

**Proposal to dredge a portion of the Swan River and
foreshore to provide access to private boathousing,
Mosman Park**

Mrs A M M W Bennett

**Report and recommendations
of the Environmental Protection Authority**

**Environmental Protection Authority
Perth, Western Australia
Bulletin 775
April 1995**

THE PURPOSE OF THIS REPORT

This report contains the Environmental Protection Authority's environmental assessment and recommendations to the Minister for the Environment on the environmental acceptability of the proposal.

Immediately following the release of the report there is a 14-day period when anyone may appeal to the Minister against the Environmental Protection Authority's report.

After the appeal period, and determination of any appeals, the Minister consults with the other relevant ministers and agencies and then issues his decision about whether the proposal may or may not proceed. The Minister also announces the legally binding environmental conditions which might apply to any approval.

APPEALS

If you disagree with any of the contents of the assessment report or recommendations you may appeal in writing to the Minister for the Environment outlining the environmental reasons for your concern and enclosing the appeal fee of \$10.

It is important that you clearly indicate the part of the report you disagree with and the reasons for your concern so that the grounds of your appeal can be properly considered by the Minister for the Environment.

ADDRESS

Hon Minister for the Environment
12th Floor, Dumas House
2 Havelock Street
WEST PERTH WA 6005

CLOSING DATE

Your appeal (with the \$10 fee) must reach the Minister's office no later than 5.00 pm on **27 April 1995**.

Environmental Impact Assessment (EIA) Process Timelines in weeks

| Date | Timeline commences from receipt of full details of proposal by proponent | Time (weeks) |
|----------|---|--------------|
| 29.9.94 | Proponent Document Released for Public Comment | 4 |
| 21.10.94 | Public Comment Period Closed | |
| 8.11.94 | Issues Raised During Public Comment Period Summarised by EPA and Forwarded to the Proponent | 3 |
| 30.11.94 | Proponent response to the issues raised | 3 |
| 11.4.95 | EPA reported to the Minister for the Environment | 19 |

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Summary

The proponent, Mrs A M M W Bennett proposes to dredge a portion of the Swan River to provide access for a 25 metre long motor boat to an underground private boatshed, at Lot 55 Saunders Street Mosman Park. Access to the boatshed would involve cutting a channel through a portion of foreshore land privately owned to High Water Mark but reserved for 'Parks and Recreation'. Public access is proposed to be maintained along the foreshore across the channel via a swing foot bridge.

The proposal was formally referred to the Department of Environmental Protection by the Swan River Trust in October 1993 because of the proposed dredging of the Swan River. In view of the potential environmental impacts associated with the proposed dredging, the Chairman of the Environmental Protection Authority determined that the proposal would be assessed formally under Part IV of the Environmental Protection Act at the level of Consultative Environmental Review. A considerable degree of public interest in the proposal was expressed during the public review period, resulting in a total of 228 submissions being received on the proposal.

Environmental issues identified by the Environmental Protection Authority have been divided into three categories according to definitions provided within the Environmental Protection Act. These categories are identified as follows:

1. Impact on the biological and physical environment;
2. Pollution issues; and
3. Impact on social surroundings .

The EPA has carefully reviewed the Consultative Environmental Review document, the issues raised within the public submissions, advice received from relevant government departments, relevant literature, and the proponents' commitments. In undertaking this review, members took into particular consideration the following issues:

- the local effects of the proposal on the River and foreshore;
- the possible cumulative effects of similar proposals;
- the public concern expressed in relation to the proposal;
- the Swan River Trust policies; and
- the context set by previous decisions of the EPA.

The EPA has resolved to recommend to the Minister for the Environment that the proposal not proceed. In reaching this conclusion, the Authority was mindful of the loss of riverine habitat; the community's perception of the river as a public trust and an area of special significance; the precedent that would be established for future projects of a similar nature if this proposal were allowed to proceed; and the potential cumulative impact issues associated with such proposals.

Accordingly, the EPA recommends to the Minister for the Environment that the proposal not proceed.

1. Introduction

On 8 October 1993, the Swan River Trust referred to the EPA a proposal to dredge a portion of the Swan River, to provide access to a private boat shed at Lot 55 Saunders Street Mosman Park. A meeting to discuss the proposal was subsequently held on 21 October 1993 with officers of the Department of Environmental Protection, the Swan River Trust and the proponent, to determine the extent of the dredging. As a result of these discussions, a detailed plan indicating the extent of dredging and excavations associated with the boat house was forwarded to the Department on 21 November 1993.

Level of assessment was subsequently set as Consultative Environmental Review in December 1993. The CER was completed in September 1994 and released for public review for a period of four weeks, ending on 21 October 1994.

A total of 228 submissions were received during the review period. These included submissions from the Fisheries Department, Swan River Trust, Department of Transport and the Town of Mosman Park.

2. Proposal

2.1. Description of proposal

The proposal is located at Lot 55 Saunders Street, Mosman Park, and is indicated on Figures 1 and 2, and described in Table 1. The site has a north east aspect, and is located approximately 750 metres north west of Chidley Point. The foreshore abuts Mosman Bay, directly west of Point Walter. The land within Lot 55 is within private ownership to high water mark. A portion of the foreshore is reserved under the Metropolitan Region Scheme for 'Parks and Recreation'. At Lot 55, the reserve is privately owned by the Bennett family.

The proposal involves the following:

- The dredging of a boat access channel in the Swan River, approximately 15 metres long, 10 to 15 metres wide and 3.5 metres deep (generating 400 m³ of spoil);
- The excavation of a channel 15 metres long, 10 metres wide and 3.5 metres deep across the river foreshore, to allow boat access to an underground pen (generating 800 m³ of spoil); and
- The construction of a swing foot bridge 1.5 metres wide across the channel (to maintain public access along the foreshore).

Spoil generated as a result of dredging and excavation of the access channel is proposed to be temporarily stockpiled adjacent to the excavation on the foreshore, and be transported to a site yet to be determined. The proponent has undertaken not to dump spoil into the river.

The proposal also includes a jetty, which would be located adjacent to the dredged access channel. The CER describes the jetty as being 15 metres long. The proponent has since acknowledged that the length of the jetty can be reduced to a length of six metres to comply with Swan River Trust policies.

2.2. Other approvals required

Approval to construct the channel within and adjacent to an existing 'Parks and Recreation' Reserve is required pursuant to clause 30A of the Metropolitan Region Scheme. A development application has been received by the Ministry for Planning, however it has been held in

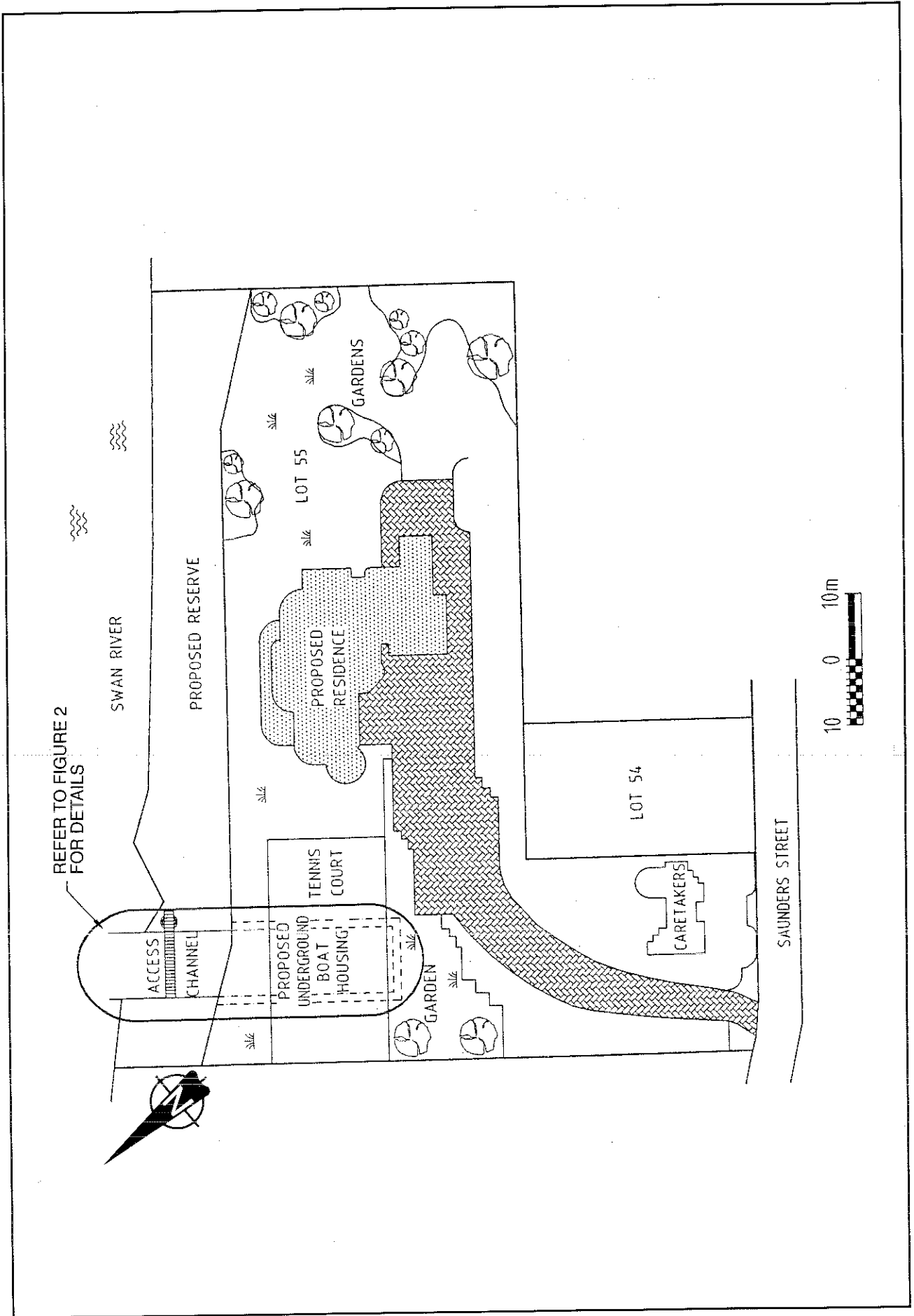


Figure 1. Location plan of proposed development (Halpern Glick Maunsell, 1994).

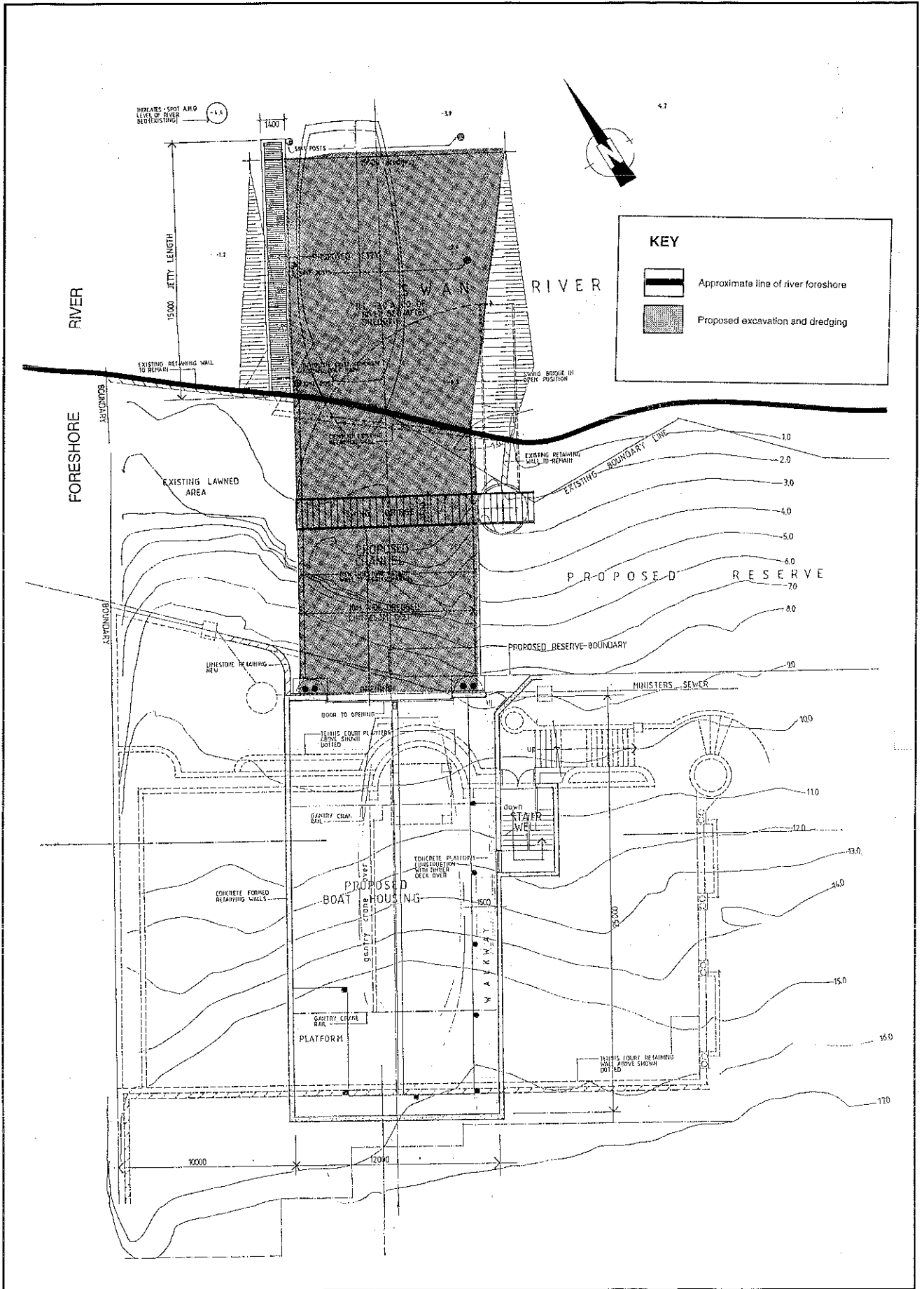


Figure 2. Site plan of proposed development (Halpern Glick Maunsell, 1994).

Table 1. Summary of Proposal

| Description of proposal | Potential environmental impact |
|--|--|
| Dredging of a boat access channel in the Swan River approximately 15 metres long, 10 to 15 metres wide and 3.5 metres deep, generating 400m ³ of spoil | Dredging of the river |
| Excavation of a channel 15 metres long, 10 metres wide and 3.5 metres deep across the River foreshore, generating approximately 800 m ³ of spoil, to allow boat access to an underground pen. | Cutting a channel across the river foreshore |
| Construction of a swing bridge 1.5 metres wide across the channel to maintain public access along the foreshore. | Restriction of public access |
| Approximately 1, 200 m ³ of spoil generated as a result of dredging and excavation is proposed to be stockpiled adjacent to the excavation for later removal to a site yet to be determined. The proponent has undertaken a commitment not to dump spoil into the Swan River. | Spoil disposal |
| Modification of the foreshore | Local foreshore ecology impact Modification of the natural topography |

abeyance pending the outcome of the Environmental Protection Authority's assessment of the proposed development. As the proposal is also located within the management area of the Swan River Trust, the Ministry for Planning would seek the advice of the Trust on the development proposal via the Minister for the Environment before making a determination on the development application.

Approval to dredge the channel is also required from the Department of Transport as the Swan River bed is vested (up to the Causeway) in the Minister for Transport as 'Port of Perth'.

Approval to construct the boatshed is required from the Town of Mosman Park under the Town of Mosman Park Town Planning Scheme.

3. Method of assessment

The environmental impact assessment for this proposal followed the environmental impact assessment administrative procedures 1993, as shown in the flow chart in Appendix 1. The summary of issues raised in submissions and the proponent's response to those issues appears in Appendix 2, and the list of submitters appears as Appendix 3. The proponent's revised commitments following response to submissions appears in Appendix 4.

Environmental issues associated with the proposal have been grouped into three categories in accordance with the definition of 'environment' within the Environmental Protection Act, i.e.:

- Impact on the physical and biological environment
- Pollution issues; and
- Impact on the social surroundings.

These categories have been investigated further and divided into the following subcategories:

- Identification of topics derived from the CER guidelines and the proponent's CER document;
- Relevant government agency advice;
- The proponent's response to the topics identified;
- Identified issues of interest to the EPA arising from these topics; and
- EPA advice on these issues.

A summary of advice received by the EPA from public submissions, local government authority and relevant Government agencies is given in Table 2. A statistical summary of issues raised within public submissions is included within Table 3. Topics which have been identified within the above categories and which have been investigated as a result of assessment of this proposal are listed in Table 4. A summary of previous EPA statements which are of relevance to this particular assessment together with the summary of the EPA's advice to the Minister on the proposal by Mrs Bennett is set out in Table 5.

Limitation

This evaluation has been undertaken using information currently available. The information has been provided by the proponent through preparation of the Consultative Environmental Review document (in response to guidelines issued by the Department of Environmental Protection), by Department of Environmental Protection officers utilising their own expertise and reference material, by utilising expertise and information from other State Government agencies, and by contributions from Environmental Protection Authority members.

Table 2. Advice to the Environmental Protection Authority

| Input | Summary of views expressed |
|--|--|
| <p>Public submissions (228)</p> | <ol style="list-style-type: none"> 1. Precedent - for other similar types of development adjacent to the Swan River; 2. Public access - interruption of continuous public access along the river foreshore; 3. Modification of the natural river landscape - including the foreshore and riverbed; 4. Impact on river ecology - river and foreshore water quality, flora and fauna; 5. Visual/aesthetic impact - will destroy the natural beauty of the area; 6. impact on existing 'Parks and Recreation' reservation - loss of public parkland earmarked for future acquisition by State Government; 7. Channel will be dangerous - 3.5 metre deep channel will be dangerous for children/sick/elderly walking along the foreshore; 8. Recreational conflict - proposal will lead to congestion and conflict with existing recreational use; 9. Privatisation of a public resource - opposed to private development along a public foreshore; 10. Long term maintenance issues - for example on-going dredging, maintenance of the swing foot bridge; 11. Insufficient data - nsufficient data was presented within the CER document in relation to impacts on flora, fauna, water quality; 12. Proposal is inconsistent with existing Swan River Trust policies; 13. Pollution issues - for example fuel spills, noise and exhaust emissions from boat; 14. Proposal out of scale - with other existing development along the river foreshore; 15. Impact on waterbirds. |
| <p>Town of Mosman Park</p> | <p>The Council opposes the proposed development because:</p> <ol style="list-style-type: none"> 1. It would prejudice the potential for future use of a consolidated 'Parks and Recreation' reserve; 2. It is not in keeping with the scale of foreshore development in the vicinity; 3. Is considered to be a major disruption to the river foreshore area; 4. It would block future public access across this area of foreshore; 5. It would result in future loss of parkland; 6. The jetty and channel would obstruct small craft in the area; 7. It would diminish the natural beauty of the area; 8. It presents a danger to young children who would be unaware of the channel depth; and 9. It would disturb the marine environment. |
| <p>Government Departments and Agencies Swan River Trust</p> | <p>The Trust is opposed to dredging because:</p> <ol style="list-style-type: none"> 1. Construction of a canal through the 'Parks and Recreation' reserve is contrary to the purpose of the reservation. Development may also compromise the future acquisition of the foreshore reserve by Government. The Trust normally opposes any proposal which will make acquisition difficult or significantly more expensive; 2. The Swan River Trust's policy is to oppose all applications which do not protect and enhance the riverside environment as a visual, conservation, ecological and recreational resource; 3. The section of river bed subject to the proposal is shallow flats with rocky outcrops. This habitat is not common in the Swan and Canning River systems and the CER fails to document the significance of dredging this environment'; 4. It generally opposes private jetties downstream of the Causeway; 5. The Trust does not wish to create a precedent for structures of this nature abutting and traversing foreshore reserves on the Swan - Canning System. A proliferation of this type of development would impede public use, increase community pressure for dredging and significantly alter the natural environment, with corresponding loss of visual amenity. |

| | |
|---|---|
| | <p>There are currently approximately 300 freehold lots which have high water mark boundaries adjoining navigable stretches of the river. The Trust frequently receives applications from owners of these blocks seeking to construct jetties and other boating facilities. Approval for the proposal put forward by Mrs Bennett would lead to increased pressure for this type of facility, and the cumulative environmental impact could be significant;</p> <p>6. Use of the proposed swing bridge is likely to create long term management problems;</p> <p>7. Proposed development would interrupt and deter continuous public access along the Swan River foreshore; and</p> <p>8. Construction of the boat shed would be contrary to the Trust's Conservation Environmental and Landscape Protection Policy (Policy EA1). The Trust is particularly concerned to protect the limestone cliffs, which are considered to be an important landscape feature of the river.</p> |
| Ministry for Planning (formerly Department of Planning and Urban Development) | <p>Provided the following comments:</p> <ul style="list-style-type: none"> • The river foreshore is reserved under the Metropolitan Region Scheme (MRS) for 'Parks and Recreation'. The intention of the reservation is that the contained land be acquired under public ownership. The Western Australian Planning Commission (WAPC - formerly SPC) has not sought to acquire the privately owned land included within the reserve from Mrs Bennett; • As part of the proposed development (the channel) lies within the reserved land, it must receive approval for development under clause 30 A of the MRS. The Ministry for Planning is awaiting the outcome of the EPA's assessment before considering the application; • Should this development application by Mrs Bennett be refused, the applicant may claim compensation under Section 36 of the MRS, or may request the WAPC to acquire the land; • The proposed channel would inevitably restrict public access along the river foreshore. This is contrary to the intent of the 'Parks and Recreation' reservation; • The proposed development has implications in terms of public liability in relation to the use of a swing bridge and future management of the 'Parks and Recreation' reserve, including rights of access through the channel when the land is within public ownership; and • Approval for the development as proposed may set a precedent for other similar proposals on privately owned land along the river foreshore. |
| Department of Transport | <p>Provided the following comments:</p> <ul style="list-style-type: none"> • The proposed channel and boat pen is unlikely to be big enough to accommodate the size of boat proposed to be housed; • It is likely that 'significant and massive retaining walls' will be required on either side of the channel. It may be necessary to build limestone retaining walls on either side of the channel; • Use of proposed swing bridge may lead to management problems which in turn may lead to restriction of public access along the river foreshore; • Noise associated with manoeuvring the boat use may be significant; and • The bed of the Swan River below high water mark is vested with the Minister for Transport. Proposed dredging of a channel is a form of development which would require permission from the Minister prior to construction. |
| Fisheries Department of WA | <p>Opposed to development proposal because:</p> <ol style="list-style-type: none"> 1. It is acknowledged that the proposed dredging would not affect a large area. However, the proposed dredging would destroy a portion of marginal shallow productive river habitat which supports a diverse and abundant range of invertebrate, fish and bird fauna. It is considered that collectively these areas contribute enormously to the productivity of the river. For the river to continue to function as a 'natural system' as it has through time, it is considered that what remains of these shallows must be preserved. Any loss of this habitat is considered to be detrimental to the river ecosystem and will impact adversely on existing recreational and commercial fishing; and 2. Approval of the proposal is likely to set an untenable precedent for the development of similar proposals, further jeopardising shallow water habitats and compromising the present role of this important ecosystem. |

| | |
|---|--|
| <p>Department of Environmental Protection</p> | <p>Opposed to development proposal because it:</p> <ul style="list-style-type: none"> • Is not environmentally beneficial to the Swan River; • Is not necessary for the continued maintenance of existing river activities; • Is proposed to use part of a public resource for private rather than public benefit; • Would involve significant physical modification to the river landscape which would be highly visible; • Would set a precedent for other similar types of development along the Swan River foreshore, which may have a cumulative and incremental impact on loss of shallow river environments; • Is the subject of considerable community opposition for a number of environmental and social reasons; • Is contrary to the existing reservation of 'Parks and Recreation', for public use; • Would impact on existing continuous public access around the Swan River foreshore; <p>and</p> <ul style="list-style-type: none"> • Would have long term implications on the future River foreshore use and management. |
|---|--|

Table 3. Summary of issues raised in public submissions

| ISSUE | % | No.of submissions (N = 228) |
|--|----------|------------------------------------|
| PRECEDENT (for other similar types of development along the Swan River) | 81 % | 185 |
| PUBLIC ACCESS (interruption of continuous public access along river foreshore) | 73 % | 167 |
| MODIFICATION OF NATURAL RIVER LANDSCAPE (including foreshore and riverbed) | 64 % | 146 |
| IMPACT ON RIVER ECOLOGY (river and foreshore - water quality, flora and fauna) | 59 % | 135 |
| VISUAL/AESTHETIC IMPACT (destroy natural beauty of river landscape) | 58 % | 133 |
| IMPACT ON EXISTING PARKS AND RECREATION RESERVE (loss of zoned public parkland earmarked for future acquisition by State Government) | 52 % | 119 |
| CHANNEL WILL BE DANGEROUS (3.5 metre deep channel will be dangerous for children/ sick/elderly walking along foreshore) | 52 % | 118 |
| RECREATIONAL CONFLICT (proposal will lead to congestion and conflict with existing recreational use) | 50 % | 113 |
| PRIVATISATION OF A PUBLIC RESOURCE (opposed to private development on public foreshore) | 37 % | 85 |
| LONG TERM MAINTENANCE ISSUES (for example on-going dredging, maintenance of foot bridge) | 12 % | 28 |
| INSUFFICIENT DATA (insufficient data presented in the CER document in relation to impacts on flora, fauna, water quality)) | 5 % | 11 |
| PROPOSAL INCONSISTENT WITH EXISTING SWAN RIVER TRUST POLICIES | 4 % | 10 |
| POLLUTION ISSUES (noise, fuel spills, exhaust emissions from boat) | 4 % | 8 |
| PROPOSAL OUT OF SCALE (with other existing development along the river foreshore) | 2 % | 5 |
| IMPACT ON WATERBIRDS | 2 % | 5 |

Table 4. Environmental Protection Authority - views and assessment

| Proposed dredging of the Swan River and foreshore to provide access to a private boathouse | | | | | | |
|---|--------------------------|---|---|---|---|---|
| Category | Topics | Advice to EPA | Proponent's responses | Issues | EPA views | Recommended Environmental Conditions |
| Physical and biological Environment | River ecology | Proposal is located within the Swan River Trust management area. The Trust advises there is likely to be an adverse impact on the riverine ecosystem. | Dredging is expected to have a minimal impact outside of channel confines. | Loss of small portion of shallow riverine environment as a result of proposed dredging. | Will affect the local river ecosystem and foreshore environment at a local level. | |
| | Fisheries | Fisheries Department advises that dredging will destroy a portion of shallow productive riverine habitat. | The proposal is expected to have minimal impact as the area proposed to be dredged is small, and will not impact on any species unique to the area. | Loss of a local shallow riverine habitat which will impact on fish species | | |
| | Waterbirds | | | Disturbance to known local waterbird habitat | Unlikely to have a significant impact on waterbird populations using the River. | |
| | Hydrodynamic circulation | | | Impact on local water hydrodynamics and flushing of channel. | Unlikely to have a significant impact on hydrodynamics of the river. | |
| | | | Proposed dredging is unlikely to have an impact on waterflow patterns or hydrodynamic characteristics of this portion of the river. Regular use of channel and boathousing by a vessel is expected to result in adequate water circulation within the boat pen. | | | |

| Category | Topics | Advice to EPA | Proponent's response | Issues | EPA views | Recommended Environmental Conditions |
|-------------------------------------|---|---|--|--|--|--------------------------------------|
| Physical and biological Environment | Impact on river foreshore | Department of Transport advises there may be an impact on the foreshore on either side of the channel. | Minimum disturbance to a portion of the river foreshore which has already been modified. Any battering of the channel sides that may be required would be minimal. | Impact on river foreshore through construction of channel and boat wash. | Reinforcement of foreshore area adjacent to the channel likely to be necessary. | |
| | Cumulative ecological impact of similar small proposals | Swan River Trust, Fisheries Department advise that the cumulative impact of the construction of a number of similar development proposals is likely to have a significant environmental impact on the river ecosystem. There are currently approximately 300 freehold lots which have a high water mark boundary. | | Cumulative ecological impact of similar proposals | It is judged that the cumulative environmental impact of the construction of a number of similar small proposals along the River would be environmentally significant. | |
| Pollution | Dredging operations | | Turbidity during dredging is expected to be minimal and mainly aesthetic. A geotextile curtain will be in place during excavation to restrict plume movement. | Impact of dredging operations on water quality (e.g. turbidity). | Potential impact on water quality unlikely to be significant or long term. | |
| | Use of antifoul on boat | | Proponent has undertaken a commitment not to use TBT paint. | Use of antifoul on boats | Not considered to be a significant environmental issue. | |

| Category | Topics | Advice to EPA | Proponent's response | Issues | EPA views | Recommended Environmental Conditions |
|---------------------|---|--|---|---|--|--------------------------------------|
| Pollution | Noise associated with channel construction and boat manoeuvrings | Department of Transport advises that noise associated with use of the channel by the Bennett boat may be significant. | Proponent has agreed to restrict construction operation hours to agreed standards of the Town of Mosman Park. Noise associated with boat manoeuvres is not considered to be a significant issue. | Temporary disturbance during construction, and intermittent on-going during boat manoeuvres once channel operational. | Not considered to be a significant environmental issue. | |
| Social surroundings | Precedent issue if proposal is found to be environmentally acceptable | Swan River Trust and the Ministry for Planning advise that permission for this proposal may set a precedent for other similar types of proposals. Public concern that approval may be seen as a precedent. | | Potential for precedent for other similar types of development along the River foreshore. | Approval may be seen as a precedent. | |
| | Restriction of public access along the foreshore | The Swan River Trust and Ministry for Planning advise that public access would be restricted along the river foreshore. | There is currently no public right-of-way along the foreshore at this point since the foreshore is within private ownership to HWM. Public access along the reserve is at the discretion of the proponent. Continuous public access below HWM is difficult. | Public access may be restricted. | Construction of channel and bridge will inhibit public access. | |
| | Modification river shoreline | Swan River Trust advises that it is contrary to Swan River Trust Policy Conservation Environmental and Landscape Protection Policy (EA1). | Proposal will affect a small portion of river foreshore which has already been modified in the past. | Modification of the natural topography of the foreshore. | Construction of the channel will alter the river foreshore significantly at a local level. | |

| Category | Topics | Advice to EPA | Proponent's response | Issues | EPA views | Recommended Environmental Conditions |
|---------------------|---|---|---|--|--|--------------------------------------|
| Social surroundings | Visual and aesthetic effect | Swan River Trust advises that it is contrary to Swan River Trust Policy 'Conservation Environmental and Landscape Protection Policy' (EA1). The Trust is particularly concerned to protect the limestone cliffs, which are considered to be an important landscape feature of the Swan River. | | Visibility of the structures. | Structures will be visible. | |
| | Current reservation of site | The Ministry for Planning advises that foreshore area is reserved for 'Parks and Recreation' and will require approval for development before proceeding. | Proponent's acknowledge that the foreshore is reserved for 'Parks and Recreation' under the MRS, however they reiterate that the foreshore is currently within private ownership to HWM | The channel will be constructed across the foreshore. Although privately owned, is reserved for 'Parks and Recreation' | Construction of the channel across the reserve is contrary to the intent of the reserve. | |
| | Long term maintenance of channel and bridge | Swan River Trust and Department of Transport raise issues of long term management of the proposed swing bridge. | Proponent acknowledges long term management and maintenance responsibility for the channel and swing bridge. | Ensuring long term maintenance | | |

4. Impact on the physical and biological environment

The Environmental Protection Act defines "environment" as *living things, their physical, biological and social surroundings, and interactions between all of these*. For the purposes of the definition of the 'environment', the social surroundings of man are his aesthetic, cultural, economic and social surroundings to the extent that those surroundings directly affect or are affected by his physical or biological surroundings.

A summary of topics raised during the assessment of this proposal, the potential impact on the physical and biological environment, government agency advice, the proponent's response, issues considered to be of significance, and EPA views is given in Table 4.

4.1. Topics

The Environmental Protection Authority has recognised the following topics which have the potential to impact on the physical and biological environment immediately adjacent to the development site:

- **Cumulative ecological impact impact of similar proposals.** The incremental and cumulative effect on the environment as a result of dredging proposals (i.e. if one is allowed, another will also be allowed and so on, incrementally having a cumulative impact). The cumulative impact of this type of proposal on the shallow riverine environment is considered to be potentially significant by both the Fisheries Department of WA and the Swan River Trust in their submissions.
- **River Ecology.** Direct impact of dredging of the access channel on the Swan River and foreshore, particularly with respect to water quality, and loss of habitat for local flora and fauna;
- **Fisheries.** The potential impact of proposed dredging operations on a portion of the shallow riverine environment which is known to be an important fish nursery area and habitat for juveniles of a variety of fish species;
- **Waterbirds.** Potential impact on waterbird populations in the vicinity of the channel and boat house;
- **Impact on river foreshore.** Construction of the boat access channel and its implications on the long term stability of the river foreshore on either side of the access channel; and
- **Hydrodynamic circulation.** Maintenance of acceptable water quality within the proposed boat access channel, and implications on water quality within the river adjacent to the access channel.

4.2. Advice to EPA

A summary of the major issues raised in submissions to the Environmental Protection Authority from members of the public, the Town of Mosman Park and relevant government agencies is set out in Table 2 and incorporated within Table 4. A more detailed list is included in Appendix 2.

Public submissions

A statistical breakdown of the number of submissions which raised specific issues is listed in Table 3. In relation to impacts on the biological and physical environment, the following information is relevant:

- 64 percent of the submissions expressed concern regarding modification of the natural river landscape as a result of the proposed development;
- 59 percent of the submissions expressed concern regarding the proposed impact of the development on river ecology; and
- 2 percent of the submissions expressed concern regarding the potential impact on waterbird populations.

Government submissions

Fisheries Department

In summary, the Fisheries Department of WA submission states that while the proposed dredging is not likely to affect a large area, it would destroy a portion of shallow productive riverine habitat which supports a diverse and abundant range of invertebrate, fish and bird fauna. Any loss of this habitat is considered to be detrimental to the river ecosystem. The Department also stated that the cumulative effect of a number of similar types of development proposals is likely to have a significant effect on the river environment.

Swan River Trust

The Trust advised that the proposed dredging is likely to have an adverse impact on the riverine ecosystem. The Trust also expressed concern regarding the cumulative impact of construction of a number of similar development proposals on the Swan River, which may have a significant effect on the river ecosystem. Information provided to the EPA by the Trust indicates that there are approximately 300 lots along the river foreshore which have land to high water mark and which therefore have the potential to be subject to similar development proposals.

Department of Transport

The Department advises that there may be an impact on the river foreshore on either side of the proposed access channel, and that it may be necessary to build substantial retaining walls to ensure that the foreshore remains stable.

Department of Environmental Protection

The Department advised that the proposed dredging would not be environmentally beneficial to the river, and would involve significant physical modification of the river landscape.

4.3. Proponent's comments

The proponent's detailed response to all issues raised within the submission period is included within Appendix 2, and is summarised within Table 4.

The EPA has considered the proponent's response, which addresses the issues raised in submissions with the exception of the issue of cumulative impact. The proponent does not consider that this issue is one for which a response is required. The EPA acknowledges and accepts that this is the proponent's view.

4.4. Issues considered by EPA

Impact on river ecology and fisheries

The EPA understands that the dredging of the boat access channel and excavation of the river foreshore will have a direct effect on the local river ecosystem and foreshore environment at a local level. Existing information on riverine ecology, i.e. flora, fauna, water quality from existing scientific reports on the Swan River indicates that no unique flora or fauna species are known to occur at the site (Thurlow, Chambers and Klemm, 1986).

Following review of this information, the EPA has concluded that while the direct impact of this specific development proposal is not considered to be significant, in general terms, the local impact is not considered to be beneficial to the river ecology. The EPA recognises that there is potential for a significant cumulative effect on the environment if a number of similar development proposals were submitted to the Authority and approved (see below).

Waterbirds

The EPA considers that the implementation of the proposal is unlikely to have a significant effect on waterbirds in the area.

Hydrodynamic circulation

The EPA considers that the proposed dredging is not likely to have a significant impact on waterflow patterns or hydrodynamic characteristics of this portion of the river. Further, regular use of the channel by a vessel is expected to result in adequate water circulation within the boat pen.

Impact on River foreshore

The EPA considers that there may be an impact on the river foreshore on either side of the proposed access channel and therefore reinforcement of the foreshore area adjacent to the channel may be necessary. This is an issue which can be adequately addressed as part of the planning approval process.

Cumulative ecological impact

Following consideration of submissions from the Fisheries Department and the Swan River Trust, the EPA has recognised that there is potential for the cumulative environmental impacts of the construction of a number of similar proposals along the river foreshore to have a significant impact on the shallow riverine environment.

4.5. Other issues

Other issues related to the biological and physical environment were raised within submissions which were not taken into consideration by the EPA as it was considered that they were out of the statutory jurisdiction of the EPA. This includes the point that the proposed boat pen may not be big enough to accommodate the 25 metre long boat.

5. Pollution issues

The Environmental Protection Act defines "pollution" as *direct or indirect alteration of the environment* —

- (a) *To its detriment or degradation;*
- (b) *To the detriment of any beneficial use; or*
- (c) *of a prescribed kind.*

A summary of topics raised during the assessment of this proposal, associated pollution issues, government agency advice, the proponent's response, issues considered to be of significance, and EPA view is given in Table 4.

5.1. Topics

The Environmental Protection Authority has recognised the following topics which have the potential to pollute the environment:

- **Release of potentially contaminated material and suspension of sediments** as a result of dredging operations associated with excavation of the entrance channel;
- **Use of antifoul paint** (on the boat hull - note that use of TBT paint is illegal for boats under 25 metres in length. The boat owned by the Bennett family is 25 metres long); and
- **Noise** associated with channel construction and boat manoeuvrings.

5.2. Advice to EPA

A summary of the major issues raised in submissions to the Environmental Protection Authority from members of the public, the Town of Mosman Park and relevant government agencies is summarised within Table 2. A more detailed list is included in Appendix 2.

Public submissions

A statistical breakdown of the number of submissions which raised specific issues is listed in Table 3. In relation to pollution issues, the following information is relevant:

- 4 percent of submissions received raised the question of pollution as a result of noise, fuel spills, and exhaust emissions from the boat; and
- 59 percent of the submissions expressed concern regarding the impact of the proposed dredging (and excavation) on the river and foreshore.

Government submissions

Department of Transport

The Department of Transport advised that noise associated with the use of the channel by the Bennett's boat may be significant.

Swan River Trust

The Trust states within its submission that it is opposed to all dredging of the Swan River which does not protect and enhance the river environment as a visual, conservation, ecological and recreational resource. Further, it states that the section of river bed proposed to be dredged is characterised by 'shallow flats with rocky outcrops'. This habitat is not common in the Swan and Canning River systems and it considers that the CER fails to document the significance of dredging this environment.

5.3. Proponent's comments

The proponent's detailed response to all issues raised within the submission period is included within Appendix 2, and is summarised within Table 4.

The EPA has considered the response by the proponent, and notes the commitment undertaken that TBT paint will not be used on the boat.

5.4. Issues considered by EPA

Dredging operations associated with excavation of the entrance channel

The EPA concludes that proposed dredging of the river bed would not be beneficial to the river environment, and believes that there is potential for dredging operations to stir up sediments which may have an adverse impact on the river water quality. The EPA notes that the proponent has undertaken to install a geotextile curtain around the dredging operations to minimise turbidity caused by dredging.

The EPA acknowledges the proponent's commitment, and has concluded that there is unlikely to be any long term adverse impact on river water quality as a result of dredging of the proposed access channel.

Use of antifoul paint

The EPA notes that the proponent has given a commitment not to use TBT paint on the vessel proposed to be housed in the boathouse.

Noise associated with channel construction and boat manoeuvrings

The EPA notes that noise is likely to be generated as a result of proposed dredging and boat house construction operations. It is considered that this noise can be adequately controlled by the Town of Mosman Park via delegated noise control powers under provisions of the Environmental Protection Act (1986).

The EPA notes that a gazetted 'water ski area' is located in the river in the vicinity of the proposed boathouse. The EPA considers that noise generated as a result of boat manoeuvrings is unlikely to significantly worsen noise levels currently experienced by residents when water skiing activities are undertaken in the river nearby, and that therefore this is not considered to be a significant issue.

5.5. Other issues

Other pollution related issues were raised within submissions which were not taken into consideration by the EPA as it was considered that they were insignificant. These include:

- risk of fuel spills originating from use of the boat pen (no refuelling facilities are proposed as part of the development); and
- concern that exhaust emissions from the boat may pollute the river.

6. Impact on social surroundings

For the purposes of the definition of 'environment', the Environmental Protection Act defines the social surroundings of man as *his aesthetic, cultural, economic and social surroundings to the extent that those surroundings directly affect or are affected by his physical or biological surroundings*.

A summary of topics raised during the assessment of this proposal, the potential impact on the social surroundings, government agency advice, the proponent's response, issues considered to be of significance, and EPA advice is given in Table 4.

6.1. Topics

The Environmental Protection Authority has identified the following topics which have the potential to impact on the 'social surroundings' adjacent to the development site.

- **Precedent issue.** This means if approval for this development is granted, there is a possibility that a precedent would be set for the approval of other similar developments along the foreshores of the Swan River.
- **Restriction of public access.** Public access along the Swan River foreshore would be interrupted by a 15 metre wide channel across the foreshore. The proponent proposes to maintain access via the use of a swing foot bridge that would be raised when the motor boat moves into or out of the boat house.
- **Modification of River shoreline.** The present river shoreline would be altered as a result of construction of the channel and boatshed.
- **Visual and aesthetic effect.** Construction of the boatshed and associated channel may alter the natural beauty of the Swan River landscape.
- **Current reservation of site.** The foreshore land subject to excavation of the access channel to the boat house is included within a 'Parks and Recreation' Reserve under the Metropolitan Region Scheme (MRS). However, the reserve in the vicinity of the proposed dredging (Lot 55 Saunders Street) is privately owned by the Bennett family.
- **Long term maintenance of channel and bridge.** The question was raised as to who will be responsible for the long term maintenance of the proposed swing foot bridge, and long term maintenance dredging of the boat access channel.

6.2. Advice to EPA

A summary of the major issues raised in submissions to the Environmental Protection Authority from members of the public, the Town of Mosman Park and relevant government agencies is summarised within Table 2. A more detailed list is included in Appendix 2.

Public submissions

A statistical breakdown of the number of submissions which raised specific issues is listed in Table 3. In relation to potential impact on 'social surroundings', the following information is relevant:

- 81 percent - expressed concern that approval of this proposal may be seen as a precedent for allowing other similar types of development along the Swan River foreshore;
- 73 percent - expressed concern that construction of the boat access channel across the river foreshore will restrict continuous public access along the river foreshore;
- 58 percent - expressed concern that the development would have an unacceptable visual/aesthetic impact and detract from the natural beauty of the river landscape;
- 52 percent - expressed concern that construction of the access channel cuts across the foreshore which is reserved for 'Parks and Recreation' and is intended for public use, and is therefore contrary to the intent of the reserve; and
- 12 percent raised the question of who would be responsible for the long term maintenance of the swing bridge and on-going maintenance dredging of the access channel.

Government submissions

Swan River Trust

Advice from the SRT indicates that there are at present approximately 300 other freehold lots with high water mark boundaries adjoining navigable stretches of the river. The Trust expressed concern that the approval of this proposal could trigger applications for other development proposals of this nature. Likely pressure spots include Point Dundas, Dalkeith, Claremont, Maylands and Ashfield (where a number of lots are currently in private ownership to high water marks - see Figure 3). The Trust does not want to create a precedent for structures of this nature abutting and traversing foreshores of the Swan River, as they would impede public use, significantly alter the natural environment, and increase community pressure for dredging.

In relation to aesthetic impact, the Swan River Trust's Landscape Protection Policy states that the limestone cliffs in the vicinity of the proposed dredging and excavation of the river foreshore are considered to be an important landscape feature of the river. Construction of the boat shed would be contrary to the Trust's 'Conservation and Landscape Protection Policy' (Appendix 5).

The Trust also advised that the construction of a channel across a 'Parks and Recreation' reserve is contrary to the intent of the reservation, and may compromise future acquisition of the reserve by State Government. Further, it advises that use of the swing foot bridge is likely to create long term management problems, and that the development would deter continuous public access along the foreshore.

Ministry for Planning (formerly Department of Planning and Urban Development)

This submission points out that the foreshore parallel to the river is reserved for 'Parks and Recreation'. The intention of the reservation is that the contained land be acquired under public ownership. As the proposed development lies within the reserved land, permission is required for development under Clause 30 A of the Metropolitan Region Scheme.

The Ministry has advised that public access is likely to be restricted as a result of the channel being constructed and is therefore contrary to the intent of the Reserve. Further, the proposed development has implications in terms of public liability in relation to use of the swing bridge and future management of the 'Parks and Recreation' reserve, including rights of access through the channel when the land is within public ownership.

The Ministry also expresses concern that approval for this development may set a precedent for other similar types of development along the river foreshore.

Department of Transport

The Department advises that use of the swing foot bridge may lead to long term management problems which in turn may lead to a restriction of public access along the foreshore.

Department of Environmental Protection

The Department advised that the propose dredging and excavation of the river foreshore is not necessary for the continued maintenance of river activities, and is proposed for private rather than public benefit. The Department also emphasised the considerable degree of community opposition expressed in submissions received on the CER document.

6.3. Proponent's comments

The proponent's detailed response to all issues raised within the submission period is included within Appendix 2, and is summarised within Table 4.

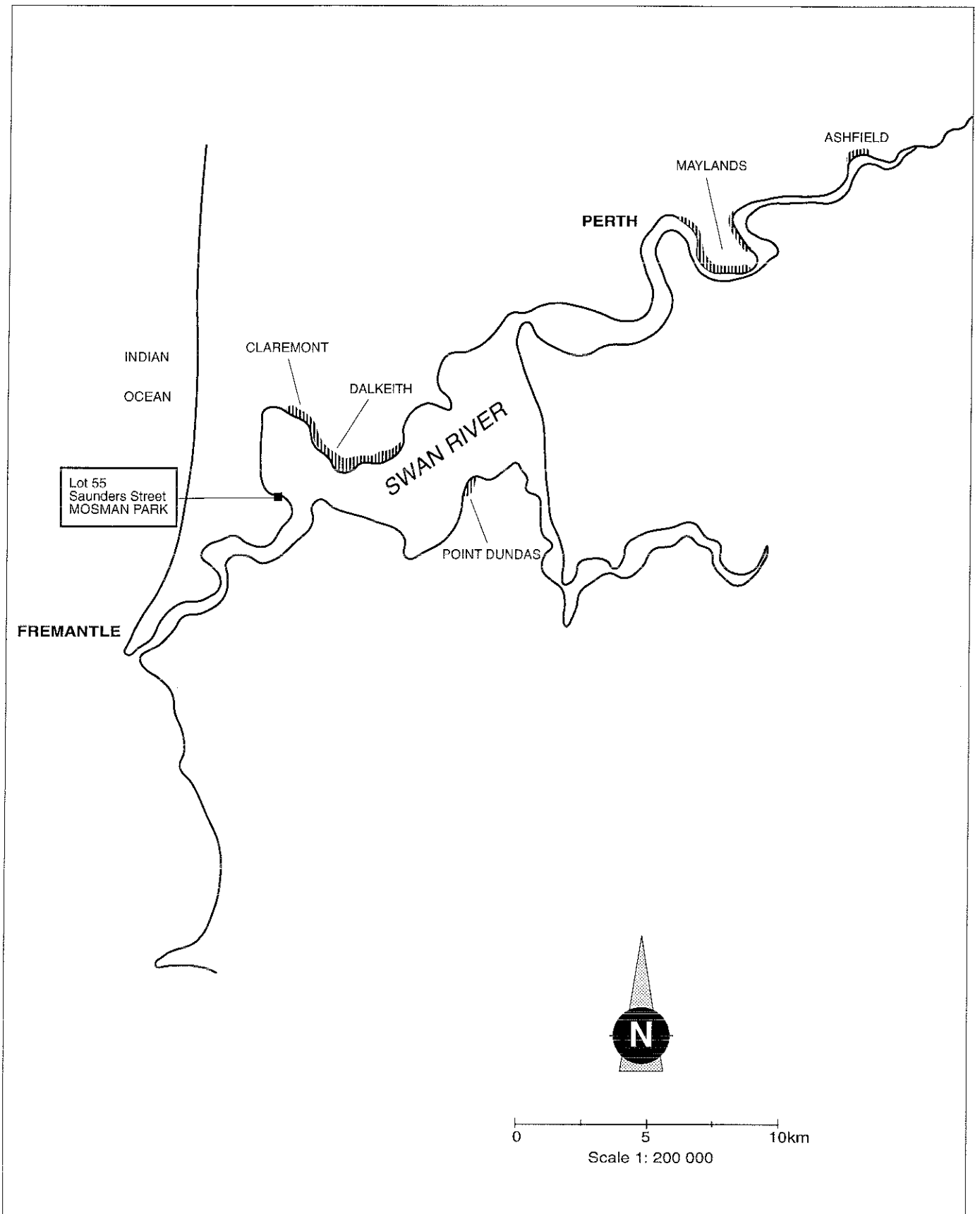


Figure 3. Map indicating location of areas along the Swan River where a number of lots are currently within private ownership to High Water Mark.

The EPA has considered the proponent's response the issues raised.

6.4. Issues considered by EPA

Precedent issue

The Environmental Protection Authority acknowledges that approval for this development proposal may be considered to set a precedent for other similar types of development proposals along the Swan River foreshore. In reaching this conclusion, the EPA has taken into consideration advice received from the Swan River Trust, the Ministry for Planning, and the considerable degree of public concern expressed in public submissions.

Restriction of public access

The Authority notes that while a swing foot bridge is proposed to be constructed across the boat channel to allow for public access along the foreshore, construction of the boat access channel across the river foreshore will inevitably inhibit currently unrestricted public access along the foreshore. This view was also expressed by the Swan River Trust, the Ministry for Planning and the Department of Transport.

Modification of the river shoreline

The Authority concludes that construction of the access channel will alter the river shoreline significantly at a local level, which would not be beneficial to the river environment.

Visual and aesthetic effect

The Authority notes that structures associated with the development proposal are likely to be visible, especially when viewed from the river.

Current reservation of foreshore

Further to advice received from the Ministry for Planning and the Swan River Trust, the Authority notes that although Lot 55 is within private ownership to High Water Mark, construction of the channel across the river foreshore is contrary to the intent of the existing 'Parks and Recreation' reserve, intended for public use. The proposal to dredge a portion of the Swan River and excavate a portion of the river foreshore is intended to provide boat access to a private boathouse, and cannot be considered to be of benefit to members of the public.

6.5. Other issues

Other social issues were raised within submissions which were not taken into consideration by the EPA as it was considered that they are out of the statutory jurisdiction of the EPA. These issues include:

- channel would be dangerous to children and elderly people walking along the foreshore;
- recreational conflict - concern was expressed that the proposal may lead to congestion and create conflict between people already using the area for recreation, for example small boating craft such as canoes;
- privatisation of a public resource - many members of the public are opposed in principal to private development on a public foreshore;
- proposal is out of scale and is inconsistent with other existing development along the Swan river foreshore;
- implementation of the proposal will result in future loss of parkland, as a portion of the area proposed to be dredged is within a 'Parks and Recreation' reserve;
- if the development application by Mrs Bennett is refused, the applicant may claim compensation under Section 36 of the Metropolitan Region Scheme, or may request the

- Ministry for Planning to acquire the land;
- proposed development has implications in terms of public liability in relation to use of a swing bridge and future management of a 'Parks and Recreation' reserve; and
- fact that the Swan River Trust 'generally opposes the construction of private jetties downstream of the causeway'.

7. Previous EPA position on dredging of the Swan River

7.1. Bulletin 575

There are no similar EPA decisions on boathouses on private land. However in August 1991 the EPA reported on a proposal to dredge an area of river near Bayswater (Bulletin 575). When assessing this proposal, the EPA considered that *'proponents of dredging proposals must not only satisfy the Authority that they will not cause any adverse impacts to the river system, but must go further and show that the dredging will be environmentally beneficial to the river, or necessary for the maintenance of existing river activities'*.

The EPA determined that the Bayswater dredging proposal was environmentally unacceptable and recommended that it not be approved. To date, this decision has been considered to be a policy position by the EPA in relation to dredging within the Swan River for private purposes, with no perceived public benefit.

7.2. 1987 Annual Report Policy Statement

The 1986-1987 EPA Annual Report stated that **it is considered that the river system is a public trust rather than a resource to be appropriated to the benefit of individuals'**. In stating this view, the EPA acknowledged that while this value is not quantifiable, it is one to which the Authority must give recognition and expression when evaluating proposals.

8. Summary of EPA views

8.1. Physical and biological

The following issues are considered to be of environmental significance:

- the local effects of the development proposal on the river and foreshore; and
- the possible cumulative effects of similar proposals

8.2. Pollution

The Authority considers that there are no significant pollution issues associated with construction and implementation of this proposal.

8.3. Social surroundings

The fact that the foreshore is within an existing 'Parks and Recreation' reserve, and that the proposal is contrary to existing Swan River Trust 'Conservation Environmental and Landscape Protection Policy (Policy EA1) is noted by the EPA.

Table 5. Information based on previous Environmental Protection Authority policies and statements

| | |
|--|---|
| <p>Previous EPA decisions on Dredging (1991)</p> | <p>There are no similar EPA decisions on boathouses on private land. However in August 1991 the EPA undertook an assessment of 'Riverside Gardens (west) dredging and Landfill, King William Street, Bayswater' (Bulletin 575).</p> <p>In assessing this proposal, the EPA considered the precedent which the proposed dredging may set, and the ecological impacts associated with the dredging.</p> <p>The EPA stated that the 'Swan and Canning Rivers and their foreshores are unique entities in the Perth region. The city itself and much of its environs derives its particular character from these rivers. The Authority's prime objective in its guardianship of the environment of the Swan River is to ensure that it remains 'alive and healthy' and to the greatest possible extent, its integrity is maintained and sustained' (Bulletin 575: ii).</p> <p>'It is considered that the river system is a public trust rather than a resource to be appropriated to the benefit of individuals' (Bulletin 575: ii).</p> <p>In assessing this proposal, the EPA stated that:</p> <p>In justifying change to the waterways, proponents of dredging proposals must not only satisfy the Authority that they will not cause any adverse impacts to the river system, but must go further and demonstrate that the dredging would be environmentally beneficial to the river, or necessary for the maintenance of existing river activities' (Bulletin 575: ii).</p> <p>The then EPA concluded that the primary motivation of the dredging proposal was to facilitate other development, and that if allowed, would set an unacceptable precedent for other similarly motivated dredging proposals. It was therefore considered to be environmentally unacceptable.</p> |
| <p>EPA Policy statement (1986 - 87)</p> | <p>The 1986 - 1987 EPA Annual Report stated that it is considered that the river system is a public trust rather than a resource to be appropriated to the benefit of individuals'. In stating this view, the then EPA acknowledged that whilst this value was not quantifiable, it was one to which the Authority must give recognition and expression when evaluating proposals.</p> |
| <p>Summary of EPA's advice to the Minister for the Environment (1995)</p> | <p>The proposal should not be approved. In arriving at this position, the Authority has taken account of the following key issues:</p> <p><u>Environmental impact</u> - loss of local shallow riverine habitat</p> <p><u>Cumulative effect</u> - a number of other similar types of development proposals are likely to be forthcoming along the river foreshore, which may impact on shallow riverine ecosystems adjacent to the foreshore. The cumulative impact as a result of several proposals could be significant</p> <p><u>Public concern</u> - there is a public expectation that the EPA protects the river. The river regarded as a public trust and an area of special significance, as set out in the EPA's 1986 - 87 Annual Report</p> <p><u>Swan River Trust policies</u> - the proposed development is contrary to the Swan River Trust 'Conservation Environmental and Landscape Protection Policy EA 1</p> |

The issue of precedence of approval of this type of development and implications for the approval of other similar types of development proposals along the Swan River foreshore is also considered to be significant. In reaching this view, the Authority members have noted the considerable degree of public concern expressed in submissions on this issue.

9. Conclusion and Recommendation

In assessing this development proposal, the Environmental Protection Authority has carefully reviewed information presented within the Consultative Environmental Review document, the issues raised within the public submissions, advice received from local authority and government departments, relevant technical literature on the ecology of the Swan River, and the proponent's response and commitments. A summary of the Authority's views on these matters is included within Table 4.

Information based on previous Authority policies and statements, included within Table 5, has also been carefully considered.

In undertaking this review, the Authority took into particular consideration the following:

- the local effects of the proposal on the river and foreshore;
- the possible cumulative effects of similar small proposals;
- the public concern expressed in relation to the proposal;
- the Swan River Trust policies; and
- the previous statements of the EPA about the Swan River.

Following consideration of these issues, the EPA has concluded that the proposal should not proceed. In reaching this conclusion, the Authority was mindful of the loss of riverine habitat; the community's perception of the river as a public trust and an area of special significance; the precedent that would be established for future projects of a similar nature if this proposal were allowed to proceed; and the potential cumulative impact issues associated with such proposals.

Accordingly, the EPA recommends to the Minister for the Environment that the proposal not proceed.

In examining this proposal, the EPA became aware of the need to have a clear policy developed, probably by the Swan River Trust, as a guide to landowners and others who may desire to pursue proposals which involve some form of dredging of the Swan River and foreshore modification.

The EPA strongly recommends that such a policy be prepared and adopted.

10. References

Environmental Protection Authority (1987) Environmental Protection Authority Annual Report 1986 - 1987

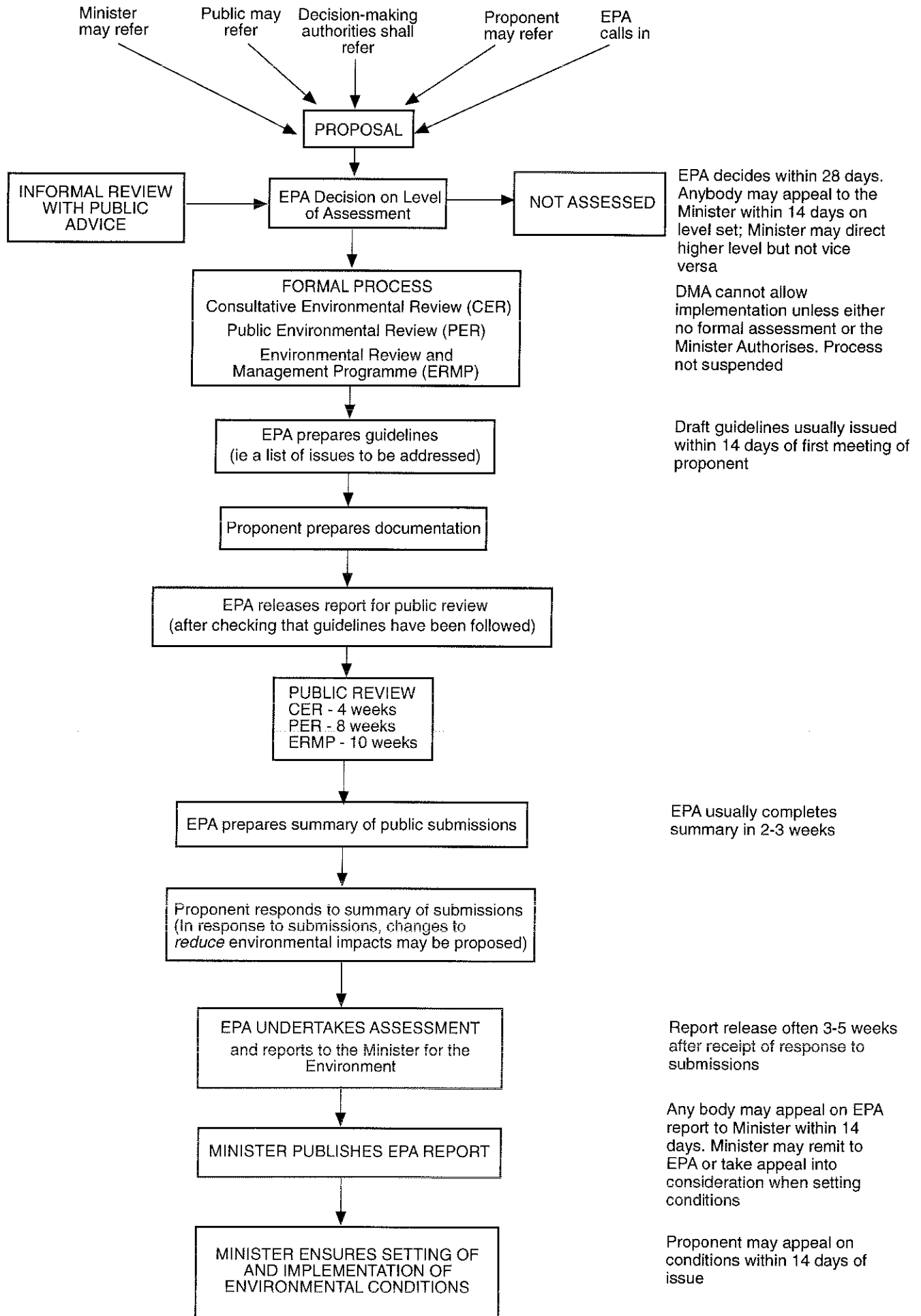
Environmental Protection Authority (1991) Riverside Gardens (West) dredging and landfill, King William Street, Bayswater. (Bulletin 575).

Halpern Glick and Maunsell (1994) Consultative Environmental Review to - Dredge a Portion of the Swan River and Foreshore to Provide Access to Private Boathousing

Thurlow, B.H., Chambers, J. and Klemm, V.V. (1986) Swan Canning Estuarine System - Environment, Use and the Future. Waterways Commission Report No. 9.

Appendix 1

Environmental Impact Assessment flow chart



Appendix 2

Summary of submissions and proponents response

1. Impact on River water quality

1.1. Many submissions claimed that it had not been clearly demonstrated within the CER document that the proposed dredged channel would not have an direct adverse impact on water quality in the adjacent river waters in the vicinity of the channel, through :

- turbidity during dredging operations;
- exhaust contamination and constant churning of riverine sediments by power boat propellers, creating sediment plumes, which is likely to have a significant impact on the river environment and prevent recolonisation of aquatic species; and
- use of the proposed powerboat, which may lead to potential pollution of adjacent waters through smell, potential fuel spills, oil, battery acid, paint, anti-fouling, and boat sullage.

1.2 Many submissions claimed that the proposed dredging may have an indirect impact on water flow patterns or hydrodynamic characteristics of this portion of the River.

2. Physical impact on River bed and foreshore

2.1. Several submissions claimed that the proposed dredging and construction of 'boat pen', and subsequent surging of water in and out of the proposed channel and 'pen' is likely to have a severe and on-going environmental impact on the Swan River, which would not be restricted to the proposed dredge site. It was claimed that it would be impossible to rejuvenate and repair the foreshore, which is already significantly degraded.

2.2. Several submissions expressed concern that the proposed dredging may have a direct impact on a much larger area than is claimed within the CER document due to the graduation of depth on either side of the proposed channel. This may lead to erosion problems on either side of the proposed channel, which may be an indirect, but never the less significant impact.

2.3. Two submissions expressed the concern that there was no mention made within the CER of the known fossil bed which is located along the limestone cliff. This is approximately 5,000 - 10,000 years old and would be destroyed if the development as proposed proceeded.

2.4. One submission raised the question as to whether this proposal should actually be considered a mining proposal in view of amount of limestone proposed to be removed.

2.5. Several submissions expressed the opinion that this proposal could not be construed as being 'beneficial to the River', as required by the Environmental Protection Authority and quoted within Section 4.4.3 of the CER document.

3. Impact on waterbirds

3.1. Concern was expressed in several submissions that the river provides decreasing opportunities for waterbirds to utilize suitable habitats for their survival. It was considered that opportunities should be pursued which return the river to its natural state, not modify it further.

4. Impact on terrestrial and aquatic flora and fauna

4.1. Several submissions expressed the view that an inadequate survey / data collection of flora and fauna which would be affected as a result of the proposed development presented was presented within CER document. It is unclear when the flora and fauna survey was undertaken, and a comprehensive list of species naturally occurring there should have been included. For example, 'Ulva' was the only aquatic species of flora listed as being present at the site in the 'Existing Environment' section of the CER.

Further, it was considered that past disturbance of the area, as claimed within the CER, is not a valid excuse to justify additional disturbance to native vegetation along the foreshore. Remaining vegetation should be retained wherever possible.

4.2. The majority of submissions made the general claim that the proposal would 'upset the natural balance of marine life' within the River.

Some submissions elaborated on this issue further by raising the following points :

4.2.1. Shallow water in the river system is well known to be rich in fauna, particularly invertebrates. It is stated within the CER (Section 4.2.4) that infauna could be expected to recolonise the dredged area. This is considered to be an uninformed and unsubstantiated opinion. It would be virtually impossible for invertebrate fauna to recolonise this area due to the constant disturbance caused by the boat. The view was expressed that the dredged area would not be expected to support the range of aquatic fauna which exists there at present. Destruction of these areas is also considered likely to have a direct impact on larger more visible fauna.

4.2.2. Dredging may lead to a loss of biodiversity which may in turn impact on the (increased) frequency of algal blooms occurring within the River.

4.2.3. Young fish (e.g. Flounder) and crustaceans (e.g. crabs) require shallow waters adjacent to the shoreline for their development, to avoid predators and find food and shelter. Approval of this proposal would set a precedent for the destruction of more of this foreshore habitat.

4.2.4. Dolphin pods currently swim past close to the foreshore. Proposed dredging and construction of the boat pen will discourage the dolphins from swimming past.

4.3. Several submissions offered the suggestion that a continuous buffer be preserved along the river foreshore to provide food and shelter for native animals.

4.4. One submission claimed that the impact of boathouse doors and walls have been ignored in the CER. These rise up to a height of over 10 metres up the cliff face, across the path of reptiles and invertebrates which use the cliff. Movement of terrestrial animals would be interrupted and the natural features of the cliff 'cul de saced'.

5. Construction Impacts

One submission made the general comment that the construction period of 2 weeks as quoted within the CER is unrealistic. Construction is likely to take a lot longer, with consequent off-site impacts.

5.1. Limestone excavation

5.1.1. Several submissions expressed the opinion that inadequate engineering details of the proposed dredging and boat house are presented within CER document, for example the excavation of limestone for the proposed channel. If blasting is in fact required, this would change the scope of the project and require further research and have an unacceptable impact on nearby residents in view of noise and vibrations. If blasting is required, a substantial bond should be put up by the proponent prior to blasting, to cover potential damages to adjacent residences.

5.2 Dredging

5.2.1. One submission considers that the CER is misleading in claiming that the river bed is free of sediment at present. It is suggested that the river bed is in fact covered with a fine silty mud. Several submissions expressed concern regarding disturbance to this riverine sediment during dredging. It was claimed that the proposed use of geotextile curtain will not retain nutrients. This disturbance may be significant in view of the quantity of material proposed to be dredged.

5.2.2. One submission stated that the proposed stockpiling of dredged material adjacent to the channel site may include organic matter. It is likely that this organic matter will begin to decompose and so create a smell. There should be a stated aim by the proponent to remove this material as soon as is practical to prevent odours if the proposal proceeds.

5.2.3. One submission stated that there is a high risk of spillage of material associated with use of a barge to remove material as proposed. This was not considered to have been adequately addressed within the CER document.

5.3. Dust Control

5.3.1. One submission expressed concern regarding dust control during dredging operations and boat pen construction. Problems have already been experienced by nearby residents as a result of the house construction at Lot 55 Saunders Street.

6. Public safety issues

6.1. Use of the bridge. - Many submissions questioned the safety of the bridge, which had not been addressed within the CER. Who would supervise use of the bridge? The question was asked "Who would cover insurance should injury or death result from any aspect of the proposed development?"

6.2. Creation of deep water. - The majority of submissions expressed the view that the proposed dredged channel (to a depth of 3.5 metres) would pose a safety threat to people, particularly children, non-swimmers, older people and tourists walking around the foreshore. Signs warning people of deep water may be ineffective as children may not be able to read them.

6.3. Other safety issues

6.3.1. It was claimed that the proposed 15 metre long jetty and guide pylons would be a hazard to water skiers, small boats and canoeists using the area.

6.3.2. One submission raised the question - what would happen to the underground boatshed if there is an earthquake.

6.3.3. It was claimed in several submissions that excavation of the channel through the river into the limestone cliff would undermine the strength of the cliff face and cause a public hazard, making the foreshore dangerous to use.

6.3.4. Safety implication of use of this part of the river, which is narrow due to existence of the Point Walter sand spit, and length of motor boat (25 metres). The development as proposed may restrict use of the River channel at times.

7. Impact on public access and recreational use of the foreshore and adjacent river waters

7.1. Several submissions claimed that the CER is inadequate in that no social impact assessment of the proposal was undertaken prior to or during CER preparation and release.

7.2. Public access - The majority of submissions expressed the view that construction of an access channel across the foreshore would cause interruption and / or obstruct existing continuous undisturbed public access / right of way around the river. The proposal could therefore be considered to be a denial of safe access of beach up to high water mark, which is presently in public ownership. It is legal to walk along up to HWM at the present time, and this proposal will deny this existing right.

Serious concern was expressed that while the proposed bridge as described within the CER would be located on private land and therefore under their control, it in no way provides a substitute for the present access situation. The owners could refuse to operate the bridge, or allow it to break down, or deny access to it whenever they felt so inclined. Additional concern was expressed that operation and maintenance of the bridge may become costly and a legally complex problem if the channel was allowed to be constructed, and the land in the future becomes publicly owned, for any future public authority responsible for it.

Further, it was claimed that no defined times of operation of the proposed bridge have been designated, or a guarantee given that it could be used, especially in view of the fact that it would be located on private property. People using the foreshore may be held up for considerable periods of time unable to get past if the bridge is not in use. Who will take responsibility for ensuring the bridge is always down.

7.3 Recreational use - Many submissions expressed the view that the proposed channel and associated infrastructure, including pylons and jetty, will interrupt current popular public recreational pursuits including walking, diving, wading, canoeing, kyaks, swimming, fishing (popular Mulloway fishing spot), prawning, crabbing, sailing, waterskiing and picnicing. Further, the proposed channel and use of the proposed boat pen would have a significant impact on local clubs such as the Swan Canoe Club.

7.4. Several submissions suggested that the State Government should investigate seriously the option of acquiring sections of the river foreshore which are presently in private ownership and zone it for public purposes before further development proposals using these areas are received.

8. Privatisation of a public resource

8.1 The majority of submissions expressed the view that this development proposal raises a fundamental equity issue, that is, private use of a public resource.

Several submissions stated that a principle should be established which would not allow this development proposal to proceed, nor allow any future similar applications to be seriously considered. The view was expressed that a public asset such as the river foreshore should be equally accessible to all people and implementation of this proposal would prevent this.

Concern was expressed that if approval of the proposed channel and cut into the cliff is granted, this will encourage other landowners adjacent to the river to apply for imaginative solutions to their parking problems. This may set a dangerous precedent in allowing:

- privatisation of the foreshore;
- dredging of the Swan River for private purposes, cutting across a public foreshore reserve, and blasting limestone cliffs, and

- the construction of private facilities such as jetty and boat house proposals along the foreshore, excluding public use of these facilities and set a 'bad example' for foreshore preservation and conservation. Scenarios such as this have occurred along the Sydney harbour foreshore, which has led to the exclusion of public use of the foreshore.

The view was strongly expressed that no private individual should be allowed to interfere with the River environment and the rights and wishes of people of the State simply because they are privileged to have the money to do so. It was claimed that the River environment is part of our heritage and must be protected for all time. The river and its foreshore should therefore be held 'in trust' for all members of the community, not be allowed to be privatised by the wealthy minority. If this proposal were to proceed, it would mean loss of this foreshore forever, of land earmarked for future Government acquisition.

8.2. Several submissions stated that the development is inconsistent with stated objectives and policies of the Swan River Trust, i.e. :

8.2.1. Primary Objective 1 - that development be compatible with the river environment, that public right of access to and use of the river environment be preserved and enhanced, and that public ownership be maximised.

8.2.2. Swan River Trust Policy :

- to refuse all applications for permanent private jetties that abut a public reserve and of a length greater than 6.0 metres measured from HWM; and
- to oppose all applications which do not protect and enhance the riverside environment as a visual, conservation, ecological and recreational resource.

8.2.3. It was claimed that the proposal is also contrary to Swan River Trust Draft Management Plan objectives, which recommends continuous public access along this foreshore.

8.3. Several submissions claimed that the proposal is contrary to Government policy of 'bringing the swans back to the River' and inconsistent with stated Government objectives to preserve the ecological health of the Swan River.

The view was strongly expressed that Government should purchase the foreshore reserve and preserve it for public recreation

8.4. Several submissions state that the proposed development also contradicts the intent of the Metropolitan Region Town Planning Scheme Act 1959 which reserves land immediately above the high water mark for Government acquisition for Parks and Recreation, for the use and benefit of all people.

9. Aesthetic Impact

9.1. The majority of submissions expressed the view that the proposal would create a highly visible cut, involving massive earthworks, which would permanently scar the landscape. The development is considered to be of a 'gargantuan' scale which would alter the natural scale of the landscape, dominate the riverscape, and have major impact on visual integrity of the limestone cliff. The Swan River is presently a famous focal point for residents, country visitors and overseas tourists and this development would detract from its popularity.

The proposed dredging and creation of a tunnel in the limestone cliff to allow for housing of a 25 metre long boat is considered to 'amount to environmental vandalism' of the river foreshore, and interfere with the 'natural beauty' of the foreshore environment. It was considered that emphasis should be placed on repairing and revegetating already damaged areas along the foreshore rather than creating more eyesores.

9.2. The view was expressed in some submissions that the proposal is in line with a continuing trend to alter the river shoreline from its original state. Consequently there is not much river foreshore in a 'natural' state in the metropolitan area. Although this foreshore area is not 'pristine', it is relatively well preserved and should be retained as such.

9.3. One submission claimed that the entrance channel will create a 'rubbish trap' for floating debris in the River, which will create a visual eyesore.

10. Long term Management responsibility

10.1. Dredging

10.1.1 Several submissions expressed concern regarding long term maintenance dredging of the site. There is no proposed on-going monitoring mentioned within the CER document to ensure maintenance dredging at some time in the future is required. The view was expressed that continuous dredging is likely to be inevitable. Further, proposed dredging will have long term management and maintenance implications, i.e. over 50 - 100 years. It is not made clear who will undertake long term management and maintenance responsibility.

10.1.2. Several submissions suggested that the CER document is inadequate in that there has been no attempt made to assess the overall environmental impacts, or cumulative impact of the dredging on the River. This proposal needs to be considered in the context of other development proposals within the Swan River.

10.2. Swing Bridge

10.2.1. Several submissions raised the question regarding the long term maintenance of the proposed swing bridge, and raised the question as to who would undertake to keep the proposed bridge across the proposed channel safe and in good order.

10.3. Water Quality within boat pen

10.3.1. One submission pointed out that the CER states that 'if there is unacceptable water quality within the proposed boat pen, a pump would be installed'. It was claimed that this issue has not been addressed thoroughly, for example, the pumping of polluted water into the River from the pen site may have an undesirable effect on the River, and may be considered as a point source of pollution.

11. Demonstrated need for proposal

11.1. Several submissions expressed the view that there was inadequate information presented within the CER document to properly assess the development proposal, for example, construction details regarding the proposed swing bridge and associated operation of the bridge, boat access channel, boathouse, batter slopes, and foreshore retaining walls. It was considered that these details also need to be properly and adequately presented before a decision on the acceptability of the proposal can be made.

11.2 The majority of submissions expressed the view that there is no demonstrated need for the proposal. The view was strongly expressed that the proponent should pursue options of using existing yacht club facilities (the Freshwater Bay Yacht Club is only 1500 metres away), or a private mooring, rather than proceeding with a dredging and private boat pen proposal. This would mean better use of existing facilities.

11.3. The view was expressed that the proponent is unreasonable to expect to be able to use / abuse the river foreshore for something which is primarily an ocean activity.

11.4. Several submissions stated that the development option presented in the CER (Section 2.3.1) to provide a 9 metre boat lift is fanciful, dangerous and unrealistic.

12. Impact on Aboriginal Land Claim

12.1. It was claimed in one submission that the proposal is contrary to an Aboriginal Land Claim lodged in Perth on 20 October 1994 for the Swan River foreshore.

Response to Issues Raised in Public Submissions

1.0 Impact on River Water Quality

- 1.1 Turbidity during dredging is expected to be minimal and mainly aesthetic due to mud, silt and clay materials being largely from the site. Any discolouration of the surrounding waters will be due mainly to the temporary suspension of limestone particles. A geotextile curtain will be in place during excavation, to restrict plume movement, and will remain in place until water clarity within the confines of the curtain approximates water clarity outside the curtain.

No sediment plumes are expected to be generated as a result of boating activity due to the limited quantity of fine material adjacent to the development site.

Exhaust contamination in such a well flushed area will be minimal and the proposed vessel is not expected to increase the environmental impact or the level of pollution over the minimal level that is currently experienced along this stretch of the river.

Tributyl tin antifoul will not be used on the vessel.

- 1.2 The main river channel will not be affected by the development and the proposed dredging is unlikely to have any impact on waterflow patterns or the hydrodynamic characteristics of this portion of the river. The length of the channel in the Swan River will be approximately 15 m whilst the width of the river at this point is approximately 500 m.

2.0 Physical Impact on Riverbed and Foreshore

- 2.1 The channel will be constructed adjacent to a section of reclaimed foreshore which has a limestone retaining wall. Damage to the foreshore will not occur.

Vessel speed adjacent to the channel will be slow due to the proximity of the shoreline. Impact on the foreshore area is expected to be minimal and less than the surge that is currently generated by ferries and ski boats using the river.

- 2.2 Dredging is expected to have minimal impact outside the channel confines. Dredging will occur in limestone and any battering of the channel sides that may be required will be minimal.

-
- 2.3 It is acknowledged that a portion of cliff face will be lost through excavation. However, the cliff face that will be disturbed by the development has previously been extensively modified. The cliff face to the east of the development site is in its natural state and will not be impacted by the development and consequently the fossil beds, which are widely distributed throughout limestone and not unique to this section of the river, will not be significantly impacted.
- 2.4 The development does not come within the definition of mining as defined under the *Mining Act 1978* since the purpose of recovering the limestone is to facilitate development rather than generate profit.
- 2.5 The CER (p.16) acknowledges that the proposal will not be environmentally beneficial to the river. However, the proposal is of such a small scale that it cannot influence the state of the river and the CER effectively demonstrates that the proposal will have minimal, if any, environmental impact.

3.0 Impact on Waterbirds

- 3.1 The proposed development is expected to have minimal impact on an area that has previously been modified through reclamation. There is no vegetation in the area that will be disturbed that has any habitat value for waterbirds.

Approximately 50 m² of river shallows will be lost through excavation of the channel. Some intermittent disturbance may also occur during the occasional vessel movements.

4.0 Impact on Terrestrial and Aquatic Flora and Fauna

- 4.1 A survey was undertaken during preparation of the CER and all species identified were common in the Swan River. Species include *Ulva lactuca*, *Gracilaria verrucosa*, *Colpomenia peregrina*, several species of Rhodophyta, *Halophila ovalis* (10% cover over a 2 m wide band), barnacles, mussels and sea squirts in deeper water.

No endemic native vegetation will be disturbed by the proposed development. Although some terrestrial vegetation will be removed, the site is expected to be improved over its current situation due to the eventual rehabilitation of the site with native species.

4.2.1 The proposal is expected to have minimal impact on infauna for the following reasons:

- . the area that will be disturbed through dredging is small;
- . the area is not expected to support any species of infauna that are unique to this section of shoreline; and
- . vessel movements will be slow with propellers moving barely above idling speed.

Although infauna numbers may decline within the channel, the species composition would not be expected to change. Overall the impact is expected to be minimal.

Due to the limited extent of disturbance, the overall impact on the larger species of fauna is also expected to be minimal

4.2.2 The project will not result in a loss of biodiversity since it is not believed that any species are unique to the area. Development at the site will increase biodiversity by providing a three-dimensional habitat on jetty piles compared to the essentially two-dimensional habitat that currently exists.

The development will not increase the frequency of algal blooms. In addition algal blooms are not generally experienced in sections of the river such as this that are well flushed.

4.2.3 The objective of the Environmental Assessment Process is to assess projects on their potential environmental impact and it is expected that the EPA will assess this project independently and on its merit.

The current proposal is expected to result in the loss of minimal fish nursery habitat.

4.2.4 The boat housing is not subject to this CER and there is no reason why dolphins will not continue to swim past.

4.3 Rehabilitation of the foreshore area following development is likely to provide a better coverage of native vegetation than currently exists. The area currently has little habitat value for native species.

4.4 Movement of reptiles and invertebrates can still occur above the boathouse doors.

5.0 Construction Impacts

Construction of the channel is still estimated to take two weeks.

5.1 Limestone Excavation

- 5.1.1** Once the necessary environmental approvals are in place, detailed engineering drawings will be prepared and submitted to the relevant authorities for approval. Although unlikely, should blasting be required the appropriate guidelines prepared by the Department of Minerals and Energy will be adhered to.

The Proponent would be liable for any damage resulting from blasting activities.

5.2 Dredging

- 5.2.1** It has been established by first hand observation that the riverbed at the proposed development site is essentially free of significant quantities of fine silty mud.

The purpose of the geotextile curtain is not to retain nutrients but rather to retain limestone particulates suspended as a result of dredging.

The absence of fine sediments at the site consequently means that nutrient release during dredging is not likely to be a problem.

- 5.2.2** Dredged material will be removed from the site as soon as practical. It is likely that dredging and removal of the spoil will be a continuous operation.

- 5.2.3** The preferred method of removing dredged material from the site is by truck via Saunders Street. Material is proposed to be lifted from the foreshore to Saunders Street on a conveyor. Noise and hours of operation will be consistent with Town of Mosman Park regulations and the relevant Noise Abatement Act. Operation of the conveyor will be closely monitored by the site supervisor.

5.3 Dust Control

- 5.3.1** Dust generation is not expected to be a problem since spoil will be wet. In the event that spoil material does dry out, wetting of the spoil will be initiated to ensure that there is no dust problem.

6.0 Public Safety Issues

- 6.1** The bridge will be designed to meet all acceptable safety standards and the design will be approved by the relevant authorities prior to construction occurring. As is the case in other public facilities the bridge will be unsupervised, the exception being when the bridge is opening or closing. Suitable insurance cover will be put in place to cover accidents.
- 6.2** The public currently has uncontrolled access to deeper water via the jetties that occur along this section of the river. Potential risks associated with these jetties are considered acceptable and the proposed channel is not expected to cause any additional safety threat.

A short jetty will be constructed to the west of the channel which will provide advance warning of the deeper water. In addition the Proponent is amenable to discussions with relevant authorities on providing additional safety measures adjacent to the channel.

6.3 Other Safety Issues

- 6.3.1** The existing jetties and swing mooring line located between the shore and the water ski area do not currently pose a hazard and it is not expected that the proposed jetty and guide pylons, which are also outside of the water ski area, will pose any additional hazard.
- 6.3.2** The boathousing does not form part of this assessment.
- 6.3.3** The channel will be engineered to accepted standards with the plans submitted to the relevant authorities for approval prior to construction occurring.
- 6.3.4** The vessel is 22.25 m long whilst the river at this point is approximately 500 m wide. The vessel is not expected to restrict use of the river channel.

7.0 Impact on Public Access and Recreational Use of the Foreshore and Adjacent River Waters

- 7.1** It is considered that all potential issues identified by the EPA have been addressed adequately in the CER document.
- 7.2** There is currently no public right-of-way along the foreshore at this point since the foreshore is in private ownership to the high water mark. Public access along the reserve is at the discretion of the Proponent.

Continuous public access below the high water mark is currently difficult due to the presence of jetties which force people to walk, in places, along the foreshore.

The Proponent will commit to maintaining the bridge in safe working order. The bridge will be available for use by the public except at times when the vessel is moving into or out of the boathousing. This is expected to occur for only a few minutes per day.

The Proponent recognises that there will be a requirement to address any legal issues relating to ownership of the bridge and channel should the foreshore become publicly owned in the future.

7.3 The Proponent considers that the development is unlikely to impact on the current recreational use of the area.

7.4 The statement is noted.

8.0 Privatisation of a Public Resource

The EPA may choose to consider this as an issue. The proposal, as it currently exists, is not considered to be inconsistent with the policies or objectives of the Swan River Trust or the EPA.

8.1 Under current land tenure the Proponent has freehold ownership of the land to the high water mark and consequently may be granted by the State Planning Commission permission to develop the land subject to conditions and procedures including those applied under the *Environmental Protection Act 1986*.

Through preparation of the CER and in the responses to the issues raised in the public submissions the Proponent has demonstrated that the development can occur in a manner which minimises or eliminates environmental impacts. For example, public thoroughfare across private land will be maintained through the construction and maintenance of a bridge.

8.2.1 The development is not incompatible with the river environment, public access to, and use of, the river environment will be preserved and the foreshore area will still be available for public acquisition.

8.2.2 The Proponent is agreeable to negotiation with the Swan River Trust on the length of the jetty. If required the jetty can be reduced to 6.0 m.

The area that is proposed for development has previously been modified through reclamation and the removal of native vegetation. Following construction of the channel the Proponent is committed to rehabilitating the foreshore with local native species and consequently the area will be enhanced over its current situation. As discussed in the CER the proposal is not expected to have significant impact on the visual, conservation, ecological and recreational attributes of the area.

8.2.3 Continuous public access along the foreshore is currently difficult due to the steepness of the foreshore to the east of the development site. Continuous public access, across the private land abutting the development, has been catered for through incorporation of a bridge in the proposal.

8.3 The proposal does not prevent swans returning to the river and is not expected to impact on the ecological health of the river.

The foreshore is not a reserve at this location and it is the government's decision whether or not an offer of purchase is made on the area in question.

8.4 The proposal does not prevent future government acquisition of the foreshore. Although the foreshore is currently in private ownership the Proponent does not place restrictions on public use of the land and will allow for continued public use of the area through incorporation of a bridge in the proposal.

9.0 Aesthetic Impact

9.1 The personal opinions expressed in this section are rejected by the Proponent and in particular the assertion that the proposed development is of a "gargantuan" scale and would "amount to environmental vandalism".

The impact on the foreshore is expected to be minor with the main visual impact being the boathouse doors. The Proponent is committed to landscaping this area of foreshore which will soften the impact of the doors and improve the area visually over the current situation. Other options, such as applying limestone cladding to the doors, could also be reviewed to minimise potential visual impact.

9.2 The area that will be developed has been extensively modified and is not in its natural state. The alignment of the shore will not be altered by the development and rehabilitation of the foreshore is likely to improve its environmental amenity over that which currently exists.

The natural shoreline to the east of the development site will not be disturbed by the proposal.

9.3 Little rubbish collects along the shoreline at present and the channel is not expected to create a "rubbish trap".

The Proponent is committed to maintaining the channel free of debris.

10.0 Long Term Management Responsibility

10.1 Dredging

- 10.1.1** The channel will be excavated through natural limestone bedrock and therefore it is unlikely that there will be a requirement for any maintenance dredging. The slope on the channel floor and use of the channel by a large motor yacht will tend to prevent the ingress of sediments from the river.

The Proponent will be responsible for long term management and maintenance of the channel.

- 10.1.2** The CER has addressed the overall and cumulative impacts of the development. Section 4.4.3 of the CER compares the proposed development with other dredging proposals whilst Section 4.2 discusses impacts on the Swan River.

10.2 Swing Bridge

- 10.2.1** The Proponent will be responsible for the maintenance of the swing bridge.

10.3 Water Quality Within Boat Pen

- 10.3.1** Installation of, for example, a pump to circulate water within the channel and boathousing was proposed to ensure that water quality did not deteriorate in the first instance rather than as a means of removing water once quality had deteriorated. Such a measure will only be implemented if it is required.

Regular use of the channel and boathousing by a vessel is expected to result in adequate water circulation.

11.0 Demonstrated Need for Proposal

- 11.1** The Proponent has committed to supplying detailed engineering design, including appropriate batter slopes, edge treatments, swing bridge design etc. to the relevant authorities for approval prior to construction commencing.
- 11.2** The need for the proposal is demonstrated in the Proponent's primary objective to develop a boathousing that is accessible from the property.
- 11.3** The Proponent does not consider that the foreshore will be "abused" as a result of the proposal. A 22.25 m long vessel is not precluded from using the Swan River.
- 11.4** Agreed, which was why it was not considered in any detail.

12.0 Impact on Aboriginal Land Claim

- 12.1** If required, discussions will be held with all relevant parties following resolution of the land claim.

Appendix 3

List of submitters

State and local Government agencies

Swan River Trust
Fisheries Department
Town of Mosman Park
Department of Transport
Department of Planning and Urban Development

Members of the public

Waterbird Conservation Group Inc.
Mosman Park Ratepayers Association
Wetlands Conservation Society (Inc.)
Australian Anglers Association
Conservation Council
WA Recreational and Sports Fishing Council Inc.
Foreshores and Waterways Protection Council
Swan Canoe Club

Hatchett, R
Chambers, F
Herlihy, A
Donaldson, J W
Williams, G, Brophy L and Brophy-Williams, S and N
Tremain, G
Mort, C
Mort, J M
Lawford, E
Allen, G
Cooper, G H and E T
Prince, G
Mathews, M
Glover, P
Oldham, J
Bamford, W H
Burke, M
Burke, J
Dunnet, D and MacNish, R
Fabris, F
Edmunds, D C
Hurley, B S
Smitheringale, L M
Greenway, E
Dillon, M
Cecil, R
Matheson, H
Camm, R P and M M
Eyres, M
Sim, H
Cruthers, J and S
Gordon, W H and D L
Adair, M
Milton, D, D, K, J, N and B
Craig, M M
Hudson - Ansell, M P
Evans, M
Greenway, E C

Camm, R
Moyle, E
Cummins, A
Hughes, P and S
Murray, A
Padman, K
Winfield, N
Rutter, D R and Y
Porter, G
Bourne, C H
Hine, A
Dallimore, K J
Smith, J
Humphry, V
Bongers, M
Yaluritja, C L
Braid, A J
Jenner, K
Prince, J A S
Coll, J S
Malta, K
Stannard, R
Downing, A J
Davis, K M G and V J
Carpenter, C P and V A
Nockolds, K
Robinson, M C
Ellicott, C
Parr, E and T
Hodder, E J
MacMahon, P
Clapin, G
Fernir, E
Henderson, P J and G K
Ellis, E (et al)
Walters, B L and J R
Chapple, P
Chapple, T
Boothman, J
Byrne, D and W
Levitzke, L G and J G
Brooke, E
Lefroy, J
Simpson, B M and K
Daniels, J J
Lidstone, C B
Ley, K M
Martin, J
Cleland, R
Bailey, E E
Bailey, Y K
Stannard, M
Warren, T
Kemp, B
Pope F R and C E
Collins, P B and J N

Hughes, W H
Turnbull, T and W
Vincent, W
Newstead, M E
Smith, M
Kegie, N and K A
Taylor, M
Megaw, H
Quinlivan, P H
O'Hara, K M
Talbot, J
Beckley, L and D E
Giding, P
McGlashan, R
More, M and V
Kennedy, C E
Joyce, D A and P A
Nicholson, C
Walter, J F
O'Reilly, J O
Dodds, A
O'Mara, M
Jansen, J W and Kerr, D C
Smith, T A
George, M
George, H
McLean, J B and W
Bunning, H
Marshall, L M and B M
Plecas, J P
McNamara, P
Evans, B
Millican, S and A
Jacobs, T H and W H
Stott, K
Glover, J L
Rosenthal, R E and K G
Reece, D and K
McDowell, J
Stevenson, G and J
Willis, G and T
Canaway, E
Driscoll, R and A
Hume, B
Morris, M
Clowes, G M
Noakes, K
Heal, P M and R
Utting, M
Atkinson, R M
Atkinson, V C
Berry, M
Bamford, J R
Utting, E P
Paine, R
Megan, H

Bignell, J and Perkins, D
Price, J A S
Edwards, N M and R
Bell, D G and G E
Hudson, P and J
Crawford, H W and J
Davis, W
Snowball, K et al.
Carroll, I M
Bartlett, L H

Appendix 4

Proponents commitments

The following commitments are made to ensure that this proposal proceeds in an environmentally acceptable manner. Those commitments flagged by an asterisk (*) have been identified as requiring specific auditing by the EPA.

Proponent's Commitments

The following commitments are made by the proponent to address the potential environmental impacts of the proposed channel construction.

The commitments describe the issue to be addressed, the phase of the project during which it will be addressed and how it will be resolved.

The project has been split into three phases; a preconstruction phase, a construction phase and a post construction phase.

Preconstruction

1. Design of the channel and surrounds will be finalised. This will include the addressing of appropriate batter slopes and edge treatments, the design of the swing bridge, and landscaping. The design will be to the satisfaction of the Swan River Trust.
2. The site for the disposal of dredge spoil will be finalised and all necessary approvals obtained to the satisfaction of the Department of Environmental Protection.

During Construction

3. A geotextile curtain will be installed around the excavation to minimise the transmission of particulates. The curtain will remain in place until water clarity within the curtain approximates water clarity outside the curtain. This will be to the satisfaction of the Swan River Trust.
4. Noise and hours of operation will be consistent with Town of Mosman Park regulations and the relevant Noise Abatement Act to the satisfaction of the Department of Environmental Protection.
5. The proponent, or the approved subcontractor, will be liable for any vibration damage to adjacent private property as a result of construction activity.
6. All dredge spoil will be removed from the site to the satisfaction of the Department of Environmental Protection and the Swan River Trust.

Post Construction

7. Landscaping of the development site, consistent with 1. above, will be implemented to the satisfaction of the Swan River Trust.
8. Visual inspection of water quality within the channel will be undertaken regularly and remedial action will be taken if quality decreases. This will be to the satisfaction of the Swan River Trust.
9. The swing bridge walkway will be maintained in working order to the satisfaction of the Swan River Trust.
10. Tributyl tin antifoul will not be used on the vessel.

Appendix 5

Swan River Trust Conservation and Landscape Protection Policy (EA1)

EA 1 Conservation, environmental and landscape protection

Preamble

Much of the river's native foreshore vegetation and fringing wetlands have been destroyed. The Swan River Trust recognises the importance of fringing vegetation in providing food and shelter for wildlife, in stabilising the banks and foreshores of the river and as a nutrient filter.

The Trust also recognises the importance of the tidal flats and shallow banks in supporting the diverse fish and invertebrate fauna on which the continued viability of the commercial and recreational fisheries depend.

Under international agreements Australia is bound to protect the habitat of the migratory waterbirds which feed on the tidal flats and adjoining salt marshes.

The Trust has endorsed the System 6 recommendations which affect the Swan River Trust Management Area but is aware that there are areas not covered by these recommendations which should be protected.

The Trust will make use of a number of planning controls and strategies to protect and enhance the variety of landscapes, natural and modified, which provide a visually attractive backdrop to the river and maintain a soft edge between the developing urban environment and the river.

In particular, the Trust recognises the importance of

- remnant foreshore vegetation
- places of scientific or historic interest
- functioning and remnant wetland ecosystems
- natural cliffs, steep escarpments and natural contours
- special and significant views to and from the river
- restoration of degraded areas

Policy

- EA 1.1 The Trust will protect and maintain a functional healthy river environment by controlling the level of its modification.
- EA 1.2 There will be a presumption against development which may degrade shallow flats, foreshore fringing vegetation or wetlands, either directly or indirectly.
- EA 1.3 The Trust will give a high priority to the maintenance and restoration of natural vegetation when considering development applications and actively encourage the retention and reinforcement of existing native vegetation.
- EA 1.4 The Trust will support land use controls to protect the river environment, including:
- reservation and acquisition of land for foreshore reserves, especially at a regional level;
 - defining areas for reservation, environmental and landscape protection in local government authority town planning schemes and the Metropolitan Region Scheme;
 - voluntary agreements with private landowners;

- landscape management plans prepared by local government authorities, private developers and local advisory groups or required as a condition of development approval;
- development and subdivision control; and
- vegetation protection orders.

EA 1.5 The Trust will encourage the provision of planned and appropriate public access and enhancement of the landscape.

EA 1.6 The Trust will not support developments which visually obtrude into the river landscape.