

Herdsman Lake-Glendalough Open Space

State Planning Commission

Report and Recommendations
of the
Environmental Protection Authority

Environmental Protection Authority
Perth, Western Australia
Bulletin 405 July 1989

HERDSMAN LAKE - GLENDALOUGH OPEN SPACE
STATE PLANNING COMMISSION

REPORT AND RECOMMENDATIONS
OF THE
ENVIRONMENTAL PROTECTION AUTHORITY

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The State Planning Commission proposes to develop an area adjacent to Herdsman Lake known as Glendalough Open Space for local open space purposes.

The development concept for Glendalough Open Space consists of two small shallow lakes in a parkland to be filled and landscaped. Development will involve excavation of the lakes, removal of underlying sand, backfilling of the lakes with peat to achieve a finished depth of 1 metre in summer, creation of parkland areas and mounding along Jon Sanders Drive, and planting of the parkland area with native tree species.

The Environmental Protection Authority decided that assessment under Part IV of the Environmental Protection Act, 1986 was required and the level of assessment was set at Notice of Intent with invited input from a number of Government agencies, the City of Stirling and the Conservation Council.

The Notice of Intent has been assessed and the proposal is considered to be environmentally acceptable subject to the following recommendations.

RECOMMENDATION 1

The Environmental Protection Authority has concluded that this project is environmentally acceptable and could proceed subject to the Environmental Protection Authority's Recommendations in this Report and the environmental commitments made by the proponent in the Notice of Intent (consolidated in Appendix A of this Report).

RECOMMENDATION 2

The Environmental Protection Authority recommends that the State Planning Commission, on advice from the Royal Australian Ornithological Union, provide habitats suitable for dryland birds in the parkland areas.

RECOMMENDATION 3

The Environmental Protection Authority recommends that the State Planning Commission, in consultation with the Environmental Protection Authority, ensures that all fill imported to the site is uncontaminated.

1. INTRODUCTION

A concept plan for development of Herdsman Lake was approved in 1976 by the then Metropolitan Region Planning Authority and endorsed by a number of interested bodies including the Environmental Protection Authority. The area known as Glendalough Open Space was intended to be developed as part of the north east sector of Herdsman Lake (Herdsman Park Estate) which was assessed by the Environmental Protection Authority in 1982. However, development did not proceed due to difficulty in gaining support from affected landholders.

Improvement Plan No 21 was gazetted in 1986 to formalise the Herdsman Lake Concept Plan and coordinate planning, development and land use (see Figure 1). A principal objective of the Improvement Plan was the completion of the development of Glendalough Open Space. Due to the form of development proposed in the Improvement Plan, it was determined in 1986 that development of Glendalough Open Space would require assessment by the Environmental Protection Authority.

The State Planning Commission has prepared and submitted a proposal for development of Glendalough Open Space. The Environmental Protection Authority determined that the level of assessment should be Notice of Intent with invited input from the Water Authority of WA, Department of Conservation and Land Management, City of Stirling and Conservation Council.

2. DESCRIPTION OF THE PROPOSAL

Glendalough Open Space is located adjacent to Herdsman Lake east of Jon Sanders Drive. The eastern portion of Glendalough Open Space, as defined in the Improvement Plan, is not included in the current proposal because of difficulties SPC is having acquiring some of the land (see Figure 2).

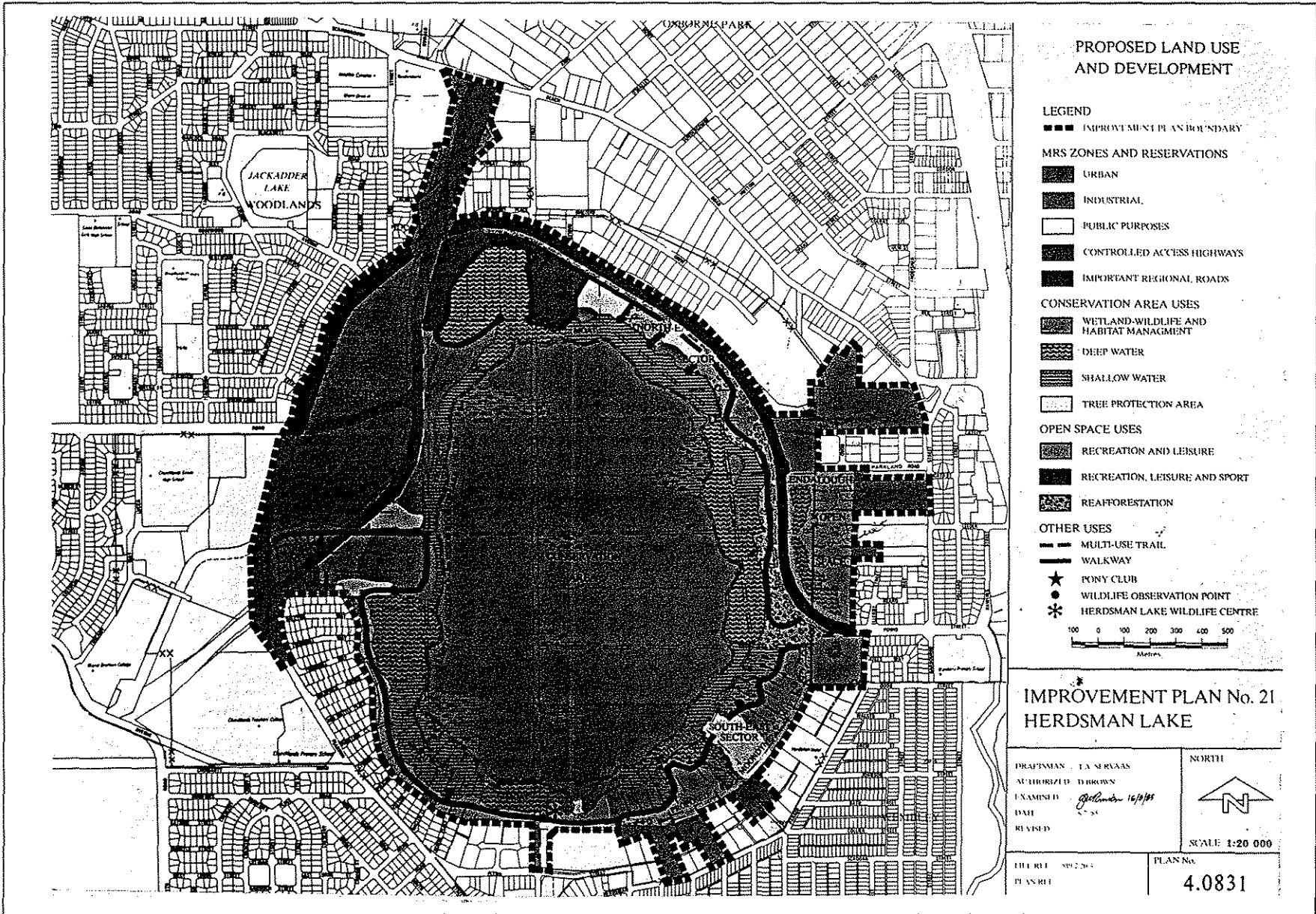
The area is currently a degraded Typha wetland which collects drainage from a small catchment including a section of Harbourne Street and an adjacent block of apartments. The drainage flows through the area via an ill-defined drain before exiting through a piped drain under Jon Sanders Drive into Herdsman Lake.

The development concept for Glendalough Open Space consists of two small shallow lakes (finished lake bed depth to be R.L. 5.4, or 1m deep in summer) in a parkland to be filled and landscaped (see Figure 3). The parkland is to be planted with non-reticulated native species and the whole area is to perform a Local Open Space function.

Development is proposed to involve excavation of the lakes to a depth of R.L. 7.5, excavation of underlying sand, backfilling of the lakes with peat to achieve a finished depth of R.L. 5.4m, creation of parkland areas and mounding along Jon Sanders Drive, and planting of parkland areas with native tree species.

The lakes are expected to play a role in the overall Herdsman Lake Drainage Management Plan when it is implemented by contributing to the containment of pollution events. It is proposed that a piped drain be constructed from the Balgay Drain in Hasler Road to the northern lake and a system of stop log structures will allow the control of flows both between the lakes, and also entering and exiting the lakes.

Figure 1: Herdsman Lake Improvement Plan No. 21



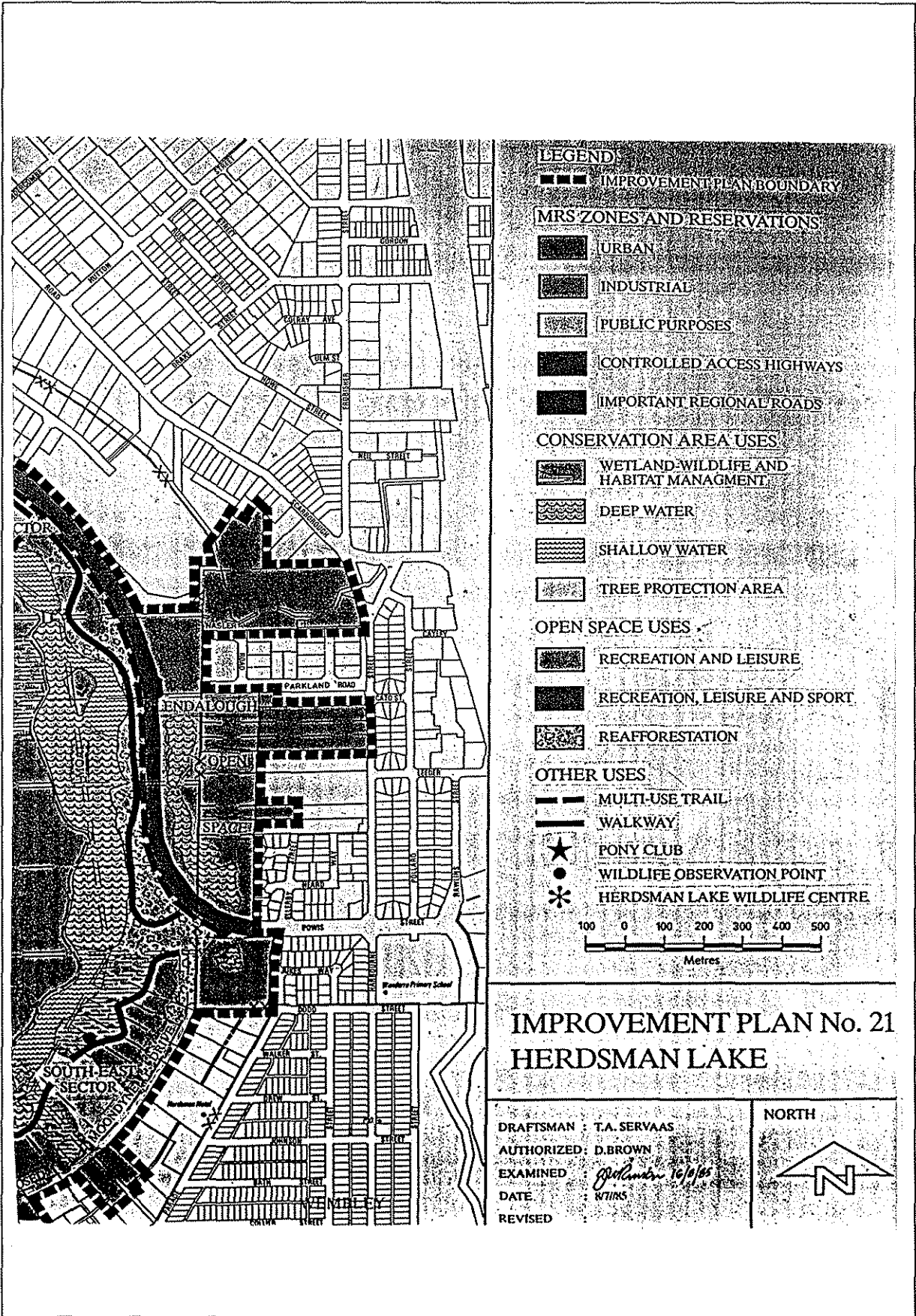
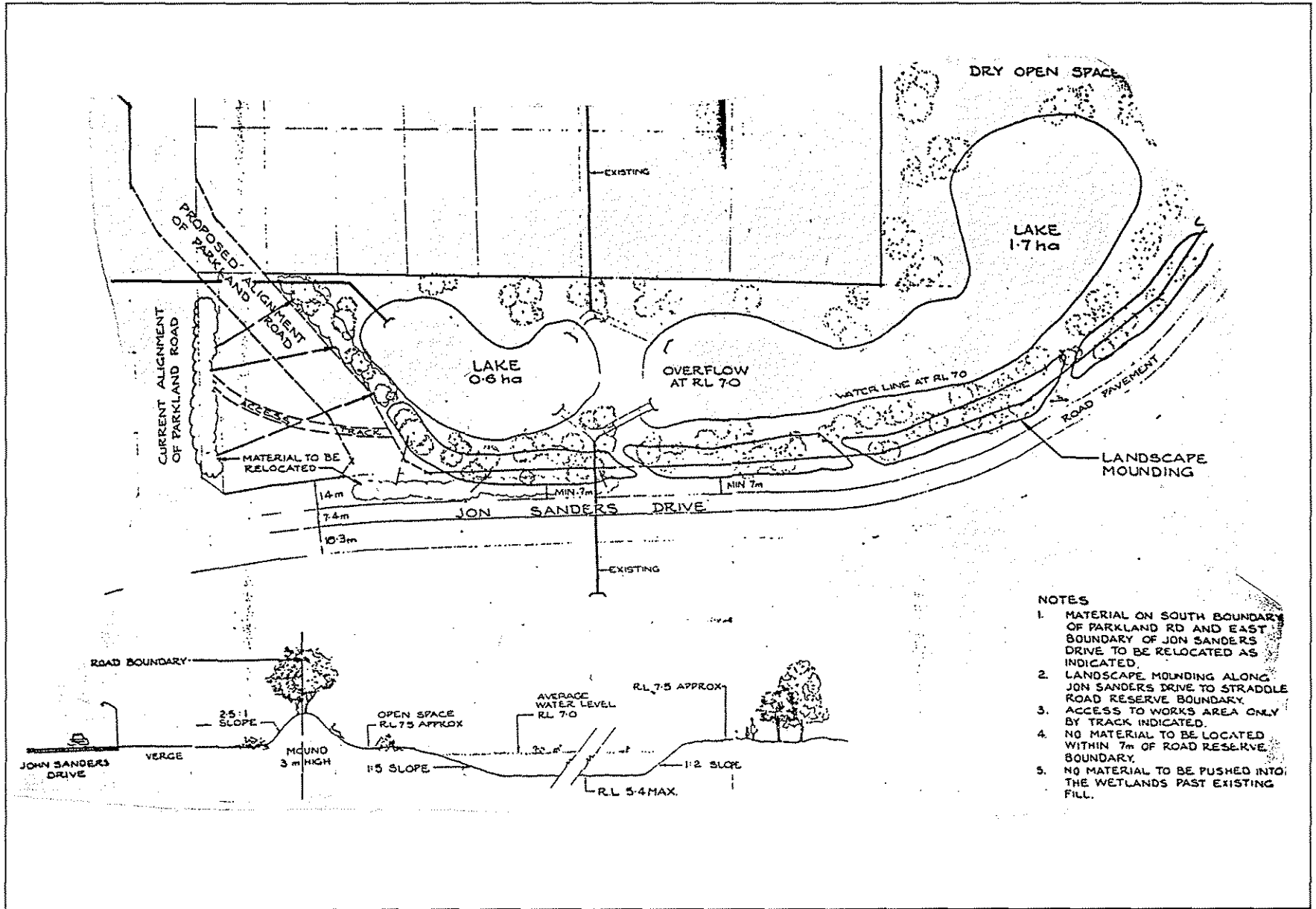


Figure 2: Glendalough Open Space.

Figure 3: Proposed Works.



- NOTES**
1. MATERIAL ON SOUTH BOUNDARY OF PARKLAND RD AND EAST BOUNDARY OF JON SANDERS DRIVE TO BE RELOCATED AS INDICATED.
 2. LANDSCAPE MOUNDING ALONG JON SANDERS DRIVE TO STRADDLE ROAD RESERVE BOUNDARY.
 3. ACCESS TO WORKS AREA ONLY BY TRACK INDICATED.
 4. NO MATERIAL TO BE LOCATED WITHIN 7m OF ROAD RESERVE BOUNDARY.
 5. NO MATERIAL TO BE PUSHED INTO THE WETLANDS PAST EXISTING FILL.

Following a request by the Environmental Protection Authority, the State Planning Commission has provided a "Summary of Commitments" with regard to the development of Glendalough Open Space (see Appendix A), and also further information regarding the acquisition and future land use of the eastern portion of the site.

3. SUBMISSIONS

As the level of assessment was set at Notice of Intent with managed input, the Water Authority of WA, Department of Conservation and Land Management, City of Stirling and Conservation Council were invited to comment on the proposal. While there were no objections to the proposal, issues raised included:

- . acquisition and future land use in the eastern portion of Glendalough Open Space;
- . water quality monitoring programme;
- . future upgrading and/or modification of the drainage works;
- . provision of dryland bird habitats;
- . design and construction of the lakes and landscape areas;
- . maintenance of vegetation;
- . catchment management;
- . Herdsman Lake Drainage Management Plan; and
- . loss of wildlife habitats.

Some of the issues raised in the submissions are planning or detailed design issues and are more appropriately dealt with by the State Planning Commission in liaison with the relevant agencies. To assist in this regard, the Environmental Protection Authority has provided a summary of these issues to the State Planning Commission for appropriate consultation and action.

4. ENVIRONMENTAL IMPACTS

Given the commitments by the proponent, physical impacts during construction such as dust and noise, and other general disturbances to both adjacent residential areas and the local bird population are considered to be acceptable. It is noted that during construction an environmental consultant will be engaged to monitor noise, dust and other local disturbances, and will have full powers to direct contractors, stop works and order remedial actions. Works will be undertaken in accordance with advice from the Royal Australian Ornithologists Union (RAOU) to ensure minimum disruption to the local bird population and habitat.

In addition to the above, development technique and timing should give due regard to the implications of dewatering for surrounding established vegetation.

Biological impacts associated with the proposal are considered to be acceptable. Where appropriate, existing native vegetation should be retained. Also, the Environmental Protection Authority supports the suggestion that advice be sought from the RAOU regarding the provision of dryland bird habitats during the construction and landscaping phases.

RECOMMENDATION 2

The Environmental Protection Authority recommends that the State Planning Commission, on advice from the Royal Australian Ornithological Union, provide habitats suitable for dryland birds in the parkland areas.

It is noted that the proposed lakes will be shallow, with the final depth of the lake bed being R.L. 5.4m, and that the lakes will have a peat bottom. Also, when the State Planning Commission's water quality monitoring programme at Herdsman Lake is resumed, it will be extended to include the proposed lakes.

The State Planning Commission proposes to install a drain diversion and stoplog structures from the Balgay drain in order to contribute to the containment of pollution events and minimise contaminated water entering Herdsman Lake. Given that the Herdsman Lake Water Management Plan is still at the conceptual stage, these drainage management works should be regarded as interim and may require up-grading and/or modification in the future to effectively combine with the overall management plan.

In regard to the import of fill from adjacent lots to be used to create the open space parkland, the Environmental Protection Authority considers that the Commission should require the environmental consultant to undertake appropriate testing to ensure the material is uncontaminated. Detailed site surveys may be required.

RECOMMENDATION 3

The Environmental Protection Authority recommends that the State Planning Commission, in consultation with the Environmental Protection Authority, ensures that all fill imported to the site is uncontaminated.

Future development in the eastern portion of Glendalough Open Space should be consistent with Improvement Plan No. 21, and be continuous with the landscaping described for the current proposal. If, however, this is not the case, future development proposals for the area should be referred to the Environmental Protection Authority for assessment.

5. CONCLUSION

The Environmental Protection Authority has concluded that the environmental impacts associated with the proposed development of Glendalough Open Space are acceptable and manageable.

RECOMMENDATION 1

The Environmental Protection Authority has concluded that this project is environmentally acceptable and could proceed subject to the Environmental Protection Authority's Recommendations in this Report and the environmental commitments made by the proponent in the Notice of Intent (consolidated in Appendix A of this Report).

SUMMARY OF COMMITMENTS

1. IMPROVEMENT PLAN NO 21

- (a) Improvement plan No 21 was brought down in January 1986 to guide the development of the lake for conservation, wildlife management, recreation, drainage, residential, industrial and other appropriate purposes.
- (b) The development of Glendalough Open Space is a primary objective of Improvement Plan No 21.
- (c) Following completion of development at Herdsman all lands are to be amalgamated as a single lot for creation as an "A" Class Crown Reserve vested in the National Park and Nature Conservation Authority (NPNCA) for management by the Department for Conservation and Land Management.

2. PROPOSED DEVELOPMENT

- (a) Excavation of peat for creation of two shallow lakes.
- (b) Excavated peat and additional fill from adjacent lots used to create open space parkland.
- (c) The installation of access pathways, park furniture and limited vehicle parking.
- (d) The planting of native trees indigenous to the area.

3. ENVIRONMENTAL CONSIDERATIONS

- (a) An environmental consultant shall be engaged to monitor noise, dust, and any other local disturbances to residents. He will have full powers to direct contractors, stop works and order remedial actions.
- (b) A sum of \$25,000 has been set aside to rectify problems of an environmental nature should they arise.

4. DRAINAGE

- (a) A drain diversion will be installed from the Balgay Branch Drain to prevent contaminated water entering Herdsman Lake.

5. BIRD HABITAT

- (a) The State Planning Commission shall consult with the Royal Australian Ornithologists Union (RAOU) to ensure minimum disruption to the local bird population and habitat.