

# **Church and school, lot 68 Bertram Road, Wellard**

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**El Shaddai Kwinana Christian Fellowship**

**Proposed change to Environmental Condition**

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

**Environmental Protection Authority  
Perth, Western Australia  
Bulletin 791  
October, 1995**

#### THE PURPOSE OF THIS REPORT

This report contains the Environmental Protection Authority's environmental assessment and recommendations to the Minister for the Environment on the environmental acceptability of the proposal.

Immediately following the release of the report there is a 14-day period when anyone may appeal to the Minister against the Environmental Protection Authority's report.

After the appeal period, and determination of any appeals, the Minister consults with the other relevant ministers and agencies and then issues his decision about whether the proposal may or may not proceed. The Minister also announces the legally binding Environmental Conditions which might apply to any approval.

#### APPEALS

If you disagree with any of the contents of the assessment report or recommendations you may appeal in writing to the Minister for the Environment outlining the environmental reasons for your concern and enclosing the appeal fee of \$10.

It is important that you clearly indicate the part of the report you disagree with and the reasons for your concern so that the grounds of your appeal can be properly considered by the Minister for the Environment.

#### ADDRESS

Hon Minister for the Environment  
12th Floor, Dumas House  
2 Havelock Street  
WEST PERTH WA 6005

#### CLOSING DATE

Your appeal (with the \$10 fee) must reach the Minister's office no later than 5.00 pm on 27 October, 1995.

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## Summary

The Environmental Protection Authority herein reports on the environmental assessment of the proposed modification of Environmental Condition 2 from the Minister for the Environment's 1991 and 1993 statements of approval for the El Shaddai Kwinana Christian Fellowship Church and School, Lot 68 Bertram Rd, Wellard.

The El Shaddai Kwinana Christian Fellowship Church and School proposal was originally assessed by the Environmental Protection Authority in 1990 and Environmental Conditions were set by the Minister for the Environment on 19 July 1991.

A number of the Environmental Conditions were concerned with the issue of nutrient management, in particular disposal of effluent in a manner that would not adversely affect the Wellard lake, which is protected under the *Environmental Protection (Swan Coastal Plain Lakes) Policy* 1992. Environmental Condition 2, in particular, required the proponent to connect to a reticulated sewerage service prior to use of the school.

The proponent subsequently requested permission to proceed with the development, using on-site effluent disposal until such time as reticulated sewerage facilities became available in the area. A review of the Environmental Condition set to manage effluent disposal was undertaken in 1993, resulting in the Minister for the Environment amending Environmental Condition 2 to allow the school to use on-site effluent disposal systems until reticulated sewerage facilities became available. The on-site effluent disposal system approved was an alternative treatment unit designed to remove nutrients from the effluent.

In January 1995 the proponent requested that the Minister for the Environment consider granting the school permission to continue using on-site effluent disposal until the sewer line ran past the property. This required a further change to Environmental Condition 2 through Section 46 of the *Environmental Protection Act* 1986. This, the second Section 46 assessment, is required to assess the environmental acceptability of the proposed change to Environmental Condition 2.

Topic	Original Assessment	First Section 46 Assessment (1993)	This proposal - Second Section 46 Assessment
Disposal of sewage in a manner that does not impact upon Wellard lake.	Proponent was required to connect the development to sewer prior to use of the school and church.  Environmental Conditions set July 1991.	Proponent permitted to use a nutrient attenuating on-site effluent disposal system until 3 months after construction of the East Parmelia pump station and rising pressure main.  Environmental Conditions set March 1993.	Proponent seeks approval to use on-site effluent disposal systems using phosphorus-removing amended soils for up to 6 months after the sewer line passes the property.  Subject of recommended Environmental Conditions in this assessment.

The Environmental Protection Authority considers that the proposal to extend the time given to the proponent to connect to a reticulated sewerage service is environmentally acceptable. This decision is based largely on the ability of on-site effluent disposal systems using phosphorus-removing amended soils to remove most of the phosphorus from effluent for an extended period of time (Ho G, Gibbs R, Mathew K & Parker W, 1992). It is recommended that Environmental Condition 2 be modified accordingly.

Since 1993, there have been improvements in the way in which Environmental Conditions are worded and structured, to make procedures, requirements and responsibilities clearer. Without changing the intent or effect of the conditions, the Environmental Protection Authority recommends that these improvements should be implemented in the new environmental statement.

	<b>Summary of recommendations</b>
1	The proponent should connect to reticulated sewerage within six months of the Bertram Road sewer line being laid past the property. Until this time the proponent should continue using on-site effluent disposal systems with phosphorus-removing amended soils.
2	Within three months of connection to reticulated sewerage, the proponent should decommission and remove the on-site effluent disposal systems and rehabilitate the site to the requirements of the Town of Kwinana.
3	The new statement issued from this assessment should be structured to reflect the changes to the conditions as summarised in Table 2.

# 1. Introduction and background

## 1.1 Purpose of this report

This report and recommendations provides the Environmental Protection Authority's advice to the Minister for the Environment on the environmental acceptability of proposed changes to Environmental Conditions set on the El Shaddai Kwinana Christian Fellowship Church and School.

## 1.2 Background

In 1991 the Environmental Protection Authority formally assessed the proposal to construct a church and school on Lot 68 Bertram Rd Wellard (EPA Bulletin 479) (refer Figure 1). The key environmental issue was management of nutrients, in particular, the potential for impacts on the Wellard lake, a lake protected under the *Environmental Protection (Swan Coastal Plain Lakes) Policy* 1992.

The proposal was approved by the Minister for the Environment, on 1 July 1991, subject to a number of legally binding Environmental Conditions (Appendix 1a).

Environmental Condition 2 was concerned with the disposal of sewage in a manner which did not impact upon the Wellard lake. The proponent was required to connect the church and school to a reticulated sewerage service prior to use.

In October 1992 the proponent, El Shaddai Kwinana Christian Fellowship, indicated that it would be difficult to comply with condition 2 because the reticulated sewerage service was not available. The East Parmelia pump station and rising pressure main had not yet been constructed which meant that the proponent, under the existing Environmental Conditions, could not use the school. The proponent, therefore, requested permission to proceed with the development and use of the school, using on-site effluent disposal until such time as reticulated sewerage facilities became available in the area. This required a change to Environmental Conditions.

The Minister for the Environment requested the Environmental Protection Authority, under Section 46 of the *Environmental Protection Act* 1986, to report to him on the proposed change to the Environmental Condition (EPA Bulletin 670). The Minister approved the change to the Environmental Condition on 4 March 1993 (refer Appendix 1b). The school was permitted to use on-site effluent disposal systems with nutrient retention capabilities until three months after the commissioning of the East Parmelia pump station and rising pressure main.

The pump station was commissioned 28 October 1994, and the school should have connected to the reticulated sewerage service by late January 1995. Prior to the January deadline as set in the Environmental Conditions the school requested an extension of time to connect to sewer, which requires modification of Environmental Condition 2.

The Minister for the Environment has requested the Environmental Protection Authority, under Section 46 of the *Environmental Protection Act* 1986, to report to him on the proposed change to the Environmental Condition.

## 2. The proposal

The proponent has requested permission to continue using on-site effluent disposal systems with nutrient retention capabilities until the sewer line passes the property. The Water Authority of Western Australia will construct a sewer line along Bertram Road, past the school, which will enable the school to connect at a far lesser cost than that required by the connection to the East Parmelia pump station and rising pressure main which is approximately 500m from the school. It is predicted that the construction of the sewer line along Bertram Road will

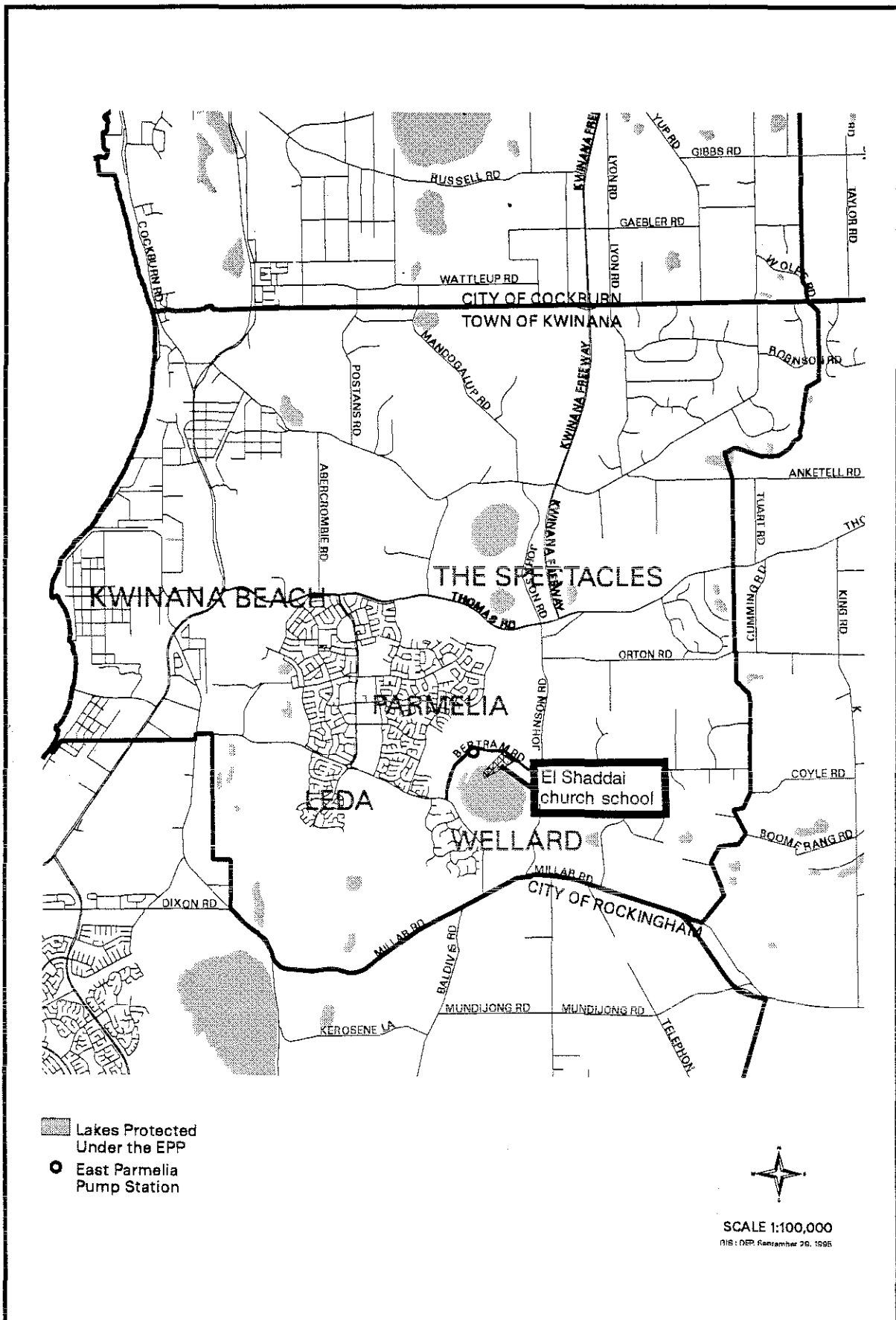


Figure 1. Location of El Shaddai Kwinana Christian Fellowship church and school.

commence in 1996, although the exact timing is dependent on the sale and development of land north of the property.

The school currently uses a treatment unit which caters for up to fifty people per day. It is a modified conventional septic system with the leach drain contained in an amended soils area, and is highly efficient in retaining phosphorus. To enable the number of students at the school to increase to the capacity of Stage 1 (up to 160 students), another treatment unit would need to be installed. It is proposed to install one large treatment unit, rather than a number of units, thereby minimising management problems associated with numerous systems, and reducing the land area that would need to be rehabilitated following the decommissioning and removal of treatment units once connection to the reticulated sewerage service has been achieved.

### **3. Environmental impact assessment method**

#### **3.1 Steps in the procedure of assessment**

The purpose of the Section 46 amendment of Environmental Conditions is to determine whether the proposed change to Environmental Conditions is environmentally acceptable or under what conditions it could be determined as environmentally acceptable.

The process is initiated by the Minister for the Environment requesting the Environmental Protection Authority, under Section 46 of the *Environmental Protection Act* 1986, to report to him on the proposed change to the Environmental Condition.

The first step in the assessment method is to identify the environmental issues to be considered. As part of this process an outline of the proposed change to the Environmental Condition is distributed to those agencies and groups who may have an interest in the proposal.

The responses received are summarised by the Department of Environmental Protection on behalf of the Environmental Protection Authority. This process can add environmental issues which need to be evaluated in terms of the acceptability of potential environmental impacts.

Proponents are invited to respond to the issues raised in submissions, as summarised by the Department of Environmental Protection. Appendix 2 contains a summary of the issues raised in submissions and the proponent's response to those issues.

The proponent's document, the submissions and the proponent's response, are then subjected to analysis for environmental acceptability. For each environmental issue, an objective is defined and where appropriate an evaluation framework is identified.

The expected impact of the proposed change to Environmental Conditions, with due consideration to the proponent's commitments to environmental management, is evaluated against the assessment objective. The Environmental Protection Authority then determines the acceptability of the impact. Where the proposed change to Environmental Conditions has unacceptable environmental impacts, the Environmental Protection Authority can either advise the Minister for the Environment against the change proceeding or make recommendations to ensure the change is environmentally acceptable.

Where the proposed change to Environmental Conditions is environmentally acceptable, the Environmental Protection Authority recommends that the condition be modified.

As part of the Section 46 assessment the opportunity is taken to review all existing conditions and commitments, in order to achieve a single environmental statement that provides for adequate protection of the environment and for efficient and effective environmental auditing of compliance criteria.



### Limitation

This evaluation has used information currently available, which has been provided by the proponent in the proposal documents (letters of 20 January 1995 and 29 March 1995), by Department of Environmental Protection officers utilising their own expertise and reference material, by utilising expertise and information from other State and local government agencies and by contributions from EPA members.

The EPA recognises that further studies and research may affect the conclusions.

## **3.2 Public submissions**

Comments were sought on the acceptability of the proposed change to the Environmental Condition from community groups and State and local government authorities. During the submission period of 10 May 1995 to 24 May 1995, five (5) submissions were received. A summary of these submissions was forwarded to El Shaddai Kwinana Christian Fellowship for response.

The principal issues of concern raised in public submissions included:

### Pollution impacts

- nutrient impacts on the Wellard lake which is protected under the *Environmental Protection (Swan Coastal Plain Lakes) Policy 1992*;

### Other issues

- the number of students permitted to attend the school prior to connection to reticulated sewerage; and
- the effect of the re-alignment of Bertram Rd on the timing of connection to reticulated sewerage.

The Environmental Protection Authority has considered the submissions received and the proponent's response as part of the assessment of the proposal (refer Appendix 2).

## **Synopsis of public submissions**

Submissions received were primarily concerned with the timing of connection to the reticulated sewerage service and the potential for impacts on the Wellard lake.

## **Pollution Impacts**

### Nutrient Impacts on the Wellard lake

The Wellard lake is recognised as having significant conservation value and is protected under the *Environmental Protection (Swan Coastal Plain Lakes) Policy 1992*. Concerns were expressed on the possible effect of continued use of on-site effluent disposal systems. Maintenance and monitoring of the systems was suggested, as was the need for adaptive management to alleviate any nutrient leaching problems that may arise.

The impacts of the proposed development upon the conservation values of the area are considered by the Environmental Protection Authority in Section 4.1.

## **Other Issues**

### Number of students and capacity of on-site effluent disposal systems

A number of the submissions were concerned with the number of students that would be attending the school prior to connection to sewer. Presently, the size of the school is restricted to fifty (50) students because that is the number that can be accommodated by the existing effluent disposal system. At the completion of Stage 1 of the development, it is estimated that 160 students would be attending the school. The consensus amongst submissions was that effluent disposal systems could be installed to cope with the increase of students expected in Stage 1, but that the school should not be permitted to develop beyond this stage prior to connection to the reticulated sewerage service.

This issue was addressed through the wording of the previous Environmental Condition 2-2 and will be addressed within the amended condition.

#### Re-alignment of Bertram Road

An additional issue raised by the Town of Kwinana was concerned with the re-alignment of Bertram Road and the relationship to the school's connection to the reticulated sewerage service. The proponent has previously stated that it is difficult to design the route of the private sewer line to connect to the reticulated sewerage service whilst the proposed re-alignment of Bertram Road is unknown.

Within the Town of Kwinana's submission it was stated that plans of the Bertram Road re-alignment will be made available to the proponent, which could enable them to proceed with the design of the private sewer line to connect to the East Parmelia pump station and rising pressure main. The proponent has claimed, however, that the cost of connecting to the East Parmelia pump station and rising pressure main is prohibitive.

The Water Authority of Western Australia proposes to construct the sewer line along Bertram Road and, as is the subject of this Report and Recommendations, the school has a preference to connect to the sewer line rather than to the East Parmelia pump station. The issue of the re-alignment of Bertram Road is, therefore, no longer relevant and will not be further considered in this report of the Environmental Protection Authority.

## **4. Evaluation of key environmental issues**

The Environmental Protection Authority has evaluated the key environmental issue raised during the Section 46 process, including matters identified in submissions. Table 1 summarises the topics raised, the characteristics of the proposal and the comments received. The Environmental Protection Authority has evaluated the key environmental issue arising from this proposal, viz:

- the effect on the Wellard lake which is protected under the *Environmental Protection (Swan Coastal Plain Lakes) Policy* 1992.

In addition, as part of the Section 46 process, the Environmental Protection Authority has reviewed the Environmental Conditions from the two previous statements and has recommended a consolidated statement be issued by the Minister for the Environment.

### **4.1 Effect on Wellard lake**

#### **4.1.1 Objective**

The Environmental Protection Authority's objective is to ensure the protection of the Wellard lake through appropriate management of land uses which have the potential to export nutrients to the lake.

#### **4.1.2 Evaluation framework**

##### Existing policy framework

*Environmental Protection (Swan Coastal Plain Lakes) Policy* 1992

The policy aims to protect lakes by controlling certain activities that may affect the lake, such as:

- filling in;
- excavation and mining;
- discharging or disposal of effluent;
- alterations to water levels, or drainage of water into or out of; and
- loss of important lake vegetation, both in the lake and fringing.

TOPICS	PROPOSAL CHARACTERISTICS	GOVERNMENT AGENCY'S COMMENTS	PUBLIC COMMENTS	IDENTIFICATION OF ISSUES
<b>Pollution Issues</b>				
Impact on lake (protected under the Environmental Protection Policy) through transport of nutrients from site.	Utilisation of on-site effluent disposal systems using phosphorus removing amended soils until connection to sewer.	On-site effluent disposal systems as interim measure only.	Monitoring and maintenance of effluent disposal systems required.	Effect on lake at rear of site. Requires EPA evaluation.
<b>Other issues</b>				
Number of students and capacity of on-site effluent disposal systems.	Current capacity limited to 50 students. Another treatment unit to be added to allow completion of Stage 1 of school (up to 160 persons capacity).	On-site effluent disposal systems could be installed to cope with the increase of students, but the school should not develop beyond Stage 1 (160 people) until connected to sewer.	Monitoring and maintenance of effluent disposal systems required.	Issue addressed through the wording of previous Environmental Condition 2-2, and will be addressed within the amended Environmental Condition.
Re-alignment of Bertram Road.	Timing of connection to reticulated sewer.	Plans for the re-alignment of the road would be made available to the proponent, which could enable them to proceed with the design of the private sewer line to connect to East Parmelia pump station.		No longer relevant as the Water Authority is constructing the sewer main on Bertram Road past the school.

**Table 1. Identification of issues requiring Environmental Protection Authority evaluation**

In addition, the Department of Environmental Protection provides advice on the minimum setbacks from waterbodies.

#### Technical Information

The Health Department has approved alternative on-site effluent disposal systems which are known to remove a significant percentage of phosphorous from effluent. The Health Department has generic requirements for the installation of these systems including maintenance requirements. The contractors of the treatment units are required to maintain the units and provide periodic maintenance reports which are distributed to the Health Department, Local Authority and the owner of the unit.

### **4.1.3 Evaluation**

The original assessment of the proposal identified the following environmental issues:

- disposal of sewage wastes;
- drainage management;
- groundwater protection; and
- protection of the Wellard lake.

It is considered that these issues have been adequately addressed through the legally binding Environmental Conditions, and that the proposed change to condition 2 will not lead to unacceptable environmental impacts.

The proponent has committed to use one of two types of on-site effluent disposal systems, both of which are approved by the Health Department. These systems are installed to appropriate standards to remove a significant percentage of phosphorous from effluent, and would be installed and maintained to the satisfaction of the Health Department and the Town of Kwinana. The Department of Environmental Protection would receive advice from these agencies on how the proponent is meeting the requirements of the Environmental Conditions relating to the on-site effluent disposal systems.

The on-site effluent disposal systems are known to remove a significant percentage of phosphorous from effluent for an extended time period. It is predicted, for example, that the Ecomax systems are effective for 20 years, after which time the filter bed should be replaced (Gidiuli-Reid M, Mathew K and Ho G, 1992). Given that the school will be able to connect to the Bertram Rd sewer line in 1996, following construction of the line by the Water Authority earlier in that year, it is expected that the export of nutrients from the site will be minimal.

It is the Environmental Protection Authority's view that, if implemented, the change to conditions sought will not adversely affect the environment at the El Shaddai Church and School site.

The Environmental Protection Authority, therefore, considers that El Shaddai Kwinana Christian Fellowship's request for an extension of time to connect to the reticulated sewerage service is reasonable and should be approved.

## **4.2 Assessment of existing environmental conditions**

The El Shaddai Kwinana Christian Fellowship Church and School is currently subject to Environmental Conditions set as a result of the environmental impact assessment of the proposal in 1990 and the Section 46 assessment in 1993 (refer Appendices 1a and 1b).

### **4.2.1 Objective**

The objective of reviewing existing conditions is to achieve a single environmental statement that provides for adequate protection of the environment and for efficient and effective environmental auditing of compliance criteria. It is also considered that this objective will assist

the public, the proponent and relevant agencies to easily identify the environmental requirements associated with the El Shaddai Kwinana Christian Fellowship Church and School development and the subsequent modifications to the proposal.

#### 4.2.2 Changes to environmental conditions

Existing Environmental Conditions have been reviewed, revised and consolidated. The status of conditions are summarised in Table 2. The table should be examined in conjunction with the original statement of Environmental Conditions and the statement of the amended conditions contained in Appendices 1a and 1b respectively. The revised statement containing the recommended Environmental Conditions arising from this assessment is included in section 7 of this report.

State-ment No.	Original Condition No.	Intent of original condition	Evaluation	New Condition No
160 (1991)	1	Adhere to proposal	Carried over and modified to conform with current style.	1-1 1-2
	2	Connection to sewer required prior to use of the school	Amended in first Section 46 (1993) assessment and further recommended change in this assessment.	2-1 2-2
	3	Design and construct a stormwater disposal system	Carried over and modified to conform with current style.	3-1
	4	Submit and implement an Environmental Management Plan	Carried over and modified to conform with current style.	4-1 4-2
	5	Transfer of ownership	Carried over and modified to conform with current style.	5-1
	6	Time limit on approval	Carried over and modified to conform with current style.	6-1
305 (1993)	2	Sewage Disposal	Recommended for amendment through current Section 46 process.	2-1 2-2
	7	Compliance Auditing	Carried over and modified to conform with current style.	7-1

**Table 2. Summary and evaluation of changes to environmental conditions**

## 5. Conclusions

The Environmental Protection Authority has examined the environmental issues associated with the proposal and has taken the opportunity to review and revise the existing Environmental Conditions. The recommendations are summarised in Table 3.

The Environmental Protection Authority concludes that the proposal to extend the time given to the proponent to connect to reticulated sewerage is environmentally acceptable subject to the recommendations contained within this report. The Environmental Protection Authority recommends that the Environmental Statement for the proposal of 19 July 1991 and 4 March 1993 should be updated to reflect changes and to include standard conditions to enable more effective project management.

6

ISSUES	OBJECTIVE	EVALUATION FRAMEWORK	PROPONENTS COMMITMENT	EPA RECOMMENDATION
Impact on lake through transport of nutrients from site.	Protect lake through appropriate management of land uses which have the potential to export nutrients to the lake.	Lake protected under Environmental Protection (Swan Coastal Plain Lakes) Policy.		Proponent to connect to reticulated sewerage within 6 months of sewer line passing property. Until then on-site effluent disposal using phosphorus-removing amended soils to Stage 1 capacity is environmentally acceptable.
Review of existing environmental conditions.	Achieve a single environmental statement that provides for adequate protection of the environment and for efficient and effective environmental auditing of compliance criteria.			The new statement of environmental conditions should be structured to reflect the changes to in conditions summarised within the Table 2.

**Table 3. Summary of Environmental Protection Authority Recommendations**

### **Recommendation 1**

The Environmental Protection Authority recommends that within six months of the Bertram Road sewer line being laid past the property, the proponent should connect to reticulated sewerage. Until this time the proponent should use on-site effluent disposal systems using phosphorus-removing amended soils to the requirements of the Town of Kwinana and the Health Department of Western Australia. Further development beyond Stage 1 of the proposal should only be permitted if connected to reticulated sewerage.

### **Recommendation 2**

Within three months of the connection to reticulated sewerage required by condition 2-1, the proponent should de-commission and remove the on-site effluent disposal systems and rehabilitate the site to the requirements of the Department of Environmental Protection on advice of the Town of Kwinana.

### **Recommendation 3**

The new statement issued from this assessment should be structured to reflect the changes to the conditions summarised in Table 2.

## **6. Recommended environmental conditions**

The following Recommended Environmental Conditions would amend the Minister for the Environment's previous 19 July 1991 and 4 March 1993 statements for the El Shaddai Kwinana Christian Fellowship Church and School, as contained in Appendices 1a and 1b, and modify conditions to reflect the recommendations in this report.

***DRAFT RECOMMENDED ENVIRONMENTAL CONDITIONS***  
**STATEMENT TO AMEND CONDITIONS APPLYING TO A PROPOSAL**  
**(PURSUANT TO THE PROVISIONS OF SECTION 46 OF THE**  
**ENVIRONMENTAL PROTECTION ACT 1986)**

PROPOSAL:	CHURCH AND SCHOOL, LOT 68 BERTRAM ROAD, WELLARD, TOWN OF KWINANA (412/773/948)
CURRENT PROPONENT:	EL SHADDAI KWINANA CHRISTIAN FELLOWSHIP
CONDITIONS SET ON:	19 JULY 1991
CONDITIONS AMENDED ON:	4 MARCH 1993

The implementation of this proposal is now subject to the following conditions which replace all previous conditions:

### **1 Implementation**

Changes to the proposal which are not substantial may be carried out with the approval of the Minister for the Environment.

- 1-1 Subject to these conditions, the manner of detailed implementation of the proposal, as modified and described in the proponent's letters of 20 January and 29 March 1995, and reported on in Environmental Protection Authority Bulletins 479, 670 and 791, shall conform in substance with that set out in any designs, specifications, plans or other technical material submitted by the proponent to the Environmental Protection Authority with the proposal.
- 1-2 Where, in the course of the detailed implementation referred to in condition 1-1, the proponent seeks to change the designs, specifications, plans or other technical material submitted to the Environmental Protection Authority in any way that the Minister for the Environment determines, on the advice of the Environmental Protection Authority, is not substantial, those changes may be effected.

## **2 Sewage Disposal**

- 2-1 Within six months of the Bertram Road sewer line passing the property, the proponent shall connect the school to reticulated sewerage. Until this time, the proponent shall use on-site effluent disposal systems using phosphorus-removing amended soils, to the requirements of the Department of Environmental Protection on advice of the Town of Kwinana and the Health Department of Western Australia.

Further development beyond Stage 1 of the proposal will only be permitted if it is connected to reticulated sewerage.

- 2-2 Within three months of the connection to reticulated sewerage required by condition 2-1, the proponent shall decommission and remove the on-site effluent disposal systems and rehabilitate the site, to the requirements of the Department of Environmental Protection on advice of the Town of Kwinana.

## **3 Stormwater Disposal**

- 3-1 Prior to use of the facilities, the proponent shall design and construct a stormwater disposal system capable of containing at least a one-in-ten year storm event on-site, to the requirements of the Department of Environmental Protection on advice of the Town of Kwinana.

## **4 Environmental Management Programme**

- 4-1 Prior to construction, the proponent shall prepare an Environmental Management Programme addressing, but not limited to the following:

- 1 nutrient and irrigation management; and
- 2 a lake periphery revegetation programme for the south western portion of Lot 68, Bertram Road, Wellard.

to the requirements of the Minister for the Environment on advice of the Department of Environmental Protection and the Department of Conservation and Land Management.

- 4-2 The proponent shall implement the Environmental Management Programme required by condition 4-1.

## **5 Proponent**

These conditions legally apply to the nominated proponent.

- 5-1 No transfer of ownership, control or management of the project which would give rise to a need for the replacement of the proponent shall take place until the Minister for the



Environment has advised the proponent that approval has been given for the nomination of a replacement proponent. Any request for the exercise of that power of the Minister shall be accompanied by a copy of this statement endorsed with an undertaking by the proposed replacement proponent to carry out the project in accordance with the conditions and procedures set out in the statement.

## **6 Time Limit on Approval**

The environmental approval for the proposal is limited.

- 6-1 If the proponent has not substantially commenced the modified project within five years of the date of this statement, then the approval to implement the proposal shall lapse and be void. The Minister for the Environment shall determine any question as to whether the modified project has been substantially commenced.

Any application to extend the period of five years referred to in this condition shall be made before the expiration of that period to the Minister for the Environment.

Where the proponent demonstrates to the requirements of the Minister for the Environment on advice of the Department of Environmental Protection that the environmental parameters of the proposal have not changed significantly, then the Minister may grant an extension not exceeding five years.

## **7 Compliance Auditing**

To help determine environmental performance, periodic reports on progress in implementation of the proposal are required.

- 7-1 The proponent shall submit periodic Progress and Compliance Reports, in accordance with an audit programme prepared by the Department of Environmental Protection in consultation with the proponent.

## **Procedure**

- 1 Unless otherwise specified, the Department of Environmental Protection is responsible for assessing compliance with the conditions contained in this statement and for issuing formal clearance of conditions.
- 2 Where compliance with any condition is in dispute, the matter will be determined by the Minister for the Environment.

## **7. References**

- Ho G, Gibbs R, Mathew K and Parker W (1992). Groundwater Recharge of Sewage Effluent Through Amended Sand, *Wat. Res.* Vol.26, No.3, pp 285-293.
- Gidiuli-Reid M, Mathew K, and Ho G (1992). A Comparison of Options for Removal of Nutrients and On-Site Disposal of Domestic Sewage, Conference Paper, August 1992.

## **Appendix 1**

**A - Statement of Conditions of Approval, 19 July 1991**

**B - Statement of Conditions of Approval, 4 March 1993**



Ass # 412

Bull # 479

State # 160

WESTERN AUSTRALIA  
MINISTER FOR THE ENVIRONMENT

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

CHURCH AND SCHOOL, LOT 68 BERTRAM ROAD, WELLARD, TOWN OF KWINANA(412)

EL SHADDAI KWINANA CHRISTIAN FELLOWSHIP

This proposal may be implemented subject to the following conditions:

1. Subject to these conditions, the manner of detailed implementation of the proposal shall conform in substance with that set out in any designs, specifications, plans or other technical material submitted by the proponent to the Environmental Protection Authority with the proposal. Where, in the course of that detailed implementation, the proponent seeks to change those designs, specifications, plans or other technical material in any way that the Minister for the Environment determines on the advice of the Environmental Protection Authority, is not substantial, those changes may be effected.
2. Prior to use, the proponent shall connect both the church and the school to a reticulated sewerage service.
3. Prior to use, the proponent shall design and construct a stormwater disposal system capable of containing at least a one-in-ten year storm event on-site, to the satisfaction of the Environmental Protection Authority on advice of the Town of Kwinana.
4. Prior to construction, the proponent shall submit and subsequently implement an Environmental Management Programme, including, but not limited to the following:
  - (1) nutrient and irrigation management; and
  - (2) a wetland periphery revegetation programme for the south western portion of Lot 68, Bertram Road, Wellard.

to the satisfaction of the Minister for the Environment on advice of the Environmental Protection Authority and Department of Conservation and Land Management.

5. No transfer of ownership, control or management of the project which would give rise to a need for the replacement of the proponent shall take place until the Minister for the Environment has advised the proponent that approval has been given for the nomination of a replacement proponent. Any request for the exercise of that power of the Minister shall be accompanied by a copy of this statement endorsed with an undertaking by the proposed replacement proponent to carry out the project in accordance with the conditions and procedures set out in the statement.

Published on

19 JUL 1991

6. If the proponent has not substantially commenced the project within five years of the date of this statement, then the approval to implement the proposal as granted in this statement shall lapse and be void. The Minister for the Environment shall determine any question as to whether the project has been substantially commenced. Any application to extend the period of five years referred to in this condition shall be made before the expiration of that period, to the Minister for the Environment by way of a request for a change in the condition under Section 46 of the Environmental Protection Act. (On expiration of the five year period, further consideration of the proposal can only occur following a new referral to the Environmental Protection Authority).



Bob Pearce, MLA  
MINISTER FOR THE ENVIRONMENT

19 JUL 1991



WESTERN AUSTRALIA  
MINISTER FOR THE ENVIRONMENT

Ass # 773  
Bull # 670  
State # 305

**STATEMENT TO AMEND CONDITIONS APPLYING TO A PROPOSAL  
(PURSUANT TO THE PROVISIONS OF SECTION 46 OF THE  
ENVIRONMENTAL PROTECTION ACT 1986)**

PROPOSAL: CHURCH AND SCHOOL, LOT 68 BERTRAM ROAD,  
WELLARD, TOWN OF KWINANA (412/773)

CURRENT PROPONENT: EL SHADDAI KWINANA CHRISTIAN FELLOWSHIP

CONDITIONS SET ON: 19 JULY 1991

Condition 2 is amended to read as follows:

**2 Sewage Disposal**

- 2-1 In the event that the Water Authority of Western Australia pump station and rising pressure main in East Parmelia have not been commissioned, for Stage 1 of the proposal the proponent may use a nutrient attenuating on-site effluent disposal system to the requirements of the Environmental Protection Authority and the Health Department of Western Australia.
- 2-2 Within three months of the pump station and rising pressure main referred to in condition 2-1 being commissioned, the proponent shall connect Stage 1 of the proposal to the reticulated sewerage. Further stages of the proposal will only be permitted to operate if connected to reticulated sewerage.
- 2-3 Within three months of connection to the pump station and rising pressure main required by condition 2-2, the proponent shall de-commission and remove the on-site effluent disposal system and rehabilitate the site to the requirements of the Town of Kwinana.

The following condition and procedure are inserted following condition 6:

**7 Compliance Auditing**

In order to ensure that environmental conditions and commitments are met, an audit system is required.

- 7-1 The proponent shall prepare periodic "Progress and Compliance Reports", to help verify the environmental performance of this project, in consultation with the Environmental Protection Authority.

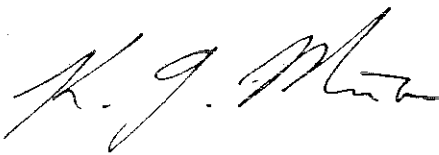
Published on

- 5 MAR 1993

## Procedure

The Environmental Protection Authority is responsible for verifying compliance with the conditions contained in this statement, with the exception of conditions stating that the proponent shall meet the requirements of either the Minister for the Environment or any other government agency.

If the Environmental Protection Authority, other government agency or proponent is in dispute concerning compliance with the conditions contained in this statement, that dispute will be determined by the Minister for the Environment.

A handwritten signature in black ink, appearing to read 'K. J. Minson', written in a cursive style.

Kevin Minson MLA  
MINISTER FOR THE ENVIRONMENT

- 4 MAR 1993

## **Appendix 2**

**Summary of submissions and  
proponent's response to submissions**

## **Summary of submissions**

1. The school should be required to maintain and monitor the effluent disposal systems, and implement measures necessary to alleviate any nutrient leaching problems that may arise.
2. Installation of additional nutrient retentive disposal systems to accommodate 150 to 200 persons per day, would require toilet facilities to be connected separately to a number of disposal systems. Management of such arrangements would be difficult and would present the risk of overloading one or more disposal systems.
3. Connection to reticulated sewerage should be required prior to any further development stages that could result in a significant increase in the number of students attending the school.
4. The Bertram Road re-alignment construction works will be commenced by Council in October this year. Plans of the design and location of this road will be made available to El Shaddai before 31 July 1995. Therefore, the sewer design will not conflict with the location of the road.
5. Prior to connection to sewer the number of occupants should not exceed 50 persons per day.



7C  
faxed 5.15pm 13.7.95

## El Shaddai Christian Fellowship Inc.

### ADDRESSES :

OFFICE : 170 Bertram Road  
WELLARD WA 6170  
SCHOOL: 170 Bertram Road  
WELLARD WA 6170  
POSTAL: P O Box 255  
KWINANA WA 6167

SNR MINISTER : Gerry McCoy  
TELEPHONE : 439 3319 Office  
419 4411 FAX  
439 3319 School

Director  
Evaluation Division  
Department of Environmental Protection  
Westralia Square  
141 St George's Terrace  
Perth WA 6000

your ref: TP90.56

**Attn: Ms Karen Sanders**

Dear Mr Sippe

Thank you for your letter of the 28th June summarising the issues concerning our submission to the Minister for the Environment.

Our response to each :

- 1 We foresee no problem in maintaining and monitoring the effluent disposal as our intention is to use Biocycle or Aquarius systems which I believe have environmental approvals
- 2 Within a school situation it is relatively easy to designate toilet facilities - eg: boys - girls - years 1 to 4 or senior boys only etc. This way we can ensure that there will be 50 people only using any one toilet system at any given time.
- 3 In general we can see that we should connect to reticulated sewerage should there be a significant increase in the number of students attending the school.
- 4 Re-alignment construction works of Bertram Road does enable us to go ahead with the sewer design, but it is still not a financially viable alternative as any private sewer line put in by us has to be taken up once the public sewer line is available.
- 5 We fully understand and adhere to this point.

87733

69

Given that the Satterly McCusker Development Group are meeting the 'public' at an informal invitation-only gathering given by the Kwinana Town Council on Monday the 17th July, one would assume that development of the area opposite our property is imminent, and as such a public sewer line will be in place in the near future, enabling us to connect to deep sewerage when our numbers warrant it.

For the present we would like to instal a 50 - 100 person usage alternative waste water teatment system to commission the ladies side only of the new toilet block at this time, while the males would continue to use the present facility connected to the Ecomax system, giving us an on-site facility for 150 people. As our numbers increase, eg between 50 to 100 per year, we could then commission the male side of the new toilet block. This would then give us facilities for 250 on site. As mentioned above this would enable us to easily monitor the disposal system without the risk of overloading any one system.

Hoping this response sufficiently addresses any queries you might have and all the issues raised.

Yours faithfully



JG (Gerry) McCoy  
Senior Minister  
13th July 95

# **Church and school, lot 68 Bertram Road, Wellard**

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**Ei Shaddai Kwinana Christian Fellowship**

**Proposed change to Environmental Condition**

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

**Environmental Protection Authority  
Perth, Western Australia  
Bulletin 791  
October, 1995**

## THE PURPOSE OF THIS REPORT

This report contains the Environmental Protection Authority's environmental assessment and recommendations to the Minister for the Environment on the environmental acceptability of the proposal.

Immediately following the release of the report there is a 14-day period when anyone may appeal to the Minister against the Environmental Protection Authority's report.

After the appeal period, and determination of any appeals, the Minister consults with the other relevant ministers and agencies and then issues his decision about whether the proposal may or may not proceed. The Minister also announces the legally binding Environmental Conditions which might apply to any approval.

## APPEALS

If you disagree with any of the contents of the assessment report or recommendations you may appeal in writing to the Minister for the Environment outlining the environmental reasons for your concern and enclosing the appeal fee of \$10.

It is important that you clearly indicate the part of the report you disagree with and the reasons for your concern so that the grounds of your appeal can be properly considered by the Minister for the Environment.

## ADDRESS

Hon Minister for the Environment  
12th Floor, Dumas House  
2 Havelock Street  
WEST PERTH WA 6005

## CLOSING DATE

Your appeal (with the \$10 fee) must reach the Minister's office no later than 5.00 pm on 27 October, 1995.

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Assessment No. 948

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## Summary

The Environmental Protection Authority herein reports on the environmental assessment of the proposed modification of Environmental Condition 2 from the Minister for the Environment's 1991 and 1993 statements of approval for the El Shaddai Kwinana Christian Fellowship Church and School, Lot 68 Bertram Rd, Wellard.

The El Shaddai Kwinana Christian Fellowship Church and School proposal was originally assessed by the Environmental Protection Authority in 1990 and Environmental Conditions were set by the Minister for the Environment on 19 July 1991.

A number of the Environmental Conditions were concerned with the issue of nutrient management, in particular disposal of effluent in a manner that would not adversely affect the Wellard lake, which is protected under the *Environmental Protection (Swan Coastal Plain Lakes) Policy* 1992. Environmental Condition 2, in particular, required the proponent to connect to a reticulated sewerage service prior to use of the school.

The proponent subsequently requested permission to proceed with the development, using on-site effluent disposal until such time as reticulated sewerage facilities became available in the area. A review of the Environmental Condition set to manage effluent disposal was undertaken in 1993, resulting in the Minister for the Environment amending Environmental Condition 2 to allow the school to use on-site effluent disposal systems until reticulated sewerage facilities became available. The on-site effluent disposal system approved was an alternative treatment unit designed to remove nutrients from the effluent.

In January 1995 the proponent requested that the Minister for the Environment consider granting the school permission to continue using on-site effluent disposal until the sewer line ran past the property. This required a further change to Environmental Condition 2 through Section 46 of the *Environmental Protection Act* 1986. This, the second Section 46 assessment, is required to assess the environmental acceptability of the proposed change to Environmental Condition 2.

Topic	Original Assessment	First Section 46 Assessment (1993)	This proposal - Second Section 46 Assessment
Disposal of sewage in a manner that does not impact upon Wellard lake.	Proponent was required to connect the development to sewer prior to use of the school and church.  Environmental Conditions set July 1991.	Proponent permitted to use a nutrient attenuating on-site effluent disposal system until 3 months after construction of the East Parmelia pump station and rising pressure main.  Environmental Conditions set March 1993.	Proponent seeks approval to use on-site effluent disposal systems using phosphorus-removing amended soils for up to 6 months after the sewer line passes the property.  Subject of recommended Environmental Conditions in this assessment.

The Environmental Protection Authority considers that the proposal to extend the time given to the proponent to connect to a reticulated sewerage service is environmentally acceptable. This decision is based largely on the ability of on-site effluent disposal systems using phosphorus-removing amended soils to remove most of the phosphorus from effluent for an extended period of time (Ho G, Gibbs R, Mathew K & Parker W, 1992). It is recommended that Environmental Condition 2 be modified accordingly.

Since 1993, there have been improvements in the way in which Environmental Conditions are worded and structured, to make procedures, requirements and responsibilities clearer. Without changing the intent or effect of the conditions, the Environmental Protection Authority recommends that these improvements should be implemented in the new environmental statement.

	<b>Summary of recommendations</b>
1	The proponent should connect to reticulated sewerage within six months of the Bertram Road sewer line being laid past the property. Until this time the proponent should continue using on-site effluent disposal systems with phosphorus-removing amended soils.
2	Within three months of connection to reticulated sewerage, the proponent should decommission and remove the on-site effluent disposal systems and rehabilitate the site to the requirements of the Town of Kwinana.
3	The new statement issued from this assessment should be structured to reflect the changes to the conditions as summarised in Table 2.

# 1. Introduction and background

## 1.1 Purpose of this report

This report and recommendations provides the Environmental Protection Authority's advice to the Minister for the Environment on the environmental acceptability of proposed changes to Environmental Conditions set on the El Shaddai Kwinana Christian Fellowship Church and School.

## 1.2 Background

In 1991 the Environmental Protection Authority formally assessed the proposal to construct a church and school on Lot 68 Bertram Rd Wellard (EPA Bulletin 479) (refer Figure 1). The key environmental issue was management of nutrients, in particular, the potential for impacts on the Wellard lake, a lake protected under the *Environmental Protection (Swan Coastal Plain Lakes) Policy* 1992.

The proposal was approved by the Minister for the Environment, on 1 July 1991, subject to a number of legally binding Environmental Conditions (Appendix 1a).

Environmental Condition 2 was concerned with the disposal of sewage in a manner which did not impact upon the Wellard lake. The proponent was required to connect the church and school to a reticulated sewerage service prior to use.

In October 1992 the proponent, El Shaddai Kwinana Christian Fellowship, indicated that it would be difficult to comply with condition 2 because the reticulated sewerage service was not available. The East Parmelia pump station and rising pressure main had not yet been constructed which meant that the proponent, under the existing Environmental Conditions, could not use the school. The proponent, therefore, requested permission to proceed with the development and use of the school, using on-site effluent disposal until such time as reticulated sewerage facilities became available in the area. This required a change to Environmental Conditions.

The Minister for the Environment requested the Environmental Protection Authority, under Section 46 of the *Environmental Protection Act* 1986, to report to him on the proposed change to the Environmental Condition (EPA Bulletin 670). The Minister approved the change to the Environmental Condition on 4 March 1993 (refer Appendix 1b). The school was permitted to use on-site effluent disposal systems with nutrient retention capabilities until three months after the commissioning of the East Parmelia pump station and rising pressure main.

The pump station was commissioned 28 October 1994, and the school should have connected to the reticulated sewerage service by late January 1995. Prior to the January deadline as set in the Environmental Conditions the school requested an extension of time to connect to sewer, which requires modification of Environmental Condition 2.

The Minister for the Environment has requested the Environmental Protection Authority, under Section 46 of the *Environmental Protection Act* 1986, to report to him on the proposed change to the Environmental Condition.

## 2. The proposal

The proponent has requested permission to continue using on-site effluent disposal systems with nutrient retention capabilities until the sewer line passes the property. The Water Authority of Western Australia will construct a sewer line along Bertram Road, past the school, which will enable the school to connect at a far lesser cost than that required by the connection to the East Parmelia pump station and rising pressure main which is approximately 500m from the school. It is predicted that the construction of the sewer line along Bertram Road will



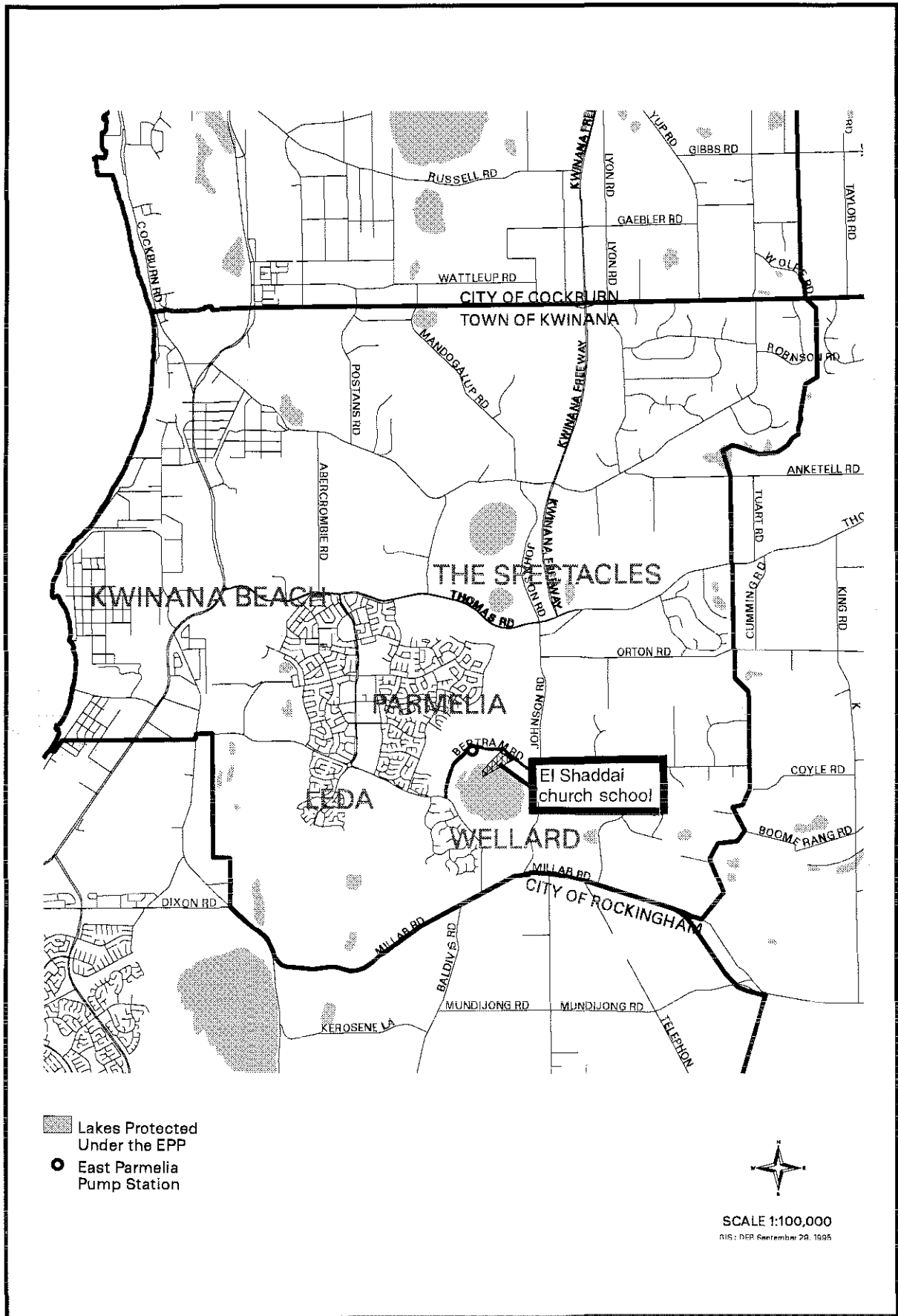


Figure 1. Location of El Shaddai Kwinana Christian Fellowship church and school.

commence in 1996, although the exact timing is dependent on the sale and development of land north of the property.

The school currently uses a treatment unit which caters for up to fifty people per day. It is a modified conventional septic system with the leach drain contained in an amended soils area, and is highly efficient in retaining phosphorus. To enable the number of students at the school to increase to the capacity of Stage 1 (up to 160 students), another treatment unit would need to be installed. It is proposed to install one large treatment unit, rather than a number of units, thereby minimising management problems associated with numerous systems, and reducing the land area that would need to be rehabilitated following the decommissioning and removal of treatment units once connection to the reticulated sewerage service has been achieved.

### **3. Environmental impact assessment method**

#### **3.1 Steps in the procedure of assessment**

The purpose of the Section 46 amendment of Environmental Conditions is to determine whether the proposed change to Environmental Conditions is environmentally acceptable or under what conditions it could be determined as environmentally acceptable.

The process is initiated by the Minister for the Environment requesting the Environmental Protection Authority, under Section 46 of the *Environmental Protection Act* 1986, to report to him on the proposed change to the Environmental Condition.

The first step in the assessment method is to identify the environmental issues to be considered. As part of this process an outline of the proposed change to the Environmental Condition is distributed to those agencies and groups who may have an interest in the proposal.

The responses received are summarised by the Department of Environmental Protection on behalf of the Environmental Protection Authority. This process can add environmental issues which need to be evaluated in terms of the acceptability of potential environmental impacts.

Proponents are invited to respond to the issues raised in submissions, as summarised by the Department of Environmental Protection. Appendix 2 contains a summary of the issues raised in submissions and the proponent's response to those issues.

The proponent's document, the submissions and the proponent's response, are then subjected to analysis for environmental acceptability. For each environmental issue, an objective is defined and where appropriate an evaluation framework is identified.

The expected impact of the proposed change to Environmental Conditions, with due consideration to the proponent's commitments to environmental management, is evaluated against the assessment objective. The Environmental Protection Authority then determines the acceptability of the impact. Where the proposed change to Environmental Conditions has unacceptable environmental impacts, the Environmental Protection Authority can either advise the Minister for the Environment against the change proceeding or make recommendations to ensure the change is environmentally acceptable.

Where the proposed change to Environmental Conditions is environmentally acceptable, the Environmental Protection Authority recommends that the condition be modified.

As part of the Section 46 assessment the opportunity is taken to review all existing conditions and commitments, in order to achieve a single environmental statement that provides for adequate protection of the environment and for efficient and effective environmental auditing of compliance criteria.

### Limitation

This evaluation has used information currently available, which has been provided by the proponent in the proposal documents (letters of 20 January 1995 and 29 March 1995), by Department of Environmental Protection officers utilising their own expertise and reference material, by utilising expertise and information from other State and local government agencies and by contributions from EPA members.

The EPA recognises that further studies and research may affect the conclusions.

## **3.2 Public submissions**

Comments were sought on the acceptability of the proposed change to the Environmental Condition from community groups and State and local government authorities. During the submission period of 10 May 1995 to 24 May 1995, five (5) submissions were received. A summary of these submissions was forwarded to El Shaddai Kwinana Christian Fellowship for response.

The principal issues of concern raised in public submissions included:

### Pollution impacts

- nutrient impacts on the Wellard lake which is protected under the *Environmental Protection (Swan Coastal Plain Lakes) Policy 1992*;

### Other issues

- the number of students permitted to attend the school prior to connection to reticulated sewerage; and
- the effect of the re-alignment of Bertram Rd on the timing of connection to reticulated sewerage.

The Environmental Protection Authority has considered the submissions received and the proponent's response as part of the assessment of the proposal (refer Appendix 2).

## **Synopsis of public submissions**

Submissions received were primarily concerned with the timing of connection to the reticulated sewerage service and the potential for impacts on the Wellard lake.

## **Pollution Impacts**

### Nutrient Impacts on the Wellard lake

The Wellard lake is recognised as having significant conservation value and is protected under the *Environmental Protection (Swan Coastal Plain Lakes) Policy 1992*. Concerns were expressed on the possible effect of continued use of on-site effluent disposal systems. Maintenance and monitoring of the systems was suggested, as was the need for adaptive management to alleviate any nutrient leaching problems that may arise.

The impacts of the proposed development upon the conservation values of the area are considered by the Environmental Protection Authority in Section 4.1.

## **Other Issues**

### Number of students and capacity of on-site effluent disposal systems

A number of the submissions were concerned with the number of students that would be attending the school prior to connection to sewer. Presently, the size of the school is restricted to fifty (50) students because that is the number that can be accommodated by the existing effluent disposal system. At the completion of Stage 1 of the development, it is estimated that 160 students would be attending the school. The consensus amongst submissions was that effluent disposal systems could be installed to cope with the increase of students expected in Stage 1, but that the school should not be permitted to develop beyond this stage prior to connection to the reticulated sewerage service.

This issue was addressed through the wording of the previous Environmental Condition 2-2 and will be addressed within the amended condition.

#### Re-alignment of Bertram Road

An additional issue raised by the Town of Kwinana was concerned with the re-alignment of Bertram Road and the relationship to the school's connection to the reticulated sewerage service. The proponent has previously stated that it is difficult to design the route of the private sewer line to connect to the reticulated sewerage service whilst the proposed re-alignment of Bertram Road is unknown.

Within the Town of Kwinana's submission it was stated that plans of the Bertram Road re-alignment will be made available to the proponent, which could enable them to proceed with the design of the private sewer line to connect to the East Parmelia pump station and rising pressure main. The proponent has claimed, however, that the cost of connecting to the East Parmelia pump station and rising pressure main is prohibitive.

The Water Authority of Western Australia proposes to construct the sewer line along Bertram Road and, as is the subject of this Report and Recommendations, the school has a preference to connect to the sewer line rather than to the East Parmelia pump station. The issue of the re-alignment of Bertram Road is, therefore, no longer relevant and will not be further considered in this report of the Environmental Protection Authority.

## **4. Evaluation of key environmental issues**

The Environmental Protection Authority has evaluated the key environmental issue raised during the Section 46 process, including matters identified in submissions. Table 1 summarises the topics raised, the characteristics of the proposal and the comments received. The Environmental Protection Authority has evaluated the key environmental issue arising from this proposal, viz:

- the effect on the Wellard lake which is protected under the *Environmental Protection (Swan Coastal Plain Lakes) Policy* 1992.

In addition, as part of the Section 46 process, the Environmental Protection Authority has reviewed the Environmental Conditions from the two previous statements and has recommended a consolidated statement be issued by the Minister for the Environment.

### **4.1 Effect on Wellard lake**

#### **4.1.1 Objective**

The Environmental Protection Authority's objective is to ensure the protection of the Wellard lake through appropriate management of land uses which have the potential to export nutrients to the lake.

#### **4.1.2 Evaluation framework**

##### Existing policy framework

*Environmental Protection (Swan Coastal Plain Lakes) Policy* 1992

The policy aims to protect lakes by controlling certain activities that may affect the lake, such as:

- filling in;
- excavation and mining;
- discharging or disposal of effluent;
- alterations to water levels, or drainage of water into or out of; and
- loss of important lake vegetation, both in the lake and fringing.

TOPICS	PROPOSAL CHARACTERISTICS	GOVERNMENT AGENCY'S COMMENTS	PUBLIC COMMENTS	IDENTIFICATION OF ISSUES
<b>Pollution Issues</b>				
Impact on lake (protected under the Environmental Protection Policy) through transport of nutrients from site.	Utilisation of on-site effluent disposal systems using phosphorus removing amended soils until connection to sewer.	On-site effluent disposal systems as interim measure only.	Monitoring and maintenance of effluent disposal systems required.	Effect on lake at rear of site. Requires EPA evaluation.
<b>Other issues</b>				
Number of students and capacity of on-site effluent disposal systems.	Current capacity limited to 50 students. Another treatment unit to be added to allow completion of Stage 1 of school (up to 160 persons capacity).	On-site effluent disposal systems could be installed to cope with the increase of students, but the school should not develop beyond Stage 1 (160 people) until connected to sewer.	Monitoring and maintenance of effluent disposal systems required.	Issue addressed through the wording of previous Environmental Condition 2-2, and will be addressed within the amended Environmental Condition.
Re-alignment of Bertram Road.	Timing of connection to reticulated sewer.	Plans for the re-alignment of the road would be made available to the proponent, which could enable them to proceed with the design of the private sewer line to connect to East Parmelia pump station.		No longer relevant as the Water Authority is constructing the sewer main on Bertram Road past the school.

Table 1. Identification of issues requiring Environmental Protection Authority evaluation

In addition, the Department of Environmental Protection provides advice on the minimum setbacks from waterbodies.

### Technical Information

The Health Department has approved alternative on-site effluent disposal systems which are known to remove a significant percentage of phosphorous from effluent. The Health Department has generic requirements for the installation of these systems including maintenance requirements. The contractors of the treatment units are required to maintain the units and provide periodic maintenance reports which are distributed to the Health Department, Local Authority and the owner of the unit.

### **4.1.3 Evaluation**

The original assessment of the proposal identified the following environmental issues:

- disposal of sewage wastes;
- drainage management;
- groundwater protection; and
- protection of the Wellard lake.

It is considered that these issues have been adequately addressed through the legally binding Environmental Conditions, and that the proposed change to condition 2 will not lead to unacceptable environmental impacts.

The proponent has committed to use one of two types of on-site effluent disposal systems, both of which are approved by the Health Department. These systems are installed to appropriate standards to remove a significant percentage of phosphorous from effluent, and would be installed and maintained to the satisfaction of the Health Department and the Town of Kwinana. The Department of Environmental Protection would receive advice from these agencies on how the proponent is meeting the requirements of the Environmental Conditions relating to the on-site effluent disposal systems.

The on-site effluent disposal systems are known to remove a significant percentage of phosphorous from effluent for an extended time period. It is predicted, for example, that the Ecomax systems are effective for 20 years, after which time the filter bed should be replaced (Gidiuli-Reid M, Mathew K and Ho G, 1992). Given that the school will be able to connect to the Bertram Rd sewer line in 1996, following construction of the line by the Water Authority earlier in that year, it is expected that the export of nutrients from the site will be minimal.

It is the Environmental Protection Authority's view that, if implemented, the change to conditions sought will not adversely affect the environment at the El Shaddai Church and School site.

The Environmental Protection Authority, therefore, considers that El Shaddai Kwinana Christian Fellowship's request for an extension of time to connect to the reticulated sewerage service is reasonable and should be approved.

## **4.2 Assessment of existing environmental conditions**

The El Shaddai Kwinana Christian Fellowship Church and School is currently subject to Environmental Conditions set as a result of the environmental impact assessment of the proposal in 1990 and the Section 46 assessment in 1993 (refer Appendices 1a and 1b).

### **4.2.1 Objective**

The objective of reviewing existing conditions is to achieve a single environmental statement that provides for adequate protection of the environment and for efficient and effective environmental auditing of compliance criteria. It is also considered that this objective will assist

the public, the proponent and relevant agencies to easily identify the environmental requirements associated with the El Shaddai Kwinana Christian Fellowship Church and School development and the subsequent modifications to the proposal.

#### 4.2.2 Changes to environmental conditions

Existing Environmental Conditions have been reviewed, revised and consolidated. The status of conditions are summarised in Table 2. The table should be examined in conjunction with the original statement of Environmental Conditions and the statement of the amended conditions contained in Appendices 1a and 1b respectively. The revised statement containing the recommended Environmental Conditions arising from this assessment is included in section 7 of this report.

State-ment No.	Original Condition No.	Intent of original condition	Evaluation	New Condition No
160 (1991)	1	Adhere to proposal	Carried over and modified to conform with current style.	1-1 1-2
	2	Connection to sewer required prior to use of the school	Amended in first Section 46 (1993) assessment and further recommended change in this assessment.	2-1 2-2
	3	Design and construct a stormwater disposal system	Carried over and modified to conform with current style.	3-1
	4	Submit and implement an Environmental Management Plan	Carried over and modified to conform with current style.	4-1 4-2
	5	Transfer of ownership	Carried over and modified to conform with current style.	5-1
	6	Time limit on approval	Carried over and modified to conform with current style.	6-1
305 (1993)	2	Sewage Disposal	Recommended for amendment through current Section 46 process.	2-1 2-2
	7	Compliance Auditing	Carried over and modified to conform with current style.	7-1

**Table 2. Summary and evaluation of changes to environmental conditions**

## 5. Conclusions

The Environmental Protection Authority has examined the environmental issues associated with the proposal and has taken the opportunity to review and revise the existing Environmental Conditions. The recommendations are summarised in Table 3.

The Environmental Protection Authority concludes that the proposal to extend the time given to the proponent to connect to reticulated sewerage is environmentally acceptable subject to the recommendations contained within this report. The Environmental Protection Authority recommends that the Environmental Statement for the proposal of 19 July 1991 and 4 March 1993 should be updated to reflect changes and to include standard conditions to enable more effective project management.

ISSUES	OBJECTIVE	EVALUATION FRAMEWORK	PROPONENTS COMMITMENT	EPA RECOMMENDATION
Impact on lake through transport of nutrients from site.	Protect lake through appropriate management of land uses which have the potential to export nutrients to the lake.	Lake protected under Environmental Protection (Swan Coastal Plain Lakes) Policy.		Proponent to connect to reticulated sewerage within 6 months of sewer line passing property. Until then on-site effluent disposal using phosphorus-removing amended soils to Stage 1 capacity is environmentally acceptable.
Review of existing environmental conditions.	Achieve a single environmental statement that provides for adequate protection of the environment and for efficient and effective environmental auditing of compliance criteria.			The new statement of environmental conditions should be structured to reflect the changes to in conditions summarised within the Table 2.

6

**Table 3. Summary of Environmental Protection Authority Recommendations**



### **Recommendation 1**

The Environmental Protection Authority recommends that within six months of the Bertram Road sewer line being laid past the property, the proponent should connect to reticulated sewerage. Until this time the proponent should use on-site effluent disposal systems using phosphorus-removing amended soils to the requirements of the Town of Kwinana and the Health Department of Western Australia. Further development beyond Stage 1 of the proposal should only be permitted if connected to reticulated sewerage.

### **Recommendation 2**

Within three months of the connection to reticulated sewerage required by condition 2-1, the proponent should de-commission and remove the on-site effluent disposal systems and rehabilitate the site to the requirements of the Department of Environmental Protection on advice of the Town of Kwinana.

### **Recommendation 3**

The new statement issued from this assessment should be structured to reflect the changes to the conditions summarised in Table 2.

## **6. Recommended environmental conditions**

The following Recommended Environmental Conditions would amend the Minister for the Environment's previous 19 July 1991 and 4 March 1993 statements for the El Shaddai Kwinana Christian Fellowship Church and School, as contained in Appendices 1a and 1b, and modify conditions to reflect the recommendations in this report.

***DRAFT RECOMMENDED ENVIRONMENTAL CONDITIONS***  
**STATEMENT TO AMEND CONDITIONS APPLYING TO A PROPOSAL**  
**(PURSUANT TO THE PROVISIONS OF SECTION 46 OF THE**  
**ENVIRONMENTAL PROTECTION ACT 1986)**

PROPOSAL:	CHURCH AND SCHOOL, LOT 68 BERTRAM ROAD, WELLARD, TOWN OF KWINANA (412/773/948)
CURRENT PROPONENT:	EL SHADDAI KWINANA CHRISTIAN FELLOWSHIP
CONDITIONS SET ON:	19 JULY 1991
CONDITIONS AMENDED ON:	4 MARCH 1993

The implementation of this proposal is now subject to the following conditions which replace all previous conditions:

#### **1 Implementation**

Changes to the proposal which are not substantial may be carried out with the approval of the Minister for the Environment.

- 1-1 Subject to these conditions, the manner of detailed implementation of the proposal, as modified and described in the proponent's letters of 20 January and 29 March 1995, and reported on in Environmental Protection Authority Bulletins 479, 670 and 791, shall conform in substance with that set out in any designs, specifications, plans or other technical material submitted by the proponent to the Environmental Protection Authority with the proposal.
- 1-2 Where, in the course of the detailed implementation referred to in condition 1-1, the proponent seeks to change the designs, specifications, plans or other technical material submitted to the Environmental Protection Authority in any way that the Minister for the Environment determines, on the advice of the Environmental Protection Authority, is not substantial, those changes may be effected.

## **2 Sewage Disposal**

- 2-1 Within six months of the Bertram Road sewer line passing the property, the proponent shall connect the school to reticulated sewerage. Until this time, the proponent shall use on-site effluent disposal systems using phosphorus-removing amended soils, to the requirements of the Department of Environmental Protection on advice of the Town of Kwinana and the Health Department of Western Australia.

Further development beyond Stage 1 of the proposal will only be permitted if it is connected to reticulated sewerage.

- 2-2 Within three months of the connection to reticulated sewerage required by condition 2-1, the proponent shall decommission and remove the on-site effluent disposal systems and rehabilitate the site, to the requirements of the Department of Environmental Protection on advice of the Town of Kwinana.

## **3 Stormwater Disposal**

- 3-1 Prior to use of the facilities, the proponent shall design and construct a stormwater disposal system capable of containing at least a one-in-ten year storm event on-site, to the requirements of the Department of Environmental Protection on advice of the Town of Kwinana.

## **4 Environmental Management Programme**

- 4-1 Prior to construction, the proponent shall prepare an Environmental Management Programme addressing, but not limited to the following:
- 1 nutrient and irrigation management; and
  - 2 a lake periphery revegetation programme for the south western portion of Lot 68, Bertram Road, Wellard.

to the requirements of the Minister for the Environment on advice of the Department of Environmental Protection and the Department of Conservation and Land Management.

- 4-2 The proponent shall implement the Environmental Management Programme required by condition 4-1.

## **5 Proponent**

These conditions legally apply to the nominated proponent.

- 5-1 No transfer of ownership, control or management of the project which would give rise to a need for the replacement of the proponent shall take place until the Minister for the

Environment has advised the proponent that approval has been given for the nomination of a replacement proponent. Any request for the exercise of that power of the Minister shall be accompanied by a copy of this statement endorsed with an undertaking by the proposed replacement proponent to carry out the project in accordance with the conditions and procedures set out in the statement.

## **6 Time Limit on Approval**

The environmental approval for the proposal is limited.

- 6-1 If the proponent has not substantially commenced the modified project within five years of the date of this statement, then the approval to implement the proposal shall lapse and be void. The Minister for the Environment shall determine any question as to whether the modified project has been substantially commenced.

Any application to extend the period of five years referred to in this condition shall be made before the expiration of that period to the Minister for the Environment.

Where the proponent demonstrates to the requirements of the Minister for the Environment on advice of the Department of Environmental Protection that the environmental parameters of the proposal have not changed significantly, then the Minister may grant an extension not exceeding five years.

## **7 Compliance Auditing**

To help determine environmental performance, periodic reports on progress in implementation of the proposal are required.

- 7-1 The proponent shall submit periodic Progress and Compliance Reports, in accordance with an audit programme prepared by the Department of Environmental Protection in consultation with the proponent.

### **Procedure**

- 1 Unless otherwise specified, the Department of Environmental Protection is responsible for assessing compliance with the conditions contained in this statement and for issuing formal clearance of conditions.
- 2 Where compliance with any condition is in dispute, the matter will be determined by the Minister for the Environment.

## **7. References**

- Ho G, Gibbs R, Mathew K and Parker W (1992). Groundwater Recharge of Sewage Effluent Through Amended Sand, *Wat. Res.* Vol.26, No.3, pp 285-293.
- Gidiuli-Reid M, Mathew K, and Ho G (1992). A Comparison of Options for Removal of Nutrients and On-Site Disposal of Domestic Sewage, Conference Paper, August 1992.

## **Appendix 1**

**A - Statement of Conditions of Approval, 19 July 1991**

**B - Statement of Conditions of Approval, 4 March 1993**

Ass # 412

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State # 160



WESTERN AUSTRALIA

MINISTER FOR THE ENVIRONMENT

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

CHURCH AND SCHOOL, LOT 68 BERTRAM ROAD, WELLARD, TOWN OF KWINANA(412)

EL SHADDAI KWINANA CHRISTIAN FELLOWSHIP

This proposal may be implemented subject to the following conditions:

1. Subject to these conditions, the manner of detailed implementation of the proposal shall conform in substance with that set out in any designs, specifications, plans or other technical material submitted by the proponent to the Environmental Protection Authority with the proposal. Where, in the course of that detailed implementation, the proponent seeks to change those designs, specifications, plans or other technical material in any way that the Minister for the Environment determines on the advice of the Environmental Protection Authority, is not substantial, those changes may be effected.
2. Prior to use, the proponent shall connect both the church and the school to a reticulated sewerage service.
3. Prior to use, the proponent shall design and construct a stormwater disposal system capable of containing at least a one-in-ten year storm event on-site, to the satisfaction of the Environmental Protection Authority on advice of the Town of Kwinana.
4. Prior to construction, the proponent shall submit and subsequently implement an Environmental Management Programme, including, but not limited to the following:
  - (1) nutrient and irrigation management; and
  - (2) a wetland periphery revegetation programme for the south western portion of Lot 68, Bertram Road, Wellard.

to the satisfaction of the Minister for the Environment on advice of the Environmental Protection Authority and Department of Conservation and Land Management.

5. No transfer of ownership, control or management of the project which would give rise to a need for the replacement of the proponent shall take place until the Minister for the Environment has advised the proponent that approval has been given for the nomination of a replacement proponent. Any request for the exercise of that power of the Minister shall be accompanied by a copy of this statement endorsed with an undertaking by the proposed replacement proponent to carry out the project in accordance with the conditions and procedures set out in the statement.

Published on

19 JUL 1991

6. If the proponent has not substantially commenced the project within five years of the date of this statement, then the approval to implement the proposal as granted in this statement shall lapse and be void. The Minister for the Environment shall determine any question as to whether the project has been substantially commenced. Any application to extend the period of five years referred to in this condition shall be made before the expiration of that period, to the Minister for the Environment by way of a request for a change in the condition under Section 46 of the Environmental Protection Act. (On expiration of the five year period, further consideration of the proposal can only occur following a new referral to the Environmental Protection Authority).



Bob Pearce, MLA  
MINISTER FOR THE ENVIRONMENT

19 JUL 1991



WESTERN AUSTRALIA  
MINISTER FOR THE ENVIRONMENT

Ass # 773  
Bull # 670  
State # 305

**STATEMENT TO AMEND CONDITIONS APPLYING TO A PROPOSAL  
(PURSUANT TO THE PROVISIONS OF SECTION 46 OF THE  
ENVIRONMENTAL PROTECTION ACT 1986)**

PROPOSAL: CHURCH AND SCHOOL, LOT 68 BERTRAM ROAD,  
WELLARD, TOWN OF KWINANA (412/773)

CURRENT PROPONENT: EL SHADDAI KWINANA CHRISTIAN FELLOWSHIP

CONDITIONS SET ON: 19 JULY 1991

Condition 2 is amended to read as follows:

**2 Sewage Disposal**

- 2-1 In the event that the Water Authority of Western Australia pump station and rising pressure main in East Parmelia have not been commissioned, for Stage 1 of the proposal the proponent may use a nutrient attenuating on-site effluent disposal system to the requirements of the Environmental Protection Authority and the Health Department of Western Australia.
- 2-2 Within three months of the pump station and rising pressure main referred to in condition 2-1 being commissioned, the proponent shall connect Stage 1 of the proposal to the reticulated sewerage. Further stages of the proposal will only be permitted to operate if connected to reticulated sewerage.
- 2-3 Within three months of connection to the pump station and rising pressure main required by condition 2-2, the proponent shall de-commission and remove the on-site effluent disposal system and rehabilitate the site to the requirements of the Town of Kwinana.

The following condition and procedure are inserted following condition 6:

**7 Compliance Auditing**

In order to ensure that environmental conditions and commitments are met, an audit system is required.

- 7-1 The proponent shall prepare periodic "Progress and Compliance Reports", to help verify the environmental performance of this project, in consultation with the Environmental Protection Authority.

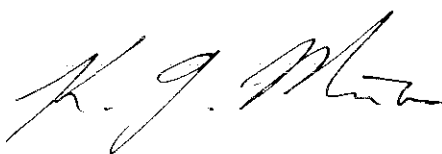
Published on

- 5 MAR 1993

## Procedure

The Environmental Protection Authority is responsible for verifying compliance with the conditions contained in this statement, with the exception of conditions stating that the proponent shall meet the requirements of either the Minister for the Environment or any other government agency.

If the Environmental Protection Authority, other government agency or proponent is in dispute concerning compliance with the conditions contained in this statement, that dispute will be determined by the Minister for the Environment.

A handwritten signature in black ink, appearing to read 'K. J. Minson', written in a cursive style.

Kevin Minson MLA  
MINISTER FOR THE ENVIRONMENT

- 4 MAR 1993



## **Appendix 2**

### **Summary of submissions and proponent's response to submissions**

## **Summary of submissions**

1. The school should be required to maintain and monitor the effluent disposal systems, and implement measures necessary to alleviate any nutrient leaching problems that may arise.
2. Installation of additional nutrient retentive disposal systems to accommodate 150 to 200 persons per day, would require toilet facilities to be connected separately to a number of disposal systems. Management of such arrangements would be difficult and would present the risk of overloading one or more disposal systems.
3. Connection to reticulated sewerage should be required prior to any further development stages that could result in a significant increase in the number of students attending the school.
4. The Bertram Road re-alignment construction works will be commenced by Council in October this year. Plans of the design and location of this road will be made available to El Shaddai before 31 July 1995. Therefore, the sewer design will not conflict with the location of the road.
5. Prior to connection to sewer the number of occupants should not exceed 50 persons per day.

# El Shaddai Christian Fellowship Inc.

## ADDRESSES :

OFFICE : 170 Bertram Road  
WELLARD WA 6170  
SCHOOL: 170 Bertram Road  
WELLARD WA 6170  
POSTAL: P O Box 255  
KWINANA WA 6167

SNR MINISTER : Geny McCoy  
TELEPHONE : 439 3319 Office  
419 4411 FAX  
439 3319 School

Director  
Evaluation Division  
Department of Environmental Protection  
Westralia Square  
141 St George's Terrace  
Perth WA 6000

your ref: TP90.56

**Attn: Ms Karen Sanders**

Dear Mr Sippe

Thank you for your letter of the 28th June summarising the issues concerning our submission to the Minister for the Environment.

Our response to each :

- 1 We foresee no problem in maintaining and monitoring the effluent disposal as our intention is to use Biocycle or Aquarius systems which I believe have environmental approvals
- 2 Within a school situation it is relatively easy to designate toilet facilities - eg: boys - girls - years 1 to 4 or senior boys only etc. This way we can ensure that there will be 50 people only using any one toilet system at any given time.
- 3 In general we can see that we should connect to reticulated sewerage should there be a significant increase in the number of students attending the school.
- 4 Re-alignment construction works of Bertram Road does enable us to go ahead with the sewer design, but it is still not a financially viable alternative as any private sewer line put in by us has to be taken up once the public sewer line is available.
- 5 We fully understand and adhere to this point.

87733

Given that the Satterly McCusker Development Group are meeting the 'public' at an informal invitation-only gathering given by the Kwinana Town Council on Monday the 17th July, one would assume that development of the area opposite our property is imminent, and as such a public sewer line will be in place in the near future, enabling us to connect to deep sewerage when our numbers warrant it.

For the present we would like to instal a 50 - 100 person usage alternative waste water teatment system to commission the ladies side only of the new toilet block at this time, while the males would continue to use the present facility connected to the Ecomax system, giving us an on-site facility for 150 people. As our numbers increase, eg between 50 to 100 per year, we could then commission the male side of the new toilet block. This would then give us facilities for 250 on site. As mentioned above this would enable us to easily monitor the disposal system without the risk of overloading any one system.

Hoping this response sufficiently addresses any queries you might have and all the issues raised.

Yours faithfully



JG (Gerry) McCoy  
Senior Minister  
13th July 95