submission (No 44)
- 19 Attachments to Fraser Island Defenders Organisation Limited Submission (No 51)
- 20 Attachments to New South Wales Government Submission (No 61)

Evidence

Evidence was taken in:
 Brisbane 22 July 1983
 Canberra 12 September 1983
 Canberra 13 September 1983
 Canberra 14 September 1983
 Canberra 21 September 1983

Submissions

Volume 1

1 Dated 4 June 1983 from the Transcontinental Safaris Pty Ltd.

- 2 Dated 2 June 1983 from Mrs J. Bigby, Victoria.
- 3 Dated 6 June 1983 from Mr J.M. Clark,
New South Wales.
- 4 Dated 7 June 1983 from Mr A.T. Krasnoqebski,
New South Wales.
- 5 Dated 9 June 1983 from Mrs J. Whiter,
New South Wales.
- 6 Dated 11 June 1983 from Mrs M. Pratt,
Western Australia.
- 7 Dated 11 June 1983 from Mrs G.L. Wilson,
New South Wales.
- 8 Dated 11 June 1983 from Mr P.A. Spencer,
Queensland.
- 9 Dated 11 June 1983 from the Portland Municipal
Council.
- 10 Dated 14 June 1983 from the National Trust of
Australia (NSW).
- 11 Dated 15 June 1983 from Mr A.D. Permewan,
Western Australia.
- 12 Dated 15 June 1983 from the South Australian
National Parks and Wildlife Service Social
Club Inc.
- 13 Dated 15 June 1983 from Mr J. Hatten, M.L.A.,
New South Wales.
- 14 Dated 17 June 1983 from Mr T. Murphy,
Victoria.
- 15 Dated 17 June 1983 from Senior Constable
J.J. Quigley, New South Wales.
- 16 Dated 17 June 1983 from Mrs R. Harris,
Tasmania.
- 17 Dated 17 June 1983 from the Metcalf family,
New South Wales.
- 18 Dated 20 June 1983 from Mr S. Cornford,
New South Wales.
- 19 Dated 20 June 1983 from Mr J.C. Helmore,
New South Wales
- 20 Dated 20 June 1983 from Captain N. Gough,
New South Wales.

- 21 Dated 20 June 1983 from Mr M.J. Horner,
New South Wales.
- 22 Dated 20 June 1983 from Mrs R. Roache,
New South Wales.
- 23 Dated 20 June 1983 from Mr D. Murphy,
New South Wales.
- 24 Dated 20 June 1983 from the Port Sorrell
Cruising Club.
- 25 Dated 21 June 1983 from the Professional
Fishermen's Association of Tasmania.
- 26 Dated 21 June 1983 from the Port Dalrymple
Yacht Club, Tasmania.
- 27 Dated 22 June 1983 from the Tasmanian Fibre
Containers Pty Ltd.
- 28 Dated 22 June 1983 from Mr H. Horbers,
South Australia.
- 29 Dated 22 June 1983 from Mr B. Maxwell,
New South Wales.
- 30 Dated 23 June 1983 from Munro Aviation,
Tasmania.
- 31 Dated 23 June 1983 from the Narooma Chamber of
Commerce.
- 32 Dated 23 June 1983 from the Narooma Area
tourist Associations.
- 33 Dated 13 June 1983 from the Derwent Sailing
Squadron.
- 34 Dated 23 June 1983 from the Narooma Bowling
Club.
- 35 Dated 23 June 1983 from Mr D. Roache,
New South Wales.
- 36 Dated 24 June 1983 from Mr P. Bury, Victoria.
- 37 Dated 26 June 1983 from Mrs H. Roache,
New South Wales.
- 38 Dated 26 June 1983 from Mrs M. Strohfeldt,
Queensland.
- 39 Dated 27 June 1983 from Mr I. White,
Western Australia.

- 40 Dated 27 June 1983 from Mr S. Pipe, Victoria.
- 41 Dated 27 June 1983 from the Kangaroo Island Tourist Associations.
- 42 Dated 28 June 1983 from the Royal Volunteer Coast Patrol.
- 43 Dated 28 June 1983 from the Sandringham Yacht Club.
- 44 Dated 28 June 1983 from Mrs J. Farnsworth, New South Wales.
- 71 Dated 18 July 1983 from Mr R. Paterson.
- 72 Dated 17 July 1983 from W. Hunter.
- 73 Dated 18 July 1983 from the Australian Yachting Federation.
- 74 Dated 15 July 1983 from the Department of Environment, Sydney, New South Wales.
- 75 Dated 19 July 1983 from the Bermagui Big Game Anglers' Club.
- 76 Dated 21 July 1983 from Dr J.H. Middleton, The University of New South Wales, Sydney.
- 77 Dated 22 July 1983 from Mr Colin Hollis, M.P., Dapto, New South Wales.
- 78 Dated 22 July 1983 from the Queensland Small Craft Council.
- 79 Dated 22 July 1983 from the Ocean Racing Club of Victoria.
- 80 Dated 26 July 1983 from Mr Jim Snow, M.P., Member for Eden Monaro.
- 81 Dated 27 July 1983 from the South Australian Government.
- 82 Dated 28 July 1983 from Mr A.J. de Recnter, via Wilchcliff, Western Australia.
- 83 Dated 25 July 1983 from Dr J.A. Peterson, Senior Lecturer in Geography, Monash University, Victoria.

Volume 3

- 84 Dated 25 July 1983 from Mr Douglas,
Queensland.
- 85 Dated 31 July 1983 from John Thompson,
South Australia.
- 86 Dated 1 August 1983 from the Queenscliff
Cruising Yacht Club.
- 87 Dated 1 August 1983 from the Municipality of
Flinders.
- 63 Dated 6 July 1983 from the New South Wales
State Government.

Volume 2

- 64 Dated 13 July 1983 from the Department of
Transport.
- 65 Dated 12 July 1983 from the Bureau of
Meteorology.
- 66 Dated 13 July 1983 from the Australian
Lighthouse Association.
- 67 Received 15 July 1983 from the Tasmanian
Conservation Trust Inc.
- 68 Dated 13 July 1983 from the National Trust of
Australia, Melbourne (Victoria).
- 69 Dated 14 July 1983 from the National Parks
Service (Victoria).
- 70 Dated 12 July 1983 from the Byron Shire
Council.
- 88 Dated 2 August 1983 from the Mackay Sea Rescue
Squad.
- 89 Received 2 August 1983 from the Royal
Volunteer Coastal Patrol.
- 90 Dated 4 August 1983 from the Port Albert
Seafoods Pty Ltd.
- 91 Dated 25 July 1983 from the Jarvis Bay Amateur
Fishing and Recreation Club.
- 92 Dated 25 July 1983 from Mr W.G. Sippo,
New South Wales.

- 93 Dated 10 August 1983 from the Navy League of Australia.
- 94 Received 11 August 1983 from the City of Port Lincoln.
- 95 Dated 18 August 1983 from the Royal Yacht Club of Tasmania.
- 96 Dated 19 August 1983 from the Tasmanian State Government.
- 97 Dated 19 August 1983 from the Australian Conservation Foundation.
- 98 Dated 23 August 1983 from the Department of Home Affairs and Environment.
- 99 Dated 19 August 1983 from the Royal Sydney Yacht Squadron, New South Wales.
- 100 Dated 23 August 1983 from the Merchant Service Guild of Australia.
- 101 Dated 17 August 1983 from the Victorian State Government.
- 102 Dated 17 August 1983 from Mr and Mrs Dack, Victoria.

Volume 4

- 103 Dated 25 August 1983 from the Victorian Yachting Council.
- 104 Dated 30 August 1983 from the Camden Haven Yacht Club, Launceston.
- 105 Dated 31 August 1983 from Mr B.C. Clarkson, Victoria.
- 106 Dated 8 September 1983 from the Department of Transport.
- 107 Dated 8 September 1983 from the New South Wales Professional Fishermen's Association.
- 109 Dated 12 September 1983 from the Australian Lighthouse Association.
- 110 Dated 13 September 1983 from the Tasmania Conservation Trust.

- 111 Dated 14 September 1983 from the Tasmanian Conservation Trust.
- 112 Dated 16 September 1983 from the Australian Lighthouse Association.
- 113 Received 21 September 1983 from the Australian Yachting Association.
- 114 Received 21 September 1983 from the Australian Heritage Commission.

Volume 5

- 115 Dated 17 October 1983 from the Bureau of Meteorology.
- 116 Dated 13 October 1983 from the Canberra Game Fishing Club.
- 117 Dated 23 September 1983 from E.L. Mignon, Benalla, Victoria.
- 118 Dated 6 October 1983 from Mr Jim Snow, M.P., Federal Member for Eden Monaro.
- 119 Dated 19 October 1983 from the Australian Lighthouse Association.
- 120 Dated 19 October 1983 from the Mackay Sea Rescue Squad.
- 121 Dated 19 October 1983 from the Australian Lighthouse Association.
- 122 Dated 26 October 1983 from the Department of Transport.
- 123 Dated 26 October 1983 from the Premier's Department, Sydney.
- 124 Dated 26 October 1983 from the Premier's Department, Perth.
- 125 Received 26 October 1983 from the Premier of Queensland.
- 126 Dated 1 November 1983 from the Bermagui Fishermen's Co-operative Ltd.
- *127 Information on Lightstations, given to the Committee by the Department of Transport in response to inspections.

Volume 6

- 128 Dated 9 November 1983 from the Department of Home Affairs and Environment.
- 129 Dated 9 November 1983 from the Tasmanian National Parks and Wildlife Service.
- 130 Dated 15 November 1983 from the Professional Fishermen's Association of Tasmania - Petition.
- 131 Dated 15 November 1983 from the residents of Flinders Island.
- 132 Dated 15 November 1983 from Byron Shire Council.
- 133 Dated 15 November 1983 from R.V. Penghana, Woodbridge, Tasmania.
- 134 Dated 2 November 1983 from the Australian Heritage Commission.
- 135 Dated 4 November 1983 from the Department of Transport.
- 136 Dated 2 November 1983 from the Department of Home Affairs and Environment.
- 137 Dated 14 November 1983 from the Department of Transport.
- 138 Dated 15 November 1983 from Flinders Strait Shipping Co Ltd.
- 139 Dated 15 November 1983 from the Australian Chamber of Shipping.
- 140 Dated 16 November 1983 from the Professional Fishermen's Association of Tasmania.
- 141 Dated 17 November 1983 from Mrs Florence Waters, Mount Nelson, Tasmania.
- 142 Dated 22 November 1983 from the Department of Transport.
- 143 Dated 18 November 1983 from the Australian Lighthouse Association.

Volume 7

- 144 Dated 1 December 1983 from the Department of Transport.
- 145 Preliminary Conclusions - Lightstation Inquiry (Preliminary Conclusions sent to the witnesses listed below under cover of Chairman's letter)
- The Australian Lighthouse Association.
 - The Australian Chamber of Shipping.
 - The Department of Transport.
 - The Premier of New South Wales.
 - The Premier of Victoria.
 - The Bureau of Meteorology.
 - The Premier of Queensland.
 - The Premier of South Australia.
 - The Premier of Western Australia.
 - The Department of Home Affairs and Environment.
 - The Premier of Tasmania.
- 146 Dated 1 December 1983 response to Preliminary Conclusions from the Australian Lighthouse Association.
- 147 Dated 2 December 1983 response to Preliminary Conclusions from the Australian Chamber of Shipping.
- 148 Dated 5 December 1983 response to Preliminary Conclusion from the Department of Transport.
- 149 Dated 5 December 1983 response to Preliminary Conclusion from the Bureau of Meteorology (Telex).