

Special rural rezoning subdivision and development, Lot 415 Gaebler Road, Banjup

I G & R L Sagers and the City of Cockburn

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

**Environmental Protection Authority
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Background

Lot 415 Gaebler Road is located approximately 800m west of Banjup Lake between Beenyup Road and Lyon Road in Banjup. The surrounding land consists of remnant native vegetation to the north, west and south with an existing Special Rural development utilising 4ha lot sizes to the east.

The land is part of the Bassendean dune system with a sand ridge crossing the site from north-west to south-east. Elevation ranges from approximately 35m AHD on the ridge to 26m AHD in the north-east and south-west corners of the site. The north-east corner is subject to intermittent flooding due to seasonal fluctuations in ground water levels.

Vegetation on the site is consistent with the Bassendean dune system, namely Banksia woodland on the deeper sand and hydrophilic vegetation such as Melaleucas on the lower lying areas. The vegetation has been disturbed with clearing in the south west corner and adjacent to the existing dwelling on the eastern boundary. In addition the site has been periodically burnt. Nevertheless, in general the site retains a good cover of remnant vegetation.

The site is over a Priority 2 Source Area as defined by the Water Authority of Western Australia (WAWA) for the protection of ground water supplies and is also in the Jandakot Underground Water Pollution Control Area.

The proposed subdivision was referred to the Environmental Protection Authority in October 1990 by the Department of Planning and Urban Development for comment. Due to the potential impacts on the ground water protection areas as mentioned above, the Authority decided that formal assessment was warranted, and the level of assessment was set at Consultative Environmental Review (CER).

It should be noted that the Authority's assessment of this proposal primarily addresses the issue of protection of the Jandakot Underground Water Pollution Control Area (Priority 2 Source area). This assessment does not include any reference which may include environmental aspects such as risk from surface inundation or flooding during winter months. Other planning issues such as servicing requirements, and relevance of other policy such as the Government's sewerage policies on the impact on the adjacent land-users may also need to be addressed by the agencies with responsibility for planning approvals.

Any environmental approval granted through this process does not imply that planning approval will automatically follow.

It may be that the planning agencies require a local authority to undertake planning studies before a development of this nature can proceed in the local area. As stated above, the Authority supports the concept of such overall planning studies which take into account the broad spectrum of planning and environmental issues in the selection of land for subdivision and development.

1. Proposal

The proponents, I G & R L Sagers, propose to rezone, subdivide and develop Lot 415 Gaebler Road, Banjup to create nine Special Rural lots ranging in size from 2ha to 3.3ha. The site is currently zoned Rural under the City of Cockburn's District Zoning Scheme No. 1. As part of the rezoning process it is intended to apply special provisions to the development to control land use and a copy of these is attached as Appendix 1. The proposed scheme provisions form part of the proposal as assessed and are extremely important in aiding the management of environmental impacts affecting the proposal. Consequently, if the proposal were to proceed, the scheme provisions should be stringently applied by the local authority.

2. Submissions

As part of the CER process, the proposal was circulated for comment amongst targeted agencies and public interest groups. During this time five submissions were received by the Authority; namely three from government agencies, one from a conservation group and one from the local authority.

Of the five submissions, one gave full support, two had no objections to the proposal and two were opposed to the proposal. The information in the submissions has been divided into issue groups as follows:

Table 1. Issues raised in submissions

Issue	Number of submissions raising the issue
Environmental issues:	
Possibility of ground water pollution (primarily from nutrients associated with septic tanks)	2
Concerns for indigenous flora	1
Spread of dieback	1
Concern for wetlands on the site	1
Planning issues:	
Possible inclusion in the Jandakot Botanical Park	1
A Rural Strategy is being prepared for this area	1
Approval should be delayed until Land Use and Water Management Strategy has been undertaken	1

As can be seen from the table, a key issue was that of impacts of the development on ground water quality (primarily nutrients).

Several planning issues were also raised and whilst the Authority agrees that they may be legitimate concerns, it does not believe it is the appropriate agency to address these issues, and that alternative avenues exist through the planning process.

3. Environmental impacts and management

3.1 Jandakot Underground Water Pollution Control Area, Priority 2 Source Area

The Priority 2 Source Area has been defined to protect an underground water resource used for Perth's domestic supplies.

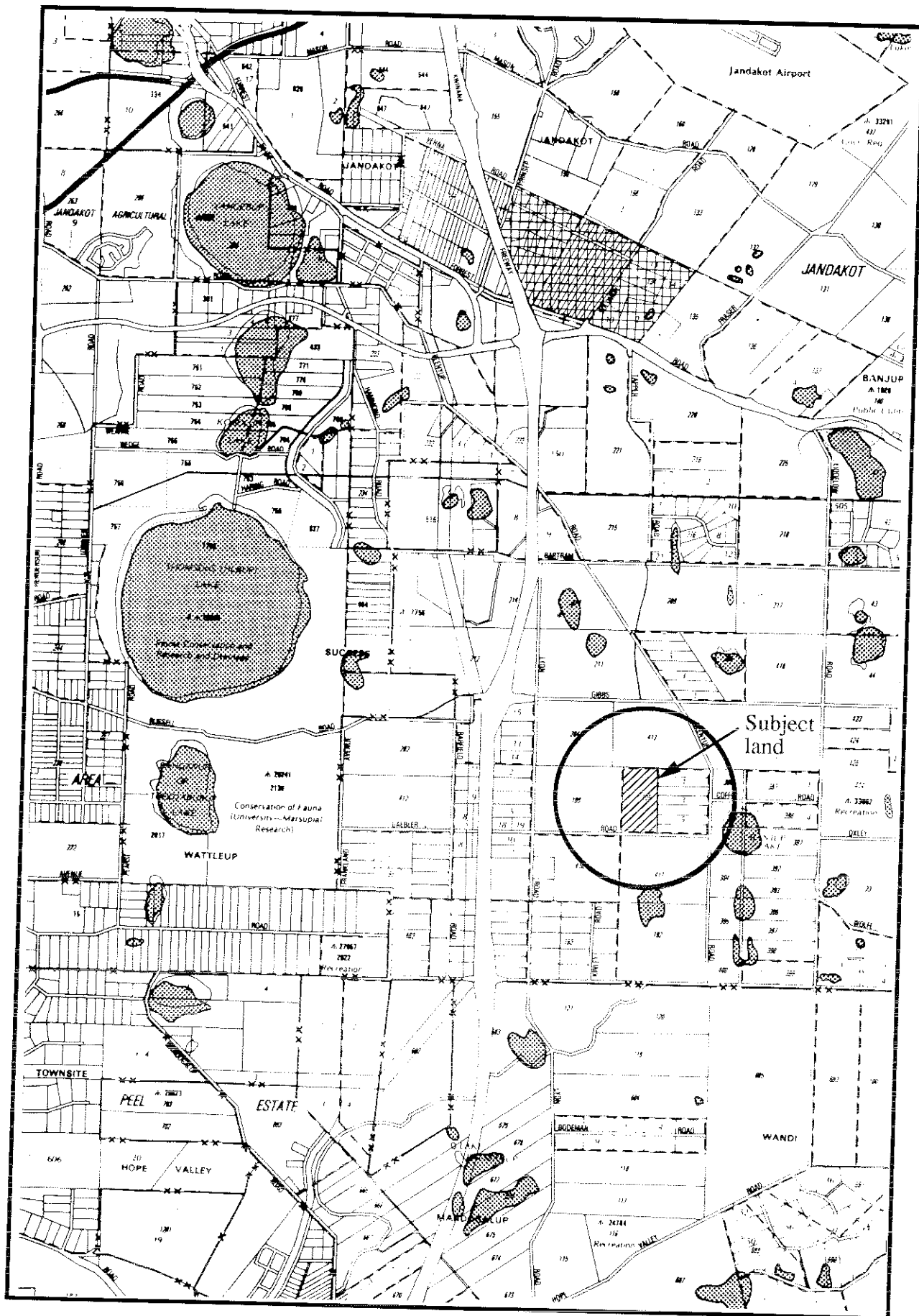


Figure 1. Location map

At present a land-use study for the Jandakot Water Mound (Jandakot Land Use and Water Management Strategy) is being prepared by the Water Authority and the Department of Planning and Urban Development, and an Environmental Protection Policy for the same area is also being prepared under the Environmental Protection Act 1986. Until such time as these studies are complete, the Authority considers development over the water supply area needs to be carefully controlled to prevent pollution of this important water source. The Water Authority of Western Australia has indicated that it is opposed to this proposal proceeding until such time as the Jandakot Land Use and Water Management Strategy is completed. It is understood that the strategy is nearing completion and that recommendations for various land uses over the Mound are in preparation. It is also understood that the City of Cockburn is currently preparing a local rural strategy which will control rural land uses. While the Authority supports the need for the planning documents it cannot recommend against developments which may compromise the Jandakot Water Pollution Control Area on this basis alone.

With so much of Perth's domestic water supply coming from ground water resources however, (particularly during the summer months), protection of existing ground water supplies must be of paramount importance. Thus the Authority has considered a number of issues to determine if the proposal can be made environmentally acceptable and these are discussed below.

3.2 The nature and impact of rural residential developments

Rural residential lots (or rural retreats) are defined as being greater than 1 hectare and are used primarily for residential purposes. Whilst the primary use is residential, there are still management implications for the ground water resource, particularly the potential for nutrient pollution from on-site effluent disposal systems. The major issues which address the suitability of rural residential development in this location and the management of these problems are examined below.

Land capability

An assessment of the site's environmental capability has been undertaken by the Environmental Protection Authority to determine whether the site is capable of sustaining rural residential development without resulting in an unacceptable environmental impact. This assessment includes the Department of Agriculture's Land Capability Assessment for the site and ratification of this assessment by the Department through a site visit. With regard to the Department of Agriculture's Land Capability Assessment, the Authority prefers this form of development to be sited on land which is classed as 'fair', 'high' or 'very high' for use as 'rural retreats' (i.e. environmentally capable of supporting conventional rural residential development). The development may proceed on such land provided a number of design constraints and management provisions are applied. These fall into two categories: those which apply to the developer and are implemented prior to the issuing of titles for the proposed lots; and those which apply to the local authority and must be reflected in the local authority's town planning scheme.

With regard to this site the Department of Agriculture has advised:

"A site inspection of Lot 415 Gaebler road indicated deep leached Bassendean sands. These leached sands are generally accepted to have a very low microbial purification ability. According to the Wells and King Land Capability Assessment Methodology (1989), as long as there is greater than 5m depth to an impermeable layer or seasonal water table, then the rating for microbial purification would be low. This would make the capability rating of on-site effluent disposal (1 septic per hectare or larger) class 111 or 'fair'.

This separation should be achievable on this site though it will require careful siting of the septic leach drains and the use of a sand pad in some instances."

Sewage disposal

Domestic septic tanks typically release about 3.5kg of phosphorus and 35kg of nitrogen into the soil each year, and because it is confined and concentrated, a significant portion of this reaches the ground water.

Because of the low density of development associated with rural residential development, connection to reticulated sewerage is not viable and conventional septic tanks with alternating leach drains are typically used for sewage disposal.

For these systems to work effectively, the Authority considers it is necessary for the bottom of the leach drain to be a minimum of two metres above the highest water table, and for the system to be at least 100 metres from the nearest water course or drain. In many cases this requires the creation of a mound to accommodate the leach drains. In these soil conditions, where there is a need to ensure that there is 5m or greater depth to ground water, the 2m separation should be easily achieved.

Other issues

Were development to proceed, there would be a number of other issues that would need to be addressed. These include the following:

- the need to manage drainage so that nutrients and drainage water resulting from development would not be exported from the site;
- the need to manage vegetation so that as much land as possible is revegetated and so that both revegetation and existing vegetation is protected; and
- the regulations for land use and land management controls to be in place to ensure that activities on the site do not generate additional nutrient loads.

3.3 Wetlands

In March 1991, the Environmental Protection Authority published the Draft Environmental Protection (Swan Coastal Plain Wetlands) Policy 1991 for public comment. Regulations were published at the same time to ensure the wetlands in the Policy area were protected during the submission period. As a generality, any area which holds water at the beginning of summer (December 1) must not be filled, drained or polluted.

Subdivision and development around designated wetlands is not excluded provided the requirements of the Policy are accommodated.

There is an ephemeral wetland (that is no permanent water) crossing the site which is ground water fed. Because of its ephemeral nature, the wetland is not listed under the Environmental Protection Policy. However, this does not mean it has no environmental value and it should be noted that the Wetland Policy is only in draft form. If the development were to proceed, the wetland's function and environmental value would need to be assessed and appropriate management provisions put in place to preserve those values.

3.4 The proposed Jandakot Botanic Park

The Department of Planning and Urban Development is currently considering setting aside land for the Jandakot Botanic Park. The Park is for the protection of banksia ecosystems and to provide for recreation. Management proposals for the Park range from reservation for core areas and land-use and development controls over buffer areas to ensure private development is consistent with the Park's objectives. Planning for the Park is not yet finalised but it is anticipated that decisions will be made in the near future.

The subject land is not in the proposed Botanic Park but is located directly adjacent to a section which is proposed for inclusion. Given the lack of clarity regarding the Park's boundaries, it is not known if modifications will be made which may include this land.

4. Conclusions and recommendations

The Environmental Protection Authority is aware that a number of decision-making authorities must provide approvals for a development such as this one to proceed. These other authorities, including the Department of Planning and Urban Development, the Department of Health and the local authority must provide planning, health and other approvals.

Recommendations by the Environmental Protection Authority, and ultimately the decision of the Minister for the Environment, primarily address the potential environmental impacts of nutrients from the proposed development on the Jandakot Underground Water Pollution Control Area Priority 2 Source Area.

Notwithstanding the Environmental Protection Authority's advice and the Minister for the Environment's decision, the proposal may or may not be approved by the other decision making authorities.

Accordingly the Environmental Protection Authority wishes to provide advice and recommendations in two parts. The first part comprises advice to the other decision-making authorities before they make decisions on whether or not to approve the proposal.

If the proposal is subsequently approved by the other decision-makers, then the Environmental Protection Authority makes further recommendations relevant to the proponent and to the Local Authority.

Advice to the decision-making authorities

The Environmental Protection Authority advises that any environmental approval granted throughout this process does not imply that planning approval will automatically follow. A number of planning issues, which may include environmental aspects, may need further consideration. Some of the issues to be addressed include the following matters:

- Consistency with the draft Jandakot Land-use and Management Strategy
- Consistency with an endorsed Local Rural Strategy
- Consistency of the use of alternative wastewater treatment systems with the Government's Sewerage Policies.
- Risk from flooding or surface inundation during winter months.
- Planning decisions regarding the proposed Jandakot Botanic Park.
- Appropriateness of lot sizes for the land practices of the area and potential for land degradation.

Recommendations

Recommendation 1

The Environmental Protection Authority has concluded that the proposed "Special Rural" development on Lot 415 Gaebler Road, Banjup as modified during the process of interaction between the proponent, the Environmental Protection Authority, the public and the government agencies that were consulted is environmentally acceptable with respect to protection of the Jandakot Underground Water Pollution Control Area, Priority 2 Source Area.

In reaching this conclusion, the Environmental Protection Authority identified the main environmental factors requiring detailed consideration as:

- **nutrient impacts on the Jandakot Groundwater Mound;**
- **the wetland area in the north-east corner of the site; and**
- **remnant vegetation protection and revegetation.**

the Environmental Protection Authority notes that these environmental factors have been addressed adequately by either special provisions in the City of

Cockburn Town Planning Scheme or by the Environmental Protection Authority's recommendations in this report.

Accordingly, the Environmental Protection Authority recommends that the project could proceed subject to:

- special provisions in the City of Cockburn Town Planning Scheme; and
- the Environmental Protection Authority's recommendations in this report.

In making these recommendations it is acknowledged that many of the Authority's recommendations are reflected in the proposed provisions accompanying the scheme amendment shown in Appendix 1. The full suite of recommendations has been included here for the sake of clarity.

On the local authority

Recommendation 2

The Environmental Protection Authority recommends that the local authority be responsible for the ongoing implementation and management of the following:

- 2.1 Lot sizes must be no less than 2.0ha and contain a building envelope no greater than 2000m².
- 2.2 Outside the area cleared for the building envelopes, fences, firebreaks, access and servicing, the existing vegetation and the revegetation shall be maintained.
- 2.3 The only permissible primary land use is residential, and no more than one residence shall be permitted on each lot unless it can be demonstrated that an additional residence would not result in any significant additional nutrient application.
- 2.4 Ancillary land uses may be permitted provided they do not involve any further significant nutrient application or the additional clearing of land.
- 2.5 The type and number of livestock shall be limited in accordance with the guidelines prepared by the Local Government Authority.
- 2.6 Any area which holds water by the beginning of summer (December 1) must not be filled, drained or polluted. Stock should be prohibited from proposed lots 4 and 5 on the subdivision guide plan to aid in protecting the seasonally inundated area.
- 2.7 Conventional effluent systems should be located and installed such that there is at least a 5 metre vertical separation between the ground level and the highest recorded ground water level, and at least a 100 metre horizontal separation between the disposal system and the nearest water body. The 5 metre vertical separation is required because of the specific land capability characteristics on this site.

On the developer

Recommendation 3

The Environmental Protection Authority recommends that the developer be required to undertake the following:

- 3.1 A stormwater disposal system is constructed capable of retaining a 1 in 10 year storm event in a specific locality of the development for 3-4 days or according to guidelines to be prepared by the Local Government Authority.

3.2 There is no removal of vegetation, with the exception of minimal clearing necessary for the building envelopes, fences, firebreaks, access and servicing.

3.3 Areas already cleared, excluding the above, are to be revegetated with appropriate indigenous trees and perennial shrubs or in accordance with the tree planting programme associated with the Town Planning Scheme Amendment. The developer shall be responsible for replacing losses of plants within the revegetation programme for the first three years or until the land is sold. Alternatively the revegetation programme may become a requirement of the planning controls to be implemented by future landowners when the house is built.

The Authority's experience is that it is common for details of a proposal to alter through the detailed design and construction phase. In many cases alterations are not environmentally significant or have positive effect on the environmental performance of the project. The Authority believes that such non-substantial changes, and especially those which improve environmental performance and protection, should be provided for.

The Authority believes that any approval for the proposal based on this assessment should be limited to five years. Accordingly, if the proposal has not been substantially commenced within five years of the date of this report, then such approval should lapse. After that time, further consideration of the proposal should occur only following a new referral to the Authority.

Appendix 1

City of Cockburn District Zoning Scheme No.2

Amendment No. 55

TOWN PLANNING AND DEVELOPMENT ACT 1928 (AS AMENDED)
RESOLUTION DECIDING TO AMEND A TOWN PLANNING SCHEME

CITY OF COCKBURN DISTRICT ZONING SCHEME NO. 2

AMENDMENT NO. 55

Resolved that the Council in pursuance of section 7 of the Town Planning and Development Act 1928 (as amended) amend the above Town Planning Scheme by:

Rezoning portion Jandakot Agricultural Area Lot 415,
Gaebler Road, Banjup, from Rural to Special Rural.

DATED the day of 19 ...

.....
TOWN CLERK

TOWN PLANNING AND DEVELOPMENT ACT 1928 (AS AMENDED)

THE CITY OF COCKBURN DISTRICT ZONING SCHEME NO. 2

AMENDMENT NO. 55

The Cockburn City Council under and by virtue of the powers conferred upon it in that behalf by the Town Planning and Development Act 1928 (as amended) and the Metropolitan Region Town Planning Scheme Act 1959 (as amended) hereby amends the above Town Planning Scheme by:

1. rezoning Jandakot Agricultural Lot 415, Gaebler Road, Banjup from Rural to Special Rural.
2. including the following Scheme Provisions within the Sixth Schedule - Special Rural Zones of the Scheme Text:

"14.0 GAEBLER ROAD, BANJUP

14.1 LOCALITY

The land comprises portion of Jandakot Agricultural Area Lot 415 (Gaebler Road).

14.2 PROVISIONS

The following provisions shall apply specifically to the Special Rural Zone Area referred to in Clause 14.1 of this Schedule.

14.2.1 Zoning Table

(1)	Civic Building	AA
(2)	Educational Establishment	AA
(3)	Home Occupation	AA
(4)	Kindergarten	SA
(5)	Office within a dwelling	AA
(6)	Private Recreation	SA
(7)	Public Utility	AA
(8)	Hobby Farm	AA
(9)	Single House	F
(10)	Veterinary Consulting Rooms	AA
(11)	Veterinary Hospital	SA
(12)	Commercial Vehicle Parking	AA

14.2.2 The Council shall not give Planning Consent for Private Recreation, or Hobby Farm unless the Water Authority of Western Australia has formally advised that it would issue a licence for a water bore to extract the quantity of groundwater necessary for the development.

14.2.3 The keeping of horses is not permitted within Special Rural Zone 14 - Gaebler Road.

14.2.4 A use that is not mentioned in Clause 14.2.1 of this Schedule shall not be permitted.

14.2.5 Subdivision of the land defined in Clause 14.1 of this Schedule shall be generally in accordance with the approved Subdivision Guide Plan - Special Rural Zone 14 - Gaebler Road, Banjup.

- 14.2.6 The minimum lot size shall be 2.0 hectares.
- 14.2.7 On receipt of a written request from the landowner to amend the building envelope, the Council may:
- (1) agree to relocate the building envelope;
 - (2) agree to extend the building envelope providing that the total building envelope does not occupy more than 10 per cent of the lot area; or
 - (3) refuse to amend the boundaries of the envelope.
- 14.2.8 Notwithstanding Clause 14.2.7, the building envelope shall not be located nearer to a boundary of a lot than the minimum building setback distance set out under Clause 5.4.1(5) of the Scheme Text.
- 14.2.9 No clearing shall be permitted outside the building envelope, as designated on the Subdivision Guide Plan of this Schedule except for the following:
- (a) The removal of trees which are dead, diseased or dangerous.
 - (b) For the purpose of providing a firebreak as required by a regulation or by-law except that, in order to preserve the amenity of the area Council may at its discretion vary the position of any required firebreak to avoid destruction of vegetation or due to the physical features of the subject land.
 - (c) For the purpose of providing any access driveway for a residential dwelling as approved by Council.
 - (d) To permit development as approved by the Council under Part 6 of the Scheme.
- 14.2.10 Prior to the subdivision of the land described in Clause 14.1 of this Schedule, the subdivider shall:
- (1) provide fire breaks as required for each lot to a standard approved by the Council and the Bush Fires Board;
 - (2) within the Tree Planting Area defined on the Subdivision Guide Plan, plant trees in accordance with a tree planting specification approved by Council, and arrange for all trees planted to be maintained to the satisfaction of Council until such time as the lot is transferred to the purchaser;
 - (3) ensure that each building envelope and accessway link to the adjacent road reserve is either located above or filled to a minimum height of 0.5 metres above the highest known water table.
- 14.2.11 The trees planted within the Tree Planting Area designated on the Subdivision Guide Plan - Special Rural Zone 14 - Gaebler Road, Banjup, shall be maintained by the purchaser of the lot."
3. including the Subdivision Guide Plan - Special Rural Zone 14 - Gaebler Road, Banjup within the Sixth Schedule of the Scheme Text; and
 4. amending the Scheme Map and Scheme Text accordingly.