

**Metropolitan Region Scheme Amendment No.
932/33 — North-West Corridor
(Alkimos — Eglinton)**

**A submission by the Environmental Protection Authority on the
document released for review by the State Planning
Commission**

**Environmental Protection Authority
Perth, Western Australia
Bulletin 729
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THE PURPOSE OF THIS REPORT

This report contains the Environmental Protection Authority's submission to the review of the Metropolitan Region Scheme Amendment No.932/33 — North-West Corridor (Alkimos — Eglinton), released by the State Planning Commission.

This submission is not a report under Part IV of the Environmental Protection Act, and there are no provisions for appeals against the Authority's views expressed in the submission.

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1. Introduction

The Metropolitan Planning Council, under delegated power from the State Planning Commission has initiated a major amendment (amendment No.932/33) to the Metropolitan Region Scheme for the North-West Corridor (Alkimos — Eglinton) of the Metropolitan Region. The State Planning Commission released the amendment for a three month public submission period which ends on 10 December 1993. The amendment is wholly within the boundaries of the City of Wanneroo and can be seen in Figure 1.

2. Planning context of the site

In November 1987, the Corridor Review Report (called Planning for the Future of the Perth Metropolitan Region), identified, among other areas, the North West Corridor (Alkimos — Eglinton) area for urban development. This was re-enforced through Metroplan (1990) and the Urban Expansion Policy (1990). In 1992 the North-West Corridor Structure Plan (1992) identified areas for future urban and additional Parks and Recreation land in the North-West Corridor. The major amendment will give statutory effect in the Metropolitan Region Scheme to planning proposals for the North-West Corridor proposed in the North-West Corridor Structure Plan.

3. Environmental assessment of planning proposals

In August 1993 the Environmental Protection Authority provided written informal advice to the Department of Planning and Urban Development on the North-West Corridor Structure Plan.

In its advice, the Environmental Protection Authority indicated that it adopted a staged approach in considering the various environmental issues that arose from the North-West Corridor Structure Plan. This staged approach reflects the various planning stages at which the Authority is generally asked by the Department of Planning and Urban Development to provide its advice. The first stage involved providing comments and advice on the North-West Corridor Structure Plan that would form the framework for more detailed consideration of the issues at the other stages.

The second stage will apply during the various amendments to the Metropolitan Region Scheme that will be necessary to implement the Plan. This report, which provides informal comment on the State Planning Commission's Amendment No. 932/33 — North-West Corridor (Alkimos — Eglinton), represents the second stage of environmental assessment.

The final stage will apply to specific developments likely to have significant environmental impacts. Detailed consideration of the environmental issues will be made at the development stage.

Decisions regarding the level of environmental impact assessment of major amendments such as this one to the Metropolitan Region Scheme are based on the merits of the proposals contained in each amendment.

After careful consideration, the Authority determined that the assessment for the North-West Corridor (Alkimos — Eglinton) Major amendment should be at the level of informal review with public advice. This level of assessment was advertised in the "West Australian" newspaper on 11 September 1993.

There were two appeals against this level of assessment. These appeals are currently being determined by the Minister for the Environment, however to meet the submission deadline, outlined by the State Planning Commission, this report is being released at the assessment level of informal review with public advice. If the Minister for the Environment upholds either of the two appeals then the issues raised in this report will need to be assessed at a higher, formal level of assessment.

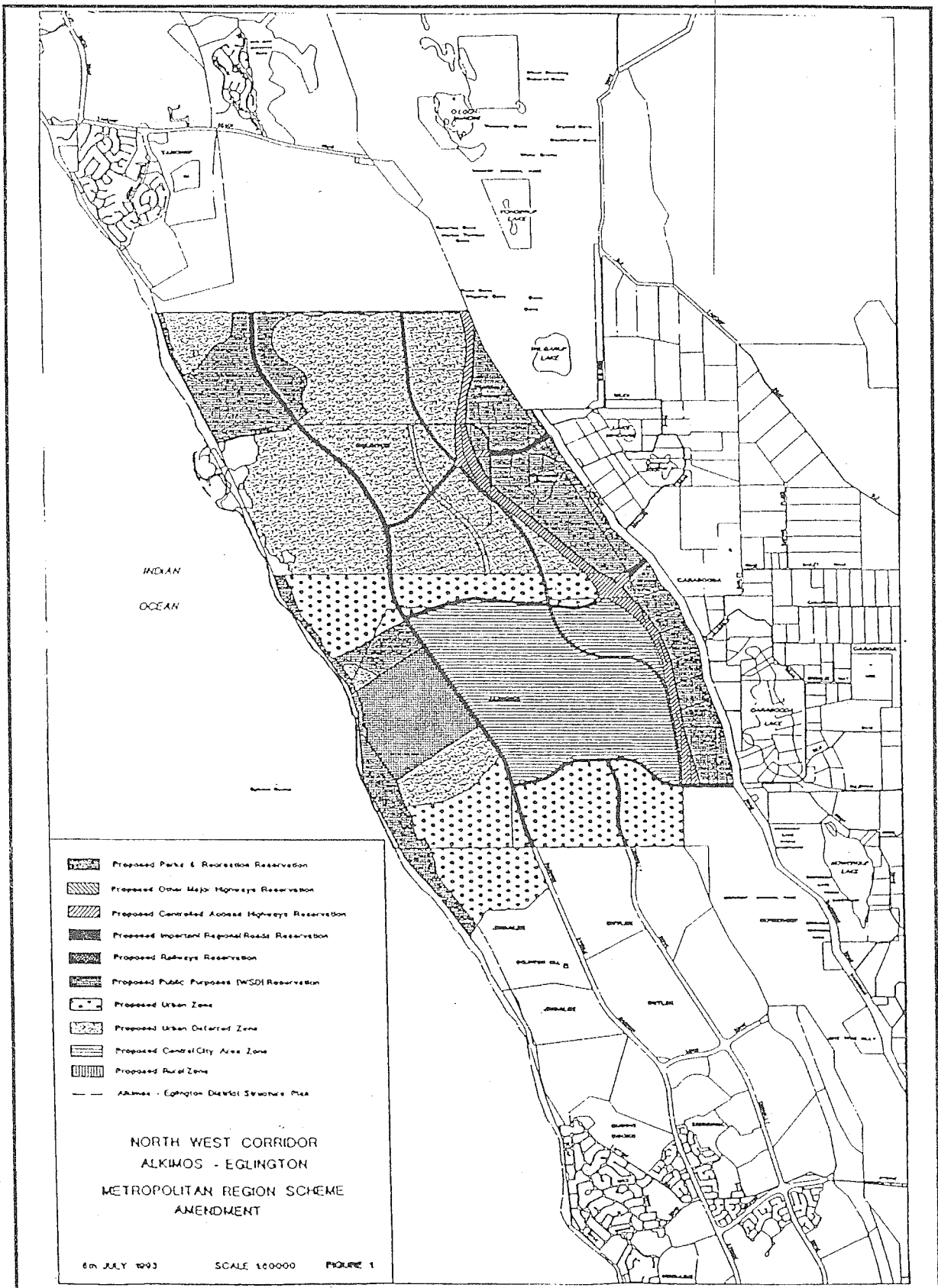


Figure 1: North -West Corridor (Alkimos - Eglinton) Metropolitan Region Scheme Amendment (from State Planning Commission report)

4. Environmental issues and their management

4.1 Overview

The area covered by this amendment is subject to a number of environmental issues, including

- System Six Recommendation Areas M2 (Coastal strip from two rocks to Burns Beach), M3 (Yanchep National Park) and M6 (Neerabup National Park) are either within the site or form part of the boundaries for the site;
- the site contains two lakes protected by the Environmental Protection (Swan Coastal Plain Lakes) Policy 1992, known as Pipidinny and Beonaddy Swamps;
- the Mitchell Freeway alignment presumes a southern extension of the Freeway through Neerabup National Park, the Authority will determine the need for formal environmental impact assessment when the amendment for this section of the freeway is initiated;
- the Eglinton Beach Resort has already been formally assessed by the Environmental Protection Authority and the Minister for the Environment has set conditions on the proposal;
- the proposed Alkimos Waste Water Treatment Plant should incorporate an appropriate buffer around the site, the extent of which will be determined by studies from the Water Authority of Western Australia;
- potential groundwater and marine pollution from urban drainage systems and potential impacts on water balance;
- protection of urban bushland/declared rare flora and fauna;

While these issues are important and pose constraints to development, the Authority has concluded that the land could be developed for residential purposes subject to certain modifications to the proposed amendment.

5. Urban conservation and wetland protection

5.1 Background information: urban conservation

The Environmental Protection Authority considers that an adequate and representative system of reserves should be set aside for the conservation of flora, fauna and landscape. Such reserves should be properly managed and given security of tenure commensurate with their conservation value. The integrity of such reserves should be maintained.

The System Six Report established through the Conservation Through Reserves studies has formed the principle focus for the Authority's conservation efforts on the Swan Coastal Plain.

The North-West Corridor (Alkimos.— Eglinton) Amendment is both directly and indirectly affected by the recommendations contained within the System Six report. Specifically, portions of M2 and M3 are contained within the amendment, and M6 is located on the south eastern boundary of the amendment.

The Environmental Protection Authority recognises that there may be areas of conservation value that have not been included in reserve and System Six boundaries. Proposals which may impact on System Six areas or other areas of conservation value should be referred to the Authority for assessment.

It is recognised that these areas may have significant local conservation value for linkages or buffers and may have social value. These areas are often used and enjoyed by local communities.

The decision to set aside substantial areas for public open space is not without cost. The need to provide space for houses displaced by such actions to other areas where greater conservation values may exist is one such cost. The financial cost associated with acquisition and on-going management of urban bushland to be set aside as open space is another.

The Environmental Protection Authority considers that the planning process provides a decision making framework with the capacity to recognise a community's interest in the preservation of bushland areas which have limited conservation value and also to account for other factors.

In providing this advice, it is not intended to diminish the importance of the issues associated with such areas or to discourage community concerns, but rather to indicate the role of the planning process in making decisions regarding the use of the land.

5.2 Background information: wetland protection

Since 1971, the Environmental Protection Authority has consistently recognised the need to conserve lakes and wetlands and has developed a strategy for wetland protection on the Swan Coastal Plain.

The Environmental Protection Authority discourages proposals which will affect significantly functional lakes and wetlands, that is:

- lakes nominated for protection in the Environmental Protection (Swan Coastal Plain Lakes) Policy;
- representative wetlands recommended for protection in the Authority's System Six report;
- wetlands with rare vegetation communities not adequately represented in reserves, or rare flora and fauna (and their habitats); and
- wetlands recognised by international agreement because of their importance primarily for waterbirds and their habitats.

Any proposals affecting wetlands in the above category will be assessed by the Environmental Protection Authority. Proposals affecting wetlands which do not fall into the above categories will not generally be assessed but it is expected that they will be protected through the planning process.

In July 1993, the Authority released Bulletin 686 "A Guide to Wetland Management in the Perth and Near Perth Swan Coastal Plain Area" (an update of EPA Bulletin 374). This bulletin provides a framework for the identification of management objectives for wetlands to ensure their natural and human-use values are maintained or improved.

Some of the areas subject to the State Planning Commission's North West Corridor (Alkimos — Eglinton) amendment contain wetlands which have previously been classified using the Bulletin 686 wetland classification method. The information used in this report is derived from the wetland 'atlases' prepared by the Water Authority of Western Australia and the Environmental Protection Authority. The preliminary management categories are referred to in other relevant sections of this report.

Where developments could affect wetlands, these wetlands should be re-evaluated using Bulletin 686 and appropriate management objectives, consistent with the management category, should be provided for in the planning process.

5.3 Parks and Recreation reservation

It is noted that the amendment proposes to reserve 680 hectares of land for the purpose of Parks and Recreation. Some of this land is the subject of System Six recommendations or lakes gazetted for protection under the Environmental Protection (Swan Coastal Plain Lakes) Policy 1992. Much of the land, however, is additional to the areas which have designated conservation value. The Environmental Protection Authority supports the State Planning Commission in their proposal to reserve 680 hectares within the North West Corridor (Alkimos — Eglinton) for the purpose of Parks and Recreation.

The Authority is particularly supportive of a proposal to link Yanchep and Neerabup National Parks with a stretch of land reserved for Parks and Recreation. This proposal can be seen on the eastern side of the amendment as shown in Figure 1. Another reservation which is supported by the Authority is the proposal to include Karli Spring as part of the Coastal Foreshore Reserve in the south western corner of the amendment.

5.4 System 6 recommendations

5.4.1 Area M3 — Pipidinny and Beonaddy swamps

Details of environmental issue :

Pipidinny and Beonaddy Swamps are gazetted lakes protected by the Environmental Protection (Swan Coastal Plain Lakes) Policy 1992. Under this policy it is an offence to fill, mine, dispose effluent or alter the drainage of any lake which is protected by the policy without authorisation.

In addition, Pipidinny and Beonaddy swamps are part of the System 6 Recommendation for M3 — Yanchep National Park which recommends that Pipidinny and Beonaddy Swamps should be reserved for Parks and Recreation.

According to the wetland evaluation method outlined in Bulletin 686, Pipidinny Swamp has been classed as a category C wetland, which possesses a high degree of naturalness and which should be managed to enhance its natural attributes and functions. Beonaddy Swamp has been classed as a category R wetland which has been modified and which should be managed to maintain and enhance its existing ecological functions.

Management of the issue as proposed in the amendment

The amendment proposes to create a strip of Parks and Recreation which would link the two National Parks and include Pipidinny and Beonaddy Swamps.

The Authority's conclusions

The Environmental Protection Authority endorses the proposal to include Pipidinny and Beonaddy Swamp in the Parks and Recreation reservation. The Parks and Recreation reservation achieves the objectives of System Six Recommendation M3, Environmental Protection (Swan Coastal Plain Lakes) Policy 1992 and Bulletin 686. It is the Authority's preference that the Parks and Recreation reservation should incorporate as much of the catchment of Pipidinny and Beonaddy Lakes as possible.

5.4.2 Area M2 — Coastal foreshore reserve

Details of environmental issue

The Alkimos — Eglinton coastline is part of System Six Recommendation M2.1 which states that the area should be reserved as a regional park and management of the area should be the responsibility of the National Parks and Nature Conservation Authority. This area is currently

partly protected under the Metropolitan Region Scheme by an existing Parks and Recreation reservation.

Management of the issue as proposed in the amendment

The amendment proposes to reserve an additional coastal strip of land for Parks and Recreation. This proposed foreshore reserve has some variations when compared to the boundary recommended for area M2. However, the Authority notes that where variation occurs it is not of a substantial nature and that reductions have generally been compensated by additions in other areas. Overall, the intention of System Six recommendation M2.1 is followed.

The Authority's conclusions

Generally the amendment meets the objectives for System Six recommendation M2.1.

The Department of Planning and Urban Development should ensure that any reductions in System Six Area M2 are adequately compensated through the exchange of land of equal conservation value to be reserved for Parks and Recreation along the coastal foreshore covered by this amendment.

6. Water balance and quality

Background information

The water balance of a region refers to fluctuations in surface and groundwater levels which may occur due to seasonal or human induced changes.

The continued existence of wetlands, as well as its surrounding vegetation and other patches of vegetation in a catchment, is determined by the areas water balance and quality. Different species of vegetation have evolved with specific tolerances to inundation. If a change in the water balance of an area resulted in some previously dry regions becoming inundated, then this could mean that the vegetation would undergo water stress and possibly die. Similarly, a change in the water balance of an area may mean that previously damp areas could dry out and become incapable of supporting water dependant species. Changes in water quality can also have significant impacts on the ecosystem within a water body.

Urban development is a land use which has the potential to alter a regions water balance and water quality. Urban development is associated with increased areas of sealed surfaces, such as roads, driveways, carparks and houses which do not allow water to infiltrate through the soil profile. This leads to an increase in the amount of drainage water. Urban development also usually requires extensive clearing of vegetation which will cause the water table to rise and also cause increases in drainage water. In addition, urban development can result in increased levels of nutrients, sediments, petroleum based products and other pollutants in ground and drainage water.

Details of the environmental issue

This amendment proposes to rezone 1,630 hectares of rural land to urban and urban deferred zonings. The Authority is concerned about possible alterations to the regions water balance and water quality which may result due to urban development initiated by rezoning this land. Of particular concern is the effect which alterations to water balance and quality may have on Pipidiny and Beonaddy swamps, Yanchep and Neerabup National Parks and Karli Spring.

Management of the issue as proposed by the amendment

The amendment does not consider drainage issues.

The Authority's conclusions

The Authority recognises that detailed drainage issues are often addressed at a later stage in the planning process. It is considered that the likely impacts of increased drainage caused by urban development could be minimised through the adoption of "water sensitive urban design principles".

In particular, drainage should be planned and managed to ensure that water levels in wetlands on or near the site are not significantly modified and that wetlands, the groundwater and the marine environment are not subject to pollution or nutrient enrichment.

The Environmental Protection Authority considers that a regional management plan for maintaining water quality and water balance for the area should be prepared to manage the following objectives :

- **minimisation of potential impacts from nutrients and other pollutants on the groundwater, associated wetlands and coastal environment; and**
- **minimisation of potential impacts from changes in water balance on groundwater, vegetation and associated wetlands.**

7. The Mitchell Freeway alignment

Details of environmental issue : proposed future alignment south of Romeo Road

The proposed controlled access highway reservation for this amendment clearly anticipates the extension of the Mitchell Freeway alignment southwards through Neerabup National Park and northwards through Yanchep National Park. The highway reservation therefore assumes that the extension of the highway through Neerabup and Yanchep National Parks will be acceptable.

The Authority is concerned that incremental planning decisions are progressively reducing alignment options for the Mitchell Freeway. Rationalisation of the Neerabup National Park to allow the passage of the Mitchell Freeway through a portion of the Park provided that land of equal conservation value is added to the Park to compensate for the impact of the Freeway is an option which has been considered.

Any future land exchange arrangements should ensure that land of equal conservation value is obtained to the satisfaction of the Department of Conservation and Land Management, the National Parks and Nature Conservation Authority and the Environmental Protection Authority. If such arrangements already exist then they should be discussed in the amendment document.

Proposals for roads to traverse National Park and System Six areas may need to be addressed through formal assessment under Part IV of the Environmental Protection Act.

Management of the issue as proposed in the amendment

The amendment does not comment on the future extensions of Mitchell Freeway through Neerabup National Park and Yanchep National Park which are known as System Six Areas M3 and M6 respectively.

The Authority's conclusions

The Environmental Protection Authority considers that proposals for new roads to traverse National Parks and System Six areas may need to be addressed through formal assessment under Part IV of the Environmental Protection Act.

The Authority is not opposed to future land exchange arrangements for the Mitchell Freeway, provided that land of equal conservation value is obtained to the satisfaction of the Department of Conservation and Land Management, the National Parks and Nature Conservation Authority and the Environmental Protection Authority.

Accordingly, the proposed Mitchell Freeway alignment, south of Romeo Road (through Neerabup National Park), should be referred to the Authority for assessment when more detailed plans are produced

Details of environmental issue: Alignment of the Mitchell Freeway near Pipidinny and Beonaddy Swamps

The Authority is concerned about the potential impact which stormwater drainage from the proposed Mitchell Freeway could have on Pipidinny and Beonaddy Swamps. It is preferable for the freeway to be located outside the catchment of these swamps to minimise potential impacts from drainage or accidental spills off the freeway.

Management of the issue as proposed in the amendment

The amendment mentions the alignment of Mitchell Freeway has been altered to minimise environmental impacts adjacent to the Pipidinny Swamp area.

The Authority's conclusions

The current alignment of the Mitchell Freeway is still partially within the catchment of Pipidinny Swamp. The Authority considers that potential impacts on Pipidinny Swamp from drainage off the Freeway could be minimised by locating the alignment outside the swamps catchment.

The Authority's concerns raised in Section 6 of this report on water balance and quality can also be applied to this section of the Mitchell Freeway alignment.

Accordingly, drainage from the Mitchell Freeway should be managed to meet the following environmental objectives :

- **minimisation of potential impacts from nutrients and other pollutants on Pipidinny and Beonaddy Swamps; and**
- **minimisation of potential impacts from changes in water balance on Pipidinny and Beonaddy Swamps.**

The need for further assessment of this section of the Mitchell Freeway alignment will need to be determined when more detailed plans are referred to the Authority

8. The proposed Alkimos Waste Water Treatment Plant

Details of environmental issue

It is proposed to locate the Alkimos Waste Water Treatment Plant in the area shown on Figure 1 for proposed public purposes (WSD) reservation. The Environmental Protection Authority and the Water Authority of Western Australia recommend that residential and commercial development should be restricted from a general distance of 1 kilometre around the plant. This buffer is to protect development from the risk associated with chlorine storage (500m) and from the impact of offensive odour (1km). The Water Authority is currently undertaking a study to refine the exact size and shape of the buffer required.

Management of the issue as proposed in the amendment

The amendment proposes a public purposes reservation for the location of the Waste Water Treatment Plant. This site could accommodate a 1 kilometre buffer if the treatment plant had a central location however the exact location has not been determined yet. Land on the western side of the site is proposed for parks and recreation reservation. Similarly, two thirds of the land on the northern boundary of the site is proposed for parks and recreation reservation. However, urban deferred zonings and commercial zoning encroach into the 1 kilometre buffer to the south (for a golf course), to the east (central city zone) and to the north west (for marine related uses).

The Authority's conclusions

The Environmental Protection Authority considers that land zoned urban deferred lying within the 1 kilometre buffer zone around the Alkimos Waste Water Treatment Plant should only be used for the purposes already identified (ie golf course and marine related uses).

If the Water Authority's modelling studies change the size and shape of the 1 kilometre buffer, then other land uses which would not conflict with the Waste Water Treatment Plant could be acceptable.

9. References

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