Sheepskin Tannery — Albany

Great Southern Tanned Products Pty Ltd

Report and Recommendations of the Environmental Protection Authority

Department of Conservation and Environment
Perth, Western Australia

Bulletin No. 268 November 1986

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1. INTRODUCTION

The expansion of rural-oriented industry has been identified by a wide variety of groups as being an important component of economic development within the agricultural base of Western Australia. One industry that has been actively promoted within the Great Southern Region has been a tannery, which could process skins from abattoirs within the region.

In 1984, the Albany Region Industrial Study (Max Hipkins and Associates, 1984) indicated that, of the processing industries identified in the study, "it would appear that a tannery is most likely to materialise as the region's next new industry" (p 66). A proposal for a tannery was subsequently formulated by Great Southern Tanned Products Pty Ltd and an application to develop on Plantagenet Location 5772 (approximately 13.5 km north of Albany) was made to the Shire of Albany in September 1984. Council gave approval to the application in the following month, subject to a number of conditions being satisfied. Two conditions referred to requirements of the Environmental Protection Authority.

In view of these conditions and local concern about the proposed tannery, the Authority determined that the project should be subject to detailed environmental assessment and public scrutiny through the preparation of a Public Environmental Report (PER). This Report was subsequently released for comment for a period of eight weeks, closing on 17 July 1986.

In July 1986, the Shire of Albany resolved to amend its Town Planning Scheme No 3 to introduce a new zoning of 'Special Industry', and to apply this zoning to a portion of Plantagenet Location 5772. This rezoning has been advertised by the Shire at Albany for public comment, but Council has decided that approval would not be sought from the Minister for Planning until the Authority's report on the tannery been considered.

This assessment report addresses the environmental implications of the development of a tannery on Plantagenet Location 5772. Some of these, such as those related to liquid and solid waste disposal and odour, would be applicable to other industries that might locate on the land which is subject to the 'Special Industry' rezoning amendment.

2. THE PROPOSAL

2.1 TANNERY

The PER indicates that the preferred site for the proposed tannery is Lot 4, Plantagenet Location 5772, situated at the corner of Down Road and Albany Highway, (Figure 1). Lot 4 has an area of 19.8646 ha and has been developed for agriculture.

The proposed tannery would comprise a main processing building with attendant pumphouse, boiler room, chemical store and gas storage compound, and a series of effluent treatment ponds.

Approximately 60 000 sheepskins annually are expected to be obtained from abattoirs in the Great Southern Region and would be processed on the day of arrival. Processing would involve soaking the skins to condition them for tanning, removal of flesh from the skins, scouring and bleaching, tanning the skins with synthetic and chromium compounds, and rinsing the skins prior to drying, dry-cleaning and finishing.

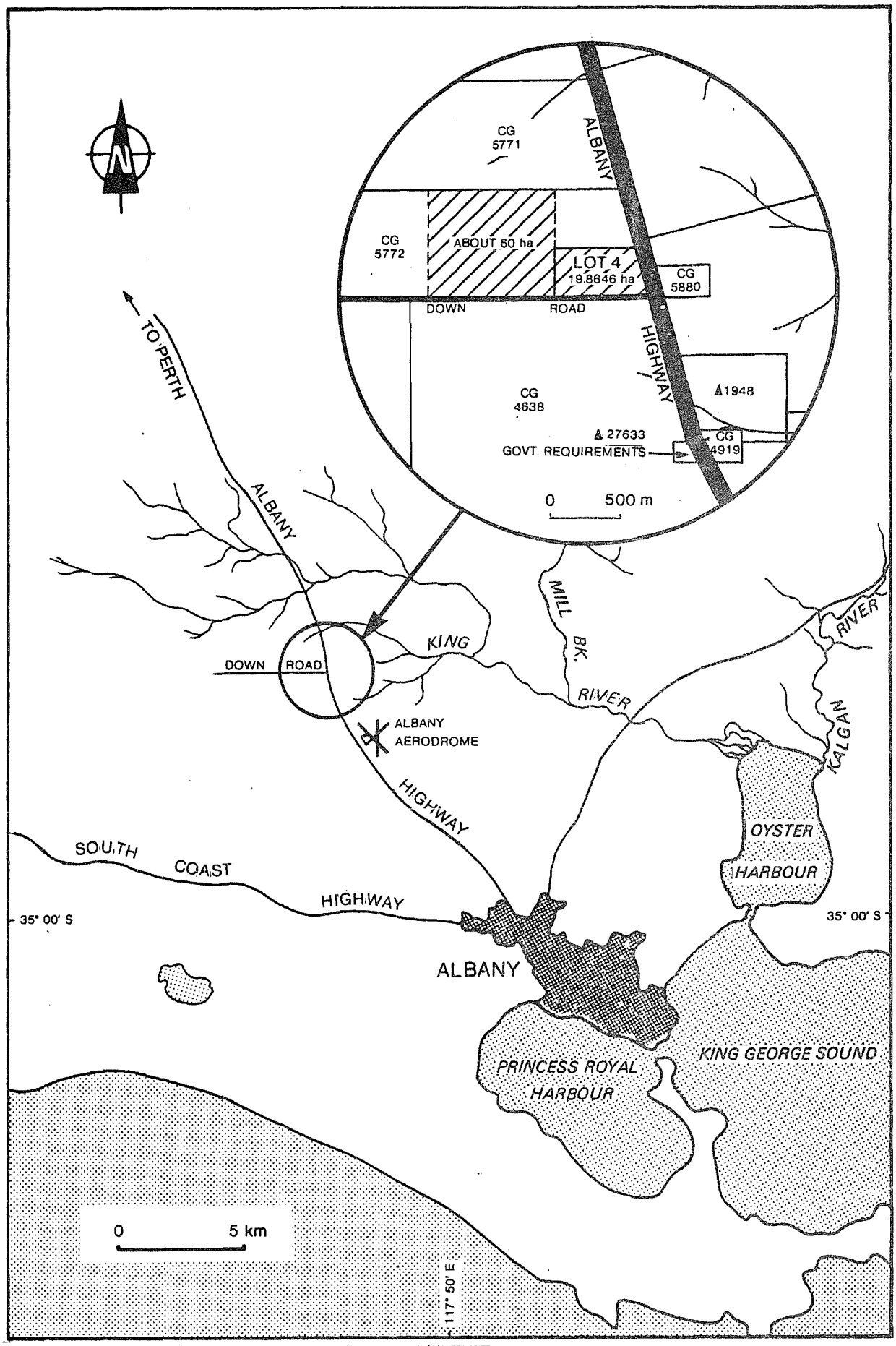

Figure 1. Proposed location of the tannery (Lot 4) and remaining portion of Plantagenet Location 5772 that is subject to the 'Special Industry' rezoning.

Solid and liquid wastes would be generated through the processing stages. The former would mainly derive from the trimming, fleshing and finishing stages, and the screening of all liquid waste to remove solid particles. Liquid wastes would be generated during the soaking, scouring and bleaching, and tanning stages. Additional wastes would result from chemical spillage, and wash-down water from within the processing building and transport bay. The PER indicates that the total annual volume of solid waste would be approximately 240 cubic metres (m^3) and an annual maximum of 9 000 m^3 of liquid effluent, based on 60 000 sheepskins per year.

Liquid waste would pass through a series of three ponds prior to irrigation onto 5 hectares (ha) of land within Lot 4. Effluent treatment would comprise pH adjustment, screening to remove solids, a settling tank of around 20 m^3 capacity to remove smaller solids, an anaerobic pond with a capacity of 1 200 m^3 and then two aerobic ponds, each able to store 4 500 m^3 of liquid. Following conditioning in these ponds, the effluent would be disposed of by irrigation along shallow trenches or by sprinkler.

The PER indicates that the characteristics of the liquid effluent at the point of discharge from the aerobic ponds would be:

pH	7.5 - 8.0	
5-day Biological Oxygen Demand (B O D)	less than 500	mg/L
Chromium III	" " 5	mg/L
Arsenic	" " 0.05	mg/L
Oil and Grease	" " 5	mg/L
Ammonia	" " 50	mg/L
Phenolic Compounds	" " 0.05	mg/L
Phosphorus	" " 150	mg/L

2.2 SPECIAL INDUSTRY REZONING

The Shire of Albany has resolved to amend Town Planning Scheme No 3 by introducing and applying the new zone of 'Special Industry' to approximately 80 ha of Plantagenet Location 5772, including Lot 4 (Figure 1).

Special Industry is defined in Amendment No 62 as "an industry which might be expected to emit air and ground pollutants such as noise, smoke, fumes, obnoxious odours and contaminated effluents, although not necessarily all of these, and does not necessarily exclude general, rural and service industry."

This zone has the following objectives:

"- to provide sites for a diverse range of industries including those which cannot necessarily be accommodated within existing industrial areas in proximity to urban landuses, due either to their nature or extensiveness.

- to provide sites for industry, the location of which will reflect their impact on the environment.

- to encourage development for an acceptable environmental, and high visual standard." (Shire of Albany, 1986).

Permitted uses include noxious industries, piggeries, tanneries and special industries.

3. PUBLIC SUBMISSIONS

The Authority received of total of 186 submissions on the Public Environmental Report; 7 from Government departments and 179 from the public and other agencies. A list of those who made submissions is provided in the Appendix.

The majority of public submissions received were on a form letter. Issues raised in that letter included:

Ratepayers Denied Prior Knowledge of Proposal - Shire ratepayers were not given the opportunity to object to the proposal before Council gave conditional approval to develop.

Suitability of the Site - detailed studies of the hydrogeology and environment of the site had not been carried out before it had been selected.

Possible Pollution of Water Supply - a major catchment area (Grasmere) is located approximately 500 m from the site. Effluent discharged on the site could pollute water within this catchment, through groundwater or surface water contamination.

Destruction of Waterways by Pollution - effluent washed from the site would eventually pass down the King River into Oyster Harbour, resulting in the destruction of their economic, recreational and aesthetic values, through the accumulation of contaminants.

Effect on Tourists - the site is located on the main road entry to Albany and effluent from the tannery would flow alongside the Albany Highway.

Destruction of Wildlife and Habitat - the aquatic fauna and flora of the King River and Oyster Harbour, and other fauna dependant on the water, would be endangered through pollution arising from the tannery.

Liability for Pollution under an Effluent Disposal Licence - the tannery has no liability for environmental damage under a disposal licence.

Destruction of Fresh Water Spring - a fresh water spring feeding the King River is located in the area proposed for the tannery.

These issues were consistently reiterated in other submissions from the public. Other submissions also expressed more detailed concerns about the proposal, such as:

Loss of Water Supply - there should be compensation or insurance provisions in the event that land or riparian water supplies are contaminated by effluent from the tannery.

Water Shedding on Site - winter rains often cause the site to be waterlogged due to poor infiltration, and lead to high runoff from the site. Lanolin in the effluent could create an impervious layer on the surface, enhancing water shedding.

Containment of Effluent - all effluent from the tannery should be stored in covered and watertight ponds.

Disposal of Effluent - effluent from watertight, covered ponds should be transported by liquid waste tankers to a predetermined site for disposal.

Contaminants in Effluent - arsenic, chromium, borates, salt, and lanolin are contaminants representing particular environmental and health hazards. Levels of these and other contaminants in the effluent need to be strictly controlled and the plant should shut down if set levels are exceeded. No information is provided on the level of solids in the effluent.

Contingency Planning - the PER contained little information on the contingency plans that would be used in the event of the effluent treatment process breaking down or excessive rainfall and the remedial action that would be taken to overcome such problems.

Nature and Quality of Skins - a condition of approval should be that only fresh skins are used, thus avoiding the need to treat salted skins. No information is given about the disposal of reject skins.

Disposal of Sludge from Ponds - the air drying of sludge will cause obnoxious odours. Disposal should be to a covered pit in a safe location, recognising that chromium will be contained within the sludge.

Approval of Chemicals - chemicals used in the tanning process should be approved by the Water Authority of WA or Health Department before their use is permitted.

Effluent Disposal Standards - the effluent concentrations given in the PER cannot be taken as satisfying a licence. The effluent standards need to be set so that environmental problems will not arise, and should be enforced independently of the tannery operators.

Monitoring of Groundwater - monitoring bores should be established close to the anaerobic and aerobic ponds, and water supply bores on adjacent sites should be monitored on a regular basis. Who would be responsible for the monitoring?

Monitoring of Surface Water - regular sampling of runoff from the site should be undertaken, and testing should be independent of the tannery operators.

Monitoring Results - results of monitoring and testing programmes should be made available for public scrutiny.

Effect of Effluent Irrigation on Vegetation - will the contaminated effluent have an effect on the trees that are proposed to be planted?

Disposal of Solid Wastes - daily disposal of solid wastes should be an enforced condition. Solid wastes should be mixed with other Council refuse.

Proximity to Albany Airport - the proximity of the tannery site to the airport appears to be poor planning.

Soils and Hydrology of the Site - information should be obtained on the soils and hydrology of the site, to determine baseline information, the likelihood of the development of groundwater mounds beneath the site, the impact on adjacent groundwater and groundwater users, and the suitability of the soils for pond development and irrigation.

Agricultural Potential of the Site - the subdivision of prime grazing land lacks foresight.

Details of Effluent Ponds - more information is needed on the size and construction details of the proposed effluent ponds.

Public Health Hazards - no information is provided on the possible spread of Ross River Encephalitis in the region. An environmental health baseline sampling survey should be undertaken.

Leakage from Ponds - effluent ponds elsewhere have leaked and a tough non-porous lining is necessary in the anaerobic and aerobic ponds, to avoid surface or ground water discharge.

Water Supply - the statement in the PER,that the site should be close to mains water supply is not relevant in site selection.

Noxious Industry Site - local people are concerned that the tannery is the 'foot in the door' for other special and noxious industries.

Several submissions supported the development of the tannery, as an important economic development in the region and the possible catalyst it could provide to the establishment of further agriculturally-based industry. These submissions concluded that the proposed tannery would not have any environmental impact. A point mentioned in one submission was the presence of chromium in superphosphate, and the relatively insignificant contribution to the catchment that would arise from the tannery.

The environmental aspects of these issues and other specific advice mentioned in the submissions have been considered by the Authority during the preparation of this assessment report.

4. ENVIRONMENTAL IMPACTS AND MANAGEMENT

4.1 SITE REQUIREMENTS

The selection of the preferred site (Plantagenet Location 5772) by Great Southern Tanned Products Pty Ltd was based on three criteria set by the Company and was also a response to the recommendations contained in the report by Max Hipkins and Associates (1984). The criteria were:

"(a) The site must be within easy reach of Albany town where the main source of sheepskins was centred and employees could be recruited.

(b) A three-phase power supply and mains water must be available or within easy access.

(c) Sufficient land must be available for the tannery complex and for the dispersal of treated tannery liquid waste by irrigation, or alternatively deep sewerage must be close at hand." (PER, p 3)

These criteria are similar to the reasons outlined in the Albany Region Industrial Study for the selection of the Down Road site. That Study concluded that Plantagenet Location 5772:

"is the best available site for expansive and special industry within 20 km of Albany. It has all required services immediately available; it comprises

flat elevated land which is environmentally safe for use and has ample room for expansion" (Max Hipkins and Associates, p V).

Two aspects of the Study should be noted. The first is that only land located within a radius of 20 km from Albany was considered in the Study. The second aspect is that the Study Brief required the consultant to examine environmental issues such as:

""disposal of effluent in relation to waterways.

*wind directions in relation to residential areas.

*the effect of noise on residential areas.

*visual effects of industrial development, in particular the possible impact upon tourism.

*impact upon flora and fauna." (ibid, Appendix 1)

This brief also indicated that the Study would include the investigation of selected sites by groundwater consultants after discussions by the Shire and Town of Albany. This part of the Study was not carried out.

4.2 SITE CHARACTERISTICS

The site is located within the catchment of the King River. A tributary of the River is located approximately 0.5 km to the south. To the west is the catchment of Marbellup Brook, a potential domestic water supply source for the region.

The geology of the area consists of lateritic duricrust, laterite rubble and sandy soil with pisolitic laterite, underlain by silty sediments of the Tertiary Plantagenet Group of about 40 m average thickness. These rest on granitic bedrock. Based on existing data and field inspection, the Geological Survey of WA has advised that groundwater movement is likely to be a reflection of the surface flows and the depth to the water table is generally 7 to 14 m. Submissions to the Authority indicated that the site and nearby land has poor water infiltration capacity and hence drainage difficulties have been encountered. The seasonal pooling of water on the site is mentioned in the PER (page 6).

While specific data on the hydrogeology of this site are limited, sufficient information was provided in the PER and submissions to indicate that drainage from the site and its proximity to current and potential water resources are factors that would significantly constrain the form of any development

4.3 EFFLUENT MANAGEMENT

The principal concern of the Authority and which was also expressed in submissions on the PER related to management of liquid effluent, in terms of its quality, quantity and disposal.

A number of submissions expressed concern about the concentrations of contaminants that were indicated on page 19 in the PER. The levels were considered to be too high, because of the high pollution potential of tanneries as well as the lower standards that would probably apply through any effluent licence.

The PER indicated that treatment and disposal of the effluent would involve the liquor passing through a series of ponds over a period of up to seven months, then being spray or flood irrigated over an area of 5 ha within the site. Disposal of effluent by irrigation would operate through the mechanisms of evaporation, transpiration by vegetation and infiltration. Some of the contaminants of the effluent, such as chromium III, would be expected to be bound to particles in the soil. However, there are significant concerns about the likelihood of contamination of surface and groundwater, eventually leading to a deterioration of both.

The water in local aquifers is used by nearby landowners. These are an essential water source and require protection. Groundwater movement has not been investigated in detail in this area, and infiltration rates and speed of movement are uncertain. Even if they were slow, contamination of the groundwater could affect adjacent owners in the future.

The PER acknowledges that material would be deposited on the surface from the irrigated effluent and indicates that these materials could be carried into nearby waterways (PER, p 23). It is suggested in the PER that rainfall would dilute the contamination sufficiently to make it harmless, and possibly, beneficial. The site is located within the catchment of the King River and Oyster Harbour, which are sensitive to water pollution.

The Authority does not believe that it is sound environmental or pollution control practice to leave material or waste in a place or manner which could lead to contamination of air, land or water and thus interfere with other users and uses.

Therefore, it cannot agree with the particular method of effluent disposal outlined in the PER. The use of trickle or spray irrigation or any other form of uncontained effluent disposal would be environmentally unacceptable.

Containment of effluent at all stages of processing and disposal should be a prime objective during the design and operation of the tannery. The Authority considers that all effluent should be contained throughout the process and disposal systems, to ensure that surface or groundwater contamination does not occur.

One method of effluent disposal that would be environmentally acceptable would be to evaporate the liquor. For this to be successful, the effluent ponds would need to have adequate surface area to balance effluent production and rainfall against evaporation. Neither the settling pond nor anaerobic pond will assist in evaporation, as the former is proposed to be small and the latter will have a naturally forming surface crust. Therefore, the aerobic ponds will need to provide sufficient evaporative surface area. Account will need to be taken of a range of rainfall events in their design. It should be noted that the evaporation data given in Appendix B of the PER is considered by the Bureau of Meteorology to be unreliable. (Bureau of Meteorology, pers comm).

The PER indicated that provision would be made for additional storage capacity in the aerobic ponds to cater for transfer of effluent in the event of pond fracture or failure. This is an essential design objective that should be adopted.

RECOMMENDATION 1.

The EPA recommends that all liquid effluent should be contained within imperviously lined or sealed ponds, and sufficient ponded area should be provided to enable evaporation of the effluent as well as containment of effluent in an emergency. The design of the effluent disposal system should be approved by relevant agencies prior to construction.

The EPA notes the comments in the PER on the use of synthetic liner for the disposal ponds (paragraph 6.20), and points out that those concerns should be recognised when the ponds are designed and constructed.

Related to the management of the effluent is the proposal in the PER that drainage from the chemical store and pumphouse be directed to the anaerobic pond. It is likely that some of the chemicals used or stored in these areas could impair the effectiveness of the conditioning agents within the anaerobic pond if spilt in sufficient quantity.

RECOMMENDATION 2.

The EPA recommends that drainage from the chemical store and pumphouse should be directed to a lined sump and any spilt material should be appropriately treated before discharge into the effluent disposal system or regularly removed to an approved disposal site.

There are two requirements for the effluent disposal system to be effective on this site. The first is that management of the disposal system should be of prime importance. If care is not taken in its design and operation or adequate maintenance is not provided, the disposal system will not be effective and could lead to significant environmental problems such as odour. Secondly, it would considerably enhance the success of the recommended effluent disposal system if the volume of the effluent could be reduced to a minimum. In this regard, the PER indicates that the figure of 150 L per skin is a maximum volume. Every attempt should be made in the design and operation of the tannery to minimise this volume. For example, the recycling of liquids, such as those used in the rinse, soak and scouring stages, would be one means of reducing the amount of effluent. A licence would be required under the Rights in Water and Irrigation Act for the disposal of liquid effluent.

4.4 SOLID WASTE MANAGEMENT

Approximately one cubic metre of solid wastes would be generated each day from the tanning process. These would comprise trimmings and wool from the skins, as well as flesh and other solids within the liquid effluent. It is proposed that these solid wastes would be disposed of at an site approved by the Shire of Albany (PER, p 14). Periodically, material that has collected in the bottoms of the anaerobic and aerobic ponds will need to be removed and disposed of.

In selecting an appropriate disposal site the Shire should recognise that solids from the settlement tank and pond system will include chromium and other contaminants that have precipitated out from the effluent. While these contaminants should be bound, to particulate matter, in unavailable forms, the disposal site should be remote from waterways and have sufficient depth to groundwater to minimise the likelihood of pollution.

4.5 ODOUR

Effluent from the tannery or any similar industry has the potential to cause odour problems. These result from the chemical components of the effluent, such as sulphides, as well as the action of biological agents which reduce and break down the components within the effluent.

Odour emissions from the process plant and effluent control facilities can be minimised through the adoption of appropriate management techniques. However, when these techniques are not practiced or the effluent control system suffers a breakdown, some odour may be evident. The closest residential premises to the tannery would be approximately 400 m to the east and north east. Wind patterns at Albany Airport are predominantly to the east through to the south west in January and to the west through to the north in July. Complaints would, therefore, be most likely to arise during summer, when a westerly wind is blowing, or during calm periods, which usually occur in the morning.

Provided effluent management is efficient, odour emissions beyond the boundary of Lot 4 are expected to be minimal.

While the process of tanning is not scheduled under the Clean Air Act, the effluent disposal system would be.

4.6 NOISE

The tannery would not be expected to represent a significant source of noise emissions. While the site is located within a rural landscape, there is a substantial buffer proposed between the tannery and nearby houses. Traffic related to the operation of the tannery should be minimal, especially when related to the current volume of vehicles both light and heavy, travelling along the adjacent Albany Highway.

4.7 AESTHETICS

An industrial plant such as a tannery is frequently planned on the basis of utility rather than aesthetics. Recognising this, the proponent has indicated that landscaping, including the planting of trees, would be undertaken in the vicinity of the process structures and along Albany Highway and Down Road. This consideration of the visual impact of the tannery is supported.

4.8 MONITORING

It is essential that the effluent disposal system is adequately monitored to ensure that the effluent ponds are effectively sealed and that contamination of the surface and groundwater can be detected at the earliest opportunity. This is recognised in the PER. A monitoring system would probably comprise a series of strategically placed and designed bores that were subject to regular measurement. It is likely that this would be a component of any licence issued under the Rights in Water and Irrigation Act. Such a monitoring system should be prepared in consultation with appropriate agencies, such as the Geological Survey of WA.

5. CONCLUSION AND RECOMMENDATIONS

This proposal has been the subject of considerable public concern, as indicated by the large number of submissions received by the Authority on the PER and those made on the rezoning of portion of Location 5772. Most of the issues raised before the Authority have been expressions of concern relating to effluent treatment and disposal. Many of these concerns are similar to those of the Authority. The location of this site within the catchment of the King River and Oyster Harbour and their sensitivity to pollution was a prime consideration of the Authority.

The Authority believes that the Down Road site cannot be considered to be a preferred sited on environmental grounds. Development of the proposed tannery and any other noxious industry on Location 5772 would only be environmentally acceptable with the application and enforcement of the highest standards of design and management of the manufacturing process and effluent disposal systems.

The use of trickle or spray irrigation, as proposed in the PER, or any other form of uncontained effluent disposal, would not be environmentally acceptable.

The Authority considers that the establishment of a tannery on Lot 4, Plantagenet Location 5772 can be environmentally acceptable, subject to the recommendations and comments in this assessment report and the issue of appropriate approvals and licences.

Further, these recommendations and relevant comments should apply to all the portion of Plantagenet Location 5772 that is subject to Amendment of the Shire of Albany Town Planning Scheme, to 'Special Industry'.

RECOMMENDATIONS

1. **The EPA recommends that all liquid effluent should be contained within imperviously lined and sealed ponds, and sufficient ponded area should be provided to enable evaporation of the effluent as well as containment of effluent in an emergency. The design of the effluent disposal system should be approved by relevant agencies prior to construction.**

2. **The EPA recommends that drainage from the chemical store and pumphouse should be directed to a lined sump and any spilt material should be appropriately treated before discharge into the effluent disposal system or regularly removed to an approved disposal site.**

6. REFERENCES

MAX HIPKINS AND ASSOCIATES, (1984). Albany Region Industrial Study.

PER, (1986) An Environmental Report on a Proposed Sheepskin Tannery in the Albany Region of Western Australia: Great Southern Tanned Products Pty Ltd.

Shire of Albany, (1986). Town Planning Scheme No 3, Amendment No 62.

APPENDIX

List of organisations and individuals who made written submissions.

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ALBANY WA 6330

Mrs S Shilling
ALBANY WA 6330

Mr S Gaunt
LOWER KING WA 6330

Mr W Maseton
KING RIVER WA 6330

Mr R Stone
TORBAY WA 6330

Mr J Twycross
DENMARK WA 6333

Mrs R Gerovich
ALBANY WA 6330

Mr K Mazzucchelli
LITTLE GROVE WA 6330

Mr D Green
ALBANY WA 6330

Mr I Hales
ALBANY WA 6330

Mr J Geddes
ALBANY WA 6330

Mr J Downer
ALBANY WA 6330

Mr F Carter
WOODANILLING WA 6316

Mr A Etchell
ALBANY WA 6330

Mr A Lamasen
ALBANY WA 6330

Mr L Gallop
ALBANY WA 6330

Mr D Vallean
TORBAY WA 6330

Mr G Crane
ALBANY WA 6330

Mr E Kowald
ALBANY WA 6330

Mr E Lamley
ALBANY WA 6330

Mr F Shadelich
ALBANY WA 6330

Mr S Gillett
ALBANY WA 6330

Mr J Neyse
TORBAY WA 6330

Mr N Johnson
ALBANY WA 6330

Mr I Steinert
LOWER KING WA 6330

Mr K Green
ALBANY WA 6330

Mr B Bingham
ALBANY WA 6330

Ms J Broadby
ELLEKER WA 6330

Mr R Wilkinson
ALBANY WA 6330

Mr R Gerovich
ALBANY WA 6330

Mr T Smith
ALBANY WA 6330

Mr R Howard
ALBANY WA 6330

Mr R Sharpe
ALBANY WA 6330

Mr B King
KING RIVER WA 6330

Ms C Owen
KING RIVER WA 6330

Mr L Kerr
ALBANY WA 6330

Mrs E Lowrie
OYSTER HARBOUR WA 6330

Mrs T Patterson
EMU POINT WA 6331

Ms H Smith
ALBANY WA 6330

Mr R Pacmall
ALBANY WA 6330

Mr D Warburton
ALBANY WA 6330

Ms K Walsh
ALBANY WA 6330

Mr R Wilson
ALBANY WA 6330

Mr P Wilde
NARRIKUP WA 6324

Mrs J Barrett
ALBANY WA 6330

Mr W Moss
ALBANY WA 6330

Ms P Piesse
Albany Districts Bird Watch
ALBANY WA 6330

Mr D Cunningham
Shire Clerk
Shire of Albany
ALBANY WA 6330

Mr O Martinson
President
Albany Chamber of Commerce
ALBANY WA 6330

Geological Survey of WA

Department of Fisheries

Water Authority of Western Australia

Department of Agriculture

Dr M Greer
ALBANY WA 6330

Mr R Wyatt
Chairman
Great Southern Regional Development Advisory Committee
ALBANY WA 6330

Mr L Barrow
ALBANY WA 6330

Mr A Blechynden
LOWER KING WA 6330

Mr F Lambert
KING RIVER WA 6330

Ms S Ficko
ALBANY WA 6330

Mr K Ford
ALBANY WA 6330

Mr G Cunningham
GLEDLOW WA 6330

Ms J Huisman
LOWER KING WA 6330

Mr B Davis
LOWER KING WA 6330

Mr R Humphries
Australian Conservation Foundation (WA)
PERTH WA 6000

Ms C Taylor
Acting President
Conservation Council of WA (Inc)
PERTH WA 6330

Town Clerk
Town of Albany
ALBANY WA 6330

State Planning Commission

Department of Industrial Development

Health Department of Western Australia