

**Industrial subdivision – Lot 502 North Lake,
Sudlow and Phoenix roads, Bibra Lake**

Western Australian Land Authority trading as LandCorp

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

**Environmental Protection Authority
Perth, Western Australia
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1. Introduction

This report provides the advice and recommendations of the Environmental Protection Authority (EPA) to the Minister for the Environment on the environmental factors relevant to the proposal to subdivide Lot 502 North Lake, Sudlow and Phoenix Roads, Bibra Lake, for industrial and mixed business purposes. The proponent for the proposal is the Western Australian Land Authority trading as LandCorp (LandCorp).

The proposal was submitted to the Department of Environmental Protection (DEP) as a subdivision application by the Western Australian Planning Commission in May 2000. It was subsequently referred by the DEP to the EPA for consideration under Part IV of the *Environmental Protection Act 1986*.

The EPA set the level of assessment at EPA-initiated Environmental Protection Statement in accordance with the *Environmental Impact Assessment Administrative Procedures Amendment 1999*. This level of assessment was decided upon by the EPA following discussion with the proponent and the submission of the proponent's commitments which the EPA recommends be adopted by the Minister as legally binding environmental conditions.

2. The proposal

The proposal is for the subdivision of approximately 89 hectares of land being Lot 502 bound by North Lake, Phoenix and Sudlow Roads and a rail reserve. The subdivision proposes approximately 190 lots for general industrial and mixed business use, and sets aside land for open space and road purposes. The subdivision layout is shown at Figure 1.

The site is immediately to the west of South Lake. South Lake is part of Beeliar Regional Park and Bushplan Site No. 254, and is subject to the provisions of the Environmental Protection (Swan Coastal Plain Lakes) Policy. The site contains extensive areas of remnant vegetation and is partly affected by waste products of the Amcor paper mill.

The site is zoned Industrial under the Metropolitan Region Scheme and General Industry under the City of Cockburn District Zoning Scheme.

The proponent has described the proposal, the management of environmental issues and a table of the proponent's commitments, and provides a list of key stakeholders consulted and environmental studies undertaken, in an Environmental Protection Statement (LandCorp 2000).

Consultation included interactive meetings and site meetings with conservation and Aboriginal representatives. The key environmental issues raised were protection of an adequate buffer to South Lake, rehabilitation of the buffer, and protection of landscape values and fauna. These issues have been addressed in the commitments made by LandCorp.

In summary, the commitments are as follows:

- to provide a buffer to South Lake as shown on Figure 2, with a minimum width of 150 metres from the high water mark;
- to protect vegetation within the buffer during construction, and to rehabilitate the buffer;
- to prepare and implement a site contamination management plan;
- to prepare and implement a management plan to minimise adverse impacts on fauna;
- to prepare and implement a landscape protection and management plan; and
- to ensure the development area drains away from South Lake and the designated buffer areas.

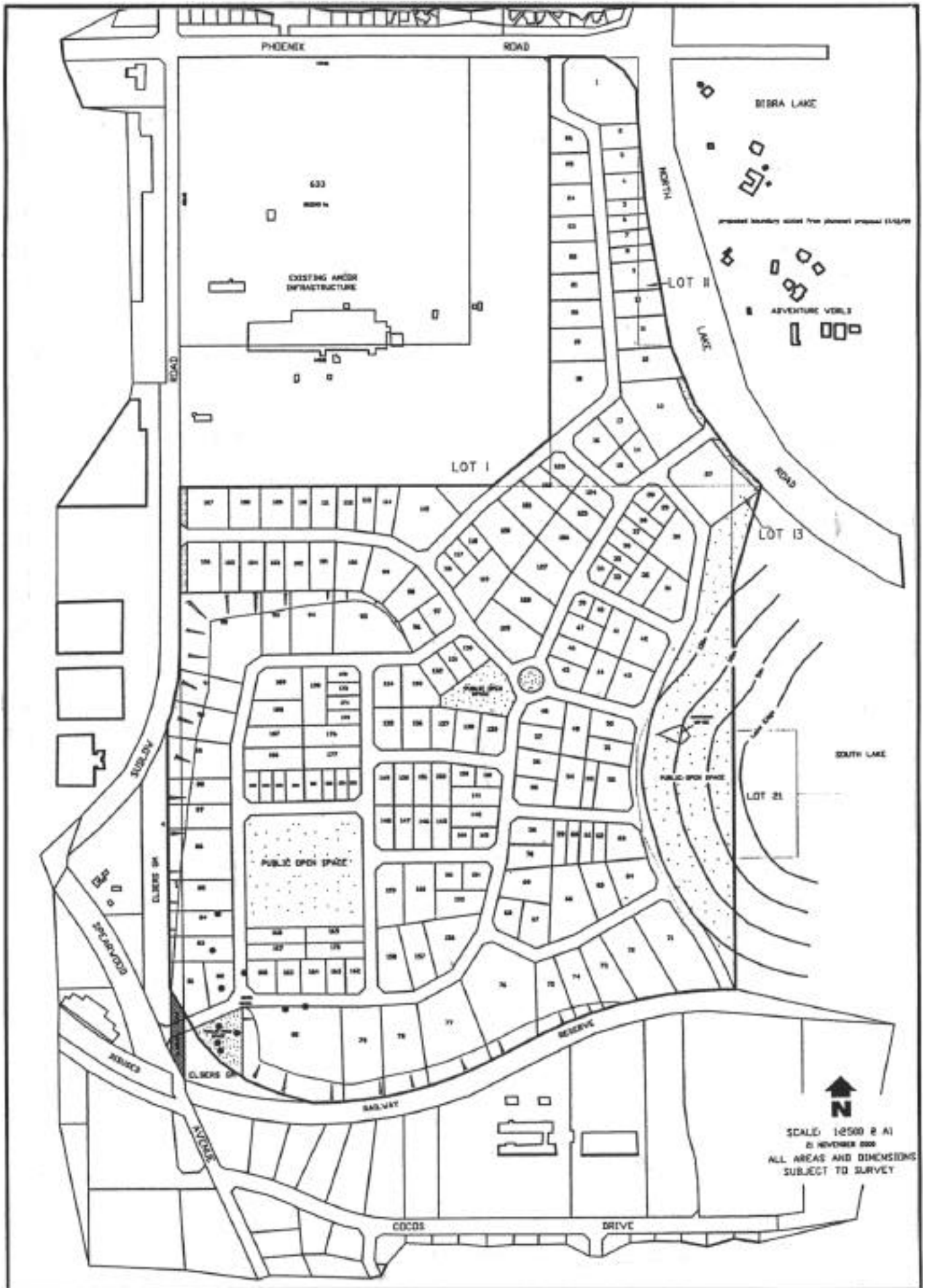


Figure 1. Plan of subdivision.

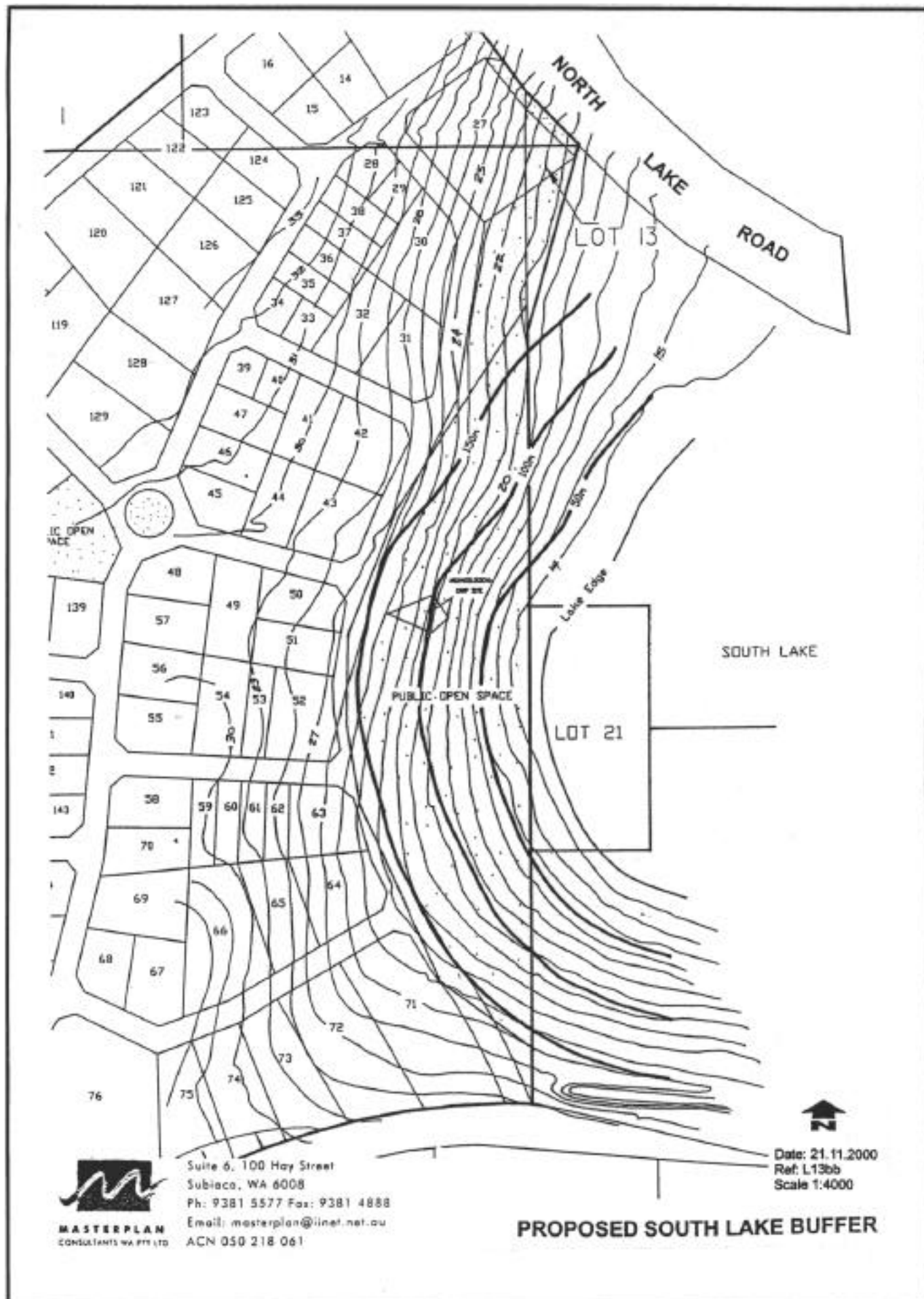


Figure 2. Proposed South Lake buffer.

3. Relevant environmental factors

It is the EPA's opinion that the following are the environmental factors relevant to the proposal:

- (a) protection of South Lake and wetland buffer;
- (b) protection of landscape values;
- (c) fauna;
- (d) site contamination; and
- (e) drainage management.

3.1 Protection of South Lake and wetland buffer

The cadastral boundary of the land proposed for subdivision is located almost immediately adjacent to the western edge of South Lake. South Lake is part of Beeliar Regional Park and Bushplan Site No. 254, and is subject to the provisions of the Environmental Protection (Swan Coastal Plain Lakes) Policy. There is an extremely narrow reserve on the west side of the lake. However, the historical uses of the land adjacent to the lake have not been intensive. Subsequently, a reasonable vegetated buffer exists on the north-western side of the lake. The original vegetation to the south-west of the lake has however been historically cleared resulting in a substantially degraded buffer in this area. The site contains a significant area of bushland which belongs to the Karrakatta Complex – Central and South. While degraded in areas, much of the bushland is in good to very good condition (Weston, 2000). While nominated for inclusion in Perth's Bushplan by the City of Cockburn in 1999, the site has not been considered suitable for inclusion. Surveys undertaken for rare flora, including a recent spring survey (Weston, 2000), have failed to identify any rare or priority flora present within the bushland on the site.

The original subdivision proposal submitted as part of the referral documentation provided a development setback of 50 metres from the edge of the wetland when measured from the high water level of the lake. This was considered inadequate by the DEP as it did not meet the EPA's guidelines for the provision of wetland buffers and was considered unlikely to provide and adequate setback for the protection of ecological and hydrological processes associated with South Lake. As a result of concerns raised by the DEP and key stakeholders, LandCorp has agreed to modify its subdivision design to provide a significantly larger development setback to the lake. This setback is shown in Figure 2 and provides an overall buffer in the vicinity of 150 metres from the lake when measured from the high water mark. This buffer allows the protection of the main wetland dependent vegetation and a substantial area of upland vegetation in the north-western portion of the buffer. While the south-western area of the buffer is heavily degraded, the proponent has committed to the rehabilitation and revegetation of degraded areas using endemic species. Additionally, LandCorp has agreed to the vesting of the wetland buffer area with the appropriate management agency as an extension of the South Lake reserve.

Taking into account the modification to the proposal to increase the width of the buffer and the proponent's commitments associated with the rehabilitation and management of the buffer, the EPA considers that the proposal will meet the EPA's objective for protection of South Lake and the wetland buffer.

3.2 Protection of landscape values

The site of the proposed subdivision is located immediately upgradient of the western side of South Lake and provides an important landscape "backdrop" to the lake and Beeliar Regional Park, particularly when viewed from the east. The subdivision development has the potential to diminish the landscape values of the area given its location and scale. In response to concerns raised in relation to this issue, the proponent has undertaken to manage development and building heights and retain remnant vegetation along with the provision of landscape screening and planting along the eastern boundary of the development. This will include some filling within the denuded south-western area of the wetland buffer to provide screening. Viewshed

analysis undertaken for LandCorp indicates that this approach should retain the landscape values of South Lake, with development on the site only being partially visible from the east.

The EPA considers that subject to the preparation and implementation of a detailed management plan for landscape protection, that landscape impacts from the proposal are manageable.

3.3 Fauna

The bushland on the site and its proximity to South Lake provide the likelihood that the site has significance for fauna. Following a request by the DEP, the proponent commissioned a survey of the fauna of the site to document the likely fauna assemblages on the site and their conservation status, identify habitat and to examine options for the minimisation of impacts of the proposed development on fauna (Bamford, 2000). This work found that the site does support a range of fauna and provides a habitat continuum from the wetland to upland vegetation communities. Several species found on the site or likely to be present were considered to be of local conservation significance, although no protected species or fauna of national conservation significance were found (Bamford, 2000). The survey concluded that the development of the site would be likely to adversely affect many of the species present. However, impacts could be minimised through the retention of a wide buffer to the wetland, protection of upland vegetation within the buffer and the estate generally, the rehabilitation of the wetland buffer using endemic species and in a manner which enhances fauna habitat, staging of development and the use of native species in landscaping within the estate. Landcorp has committed to the preparation of a more detailed management plan for the protection of fauna prior to the commencement of subdivisional works to the satisfaction of the DEP and the Department of Conservation and Land Management (CALM).

Taking into account the proponent's commitments, it is the EPA's opinion that the proposal can be managed to achieve an environmentally acceptable outcome.

3.4 Site contamination

The current and historical use of the site for paper manufacturing has resulted in some site contamination. This contamination appears to be confined to areas of the site used for landfill and wastewater ponds. A site contamination assessment has been undertaken on behalf of Landcorp, which has been reviewed by the DEP. The contamination present is considered manageable and the proponent has committed to the preparation of a site contamination management plan to the satisfaction of the DEP prior to the development of areas of the site subject to contamination.

Taking into account the proponent's commitments, it is the EPA's opinion that the proposal can be managed to meet the EPA's environmental objective for this factor.

3.5 Drainage management

Given the proximity of the site to South Lake, Landcorp was requested to address the management of drainage from the estate to ensure that water quality within the lake is not reduced. While groundwater flow is westerly and away from the lake, surface run-off needs to be managed to ensure that it is directed away from the lake. Landcorp has committed to ensuring that the design of the drainage system and development levels within the subdivision will prevent any drainage water entering South Lake.

Taking into account the proponent's commitments, it is the EPA's opinion that the proposal can be managed to meet the EPA's environmental objective for this factor.

4. Conclusions

The EPA has concluded that the industrial subdivision proposal is capable of being implemented in an environmentally acceptable manner such that it is most unlikely that the EPA's objectives would be compromised, provided there is satisfactory implementation by the proponent of its commitments.

5. Recommendations

The EPA considers that the proponent has demonstrated, by its commitments, that the proposal can be managed in an environmentally acceptable manner and provides the following recommendations to the Minister for the Environment.

1. That the Minister notes that this report follows a decision by the EPA to set a level of assessment as EPA-initiated Environmental Protection Statement because:
 - the proponent's commitments in relation to the environmental factors identified needed to be made legally binding through the environmental conditions set in accordance with Part IV of the *Environmental Protection Act 1986*; and
 - the proposal is not of the magnitude to warrant full environmental impact assessment under Part IV of the *Environmental Protection Act 1986*.
2. That the Minister notes that during the course of the EPA's consideration of the proposal, the DEP on behalf of the EPA and the proponent consulted a range of stakeholders including conservation interests;
3. That the Minister considers the report on the relevant environmental factors as set out in Section 3;
4. That the Minister notes that the EPA has concluded that it is unlikely that the EPA's objectives would be compromised, provided there is satisfactory implementation by the proponent of the recommended conditions and proponent commitments as set out in Appendix 2;
5. That the Minister imposes the conditions recommended in Appendix 2 of this report.

Appendix 1

References

Bamford, M.J. & A.R. (2000) *The Vertebrate Fauna of the Amcor Bushland, Cockburn* Report prepared for Landcorp, M.J. & A.R Bamford, Kingsley Western Australia.

LandCorp (2000) *Bibra Lake Industrial Estate Environmental Protection Statement Consolidated Document Table of Proponent Commitments and Appendices* LandCorp, Perth Western Australia.

Weston, A.S. (2000) *Spring Rare Flora Search Landcorp Property West of Bibra Lake City of Cockburn* Draft Report Prepared for Landcorp, Dr A.S. Weston, St James Western Australia.

Appendix 2

Recommended Environmental Conditions and Proponent's Consolidated Commitments

**STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED
(PURSUANT TO THE PROVISIONS OF THE
ENVIRONMENTAL PROTECTION ACT 1986)**

INDUSTRIAL SUBDIVISION LOT 502 NORTH LAKE, SUDLOW AND PHOENIX
ROADS, BIBRA LAKE

Proposal: The proposal is to subdivide approximately 89 hectares of land being Lot 502 bound by North Lake, Phoenix and Sudlow Roads and a rail reserve, as documented in schedule 1 of this statement.

Proponent: Western Australian Land Authority trading as LandCorp

Proponent Address: Level 3 Wesfarmers House, 40 The Esplanade, Perth, Western Australia 6000

Assessment Number: 1361

Report of the Environmental Protection Authority: Bulletin 999

The proposal to which the above report of the Environmental Protection Authority relates may be implemented subject to the following conditions and procedures:

1 Implementation

- 1-1 Subject to these conditions and procedures, the proponent shall implement the proposal as documented in schedule 1 of this statement.
- 1-2 Where the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment determines, on advice of the Environmental Protection Authority, is substantial, the proponent shall refer the matter to the Environmental Protection Authority.
- 1-3 Where the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment determines, on advice of the Environmental Protection Authority, is not substantial, those changes may be effected.

2 Proponent Commitments

- 2-1 The proponent shall implement the consolidated environmental management commitments documented in schedule 2 of this statement.
- 2-2 The proponent shall implement subsequent environmental management commitments which the proponent makes as part of the fulfilment of conditions and procedures in this statement.

3 Proponent

- 3-1 The proponent for the time being nominated by the Minister for the Environment under section 38(6) or (7) of the Environmental Protection Act 1986 is responsible for the implementation of the proposal until such time as the Minister for the Environment has exercised the Minister's power under section 38(7) of the Act to revoke the nomination of that proponent and nominate another person in respect of the proposal.
- 3-2 Any request for the exercise of that power of the Minister referred to in condition 3-1 shall be accompanied by a copy of this statement endorsed with an undertaking by the proposed replacement proponent to carry out the proposal in accordance with the conditions and procedures set out in the statement.
- 3-3 The proponent shall notify the Department of Environmental Protection of any change of proponent contact name and address within 30 days of such change.

4 Commencement

- 4-1 The proponent shall provide evidence to the Minister for the Environment within five years of the date of this statement that the proposal has been substantially commenced.
- 4-2 Where the proposal has not been substantially commenced within five years of the date of this statement, the approval to implement the proposal as granted in this statement shall lapse and be void. The Minister for the Environment will determine any question as to whether the proposal has been substantially commenced.
- 4-3 The proponent shall make application to the Minister for the Environment for any extension of approval for the substantial commencement of the proposal beyond five years from the date of this statement at least six months prior to the expiration of the five year period referred to in conditions 4-1 and 4-2.
- 4-4 Where the proponent demonstrates to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority that the environmental parameters of the proposal have not changed significantly, then the Minister may grant an extension not exceeding five years for the substantial commencement of the proposal.

5 Compliance Auditing

- 5-1 The proponent shall submit periodic Compliance Reports, in accordance with an audit program prepared in consultation between the proponent and the Department of Environmental Protection.
- 5-2 Unless otherwise specified, the Chief Executive Officer of the Department of Environmental Protection is responsible for assessing compliance with the conditions, procedures and commitments contained in this statement and for issuing formal, written advice that the requirements have been met.
- 5-3 Where compliance with any condition, procedure or commitment is in dispute, the matter will be determined by the Minister for the Environment.

Schedule 1

The Proposal

The proposal is to subdivide approximately 89 hectares of land being Lot 502 of Diagram 99880 certificate of title 2198/216, within the area bound by North Lake, Phoenix and Sudlow Roads and a rail reserve. The subdivision proposes approximately 190 lots for general industrial and mixed business use, and provides for public open space and roads. The subdivision layout is shown in Figure 1.

The land to be set aside for public open space adjoining South Lake is shown in Figure 2.

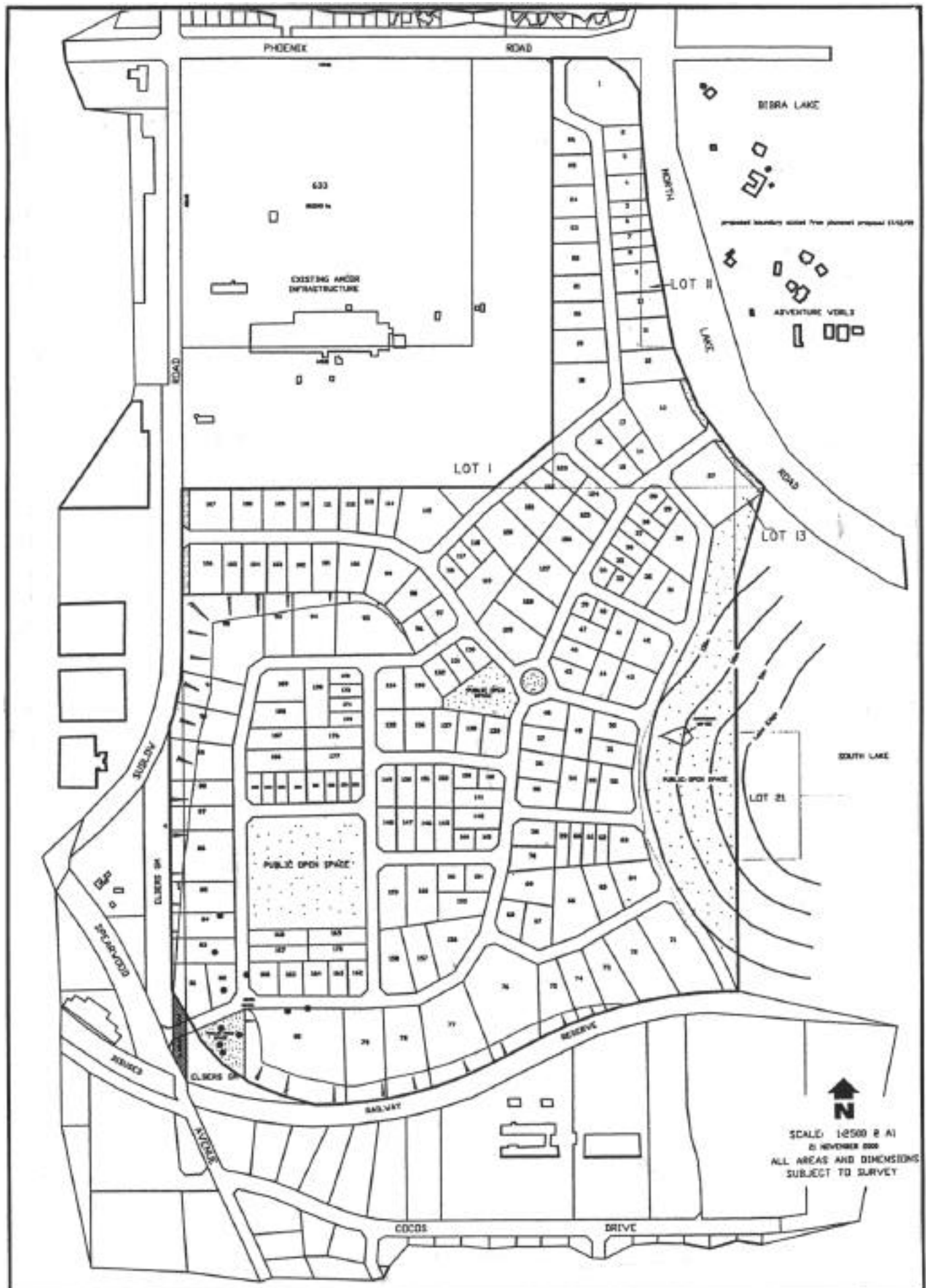


Figure 1. Plan of subdivision.

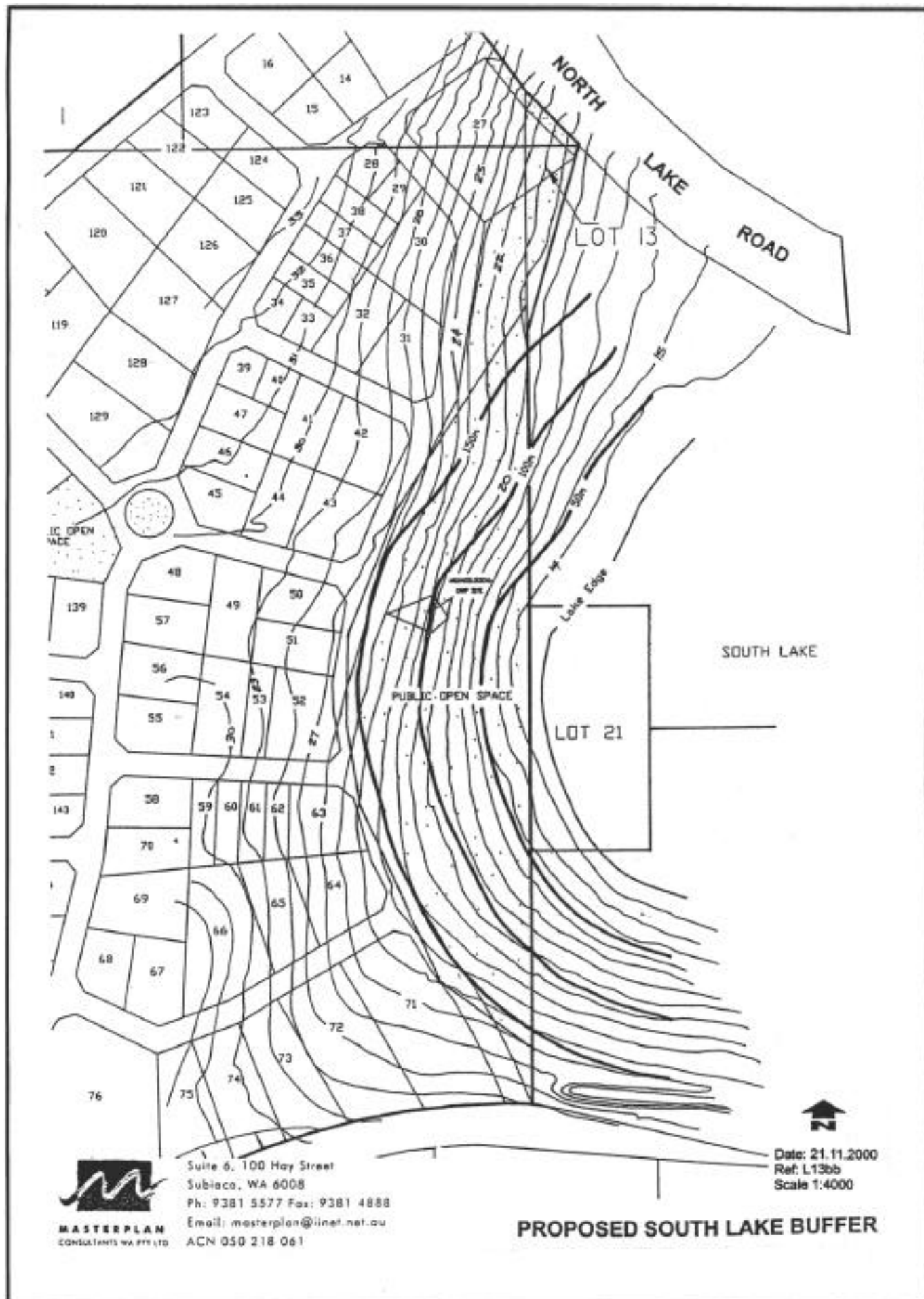


Figure 2. Proposed South Lake buffer.

**Proponent's Consolidated Environmental Management
Commitments**

November 2000

**INDUSTRIAL SUBDIVISION LOT 502 NORTH LAKE,
SUDLOW AND PHOENIX ROADS, BIBRA LAKE**

Western Australian Land Authority trading as LandCorp

Consolidated Environmental Management Commitments: Industrial subdivision Lot 502 North Lake, Sudlow and Phoenix Roads, Bibra Lake
The proponent undertakes to fulfil the following commitments to manage environmental impacts associated with the proposal:

No.	Topic	Action (What/How/Where)	Objectives (Why)	Timing	Advice
1	Buffer To South Lake	Provide a buffer of at least 150 metres from the western boundary of South Lake within the subdivision plan. The extent of the buffer is indicated on Figure 2 in schedule 1.	To achieve protection of South Lake from the impacts of development and to allow for the rehabilitation of the buffer to provide habitat adjacent to the wetland.	At time of subdivision approval.	DEP
2	Buffer To South Lake	Management of works to protect vegetation within the buffer including vegetation close to the road edge.	To achieve protection of South Lake from the impacts of development and to allow for the protection of the buffer to provide a habitat adjacent to the wetland.	During subdivision works/ground disturbing activity.	DEP
3	Buffer To South Lake	The buffer is to be vested with a suitable management body to the satisfaction of the EPA as an extension to existing South Lake Reserve.	To ensure the ongoing coordination, management and protection of the South Lake Reserve including the newly created buffer to South Lake.	Initiate vesting upon the creation of separate titles for the subdivided land.	DEP
4.1	Rehabilitation Of Buffer	Prepare rehabilitation / revegetation plan for the buffer utilising endemic species and topsoils.	To rejuvenate the wetland habitat to the west of South Lake and provide a habitat for species impacted upon by the development of the balance of the land.	Prior to commencement of ground disturbing works.	DEP, CALM
4.2	Rehabilitation Of Buffer	Implement rehabilitation / revegetation plan.	To rejuvenate the wetland habitat to the west of South Lake and provide a habitat for species impacted upon by the development of the balance of the land.	Rehabilitation works to commence with the first stage of subdivision.	DEP, CALM
5.1	Site Contamination	Prepare a site contamination management plan in areas subject to contamination specifically the two identified landfill areas and waste water ponding areas.	To ensure site contamination levels do not exceed levels acceptable for industrial development or lead to ongoing groundwater pollution.	Prior to commencement of subdivision or development works.	DEP
5.2	Site Contamination	Implement the site contamination management plan.	To ensure site contamination levels do not exceed levels acceptable for industrial development or lead to ongoing groundwater pollution.	As part of staged subdivision works and prior to the creation of separate titles for the land contaminated.	DEP

6.1	Management of Fauna	Prepare a management plan to minimise adverse impacts on resident fauna through the subdivision process.	Protect fauna in areas to be cleared.	Prior to ground disturbing activities.	DEP, CALM
6.2	Management of Fauna	Implement a management plan to minimise adverse impacts on resident fauna through the subdivision process.	Protect fauna in areas to be cleared.	Implement throughout the life of the subdivisional program.	DEP, CALM
7.1	Landscape Protection	Prepare a landscape protection and management plan.	To protect the landscape amenity of the Beeliar Regional Park and provide a visual buffer to South Lake through the management of development and building levels, and the provision of screening and landscaping to the eastern portion of the site.	Prior to subdivision approval.	DEP, CALM
7.2	Landscape Protection	Implement a landscape protection and management plan.	To protect the landscape amenity of the Beeliar Regional Park and provide a visual buffer to South Lake through the management of development and building levels, and the provision of screening and landscaping to the eastern portion of the site.	Implement throughout the life of the subdivisional program.	DEP, CALM
8.1	Drainage and Protection of South Lake	Design subdivisional final contours to ensure all drainage for the development area drains into drainage systems away from South Lake and the designated buffer areas.	To ensure water quality in South lake is not impacted on by uncontrolled drainage from the industrial area and road systems.	Prior to commencement of site works.	WRC
8.2	Drainage and Protection of South Lake	Construct in accordance with the above design.	To ensure water quality in South lake is not impacted on by uncontrolled drainage from the industrial area and road systems.	During site works.	WRC

Abbreviations:

CALM Department of Conservation and Land Management
DEP Department of Environmental Protection
WRC Water and Rivers Commission