

**Metropolitan Region Scheme Amendment No.
925/33 — The Foothills**

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

**Environmental Protection Authority
Perth, Western Australia
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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. 925/33 - The Foothills, 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. 925/33) to the Metropolitan Region Scheme for the Foothills area of the Metropolitan Region. The State Planning Commission released the Foothills amendment for a three month public submission period which ends on 15 October 1993.

The Foothills Structure Plan (1992) identified areas to accommodate future urban and additional industrial land in the Foothills. The major amendment will give statutory effect in the Metropolitan Region Scheme to planning proposals for the Foothills proposed in the Foothills Structure Plan. The amendment includes areas within the City of Gosnells and the shires of Kalamunda, Mundaring and Swan. These areas are shown in Figure 1.

The amendment specifically relates to the following:

- the rezoning of land at High Wycombe (U2,U4) and Forrestfield (U7b) to Urban;
- the rezoning of land at Bushmead (U1) and Wattle Grove (U9) to Urban Deferred;
- the rezoning of land at High Wycombe (I3) to Urban to accommodate a mix of industrial, light industrial and residential uses;
- the rezoning of land at Hazelmere (I1) to Industrial;
- the inclusion of the eastern part of the Bushmead Rifle Range in the Parks and Recreation reservation;
- the inclusion of land between Boundary and Brook Road, Kenwick, in the Parks and Recreation reservation;
- the inclusion of land contained within the System 6 Recommendation Area M53 adjacent to the Roe Highway, Forrestfield, in the Parks and Recreation reservation;
- the inclusion of Tomah Swamp, Wattle Grove, in the Parks and Recreation reservation; and
- the inclusion of the proposed high school site on Stirling Crescent/Adelaide Street, Hazelmere, in the Public Purposes reservation.

This amendment represents a deviation from recent past practices. Instead of initiating separate amendments for each area of land they are included as an omnibus amendment package.

2. Planning context of the site

The Department of Planning and Urban Development is responsible for the long-term planning for the Perth Metropolitan region. Its principle statutory instrument is the Metropolitan Region Scheme. The Metropolitan Region Scheme lays down guidelines for the zoning of land for various uses.

Metroplan is the new metropolitan strategy for the Perth Region. It is a government statement about the direction development will take into the next century. Metroplan is supported by a series of strategic policy statements on particular topics as well as Structure Plans for urban growth areas. The Metropolitan Region Scheme together with the policy framework provided by Metroplan are the instruments for implementing regional land use policy.

The Foothills Structure Plan has been formulated to provide a regional scale development strategy for the Foothills area that builds on the policies and proposals of Metroplan but which recognises the particular opportunities and constraints that exist.

The Foothills Structure Plan is an advisory document which is given statutory force and effect through amendments to the Metropolitan Region Scheme and local authority town planning schemes.

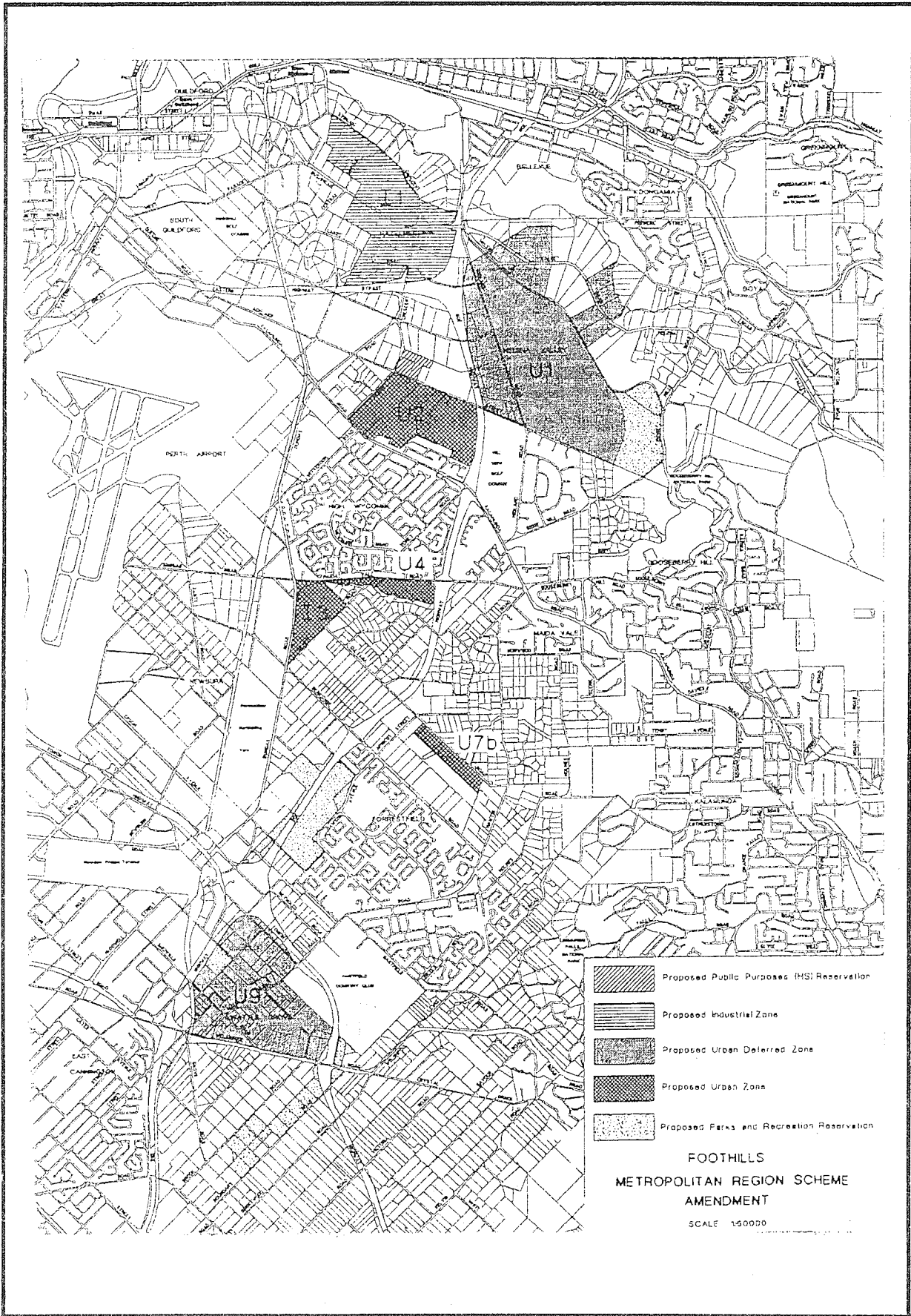


Figure 1. Foothills Metropolitan Region Scheme Amendment (from State Planning Commission report)

The State Planning Commission's Amendment No. 925/33 introduces several changes to the Metropolitan Region Scheme for the Foothills including parts of the City of Gosnells and the Shires of Kalamunda, Mundaring and Swan.

3. Environmental assessment of planning proposals

In March 1992 the Environmental Protection Authority provided written informal advice to the Department of Planning and Urban Development on the Foothills 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 Foothills 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 Foothills 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. 925/33 - The Foothills, 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 should be based on the merits of the proposals contained in each amendment.

Should an amendment propose significant changes to System Six Recommendation Areas, or raise other environmental issues of concern, that amendment would require referral to the Environmental Protection Authority to determine the need for a formal assessment. For this proposal the only significant environmental issue is the proposal affecting the System Six Recommendation Area M53 (Reserve C29880, Forrestfield). However, this area is currently subject to a separate Consultative Environmental Review and specific conditions will ultimately be set on the proposal.

In view of the above, and after careful consideration, the Authority determined that the assessment for the Foothills 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 31 July 1993. There was one appeal against this level of assessment. This appeal was dismissed by the Minister for the Environment and the level of assessment remained at informal review with public advice.

For planning proposals, the Authority considers that effective conservation of the environment can be achieved through the incorporation of environmental principles and policies within the planning process. However, where this does not occur, the Authority can, under part IV of the Environmental Protection Act, undertake environmental assessment of subsequent developments which would significantly affect the environment.

4. Generic issues

Environmental factors such as soil type, vegetation cover and depth to water table may vary for the different areas in the Foothills amendment. However, there are some environmental issues which are the same and for which the environmental principles for management of those issues are also the same. These generic issues are discussed in this section of the report and apply not only to areas included in the amendment but also more broadly to the Foothills metropolitan corridor.

4.1 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.

System Six covers the most intensively used part of the State where land values are high and competition for differing land use is often intense. The study's objective was to define those parts of the region which should be kept mainly natural.

This study identified 209 metropolitan and country areas of regional conservation significance and/or regional representation of biological and physical values on the Swan Coastal Plain and made recommendations for their management. The recommendations of the System Six Study were endorsed in principle by Government in 1983.

The Foothills Amendment is directly affected by the recommendations contained within the System Six report, specifically the System Six Recommendation Area M53. However, proposals affecting M53 are already the subject of a separate Consultative Environmental Review assessment in which the Minister for the Environment will ultimately set specific environmental conditions for the development proposed there.

The Environmental Protection Authority also understands that the requirements of conservation extend beyond reserve and System Six boundaries. There are some instances where areas that have potentially very high conservation values have not been included in System Six recommendation areas, and have been the subject of development proposals. One example of this was a development proposal for an area of land at Brixton Street, Kenwick, in 1992, where the Authority recommended that a substantial area of the land be set aside for conservation (Environmental Protection Authority, 1991, Bulletin 577). The setting aside of land for conservation at Ellenbrook (EPA Bulletin 642) is another example.

Decisions on the use of areas outside System Six should generally be the primary responsibility of the planning process at both the State and local level. The Brixton Street and Ellenbrook cases are exceptions to this general point of view.

The Environmental Protection Authority recommends that where remnant vegetation exists the flora, fauna and conservation values of the site should be ascertained through proper survey and where those values are found to be high the proposal should be referred to the Authority.

There are yet other areas of bushland which do not have the regional conservation significance of System Six areas, and do not contain special conservation values worthy of inclusion in a state-wide or regional reserve system, but which may have local conservation value for linkages or buffers and may have social value. These areas are often used and enjoyed by local communities.

It is also recognised that 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 which includes 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.

4.2 Conflicting landuses

Certain land uses such as heavy industries, airports, intensive agriculture, poultry farms, waste water treatment plants, quarries and land fill sites produce effects which can impact upon residential areas. These impacts include:

- gases that could cause health problems in high enough doses;
- noise;
- dust;
- odour;
- risk (of injury or death from accidents); and
- aesthetic (visual).

It is generally accepted that residential areas should be located well away from these land uses. Put another way, these land uses require adequate "buffers" from residential areas. Planning measures should ensure that residential areas are not subjected to unacceptable impacts from land uses which cause off-site impacts.

Although not the only conflicting land use in the Foothills area, the presence of poultry farms on existing rural land presents a major constraint to urban development. The Environmental Protection Authority is extremely concerned with planning and land use incompatibility that arises between poultry farms and residential development. As such, the Authority considers it to be essential at the planning stage to prevent residential development (other than homes on the poultry farm) proceeding close to established poultry sheds, or any other intensive animal husbandry activity.

The Authority has developed an Environmental Code of Practice for the Poultry Industry, published in January 1991, which recommends that planning authorities should not generally support proposals for residential development in respect of a new residential zone within 500m of any existing poultry sheds, unless it can be demonstrated that the poultry shed will have no adverse impact on the amenity or enjoyment of the occupiers of the residential development as a result of odour emissions.

The Environmental Protection Authority recommends that where a poultry farm operates in accordance with current acceptable standards as set out in the Code of Practice, residential development within the recommended 500 metre odour buffer should be refused by the planning agencies unless:

- the proponent of the new residential development has established that the specific site conditions are such that impacts, such as odour, dust and noise, on new residents will be acceptable; or
- an alternative strategy is devised by the planning agencies that avoids potential land use conflicts.

Any modification of the buffer zone should be determined on the basis of proper air dispersion modelling, using data consisting of emission rates, meteorological conditions, and appropriate ambient standards (values of source emission rates and ambient standards being expressed in odour units, as ascertained using dynamic olfactometry techniques).

4.3 Air quality

The Environmental Protection Authority is addressing the issue of air quality in the metropolitan region through the Perth Photochemical Smog Study. The results of this study are expected to be available before the end of 1994.

4.4 Catchment management and water balance issues affecting wetlands and the Swan River

There is a growing concern regarding the impact of development on waterbodies throughout the State. Development can impact on both water levels and water quality. The Authority is opposed to direct discharge of road runoff to natural water courses. Runoff from roads contributes grit, particulates, metals, hydrocarbons, and many other substances. For the reasons indicated above it is desirable to retain on site as much surface runoff from the development area as possible. In the foothills, the clay soils make management of both quantity and quality of water difficult. The Authority is concerned, especially, that principles of catchment management and water balance management are introduced to protect:

- the quality of water entering waterways and ultimately the Swan/Canning River System; and
- wetlands from adverse changes in water levels and water quality resulting from subsurface and surface drainage.

As a guideline, the Authority usually advocates that a stormwater disposal system should be constructed that is capable of retaining a 1 in 10 year storm event in a specific locality of the development for 3-4 days. Where it can be demonstrated by detailed site investigation and studies that the above criteria could be met by alternative means this would also be acceptable. For example, a stormwater disposal system designed with the objective of detaining the early winter rainfall (first-flush) event for 3-4 days would be acceptable.

The Authority considers that the environmental issues associated with stormwater drainage management should be adequately managed by local government in consultation with the Water Authority and developers.

4.4.1 Protecting lakes and wetlands

The Authority has worked to provide legal protection for the remaining lakes on the Swan Coastal Plain through the preparation of the Environmental Protection (Swan Coastal Plain Lakes) Policy which was gazetted in December 1992 and prohibits unauthorised filling, mining, drainage into or out of, and effluent discharge into lakes. This policy applies to those lakes on the Swan Coastal Plain that are shown in green on Department of Land Administration Miscellaneous Plan No 1815.

Wetlands protected by this policy have the highest level of protection under the Environmental Protection Act.

The Environmental Protection Authority does not support proposals which will affect significantly functional lakes and wetlands in the Foothills, that is:

- lakes nominated for protection in the Environmental Protection 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. Generally, proposals affecting wetlands in categories other than those listed are not subject to the Environmental Protection Authority assessment process, but the Authority works in the knowledge that agencies and proponents recognise that wetlands have special values, and take these into account, in assessing possible uses.

In this regard, Bulletin 686 "A Guide to Wetland Management in the Perth and Near Perth Swan Coastal Plain Area" (an update of EPA Bulletin 374), 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 Foothills amendment contain wetlands which may not fall into the above categories. Some of these wetlands have previously been classified using the Bulletin 686 wetland classification method and 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, the Environmental Protection Authority recommends that the 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. Urban and urban deferred proposals

5.1 Helena Valley and Bushmead (U1)

5.1.1 Bushmead Rifle Range

In June 1992 the Environmental Protection Authority provided advice to the Commonwealth Department of the Arts, Sport, the Environment and Territories on the proposed sale of Commonwealth land at the Bushmead Rifle Range site for housing development (Bulletin 632).

The regional environmental significance of the Bushmead site has been stated by the proponents in their draft Environmental Impact Assessment (EIS) biological survey document as:

- The only remaining contiguous major area of the Ridge Hill Shelf system throughout the distribution of the system. Currently none of the system is contained in conservation reserves.
- The Bushmead site represents a significant transition zone between the coastal plain and Darling Range vegetation systems.
- The *Eucalyptus rudis* - *Melaleuca* creekline association and *Banksia* - *Allocasuarina* woodlands are of regional conservation significance.
- Regionally the project area is of significance as a large (296ha) partially undisturbed remnant of native vegetation woodland vegetation. Despite the high degree of degradation of some vegetation associations, few such areas remain which contain vegetation of high conservation value.
- The contiguous nature of the area with Gooseberry Hill National Park is of significance as an ecological corridor and buffer zone between coastal plain and Darling Scarp.
- Bushmead is the only sizable transition zone area contiguous with a high conservation value Scarp area and represents a centre of resources, dense woodland canopy and floristic diversity, for fauna, particularly the nectivorous and insectivorous avifauna.
- The only feature which the proponent considers to be of State significance, by virtue of the species Schedule 1 Wildlife Conservation Act status, is the resident Southern Brown Bandicoot population.

The Commonwealth Environment Protection Agency has completed its assessment of the Environmental Impact Statement, however, a final decision on the future use of the Bushmead Rifle Range land has not yet been reached by the Commonwealth.

5.1.2 West of Midland Road

The geological formation of the site is part of the Ridge Hill Shelf System which occurs as a narrow belt at the foot of the Darling and Gingin Scarps from Bullsbrook to Harvey. Remnant vegetation in the northern part of this area belongs to the Ridge Hill Shelf System. Major impact has occurred to the system through forestry, mining, agriculture and urban development. By 1986 only 3.1% of the original 14,414ha covered by the system remained.

The Environmental Protection Authority recommends that future development of this area should be preceded by an appropriate vegetation survey to determine the conservation value of the remnant vegetation.

The presence of a poultry farm in this section presents a major constraint to urban development. The Environmental Protection Authority has developed a Code of Practice for the Poultry Industry and concerns in relation to the incompatibility that arises between poultry farms and residential development is discussed in Section 4.2 of this report.

The Environmental Protection Authority recommends that where a poultry farm operates in accordance with current acceptable standards as set out in the Code of Practice, residential development within the recommended 500 metre odour buffer should be refused by the planning agencies unless:

- **the proponent of the new residential development has established that the specific site conditions are such that impacts, such as odour, dust and noise, on new residents will be acceptable; or**
- **an alternative strategy is devised by the planning agencies that avoids potential land use conflicts.**

5.1.3 North of Helena Valley Road

The System Six Recommendation Area M33 (Helena Valley) forms a boundary to the proposal to rezone this land to Urban Deferred. It is therefore essential that future proposals to develop this area are consistent with the recommendations of the System Six report. Protection of water quality and stream bank vegetation, including an adequate buffer, is highly important. The eastern extension of the Parks and Recreation reserve along the Helena River foreshore suggested in the State Planning Commission's Amendment report would be supported by the Authority.

The western part of this area includes Kadina Brook and a minor wetland basin. The Kadina Brook floodplain is seasonally inundated and has a Resource Enhancement management category. The minor wetland basin on this site has not been classified and should be evaluated according to Bulletin 686 as part of any development proposal for the area. Appropriate management objectives consistent with the management category of these features should then be included in the development design.

Where developments could affect wetlands, the Environmental Protection Authority recommends that the 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.

The Helena River ultimately discharges into the Swan River and the Authority would not support the direct discharge of drainage water into this system. To be effective, water sensitive urban design must be part of the land use planning process. The incorporation of best planning and best management practices are required to achieve water resource management objectives.

The Environmental Protection Authority has provided generic comments in relation to this issue in section 4.4 of this report.

5.2 High Wycombe north of Kalamunda Road (U2)

This area contains seasonally inundated sumplands and seasonally waterlogged damplands. Of these, a portion of a much larger sumpland complex has been assessed as a Resource Enhancement wetland. These wetlands should be assessed according to Bulletin 686 prior to development of the site and appropriate management, which includes the provision of an adequate buffer, should be provided within subdivision design.

Where developments could affect wetlands, the Environmental Protection Authority recommends that the 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.

The eastern portion of the site contains some remnant vegetation which should be considered through subsequent stages of the planning process. The Authority has provided advice in Section 4.1 of this report to assist the planners with decisions regarding urban bushland.

The management of drainage is considered an important element of this proposal.

There is an existing drain on the southern side of Kalamunda Road which ultimately discharges through the Munday Swamp wetland within the Perth Airport. This wetland is a lake under the Environmental Protection (Swan Coastal Plain lakes) Policy 1992. Munday Swamp is also regarded as having high conservation value.

Drainage of water into an EPP lake is contrary to the Environmental Protection (Swan Coastal Plain Lakes) Policy 1992.

In view of the above, and consistent with other recent developments within the Poison Gully catchment such as the land bounded by Wittenoom, Kalamunda Roads and the Welshpool Railway Reserve at High Wycombe, storm water drainage should be stripped of nutrients prior to its discharge into watercourses or drains which discharge to Munday Swamp. The management of existing wetlands on the site will also require consideration of water quality and quantity issues.

5.3 High Wycombe (U4)

Watercourses are important elements in the natural and human environment. In addition to their drainage function they can provide important corridors for a variety of wildlife. The Environmental Protection Authority considers that the fringing vegetation along the Poison Gully watercourse represents a potential environmental, recreational and social feature worthy of protection within any future development proposal. The Poison Gully watercourse ultimately discharges through the Munday Swamp wetland within the Perth Airport. This wetland is a lake under the Environmental Protection (Swan Coastal Plain Lakes) Policy 1992. Munday Swamp is also regarded as having high conservation value.

Drainage of water into an EPP lake is contrary to the Environmental Protection (Swan Coastal Plain Lakes) Policy 1992.

Storm water drainage should be stripped of nutrients prior to its discharge into watercourses or drains which discharge to Munday Swamp.

5.4 Forrestfield (U7b)

Other than the retention and possible enhancement of vegetation along the small watercourse which bisects this site the Authority has no additional comments in relation to the proposal to rezone this land to urban.

5.5 Wattle Grove (U9)

This land, known as Cell 9 Wattle Grove, has been the subject of on-going involvement by the Environmental Protection Authority for some time. A proposal was initially referred to the Environmental Protection Authority by the Department of Planning and Urban Development on the 2 April 1990. The level of environmental assessment set on the proposal was informal review with public advice.

The Authority received a number of appeals against the level of assessment, requesting a formal level of environmental assessment. These appeals were subsequently dismissed by the Minister for the Environment on 23 July 1990.

The Authority has already provided the planning agencies with its preliminary advice pending resolution of some of the outstanding issues. In its advice the Authority has identified the following environmental issues of concern with the proposed development of Cell 9.

Proximity of poultry farms

The presence of poultry farms in this area presents a major constraint to urban development. The Environmental Protection Authority has developed a Code of Practice for the Poultry Industry and concerns in relation to the incompatibility that arises between poultry farms and residential development is discussed in Section 4.2 of this report.

The Environmental Protection Authority recommends that where a poultry farm operates in accordance with current acceptable standards as set out in the Code of Practice, residential development within the recommended 500 metre odour buffer should be refused by the planning agencies unless:

- **the proponent of the new residential development has established that the specific site conditions are such that impacts, such as odour, dust and noise, on new residents will be acceptable; or**
- **an alternative strategy is devised by the planning agencies that avoids potential land use conflicts.**

Tomah Swamp wetland

The Authority has previously expressed its concerns regarding the impact of the development on the Tomah Road wetland. The preliminary management category for this seasonally inundated sumpland found it has high conservation value and it should therefore be managed accordingly. The Authority considers that the wetland should be evaluated again in accordance with Environmental Protection Authority Bulletin 686 to determine its current conservation value and thus the most appropriate management.

Where developments could affect wetlands, the Environmental Protection Authority recommends that the 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.

The Authority notes that the part of Tomah Swamp within Cell 9 is proposed to be retained and reserved for Parks and Recreation purposes to protect the wetland and associated vegetation. The Environmental Protection Authority supports this proposal.

Hartfield Park Reserve

Hartfield Park is a Class 'A' reserve vested in the Shire of Kalamunda for Recreation and Park and is also reserved for Parks and Recreation in the Metropolitan Region Scheme.

Hartfield Park is not affected by System Six recommendations and even though some parts of Hartfield Park are already degraded, a large part of the Park still remains in a natural state. The Authority is aware that there is community interest in the conservation values of Hartfield Park.

This area, although divided by the Tonkin Highway, contains heathland vegetation types and is a seasonally waterlogged dampland, with associated value for flora and fauna. Incremental clearing of Hartfield Park may result in a progressive decline of environmental values. The part of Hartfield Park adjacent to this proposal remains in a natural state and consists of high conservation value seasonally waterlogged Palusplain. The Authority considers that future development proposals for Cell 9 should not use Hartfield Park for drainage functions or impact on areas of high quality vegetation in other ways.

The proximity of development to this reserve could also result in undesirable urban edge impacts if not properly managed. However, the management and use of Hartfield Park is the responsibility of the vested authority and should be undertaken in a manner consistent with good environmental and conservation planning principles.

Catchment management and water balance for the site

To be effective, water sensitive urban design must be part of the land use planning process. The incorporation of best planning and best management practices are required to achieve water resource management objectives. Consideration should be given to the maintenance of appropriate water quantity and quality criteria for Tomah Swamp and Hartfield Park. The establishment and protection of a vegetation corridor along Woodlupine Brook could provide an amenity feature to development of the area and enhance its capacity as a corridor for a variety of wildlife.

Noise from major roads and the airport.

The Authority notes that Cell 9 is bounded by the Tonkin Highway, the proposed Roe Highway and Welshpool Road as well as the standard gauge railway.

The developers of this area will need to provide information regarding existing noise levels from Welshpool Road, the Tonkin Highway and the railway including the specific requirements to attenuate noise impacts to environmentally acceptable levels.

The Environmental Protection Authority considers that a survey should be undertaken to establish existing noise levels from these areas and detailed noise management measures indicated before the environmental acceptability of future development can be determined.

The Environmental Protection Authority notes that approximately 60% of the subject land lies within the 20-25 ANEF noise contour zone of Perth Airport. The Environmental Protection Authority considers that the management of noise impacts arising from aircraft noise through the provision of specific noise attenuation measures applied to residential development is important and should be incorporated as a local planning issue.

6. Industrial land proposals

6.1 Hazelmere (I1)

This site is in proximity to the System Six Recommendation Areas M33 (Helena River) and M45 (Hazelmere Lakes). Recent investigations (EPA Technical Series 49, May 1992), have found the Hazelmere Lakes to be severely nutrient enriched (hyper-eutrophic). The report found that substantial reductions in the nutrient load and significant changes in management for

both lakes are required if their regional value to both the community and conservation generally are to be preserved. The above-mentioned report arrived at a number of conclusions some of which require further action to be taken and which should be considered by the planning agencies as part of any future development of the area.

The Hazelmere Lakes are gazetted for protection under the Environmental Protection (Swan Coastal Plain Lakes) Policy 1992. Drainage of water into a gazetted lake is contrary to this Policy. There is the potential for polluted surface and sub-surface drainage water to enter into the Hazelmere Lakes and the Helena River from industrial developments located within the catchment of these areas. This issue needs to be properly addressed before development in this area proceeds.

The proposal to protect and enhance the Hazelmere Lakes by setting aside land for public open space would be consistent with the recommendations for System Six Area M45 and is supported in principle. The Authority will provide its more detailed advice in relation to the public open space proposal at the appropriate time in the planning process.

The management of seasonally inundated sumplands and seasonally waterlogged damplands on this site will need to be considered at subsequent stages in the planning process.

Where developments could affect wetlands, the Environmental Protection Authority recommends that the 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.

The existing animal rendering works on and adjacent to this site emit odours. The odour buffer zone for the rendering works is more appropriately described as an odour detectable zone. Odours are expected to be mostly present within the zone but on some occasions (ie. depending on weather conditions, plant malfunctions, etc), may also be detected outside of the zone. The presence of odours from the rendering works presents a major constraint to residential development of the area whereas the proposed industrial zoning is likely to be more compatible.

6.2 High Wycombe (I3)

Council should ensure that the proposed graduated land use concept does not provide unacceptable amenity for residents, or place industries which are operating to industry standards and within their licence conditions in conflict with adjoining land uses.

The Poison Gully watercourse which forms a boundary to this proposals flows into the Munday Swamp wetland within the Perth Airport land. This wetland is a lake under the Environmental Protection (Swan Coastal Plain Lakes) Policy 1992. Munday Swamp is also regarded as having high conservation value.

Drainage of water into a designated lake is contrary to the Environmental Protection (Swan Coastal Plain Lakes) Policy 1992.

In view of the above and consistent with other recent developments within the Poison Gully catchment such as the land bounded by Wittenoom, Kalamunda roads and the Welshpool Railway Reserve at High Wycombe, storm water drainage should be stripped of nutrients prior to its discharge into watercourses or drains which discharge to Munday Swamp.

Effective drainage management from industrial land is very important given the potential for pollutants arising from such land use.

7. Parks and recreation proposals

The Environmental Protection Authority supports the Parks and Recreation reservation proposals put forward in the amendment for Kenwick and the Tomah wetland. The Parks and Recreation reservation proposal for the Bushmead Rifle Range is also supported although decisions regarding the final landuse for the Commonwealth owned Bushmead site many include a greater area for conservation purposes than that proposed in the State Planning Commission's amendment.

7.1 Forrestfield

It is noted that the major amendment includes a proposed Parks and Recreation Reserve for a portion of the area affected by the System Six Recommendation Area M53 and also includes areas outside of the System Six Recommendation.

The issues affecting the System Six Area M53 go beyond the proposed Reserve, and involve private land owners and Government agencies, in particular, the Western Australia Fire Brigade Board, Department of Community Development, the Water Authority and the Shire of Kalamunda. The Environmental Protection Authority therefore considers that a mechanism which allows land use planning decisions to be made within a framework which assesses the conservation value of the whole of M53 is required. The Consultative Environmental Review currently in progress for this area is intended to provide this framework and a management strategy.

In summary, the environmental impact assessment process offers an appropriate mechanism through which the environmental issues associated with the System Six Area M53 can be resolved prior to finalisation of the major amendment.

The Authority advises that the proposal for parks and recreation zoning affecting the System Six Recommendation Area M53 can not proceed further until the Minister for the Environment has made a final decision regarding the implementation of the proposals put forward through the separate Consultative Environmental Review process.

8. Public purposes proposal

The Environmental Protection Authority notes the proposed Public Purposes reservation at Stirling Crescent/Adelaide Street to accommodate the Ministry of Education's high school site. As acknowledged in the Department of Planning and Urban Development's 1992 Foothills Structure Plan, the odour emissions arising from the two rendering works in the Hazelmere locality impose constraints for residential and similar developments in proximity to these industries.

Although the operations of the two rendering works are subject to Environmental Protection Authority licences, it is expected that these industries, using best available technology, will always have some level of odour associated with them. The odour buffer zone for the rendering works is more appropriately described as an odour detectable zone. Odours are expected to be mostly present within the zone but on some occasions (ie. depending on weather conditions, plant malfunctions, etc), may also be detected outside of the zone.

Even though licence conditions require the odour detectable zone to decrease in size by 1995, it is still expected, however, that odours will at times be detectable beyond this zone for the reasons stated above.

Even though located outside of the odour detectable zone, the proposed future high school for this site may, from time to time, be potentially affected by odours arising from the operations of two rendering plants located nearby.

9. Conclusion

The Authority considers that the proposals within Amendment No.925/33 - The Foothills, which constitutes a major amendment to the Metropolitan Region Scheme can be implemented without causing unacceptable environmental impacts provided the recommendations in this report are implemented.

The State Planning Commission's Foothills Amendment report does not fully address the environmental issues associated with each proposal nor does it seek to address the management

of the issues. However, it is the Authority's view that the nature of the environmental impacts associated with the proposals are not so significant as to prevent their effective management and should be addressed in greater detail by the planning agencies at subsequent stages in the planning process, within the context of environmental policy and the advice offered in this submission.

The comments offered in this submission are offered as public advice and not a report under Part IV of the Environmental Protection Act. The comments do not preclude the Authority from undertaking assessment of specific proposals at a later date.

10. References

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